

DAFTAR PUSTAKA

- Ameijeiras, A. Q., & Durso, S. O. (2024). Information technology in accounting education: A bibliometric-systematic literature review (2006–2025). *Journal of Accounting Education*, 65, 100956.
- AmplifAI. (2024). Top gamification statistics for 2024. AmplifAI. <https://www.amplifai.com/blog/gamification-statistics#gamification-statistic-1>
- Ashfaq, M., Yun, J., Yu, S., & Loureiro, S. M. C. (2020). I, Chatbot: Modeling the determinants of *users'* satisfaction and continuance intention of AI powered service agents. *Telematics and Informatics*, 54, 101473. <https://doi.org/10.1016/j.tele.2020.101473>
- Attest. (2024). Understanding US Gen Z media consumption trends. Ask Attest. <https://www.askattest.com/blog/research/gen-z-media-consumption>
- Azoth Analytics. (2025). Global app economy market (2025 edition): Analysis by store type, category & region (2021-2031). <https://www.azothanalytics.com/>
- Baah, C., Govender, I., & Subramaniam, P. R. (2023). Exploring the role of gamification in motivating students to learn. *Cogent Education*, 10(1), 2210045. <https://doi.org/10.1080/2331186X.2023.2210045>
- Badan Pusat Statistik. (2021, Januari 21). Hasil sensus penduduk 2020. <https://www.bps.go.id/pressrelease/2021/01/21/1854/hasil-sensus-penduduk-2020.html>
- Badan Pusat Statistik Kabupaten Gorontalo. (2025, 5 Februari). Memahami generasi Z: Tantangan, perilaku, dan peluang. <https://gorontalokab.bps.go.id/id/news/2025/02/05/30/memahami-generasi-z--tantangan--perilaku--dan-peluang.html>
- Badiozaman, I. F. A., Leong, H., & Jikus, O. (2020). Investigating student engagement in Malaysian higher education: A self-determination theory approach. *Journal of Further and Higher Education*, 44(8), 1045–1057. <https://doi.org/10.1080/0309877X.2019.1688266>
- Bai, S., Hew, K. F., & Huang, B. (2020). Does gamification improve student learning outcome? Evidence from a meta-analysis and synthesis of qualitative data. *Educational Research Review*, 30, 100322. <https://doi.org/10.1016/j.edurev.2020.100322>
- Basuki, R., Tarigan, Z. J. H., Siagian, H., Limanta, L. S., Setiawan, D., & Mochtar, J. (2022). The effects of perceived ease of use, usefulness, *enjoyment* and intention to use online platforms on behavioral intention in online movie watching during the pandemic era. *International Journal of Data and Network Science*, 6(1), 253–262. <https://doi.org/10.5267/j.ijdns.2021.9.003>
- Bitrián, P., Buil, I., & Catalán, S. (2020). Gamification in sport apps: The determinants of *users'* motivation. *European Journal of Management and Business Economics*, 29(3), 365–381. <https://doi.org/10.1108/EJMBE-09-2019-0163>
- 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>

- Bitrián, P., Buil, I., & Catalán, S. (2023). The motivational power of mobile-gamified exercise apps. *Management Letters / Cuadernos de Gestión*, 23(2), 21–36. <https://doi.org/10.5295/cdg.211629pb>
- Bouzaâbia, O., Ben Arbia, M., Juárez Varón, D. J., & Chui, K. T. (2024). The consequences of gamification in mobile commerce platform applications. *International Journal on Semantic Web and Information Systems*, 20(1). <https://doi.org/10.4018/IJSWIS.337599>
- Cai, Y., Li, X., & Shi, W. (2024). Does gamification affect knowledge-sharing behavior? The mediating role of intrinsic satisfaction needs. *Online Information Review*, 48(2), 354–373. <https://doi.org/10.1108/OIR-05-2021-0288>
- Cao, X., Liu, J., Liu, Y., & Gong, J. (2021). Understanding the dark side of gamification health management: A stress perspective. *Information Processing & Management*, 58(5), 102648. <https://doi.org/10.1016/j.ipm.2021.102648>
- Capatina, A., Juarez-Varon, D., Micu, A., & Micu, A. E. (2024). Leveling up in corporate training: Unveiling the power of gamification to enhance knowledge retention, knowledge sharing, and job performance. *Journal of Innovation & Knowledge*, 9(3), 100530. <https://doi.org/10.1016/j.jik.2024.100530>
- Chang, S. E., & Yu, C. (2023). Exploring gamification for live-streaming shopping Influence of *reward*, competition, presence and *immersion* on purchase intention. *IEEE Access*, 11, 57503–57513. <https://doi.org/10.1109/ACCESS.2023.3284033>
- Chen, C.-C., & Chiu, Y.-P. (2023). Enhancing intrinsic learning motivation through gamification: A self-determination theory perspective. *The International Journal of Information and Learning Technology*, 40(5), 413–424. <https://doi.org/10.1108/IJILT-07-2022-01-45>
- Choirisa, S. F., Waworuntu, A., & Istiono, W. (2024). Enhancing *user* engagement and loyalty in online travel agents: A gamification approach. *Journal of Hospitality and Tourism Technology*. Advance online publication. <https://doi.org/10.1108/JHTT-08-2023-0214>
- Chou, Y.-k. (2015). Actionable gamification: Beyond points, badges, and leaderboards. Octalysis Media.
- Deci, E. L., & Ryan, R. M. (1985). Conceptualizations of intrinsic motivation and self-determination. In *Intrinsic motivation and self-determination in human behavior*. Springer. https://doi.org/10.1007/978-1-4899-2271-7_2
- Delta – The Analytics Cell. (2025, 10 Oktober). Gen-Z’s productivity app revolution. Medium. <https://medium.com/@delta.analyticscell.lsr/gen-zs-productivity-app-revolution-997df1dffcb9>
- Deng, J., & Pan, Y. (2023). Evaluating influencing factors of audiences' attitudes toward virtual concerts: Evidence from China. *Behavioral Sciences*, 13(6), 478. <https://doi.org/10.3390/bs13060478>
- Deterding, S. (2015). The lens of intrinsic skill atoms: A method for gameful design. *Human–Computer Interaction*, 30(3–4), 294–335. <https://doi.org/10.1080/07370024.2014.993471>
- Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011). From game design elements to gamefulness: Defining gamification. In *Proceedings of the 15th International*

- Academic MindTrek Conference: Envisioning Future Media Environments (pp. 9–15). ACM. <https://doi.org/10.1145/2181037.2181040>
- East Ventures, Katadata Insight Center, & PwC Indonesia. (2023). *East Ventures - Digital Competitiveness Index (EV-DCI) 2023: Equitable Digital Nation*. Jakarta: East Ventures.
- Eklesia, J. A. S., & Wijayanti, C. A. (2025, Februari). The impact of gamification on Gen Z's behavioral intention through e-commerce Shopee: Does *reward* moderate the relationship? In Proceedings of the 4th International Conference on Entrepreneurship (IConEnt 2025) (pp. 807–817). <https://www.researchgate.net/publication/389045792>
- Fayola, F., Graciela, V., Chandra, V., & Sukmaningsih, D. W. (2024). Impact of gamification elements on live streaming e-commerce (live commerce). *Procedia Computer Science*, 245, 1065–1074. <https://doi.org/10.1016/j.procs.2024.10.335>
- Forbes Business Council. (2024, Januari 9). The psychology of high-performing teams: Unpacking the layers of cohesion. *Forbes*. <https://www.forbes.com/councils/forbesbusinesscouncil/2024/01/09/the-psychology-of-high-performing-teams-unpacking-the-layers-of-cohesion/>
- Foroughi, B., Iranmanesh, M., Kuppusamy, M., Ganesan, Y., Ghobakhloo, M., & Madugoda Gunaratne, S. (2023). Determinants of continuance intention to use gamification applications for task management: An extension of technology continuance theory. *The Electronic Library*, 41(2/3), 286–307. <https://doi.org/10.1108/EL-05-2022-0108>
- Gao, F., Rogers, K. C., & Li, L. (2024). Understanding students' perceived need satisfaction, *enjoyment*, and participation intention in a leaderboard-based math practice game. *E-Learning and Digital Media*. Advance online publication. <https://doi.org/10.1177/20427530241251407>
- Gerdenitsch, C., Sellitsch, D., Besser, M., Burger, S., Stegmann, C., Tscheligi, M., & Kriglstein, S. (2020). Work gamification: Effects on *enjoyment*, productivity and the role of leadership. *Electronic Commerce Research and Applications*, 43, 100994. <https://doi.org/10.1016/j.elerap.2020.100994>
- GIANTY. (2025, Januari 7). How gamification helps boost *user* engagement and a practical guide in 2025. GIANTY. <https://www.gianty.com/gamification-boost-user-engagement-in-2025/>
- Grasse, K.M., Kreminski, M., Wardrip-Fruin, N., Mateas, M., & Melcer, E.F. (2022). Using self-determination theory to explore *enjoyment* of educational interactive narrative games: A case study of Academical. *Frontiers in Virtual Reality*, 3, 847120. <https://doi.org/10.3389/frvir.2022.847120>
- Growth Engineering. (2024). 19 gamification trends for 2024-2025: Top stats, facts & examples. *Growth Engineering*. <https://www.growthengineering.co.uk/19-gamification-trends-for-2022-2025-top-stats-facts-examples/>
- Growth Engineering. (2025). The neuroscience of gamification: Unlocking true learner engagement. *Growth Engineering*. <https://www.growthengineering.co.uk/neuroscience-of-gamification/>

- Guo, J., Shan, S., & Ali Khan, Y. (2023). What are the impetuses behind e-health applications' self-management services' ongoing adoption by health community participants? *Health Informatics Journal*, 29(1). <https://doi.org/10.1177/14604582231152801>
- Hadi, N. U., & Khan, A. N. (2021). Self-regulation and *social* media addiction: A multi-wave data analysis in China. *Technology in Society*, 64, 101495. <https://doi.org/10.1016/j.techsoc.2020.101495>
- Hamari, J., & Koivisto, J. (2013). *social* motivations to use gamification: An empirical study of gamifying exercise. In Proceedings of the 21st European Conference on Information Systems (ECIS 2013). https://aisel.aisnet.org/ecis2013_cr/105/
- Hanus, M. D., & Fox, J. (2015). Assessing the effects of gamification in the classroom: A longitudinal study on intrinsic motivation, *social* comparison, satisfaction, effort, and academic performance. *Computers & Education*, 80, 152–161. <https://doi.org/10.1016/j.compedu.2014.08.019>
- Hiltunen, V. (2025). Gamification and its impact on motivation and pressure in running applications: Strava case [Master's thesis, University of Turku]. UTUPub. https://www.utupub.fi/bitstream/handle/10024/180815/Hiltunen_Vera_opinnayte.pdf
- Hong, Y., Saab, N., & Admiraal, W. (2024). Approaches and game elements used to tailor digital gamification for learning: A systematic literature review. *Computers & Education*, 212, 105000. <https://doi.org/10.1016/j.compedu.2024.105000>
- Huang, X., Ozturk, A. B., & Zhang, T. (2024). Unpacking AI for hospitality and tourism services: A review and research agenda. *MNC Hospitality & Tourism*, 2(1), 1–23. <https://doi.org/11.1186/s12982-024-00120-7>
- Jiménez-Valverde, G., Fabre-Mitjans, N., & Guimerà-Ballesta, G. (2025). Narrative-driven digital gamification for motivation and presence: Preservice teachers' experiences in a science education course. *Computers*, 14(9), 384. <https://doi.org/10.3390/computers14090384>
- Jo, H., & Baek, Y. (2023). Exploring the dynamics of mobile app addiction: The interplay of communication, affective factors, flow, perceived *enjoyment*, and habit. *BMC Psychology*, 11, Article 404. <https://doi.org/10.1186/s40359-023-01433-z>
- Kaur, J., Lavuri, R., Parida, R., & Singh, S. V. (2023). Exploring the impact of gamification elements in brand apps on the purchase intention of consumers. *Journal of Global Information Management*, 31(1), 1–30. <https://doi.org/10.4018/JGIM.317216>
- Khoshnoodifar, M., Ashouri, A., & Taheri, M. (2023). Effectiveness of gamification in enhancing learning and attitudes: A study of statistics education for health school students. *JAMP Journal of Advances in Medical Education & Professionalism*, 11(4), 230–239. <https://doi.org/10.30476/JAMP.2023.98953.1817>
- Khoudri, I., & Khoudri, A. (2023). Examining the influence of gamification on the *enjoyment*, engagement, and motivation of secondary school students: A case study of Vevox. *International Journal of Current Education Studies*, 2(2), 1–15. <https://doi.org/10.46328/ijces.77>
- Krath, J., Schürmann, L., & von Korfflesch, H. F. O. (2021). Revealing the theoretical basis of gamification: A systematic review and research agenda. *Computers in Human Behavior*, 125, 106963. <https://doi.org/10.1016/j.chb.2021.106963>

- Lan, X., & Song, B. (2025). The more, the merrier? Investigating the distinct and interaction effects of gamification mechanics in corporate sustainability engagement. *Journal of Business Research*, 199, 115513. <https://doi.org/10.1016/j.jbusres.2025.115513>
- Li, L., Hew, K. F., & Du, J. (2024). Gamification enhances student intrinsic motivation, perceptions of *autonomy* and *relatedness*, but minimal impact on competency: A meta-analysis & systematic review. *Educational Research Review*, 43, 100422. <https://doi.org/10.1016/j.edurev.2024.100422>
- Li, N. (2025). Fostering creative thinking through gamified intercultural communication: Innovative pedagogical strategies in higher education English programs. *Cogent Education*, 12(1), 2489271. <https://doi.org/10.1080/2331186X.2025.2489271>
- Liatukaitė, M. (2021). Gamification in mobile applications: Influence of *immersion*, achievement and *social*-related features on brand loyalty [Master's thesis, Vilnius University]. Vilnius University Repository.
- Lichtenberg, S., Hildebrandt, F., & Mirbabaie, M. (2023). Under pressure? - The effect of conversational agents on task pressure and *social relatedness* in digital labor. In *ICIS 2023 Proceedings (No. 3)*. Association for Information Systems. https://aisel.aisnet.org/icis2023/sharing_econ/sharing_econ/3
- Luarn, P. (2023). Badge gamification and perceived *autonomy*: Enhancing intrinsic learning motivation through badges and choice. In *Proceedings of the International Conference on Education and Multimedia Technology* (pp. 1-5).
- Luarn, P., Chen, C.-C., & Chiu, Y.-P. (2023). Enhancing intrinsic learning motivation through gamification: A self-determination theory perspective. *The International Journal of Information and Learning Technology*, 40(5), 413–424. <https://doi.org/10.1108/IJILT-07-2022-0145>
- Ma, M., Zhao, X., & Shen, H. (2022). Impact of gamification on knowledge sharing – The mediating role of self-determination. *International Journal of Business Studies and Innovation*, 2(2), 43–58. <https://doi.org/10.35745/ijbsi2022v02.02.0006>
- Majumder, S. (2025). Influence of UX design on *user* retention and conversion rates in mobile apps. arXiv. <https://doi.org/10.48550/arXiv.2501.13407>
- Mekler, E. D., Brühlmann, F., Tuch, A. N., & Opwis, K. (2017). Towards understanding the effects of individual gamification elements on intrinsic motivation and performance. *Computers in Human Behavior*, 71, 525–534. <https://doi.org/10.1016/j.chb.2015.08.048>
- Mulcahy, R., Zainuddin, N., & Russell-Bennett, R. (2020). Transformative value and the role of involvement in gamification and serious games for well-being. *Journal of Service Management*, 31(1), 1–31. <https://doi.org/10.1108/JOSM-03-2019-0076>
- Mustafa, A. S., Ali, N., Dhillon, J. S., & Sedera, D. (2023). An integrated model for evaluating the sustainability of gamified mobile health apps: An instrument development and validation. *Healthcare*, 11(7), 1051. <https://doi.org/10.3390/healthcare11071051>
- Nguyen-Viet, B., & Minh, H. D. N. (2025). How gamification enhances learning effectiveness through blended learning and intrinsic motivation: The moderating effects of self-regulation. *SAGE Open*, 15(4), 1–15. <https://doi.org/10.1177/21582440251385846>

- Nguyen-Viet, B., & Nguyen-Viet, B. (2025). The synergy of *immersion* and basic psychological needs satisfaction: Exploring gamification's impact on student engagement and learning outcomes. *Acta Psychologica*, 252, 104660. <https://doi.org/10.1016/j.actpsy.2024.104660>
- Nivedhitha, K. S., Giri, G., & Pasricha, P. (2024). Gamification as a panacea to workplace cyberloafing: An application of self-determination and *social* bonding theories. *Internet Research*, 35(2), 798. <https://doi.org/10.1108/INTR-07-2023-0558>
- Nugroho, S. S. (2024). Gamification aspects affecting mobile app continued use, attitude, and satisfaction. *Jurnal Siasat Bisnis*, 28(1), 19–36. <https://doi.org/10.20885/jsb.vol28.iss1.art2>
- Nurbaiti. (2023). Characteristics of Internet, smartphone, and *social* media usage among Generation Z in South Jakarta after the COVID-19 pandemic. *Journal of Health Sciences and Epidemiology*, 1(3), 101–108.
- Oliveira, H., Figueiredo, G., Pereira, B., Magalhães, M., Rosário, P., & Magalhães, P. (2025). Understanding children's perceptions of game elements in an online gamified intervention: Contributions by the self-determination theory. *International Journal of Human-Computer Interaction*, 41(16), 10163–10177. <https://doi.org/10.1080/10447318.2024.2431363>
- Oliveira, W., & Hamari, J. (2025). Flow experience in gameful approaches: A systematic literature review, scientometric analysis, and research agenda. *International Journal of Human-Computer Interaction*, 41(15), 13113–13139. <https://doi.org/10.1080/10447318.2025.2470279>
- Prestianta, A. M., Evita, N., & Asmarantika, R. A. (2023). Patterns of media and *social* media use in Generation Z in Indonesia. *Jurnal Studi Komunikasi*, 7(1), 195–214. <https://doi.org/10.25139/jsk.v7i1.5230>
- Qin, Y. (2021). Attractiveness of game elements, presence, and *enjoyment* of mobile augmented reality games: The case of Pokémon Go. *Telematics and Informatics*, 62, 101620. <https://doi.org/10.1016/j.tele.2021.101620>
- Queiro-Ameijeiras, C. M., Seguí-Mas, E., & Martí-Parreño, J. (2025). Determinants of gamification acceptance in higher education: An empirical model. *RIED-Revista Iberoamericana de Educación a Distancia*, 28(1). <https://doi.org/10.5944/ried.28.1.41565>
- Rahiman, H. U., Kodikal, R., & Suresh, S. (2023). Game on: Can gamification enhance productivity? *F1000Research*, 12, 818. <https://doi.org/10.12688/f1000research.131579.2>
- Rai, N., & Srivastava, A. (2024). Drivers of consumer trust in mHealth apps among young consumers: A socio-technical approach. *Young Consumers*, 26(1), 36–60. <https://doi.org/10.1108/yc-03-2024-2043>
- Reer, F., Wehden, L.-O., Janzik, R., Tang, W. Y., & Quandt, T. (2022). Virtual reality technology and game *enjoyment*: The contributions of natural mapping and need satisfaction. *Computers in Human Behavior*, 132, 107239. <https://doi.org/10.1016/j.chb.2022.107239>

- Rigby, S., & Ryan, R. (2011). *Glued to games: How video games draw us in and hold us spellbound*. Praeger.
- Rohan, R., Pal, D., & Funilkul, S. (2020). Mapping gaming elements with gamification categories: *immersion*, *achievement*, and *social* in a MOOC setting. In 2020 14th International Conference on Innovations in Information Technology (IIT) (pp. 63–68). IEEE. <https://doi.org/10.1109/IT50501.2020.9299047>
- Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25(1), 54–67. <https://doi.org/10.1006/ceps.1999.1020>
- Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. The Guilford Press.
- Sailer, M., Hense, J. U., Mayr, S. K., & Mandl, H. (2017). How gamification motivates: An experimental study of the effects of specific game design elements on psychological need satisfaction. *Computers in Human Behavior*, 69, 371–380. <https://doi.org/10.1016/j.chb.2016.12.033>
- Sen, A. (2024). Investigating a motivation model for gamified e-learning: A mixed methods approach [Doctoral thesis, University of Plymouth]. PEARL. <https://doi.org/10.24382/5184>
- Sen, A., Lean, J., Kelland, J., & Moizer, J. (2023). Investigating a motivation model for gamified e-learning: A self-determination approach. In *INTED2023 Proceedings* (pp. 6738–6745). IATED.
- Seven Square Tech. (2024, 11 November). Top apps American Gen Z young adults downloaded in 2024 – Gen Z app preferences. <https://www.sevensquaretech.com/top-gen-z-apps-downloaded-2024/>
- Sharma, N., Sharma, M., & Singh, T. (2024). Mobile banking app experience of generation Y and Z consumers. *Asia Pacific Journal of Marketing and Logistics*, 36(8), 2008–2027. <https://doi.org/10.1108/APJML-08-2023-0793>
- Shi, M., Deng, L., Zhang, M., & Long, Y. (2025). How telepresence and perceived *enjoyment* mediate the relationship between interaction quality and continuance intention: Evidence from China Zisha ware Digital Museum. *PLOS ONE*, 20(1), e0317784. <https://doi.org/10.1371/journal.pone.0317784>
- StriveCloud. (2021, 2 Juli). Duolingo gamification explained: How to build an app gamification strategy. <https://strivecloud.io/blog/gamification-examples-boost-user-retention-duolingo/>
- Suh, A., Wagner, C., & Liu, L. (2018). Enhancing *user* engagement through gamification. *Computers in Human Behavior*, 84, 14–25. <https://doi.org/10.1016/j.chb.2018.02.037>
- Tahir, F., Mitrovic, A., & Sotardi, V. (2022). Investigating the causal relationships between badges and learning outcomes in SQL-Tutor. *Research and Practice in Technology Enhanced Learning*, 17, Article 7. <https://doi.org/10.1186/s41039-022-00180-4>
- TalentLMS. (2019). *Gamification at work: Survey report*. <https://www.talentlms.com/blog/gamification-at-work-survey-2019>
- Tech Jury. (2024). The psychology of gamification: 10 surprising gamification statistics. Tech Jury. <https://techjury.net/blog/gamification-statistics/>

- The Brand Berries. (2025, 1 Juli). How gamified experiences are winning over Gen Z consumers. <https://thebrandberries.com/how-gamified-experiences-are-winning-over-gen-z-consumers/>
- Trophy. (2025). Habitica's gamification strategy: A case study. Trophy. <https://trophy.so/blog/habitica-gamification-case-study>
- Tsai, C. Y. (2024). Gamification intensity and perceived *autonomy* in virtual workplace training: The power of play. *Journal of Workplace Learning*, 36(4), 387–406. <https://doi.org/10.1108/JWL-07-2023-0114>
- Tsai, C. Y. (2025). Investigating the influence of *autonomy*, *competence*, *relatedness* and excitement on *user* satisfaction with ChatGPT: A self-determination theory perspective. In *Proceedings of the International Conference on Human-AI Interaction*. <https://doi.org/10.1145/3667895.3667901>
- UX Magazine. (2025). Flow state design: Applying game psychology to productivity apps. UX Magazine. <https://uxmag.com/articles/flow-state-design-applying-game-psychology-to-productivity-apps>
- van der Walt, F., Nkoyi, A., & Thithi, M. (2024). The influence of selected factors on perceived *enjoyment* of the online learning experience: Lessons for post-COVID-19 classrooms. *Frontiers in Education*, 9, 1274126. <https://doi.org/10.3389/feduc.2024.1274126>
- Villalobos-Zúñiga, G., Rodríguez, I., Fedosov, A., & Cherubini, M. (2021). Informed choices, progress monitoring and comparison with peers: Features to support the *autonomy*, *competence* and *relatedness* needs, as suggested by the self-determination theory. In *23rd International Conference on Mobile Human-Computer Interaction (MobileHCI '21)* (pp. 1–14). ACM. <https://doi.org/10.1145/3447526.3472039>
- Vorecol. (2024, 28 Agustus). Gamification in productivity apps: How game mechanics enhance time management. Vorecol Blog. <https://vorecol.com/blogs/blog-gamification-in-productivity-apps-how-game-mechanics-enhance-time-management-170378>
- Wang, C., Wang, Z., Liu, L., & Hua, K. (2024). Relationship between customer knowledge management and the value co-creation of fitness application customers: Mediating role of flow experience. *PLOS ONE*, 19(10), e0311988. <https://doi.org/10.1371/journal.pone.0311988>
- Wang, Y., Li, H., & Zhang, X. (2025). Is more always better? An S-shaped impact of gamification feature richness on exercise adherence intention. *Frontiers in Psychology*, 15, 1671543. <https://doi.org/10.3389/fpsyg.2025.1671543>
- White, J. S., Salem, M. K., Toussaert, S., Westmaas, J. L., Raiff, B. R., Crane, D., Warrender, E., Lyles, C., Abrams, L., & Thrul, J. (2023). Developing a game (Inner Dragon) within a leading smartphone app for smoking cessation: Design and feasibility evaluation study. *JMIR Serious Games*, 11, e46602. <https://doi.org/10.2196/46602>
- Xi, N., & Hamari, J. (2019). Does gamification satisfy needs? A study on the relationship between gamification features and intrinsic need satisfaction. *International Journal of Information Management*, 46, 210–221. <https://doi.org/10.1016/j.ijinfomgt.2018.12.002>

- Yang, C., Yang, P., & Feng, Y. (2021). Effect of achievement-related gamification on brand attachment. *Industrial Management & Data Systems*. Advance online publication. <https://doi.org/10.1108/IMDS-12-2021-0008>
- Yee N. Motivations for play in online games. *Cyberpsychol Behav*. 2006 Dec;9(6):772-5. doi: 10.1089/cpb.2006.9.772. PMID: 17201605.
- YellowHEAD. (2024). Gen Z attention span and mobile marketing trends. YellowHEAD. <https://yellowhead.com/blog/gen-z-attention-span/>
- Young Urban Project. (2025). Duolingo case study 2025: How gamification made learning addictive. Young Urban Project. <https://www.youngurbanproject.com/duolingo-case-study/>
- Yushaa, S. M., Mazlina, S., Khuzzan, S., & Hanid, M. (2021). Gamification elements and its impact on students. *Journal of Technology and Operations Management*, 16(2), 62–75. <https://doi.org/10.32890/jtom2021.16.2.6>
- Zainuddin, Z., Chu, S. K. W., Shujahat, M., & Perera, C. J. (2020). The impact of gamification on learning and instruction: A systematic review of empirical evidence. *Educational Research Review*, 30, 100326. <https://doi.org/10.1016/j.edurev.2020.100326>

