

DAFTAR PUSTAKA

- Andrés F., & Julián Moreno. (2017). *Proposal of a gamified virtual learning environment for computer programming courses*. IEEE.
- Angraini, M. N., Yani, D. F., Andika, W. D., & Suningsih, T. (n.d.). Peran Media Berbasis ICT (Information and Communication Technology) pada Kemampuan Bahasa Inggris Anak Usia Dini. *Journal of Early Childhood Education*, 1(1), 2023.
- Arifn Rahadyan Fannani, Rosyid Harits Ar, & Pujianto Utomo. (2019). *Design and Implementation of Interactive Coding with Gamification for Web Programming Subject for Vocational High School Students*. IEEE.
- Armstrong, M. B., & Landers, R. N. (2018). Gamification of employee training and development. *International Journal of Training and Development*, 22(2), 162–169. <https://doi.org/10.1111/ijtd.12124>
- Auf, H., Dagman, J., Renström, S., & Chaplin, J. (2021). Gamification and nudging techniques for improving user engagement in mental health and well-being apps. *Proceedings of the Design Society*, 1, 1647–1656. <https://doi.org/10.1017/pds.2021.426>
- Bantuan, S., Setyosari, P., Ulfa, S., Praherdhiono, H., Yusmah Sari, J., Pembelajaran, T., & Negeri Malang, U. (2024). Pengembangan Aplikasi Mobile dengan Pendekatan Gamifikasi dalam Pembelajaran Matematika di Sekolah Dasar. In *Informatics Journal* (Vol. 8, Issue 3).
- Bitrián, P., Buil, I., & Catalán, S. (2021). Enhancing user engagement: The role of gamification in mobile apps. *Journal of Business Research*, 132, 170–185. <https://doi.org/10.1016/j.jbusres.2021.04.028>
- Bouchrika, I., Harrati, N., Wanick, V., & Wills, G. (2019). *Exploring the impact of gamification on student engagement and involvement with e-learning systems*.
- Bovermann, K., & Bastiaens, T. J. (2020). Towards a motivational design? Connecting gamification user types and online learning activities. *Research and Practice in Technology Enhanced Learning*, 15(1). <https://doi.org/10.1186/s41039-019-0121-4>
- buyse-2012-limitations-of-adaptive-clinical-trials. (n.d.).
- Chans, G. M., & Portuguez Castro, M. (2021). Gamification as a strategy to increase motivation and engagement in higher education chemistry students. *Computers*, 10(10). <https://doi.org/10.3390/computers10100132>
- Cheng, M. T., She, H. C., & Annetta, L. A. (2015). Game immersion experience: Its hierarchical structure and impact on game-based science learning. *Journal of Computer Assisted Learning*, 31(3), 232–253. <https://doi.org/10.1111/jcal.12066>

- Chuang, H. C., Tseng, H. Y., & Tang, D. L. (2023). An eye tracking study of the application of gestalt theory in photography. *Journal of Eye Movement Research*, 16(1). <https://doi.org/10.16910/JEMR.16.1.5>
- Cresswell J. (2013). *Qualitative inquiry & research design: Choosing among five approaches*.
- Çubukçu, Ç., Goodman, L., Wang, B., & Mangina, E. (2017). Gamification for teaching Java. *ACM International Conference Proceeding Series*, 120–130. <https://doi.org/10.1145/3173519.3173538>
- Darin Gad, M. (2018). *Information Design of Public Documents: Applying Gestalt Principles to Improve User Understanding*.
- Dede, C. (2009). Immersive interfaces for engagement and learning. In *Science* (Vol. 323, Issue 5910, pp. 66–69). <https://doi.org/10.1126/science.1167311>
- Denzin N. K., & Lincoln Y. S. (2008). *Introduction: The discipline and practice of qualitative research*.
- Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011). *From game design elements to gamefulness: defining "gamification"*. ACM Digital Library.
- Dichev, C., & Dicheva, D. (2017). Gamifying education: what is known, what is believed and what remains uncertain: a critical review. In *International Journal of Educational Technology in Higher Education* (Vol. 14, Issue 1). Springer Netherlands. <https://doi.org/10.1186/s41239-017-0042-5>
- Drzyzga, G., & Harder, T. (2022). Student-centered Development of an Online Software Tool to Provide Learning Support Feedback: A Design-study Approach. *International Conference on Computer-Human Interaction Research and Applications, CHIRA - Proceedings, 2022-October*, 244–248. <https://doi.org/10.5220/0011589100003323>
- Feng, W., Tu, R., & Hsieh, P. (2020). Can gamification increases consumers' engagement in fitness apps? The moderating role of commensurability of the game elements. *Journal of Retailing and Consumer Services*, 57. <https://doi.org/10.1016/j.jretconser.2020.102229>
- Friginal, J., Martínez, M., De Andrés, D., & Ruiz, J. C. (2016). Multi-criteria analysis of measures in benchmarking: Dependability benchmarking as a case study. *Journal of Systems and Software*, 111, 105–118. <https://doi.org/10.1016/j.jss.2015.08.052>
- Hady, E. L., Haryono, K., & Rahayu, N. W. (2020). *User Acceptance Testing (UAT) pada Purwarupa Sistem Tabungan Santri (Studi Kasus: Pondok Pesantren Al-Mawaddah) User Acceptance Testing (UAT) of the Prototype of Students' Savings Information System (Case Study: Al-Mawaddah Islamic Boarding School)*.

- Hafizah, N. (2023). Media Pembelajaran Digital Generasi Alpha Era Society 5.0 Pada Kurikulum Merdeka. *Al-Madrasah: Jurnal Pendidikan Madrasah Ibtidaiyah*, 7(4), 1675. <https://doi.org/10.35931/am.v7i4.2699>
- Hajar I. S., & Fernadi M. F. (2023). *Pemanfaatan Media Dalam Pembelajaran Akhlak di Sekolah Dasar Negeri 2 Taman Agung Kec. Kalianda Kab. Lampung Selatan Tahun Ajaran 2022/2023*.
- Hamann, M., Godfrey, M. H., Seminoff, J. A., Arthur, K., Barata, P. C. R., Bjorndal, K. A., Bolten, A. B., Broderick, A. C., Campbell, L. M., Carreras, C., Casale, P., Chaloupka, M., Chan, S. K. F., Coyne, M. S., Crowder, L. B., Diez, C. E., Dutton, P. H., Epperly, S. P., Fitz Simmons, N. N., ... Godley, B. J. (2010). Global research priorities for sea turtles: Informing management and conservation in the 21st century. *Endangered Species Research*, 11(3), 245–269. <https://doi.org/10.3354/esr00279>
- Hamari, J., Koivisto, J., & Sarsa, H. (2014). *Does Gamification Work?-A Literature Review of Empirical Studies on Gamification*.
- Helmy, W., & M. A. Lashin, M. (2021). Features of New Design Principles for Mobile Applications UI/UX for Smartphones. 6(25), 480–491. <https://doi.org/10.21608/mjaf.2020.25213.1533>
- Heni Jusuf. (n.d.). *Penggunaan gamifikasi dalam proses pembelajaran*. <https://www.researchgate.net/publication/320920734>
- Henning, S., & Hasselbring, W. (2022). A configurable method for benchmarking scalability of cloud-native applications. *Empirical Software Engineering*, 27(6). <https://doi.org/10.1007/s10664-022-10162-1>
- Hidayat, L., & Dwi Herlambang, A. (2018). *Evaluasi Pengukuran Tingkat Kapabilitas Proses Pengelolaan Layanan, Pengelolaan Aset, dan Pengelolaan Operasi Menggunakan Framework COBIT 5 (Studi Kasus: PT. Pertamina (Persero) RU VI Balongan)* (Vol. 2, Issue 11). <http://j-ptiik.ub.ac.id>
- Hsin-Yuan Huang, W., & Soman, D. (2013). *A Practitioner's Guide To Gamification Of Education*.
- Jacobson, A. P., Gerngross, P., Lemeris, J. R., Schoonover, R. F., Anco, C., Breitenmoser-Würsten, C., Durant, S. M., Farhadinia, M. S., Henschel, P., Kamler, J. F., Laguardia, A., Rostro-García, S., Stein, A. B., & Dollar, L. (2016). Leopard (*Panthera pardus*) status, distribution, and the research efforts across its range. *PeerJ*, 2016(5). <https://doi.org/10.7717/peerj.1974>
- Jamalulail, Q., Fitrotun Nisa, A., Yulia, Y., Jay Domingo, M. A., & Sigit Yuniharto, B. (2022). *Gamification as a Form of Innovation in Learning*. In *International Seminar Commemorating the 100th Anniversary of Tamansiswa*.

- Kaur, A., & Kaur, K. (2019). Investigation on test effort estimation of mobile applications: Systematic literature review and survey. *Information and Software Technology, 110*, 56–77.
<https://doi.org/10.1016/j.infsof.2019.02.003>
- Khaleel, F. L., Ashaari, N. S., Wook, T. S. M. T., & Ismail, A. (2017). Methodology for developing gamification-based learning programming language framework. *Proceedings of the 2017 6th International Conference on Electrical Engineering and Informatics: Sustainable Society Through Digital Innovation, ICEEI 2017, 2017-November*, 1–6.
<https://doi.org/10.1109/ICEEI.2017.8312378>
- Krath, J., Schürmann, L., & von Korfflesch, H. F. O. (2021). Revealing the theoretical basis of gamification: A systematic review and analysis of theory in research on gamification, serious games and game-based learning. *Computers in Human Behavior, 125*.
<https://doi.org/10.1016/j.chb.2021.106963>
- Kuantitatif P. P. (2016). *Metode Penelitian Kuantitatif Kualitatif dan R&D*.
- Lampropoulos, G., & Sidiropoulos, A. (2024). Impact of Gamification on Students' Learning Outcomes and Academic Performance: A Longitudinal Study Comparing Online, Traditional, and Gamified Learning. *Education Sciences, 14*(4). <https://doi.org/10.3390/educsci14040367>
- Le, L., Pham, N., Nguyen, H. T., Thi, V., & Le, K. (2021). Triggering Students' Learning Autonomy Using The Combination of M-Learning And Gamification: A Case Study At Nguyen Tat Thanh University. In *Teaching English with Technology* (Vol. 21, Issue 2). <http://www.tewtjournal.org>
- Looyestyn, J., Kernot, J., Boshoff, K., Ryan, J., Edney, S., & Maher, C. (2017). Does gamification increase engagement with online programs? A systematic review. *PLoS ONE, 12*(3). <https://doi.org/10.1371/journal.pone.0173403>
- Lubis, M., Handayani, D. O., Novrian, N., & Fauzi, R. (2021). Development of internet healthy platform for student community through design approach against internet addiction. *ACM International Conference Proceeding Series, 24–30*. <https://doi.org/10.1145/3479162.3479166>
- Macnamara William. (2017). *Evaluating the Effectiveness of the Gestalt Principles of Evaluating the Effectiveness of the Gestalt Principles of Perceptual Observation for Virtual Reality User Interface Design Perceptual Observation for Virtual Reality User Interface Design*.
<https://arrow.tudublin.ie/scschcomdis>
- Marín, B., Frez, J., Cruz-Lemus, J., & Genero, M. (2019). An empirical investigation on the benefits of gamification in programming courses. *ACM Transactions on Computing Education, 19*(1).
<https://doi.org/10.1145/3231709>

- Martins, C., Oliveira, T., & Popovič, A. (2014). Understanding the internet banking adoption: A unified theory of acceptance and use of technology and perceived risk application. *International Journal of Information Management*, 34(1), 1–13. <https://doi.org/10.1016/j.ijinfomgt.2013.06.002>
- Meilina, A., Istianah, F., & Jurusan Pendidikan Guru Sekolah Dasar, Mp. (n.d.). Penerapan Gamifikasi pada Materi Sistem Pencernaan untuk Meningkatkan Aktivitas dan Hasil Belajar Ipa di SD.
- Metwally, E. (2021). Achieving the Visual Perception and Gestalt Psychology in Sultan Hassan Mosque Building. *Open Journal of Applied Sciences*, 11(01), 21–40. <https://doi.org/10.4236/ojapps.2021.111003>
- Miraz, M. H., Ali, M., & Excell, P. S. (2021). Adaptive user interfaces and universal usability through plasticity of user interface design. In *Computer Science Review* (Vol. 40). Elsevier Ireland Ltd. <https://doi.org/10.1016/j.cosrev.2021.100363>
- Mora, A. , R. D., González, C., & Arnedo-Moreno, J. (2017). Gamification: a systematic review of design frameworks. *Journal of Computing in Higher Education*.
- Muttaqien, R. (2019). *Rancang Bangun Aplikasi Mobile Untuk Peminjaman Barang Menggunakan Layanan Web (Studi Kasus: Kantor BPN Kota Langsa)*. 4(4), 2019.
- Okoli, C. (2019). A citation analysis of theoretical concept reviews. *25th Americas Conference on Information Systems, AMCIS 2019*. <https://doi.org/10.2139/ssrn.3452116>
- Padirayon, L. M. (2019). The designed gamification application architecture and elements for a C# programming course. *ACM International Conference Proceeding Series*, 67–72. <https://doi.org/10.1145/3330393.3330414>
- Padmini, K. J., Perera, I., & Bandara, H. D. (2016). *Applying agile practices to avoid chaos in User Acceptance Testing: A case study*. IEEE.
- Pasholikov, M. (2024). Benchmarking is a tool for the development of an industrial company. *E3S Web of Conferences*, 549. <https://doi.org/10.1051/e3sconf/202454909005>
- Presnell, J. S., Vandepas, L. E., Warren, K. J., Swalla, B. J., Amemiya, C. T., & Browne, W. E. (2016). The Presence of a Functionally Tripartite Through-Gut in Ctenophora Has Implications for Metazoan Character Trait Evolution. *Current Biology*, 26(20), 2814–2820. <https://doi.org/10.1016/j.cub.2016.08.019>
- Rauschenberger, M., Emden, H., & Leer, /. (n.d.). *Towards The Use Of Gamification Frameworks In Learning Environments*. <https://www.researchgate.net/publication/343475223>

- Ripalda, D., Guevara, C., & Garrido, A. (2020). *Framework based on Gestalt principles to design mobile interfaces for a better user experience.*
- Rojas-López, A., Rincón-Flores, E. G., Mena, J., García-Peñalvo, F. J., & Ramírez-Montoya, M. S. (2019). Engagement in the course of programming in higher education through the use of gamification. *Universal Access in the Information Society, 18*(3), 583–597. <https://doi.org/10.1007/s10209-019-00680-z>
- Safitra, M. F., Lubis, M., Kurniawan, M. T., Alhari, M. I., Nuraliza, H., Azzahra, S. F., & Putri, D. P. (2023). Green Networking: Challenges, Opportunities, and Future Trends for Sustainable Development. *ACM International Conference Proceeding Series*, 168–173. <https://doi.org/10.1145/3617733.3617760>
- Sailer, M., & Homner, L. (2020). The Gamification of Learning: a Meta-analysis. *Educational Psychology Review, 32*(1), 77–112. <https://doi.org/10.1007/s10648-019-09498-w>
- Saleem, A. N., Noori, N. M., & Ozdamli, F. (2022). Gamification Applications in E-learning: A Literature Review. *Technology, Knowledge and Learning, 27*(1), 139–159. <https://doi.org/10.1007/s10758-020-09487-x>
- Saran, M., Al-Magsoosi, D., Mohammed, D., & Daleh Al-magsoosi, A. (2018). *Gamification in e-learning: The Effect on Student Performance.* <https://www.researchgate.net/publication/329415817>
- Schrader, C., Reichelt, M., & Zander, S. (2018). The effect of the personalization principle on multimedia learning: the role of student individual interests as a predictor. *Educational Technology Research and Development, 66*(6), 1387–1397. <https://doi.org/10.1007/s11423-018-9588-8>
- Shahhosseini, S. (2018). *The Effectiveness of Gestalt Visual Perception Laws in Designing Electronic Pages for the Delivery of First Aid Training.* <https://doi.org/10.30476/IJVLMS.2021.89159.1067>
- Smiderle, R., Rigo, S. J., Marques, L. B., Peçanha de Miranda Coelho, J. A., & Jaques, P. A. (2020). The impact of gamification on students' learning, engagement and behavior based on their personality traits. *Smart Learning Environments, 7*(1). <https://doi.org/10.1186/s40561-019-0098-x>
- Sugiyono. (2019). *Metode Penelitian Kualitatif dan R&D.*
- Vermeulen, S., & Sheil, D. (2007). Partnerships for tropical conservation. In *ORYX* (Vol. 41, Issue 4, pp. 434–440). <https://doi.org/10.1017/S0030605307001056>
- Yalcinkaya, M., & Singh, V. (2019). Exploring the use of Gestalt's principles in improving the visualization, user experience and comprehension of COBie data extension. *Engineering, Construction and Architectural Management, 26*(6), 1024–1046. <https://doi.org/10.1108/ECAM-10-2017-0226>

Yanuar Surya Putra. (n.d.). *Theoretical review: Teori perbedaan generasi*.
Zhang, Q., & Yu, Z. (2022). Meta-Analysis on Investigating and Comparing the Effects on Learning Achievement and Motivation for Gamification and Game-Based Learning. In *Education Research International* (Vol. 2022). Hindawi Limited. <https://doi.org/10.1155/2022/1519880>

Graygroupintl.com. 30 Agustus 2023. Extinct Species: Lessons from Nature's Lost.

Diakses pada 23 Desember 2023, dari <https://www.graygroupintl.com/blog/extinct-species#:~:text=When%20a%20species%20goes%20extinct,crop%20production%20and%20food%20security>.

Gviusa.com. 03 Mei 2023. How Endangered Species Affect the Environment.

Diakses pada 23 Desember 2023, dari <https://www.gviusa.com/blog/smb-how-endangered-species-affect-the-environment/#:~:text=The%20decline%20of%20endangered%20species%20can%20have%20severe%20consequences%20for,maintaining%20ecosystem%20health%20and%20biodiversity>.

play.google.com. Duolingo: Belajar Bahasa. Diakses pada 13 Juni 2024, dari

<https://play.google.com/store/apps/details?id=com.duolingo&hl=id>

play.google.com. Habitica. Diakses pada 20 Juni 2024, dari

<https://play.google.com/store/apps/details?id=com.habitrpg.android.habitica&hl=id>

play.google.com. MyFitnessPal. Diakses pada 18 Juli 2024, dari

<https://play.google.com/store/apps/details?id=com.myfitnesspal.android&hl=id>

play.google.com. Memrise: Bicara bahasa baru. Diakses pada 19 Juli 2024, dari

<https://play.google.com/store/apps/details?id=com.memrise.android.memrisecompanion&hl=id>

play.google.com. Quizizz: Mainkan untuk belajar. Diakses pada 20 Juli 2024, dari

https://play.google.com/store/apps/details?id=com.quizizz_mobile

- International Union for Conservation of Nature (IUCN) Red List of Threatened Species. (2021). Rhinoceros sondaicus. Diakses pada 24 November 2024, dari <https://www.iucnredlist.org/species/19495/89259661>
- Rafli, M. (2024, November 27). Orang Indonesia masih suka buang sampah sembarangan, apa alasannya? GoodStats. <https://data.goodstats.id/statistic/orang-indonesia-masih-suka-buang-sampah-sembarangan-apa-alasannya-AXngN>
- Nurhaliza, S. (2024, October 7). Konservasi untuk masa depan: Upaya bersama melindungi keanekaragaman hayati. AMF. <https://amf.or.id/konservasi-untuk-masa-depan-upaya-bersama-melindungi-keanekaragaman-hayati/>
- Senopati. (2024, November 6). Edukasi konservasi lingkungan untuk meningkatkan kesadaran masyarakat. BBC Indonesia. <https://bbcindonesia.info/2024/11/06/edukasi-konservasi-lingkungan-untuk-meningkatkan-kesadaran-masyarakat/>
- Barrette, R. (2021). Gauging user tolerance to interface modifications using Gestalt Principles (Doctoral dissertation, Laurentian University of Sudbury).
- Mardoyo, E. (2023). Penerapan Virtual Reality dalam Pembelajaran Project Based Learning (Pbl) untuk Meningkatkan Performansi Mahasiswa di Politeknik (Master's thesis).
- Dinas Pendidikan Kota Bandung. (2018). Rencana Strategis Perubahan Dinas Pendidikan Kota Bandung Tahun 2018-2023. Bandung: Dinas Pendidikan Kota Bandung.