UNIVERSITAS GADJAH MADA
Pengembangan Media Pembelajaran Kodifikasi ICD-10 Chapter X Berbasis Augmented Reality dengan Kuis Bertingkat Metode Leitner
Naila Indira Priyanto, Adhistya Erna Permanasari, Ir., S.T., M.T., Ph.D., IPM., ASEAN Eng. , Indriana Hidayah, Dr., S
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

DAFTAR PUSTAKA

[1] L. Otero Varela, C. Doktorchik, N. Wiebe, H. Quan, and C. Eastwood, "International classification of diseases clinical coding training: An international survey," *Health Information Management Journal*, vol. 53, no. 2, pp. 68–75, 2024.

[2] P.-F. Chen, S.-M. Wang, W.-C. Liao, L.-C. Kuo, K.-C. Chen, Y.-C. Lin, C.-Y. Yang, C.-H. Chiu, S.-C. Chang, and F. Lai, "Automatic icd-10 coding and training system: Deep neural network based on supervised learning," *JMIR Medical Informatics*, vol. 9, no. 8, p. e23230, 2021.

[3] M. Topaz, L. Shafran-Topaz, and K. H. Bowles, "ICD-9 to ICD-10: Evolution, revolution, and current debates in the united states," *Perspectives in Health Information Management*, vol. 10, no. Spring, p. 1g, 2013.

[4] M. Farzandipour, A. Sheikhtaheri, and F. Sadoughi, "Effective factors on accuracy of principal diagnosis coding based on international classification of diseases, the 10th revision (icd-10)," *International Journal of Information Management*, vol. 30, no. 1, pp. 78–84, 2010.

[5] E. M. Burns, E. Rigby, R. Mamidanna, A. Bottle, P. Aylin, P. Ziprin, and O. D. Faiz, "Systematic review of discharge coding accuracy," *Journal of Public Health*, vol. 34, no. 1, pp. 138–148, 2012.

[6] K. J. O'Malley, K. F. Cook, M. D. Price, K. R. Wildes, J. F. Hurdle, and C. M. Ashton, "Measuring diagnoses: Icd code accuracy," *Health Services Research*, vol. 40, no. 5 Pt 2, pp. 1620–1639, 2005.

[7] J. Horsky, E. A. Drucker, and H. Z. Ramelson, "Accuracy and completeness of clinical coding using icd-10 for ambulatory visits," *AMIA Annual Symposium Proceedings*, vol. 2017, pp. 912–920, 2017.

[8] C. Chen, Y. You, Y. Du, W. Zhou, D. Jiang, K. Cao, M. Yang, X. Wu, M. Chen, J. Qi, D. Chen, R. Yan, S. Yang, and J. S. Ji, "Global epidemiological trends in the incidence and deaths of acute respiratory infections from 1990 to 2021," *Heliyon*, vol. 10, no. 16, p. e35841, 2024.

[9] Badan Kebijakan Pembangunan Kesehatan, Kementerian Kesehatan Republik Indonesia, "Survei kesehatan indonesia (SKI) 2023 dalam angka," Kementerian Kesehatan Republik Indonesia, Jakarta, Tech. Rep., 2023.

[10] J. N. Sand and P. Elison-Bowers, "ICD-10-CM/PCS: Transferring knowledge from ICD-9-CM," *Perspectives in Health Information Management*, vol. 10, no. Summer, 2013, pMCID: PMC3709880.

[11] R. Kaur, J. A. Ginige, and O. Obst, "A systematic literature review of automated ICD coding and classification systems using discharge summaries," *arXiv preprint arXiv:2107.10652*, 2021.

[12] S. Ghanbari, F. Haghani, M. Barekatain, and A. Jamali, "A systematized review of cognitive load theory in health sciences education and a perspective from cognitive neuroscience," *Journal of Education and Health Promotion*, vol. 9, p. 176, 2020.

UNIVERSITAS
GADJAH MADA
Pengembangan Media Pembelajaran Kodifikasi ICD-10 Chapter X Berbasis Augmented Reality dengan Kuis Bertingkat Metode Leitner
Naila Indira Priyanto, Adhistya Erna Permanasari, Ir., S.T., M.T., Ph.D., IPM., ASEAN Eng. , Indriana Hidayah, Dr., S
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

[13] S. Agudelo-Londoño, I. Gorbanev, V. Delgadillo, A. Cortés, A. Pomares-Quimbaya, R. A. González, J. S. Restrepo, and Ó. Muñoz, "Development and evaluation of a serious game for teaching icd-10 diagnosis coding to medical students," *Games for Health Journal*, vol. 8, no. 5, pp. 349–356, 2019.

[14] C.-Y. Lee, C.-H. Lee, H.-Y. Lai, P.-J. Chen, M.-M. Chen, and S.-Y. Yau, "Do games work? a meta-analytic synthesis of gamified learning for clinical reasoning in medical and allied health education," *Medical Education Online*, vol. 31, no. 1, p. 2614233, 2026.

[15] A. M. Al-Ansi, M. Jaboob, A. Garad, and A. Al-Ansi, "Analyzing augmented reality (AR) and virtual reality (VR) recent development in education," *Social Sciences & Humanities Open*, vol. 8, no. 1, p. 100532, 2023.

[16] B. M. Kyaw, N. Saxena, P. Posadzki, J. Vseteckova, C. K. Nikolaou, P. P. George, U. Divakar, I. Masiello, A. A. Kononowicz, N. Zary, and L. Tudor Car, "Virtual reality for health professions education: Systematic review and meta-analysis by the digital health education collaboration," *Journal of Medical Internet Research*, vol. 21, no. 1, p. e12959, 2019.

[17] G. Lampropoulos, P. Fernández-Arias, A. del Bosque, and D. Vergara, "Augmented reality in health education: Transforming nursing, healthcare, and medical education and training," *Nursing Reports*, vol. 15, no. 8, p. 289, 2025.

[18] K. S. Tang, D. L. Cheng, E. Mi, and P. B. Greenberg, "Augmented reality in medical education: A systematic review," *Canadian Medical Education Journal*, vol. 11, no. 1, pp. e81–e96, 2020.

[19] D. E. Kurniawan, A. Dzikri, M. Suriya, Y. Rokhayati, and A. Najmurrokhman, "Object visualization using maps marker based on augmented reality," in *2018 International Conference on Applied Engineering (ICAE)*, Batam, Indonesia, 2018.

[20] J. A. Maye and F. Hurley, "The effectiveness of spaced repetition in medical education: A systematic review and meta-analysis," *The Clinical Teacher*, vol. 23, no. 2, p. e70353, 2026.

[21] Y. M. Tang, K. Y. Chau, A. P. K. Kwok, T. Zhu, and X. Ma, "A systematic review of immersive technology applications for medical practice and education—trends, application areas, recipients, teaching contents, evaluation methods, and performance," *Educational Research Review*, vol. 35, p. 100429, 2022.

[22] C. L. Hughes, C. Fidopiastis, K. M. Stanney, P. S. Bailey, and E. Ruiz, "The psychometrics of cybersickness in augmented reality," *Frontiers in Virtual Reality*, vol. 1, p. 602954, 2020.

[23] M. A. M. AlGerafi, Y. Zhou, M. Oubibi, and T. T. Wijaya, "Unlocking the potential: A comprehensive evaluation of augmented reality and virtual reality in education," *Electronics*, vol. 12, no. 18, p. 3953, 2023.

[24] K.-T. Huang, C. Ball, J. Francis, R. Ratan, J. Boumis, and J. Fordham, "Augmented versus virtual reality in education: An exploratory study examining science knowledge retention when using augmented reality/virtual reality mobile applications,"

UNIVERSITAS
GADJAH MADA
**Pengembangan Media Pembelajaran Kodifikasi ICD-10 Chapter X Berbasis Augmented Reality dengan Kuis
Bertingkat Metode Leitner**
Naila Indira Priyanto, Adhistya Erna Permanasari, Ir., S.T., M.T., Ph.D., IPM., ASEAN Eng. , Indriana Hidayah, Dr., S
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Cyberpsychology, Behavior, and Social Networking, vol. 22, no. 2, pp. 105–110, 2019.

[25] S. Barteit, L. Lanfermann, T. Bärnighausen, F. Neuhann, and C. Beiersmann, "Augmented, mixed, and virtual reality-based head-mounted devices for medical education: Systematic review," *JMIR Serious Games*, vol. 9, no. 3, p. e29080, 2021.

[26] J. M. J. Murre and J. Dros, "Replication and analysis of ebbinghaus' forgetting curve," *PLOS ONE*, vol. 10, no. 7, p. e0120644, 2015.

[27] H. L. Roediger and J. D. Karpicke, "Test-enhanced learning: Taking memory tests improves long-term retention," *Psychological Science*, vol. 17, no. 3, pp. 249–255, 2006.

[28] J. Dunlosky, K. A. Rawson, E. J. Marsh, M. J. Nathan, and D. T. Willingham, "Improving students' learning with effective learning techniques: Promising directions from cognitive and educational psychology," *Psychological Science in the Public Interest*, vol. 14, no. 1, pp. 4–58, 2013.

[29] N. J. Cepeda, H. Pashler, E. Vul, J. T. Wixted, and D. Rohrer, "Distributed practice in verbal recall tasks: A review and quantitative synthesis," *Psychological Bulletin*, vol. 132, no. 3, pp. 354–380, 2006.

[30] S. H. K. Kang, "Spaced repetition promotes efficient and effective learning: Policy implications for instruction," *Policy Insights from the Behavioral and Brain Sciences*, vol. 3, no. 1, pp. 12–19, 2016.

[31] M. M. Gilbert, T. C. Frommeyer, G. V. Brittain, N. A. Stewart, T. M. Turner, A. Stolfi, and D. Parmelee, "A cohort study assessing the impact of anki as a spaced repetition tool on academic performance in medical school," *Medical Science Educator*, vol. 33, no. 4, pp. 955–962, 2023.

[32] A. M. Deshmukh and R. Chalmeta, "Validation of system usability scale as a usability metric to evaluate voice user interfaces," *PeerJ Computer Science*, vol. 10, p. e1918, 2024.

[33] J. Brooke, "Sus: A "quick and dirty" usability scale," in *Usability Evaluation in Industry*, P. W. Jordan, B. Thomas, B. A. Weerdmeester, and I. L. McClelland, Eds. London: Taylor & Francis, 1996, pp. 189–194.

[34] M. Hertzum, "System usability scale: A meta-analysis of how sus relates to workload, task time, and error rate," *International Journal of Human–Computer Interaction*, pp. 1–14, 2026.

[35] R. Dutta, A. Mantri, and G. Singh, "Evaluating system usability of mobile augmented reality application for teaching karnaugh-maps," *Smart Learning Environments*, vol. 9, no. 1, p. 6, 2022.

[36] P.-F. Chen, K.-C. Chen, W.-C. Liao, F. Lai, T.-L. He, S.-C. Lin, W.-J. Chen, C.-Y. Yang, Y.-C. Lin, I.-C. Tsai, C.-H. Chiu, S.-C. Chang, and F.-M. Hung, "Automatic international classification of diseases coding system: Deep contextualized language model with rule-based approaches," *JMIR Medical Informatics*, vol. 10, no. 6, p. e37557, 2022.

UNIVERSITAS
GADJAH MADA
Pengembangan Media Pembelajaran Kodifikasi ICD-10 Chapter X Berbasis Augmented Reality dengan Kuis Bertingkat Metode Leitner
Naila Indira Priyanto, Adhistya Erna Permanasari, Ir., S.T., M.T., Ph.D., IPM., ASEAN Eng. , Indriana Hidayah, Dr., S
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

[37] World Health Organization. (2019) International statistical classification of diseases and related health problems, 10th revision (icd-10), version:2019. World Health Organization. Diakses: 8 Juli 2026. [Online]. Available: https://icd.who.int/browse10/2019/en

[38] W. J. Fokkens, V. J. Lund, C. Hopkins, P. W. Hellings, R. Kern, S. Reitsma, S. Toppila-Salmi, M. Bernal-Sprekelsen, and J. Mullol, "European position paper on rhinosinusitis and nasal polyps 2020," *Rhinology*, vol. 58, no. Suppl S29, pp. 1–464, 2020.

[39] R. R. Orlandi, T. T. Kingdom, T. L. Smith, B. Bleier, A. DeConde, A. U. Luong, D. M. Poetker, Z. Soler, K. C. Welch, and S. K. Wise, "International consensus statement on allergy and rhinology: Rhinosinusitis 2021," *International Forum of Allergy & Rhinology*, vol. 11, no. 3, pp. 213–739, 2021.

[40] London ENT. Sinusitis. London ENT. Diakses: 8 Juli 2026. [Online]. Available: https://www.london-ent.co.uk/sinusitis/

[41] R. M. Rosenfeld, J. F. Piccirillo, S. S. Chandrasekhar, I. Brook, K. A. Kumar, M. Kramper, R. R. Orlandi, J. N. Palmer, Z. M. Patel, A. Peters, S. A. Walsh, and M. D. Corrigan, "Clinical practice guideline (update): Adult sinusitis," *Otolaryngology–Head and Neck Surgery*, vol. 152, no. 2 Suppl, pp. S1–S39, 2015.

[42] V. Jain, R. Vashisht, G. Yilmaz, and A. Bhardwaj, "Pneumonia pathology," in *StatPearls [Internet]*. Treasure Island, FL: StatPearls Publishing, 2023.

[43] S. B. Bin Abdul Sattar, A. D. Nguyen, and S. Sharma, "Bacterial pneumonia," in *StatPearls [Internet]*. Treasure Island, FL: StatPearls Publishing, 2024.

[44] Marley Drug. Pneumonia. Marley Drug. Diakses: 8 Juli 2026. [Online]. Available: https://www.marleydrug.com/condition/pneumonia

[45] J. P. Metlay, G. W. Waterer, A. C. Long, A. Anzueto, J. Brozek, K. Crothers, L. A. Cooley, N. C. Dean, M. J. Fine, S. A. Flanders, M. R. Griffin, M. L. Metersky, D. M. Musher, M. I. Restrepo, and C. G. Whitney, "Diagnosis and treatment of adults with community-acquired pneumonia. an official clinical practice guideline of the american thoracic society and infectious diseases society of america," *American Journal of Respiratory and Critical Care Medicine*, vol. 200, no. 7, pp. e45–e67, 2019.

[46] J. S. Bradley, C. L. Byington, S. S. Shah, B. Alverson, E. R. Carter, C. Harrison, S. L. Kaplan, S. E. Mace, G. H. McCracken, M. R. Moore, S. D. St Peter, J. A. Stockwell, and J. T. Swanson, "The management of community-acquired pneumonia in infants and children older than 3 months of age: Clinical practice guidelines by the pediatric infectious diseases society and the infectious diseases society of america," *Clinical Infectious Diseases*, vol. 53, no. 7, pp. e25–e76, 2011.

[47] World Health Organization. (2024) Asthma. World Health Organization. Diakses: 8 Juli 2026. [Online]. Available: https://www.who.int/news-room/fact-sheets/detail/asthma

UNIVERSITAS
GADJAH MADA
**Pengembangan Media Pembelajaran Kodifikasi ICD-10 Chapter X Berbasis Augmented Reality dengan Kuis
Bertingkat Metode Leitner**
Naila Indira Priyanto, Adhistya Erna Permanasari, Ir., S.T., M.T., Ph.D., IPM., ASEAN Eng. , Indriana Hidayah, Dr., S
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

[48] Global Initiative for Asthma. (2024) Global strategy for asthma management and prevention. Global Initiative for Asthma (GINA). Diakses: 8 Juli 2026. [Online]. Available: https://ginasthma.org/2024-report/

[49] B. Sinyor and L. Concepcion Perez, "Pathophysiology of asthma," in *StatPearls [Internet]*. Treasure Island, FL: StatPearls Publishing, 2023.

[50] B. L. Graham, I. Steenbruggen, M. R. Miller, I. Z. Barjaktarevic, B. G. Cooper, G. L. Hall, T. S. Hallstrand, D. A. Kaminsky, K. McCarthy, M. C. McCormack, C. E. Oropez, M. Rosenfeld, S. Stanojevic, M. P. Swanney, and B. R. Thompson, "Standardization of spirometry 2019 update. an official american thoracic society and european respiratory society technical statement," *American Journal of Respiratory and Critical Care Medicine*, vol. 200, no. 8, pp. e70–e88, 2019.

[51] R. J. Chen, K. McMahon, and M. V. Launico, "Status asthmaticus," in *StatPearls [Internet]*. Treasure Island, FL: StatPearls Publishing, 2023.

[52] R. Azuma, Y. Baillot, R. Behringer, S. Feiner, S. Julier, and B. MacIntyre, "Recent advances in augmented reality," *IEEE Computer Graphics and Applications*, vol. 21, no. 6, pp. 34–47, 2001.

[53] B. Butchart, "Augmented reality for smartphones: A guide for developers and content publishers," UKOLN, University of Bath, Tech. Rep., 2011.

[54] A. B. Craig, *Understanding Augmented Reality: Concepts and Applications*. San Francisco, CA: Morgan Kaufmann, 2013.

[55] D. Chatzopoulos, C. Bermejo, Z. Huang, and P. Hui, "Mobile augmented reality survey: From where we are to where we go," *IEEE Access*, vol. 5, pp. 6917–6950, 2017.

[56] M. M. Nafea, S. Y. Tan, M. A. Jubair, and M. T. Abd, "A review of lightweight object detection algorithms for mobile augmented reality," *International Journal of Advanced Computer Science and Applications*, vol. 13, no. 11, 2022.

[57] J. C. P. Cheng, K. Chen, and W. Chen, "Comparison of marker-based and markerless ar: A case study of an indoor decoration system," in *Lean and Computing in Construction Congress (LC3): Proceedings of the Joint Conference on Computing in Construction (JC3)*, Heraklion, Greece, 2017, pp. 483–490.

[58] S. Reddy, I. Labutov, S. Banerjee, and T. Joachims, "Unbounded human learning: Optimal scheduling for spaced repetition," in *Proceedings of the 22nd ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD '16)*, San Francisco, CA, 2016, pp. 1815–1824.

[59] D. Zhu, Y. Jing, R. Huang, Y. Gao, Y. Liu, Z. Zou, and W. Liu, "Designing a mobile application for working memory training through understanding the psychological and physiological characteristics of older adults," *Sustainability*, vol. 14, no. 21, p. 14152, 2022.

[60] G. N. Firdaus and M. Marini, "Design user interface/user experience (ui/ux) inventory pada toko asen menggunakan figma," *MALCOM: Indonesian Journal of Machine Learning and Computer Science*, vol. 6, no. 3, pp. 1176–1185, 2026.

UNIVERSITAS
GADJAH MADA
**Pengembangan Media Pembelajaran Kodifikasi ICD-10 Chapter X Berbasis Augmented Reality dengan Kuis
Bertingkat Metode Leitner**
Naila Indira Priyanto, Adhistya Erna Permanasari, Ir., S.T., M.T., Ph.D., IPM., ASEAN Eng. , Indriana Hidayah, Dr., S
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

[61] M. M. de Sousa, C. T. Lopes, A. A. M. Almeida, T. d. C. F. Almeida, B. d. L. A. Gouveia, and S. H. d. S. Oliveira, "Development and validation of a mobile application for heart failure patients self-care," *Revista da Escola de Enfermagem da USP*, vol. 56, p. e20220315, 2023.

[62] L. Soni, A. Kaur, and A. Sharma, "A review on different versions and interfaces of blender software," in *2023 7th International Conference on Trends in Electronics and Informatics (ICOEI)*, Tirunelveli, India, 2023, pp. 882–887.

[63] T. Chlubna, M. Vlnas, T. Milet, and P. Zemčík, "Survey of foss 3d/2d graphics software blender usage in science, academia, and industry," *The Visual Computer*, vol. 42, no. 1, 2026.

[64] D. Rosen and O. Nesic, "A novel approach to design 3d models in medical education," *Medical Science Educator*, vol. 31, no. 2, pp. 317–318, 2021.

[65] T. Hattori, R. Masuda, Y. Moritoh, Y. Imai, Y. Kawakami, and T. Tanaka, "Utilization of both free 3dcg software "blender" and 3d printing for early stem education," in *2020 IEEE International Conference on Teaching, Assessment, and Learning for Engineering (TALE)*, Takamatsu, Japan, 2020, pp. 879–882.

[66] G. Wheeler, S. Deng, N. Toussaint, K. Pushparajah, J. A. Schnabel, J. M. Simpson, and A. Gomez, "Virtual interaction and visualisation of 3d medical imaging data with vtk and unity," *Healthcare Technology Letters*, vol. 5, no. 5, pp. 148–153, 2018.

[67] I. Logothetis, M. Sfyrakis, and N. Vidakis, "Eduardo—unity components for augmented reality environments," *Information*, vol. 14, no. 4, p. 252, 2023.

[68] D. Lee, J. W. Yi, J. Hong, Y. J. Chai, H. C. Kim, and H.-J. Kong, "Augmented reality to localize individual organ in surgical procedure," *Healthcare Informatics Research*, vol. 24, no. 4, pp. 394–401, 2018.

[69] L. Cercenelli, A. De Stefano, A. M. Billi, A. Ruggeri, E. Marcelli, C. Marchetti, L. Manzoli, S. Ratti, and G. Badiali, "Aeducaar, anatomical education in augmented reality: A pilot experience of an innovative educational tool combining ar technology and 3d printing," *International Journal of Environmental Research and Public Health*, vol. 19, no. 3, p. 1024, 2022.

[70] M. Sarosa, A. Chalim, S. Suhari, Z. Sari, and H. B. Hakim, "Developing augmented reality based application for character education using unity with vuforia sdk," *Journal of Physics: Conference Series*, vol. 1375, no. 1, p. 012035, 2019.

[71] B. Beizer, *Black-Box Testing: Techniques for Functional Testing of Software and Systems*. New York: John Wiley & Sons, 1995.

[72] R. Kimla and R. Czerwiński, "A methodical approach to functional exploratory testing for embedded systems," *Applied Sciences*, vol. 12, no. 19, p. 10016, 2022.

[73] L. Mariani, M. Pezzè, O. Riganelli, and M. Santoro, "Autoblacktest: Automatic black-box testing of interactive applications," in *2012 IEEE Fifth International Conference on Software Testing, Verification and Validation (ICST)*, Montreal, QC, Canada, 2012, pp. 81–90.

UNIVERSITAS
GADJAH MADA
**Pengembangan Media Pembelajaran Kodifikasi ICD-10 Chapter X Berbasis Augmented Reality dengan Kuis
Bertingkat Metode Leitner**
Naila Indira Priyanto, Adhistya Erna Permanasari, Ir., S.T., M.T., Ph.D., IPM., ASEAN Eng. , Indriana Hidayah, Dr., S
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

[74] M. E. Khan and M. Sadiq, "Analysis of black box software testing techniques: A case study," in *2011 International Conference and Workshop on Current Trends in Information Technology (CTIT)*, Dubai, United Arab Emirates, 2011, pp. 1–5.

[75] F. Dobslaw, R. Feldt, and F. Gomes de Oliveira Neto, "Automated black-box boundary value detection," *PeerJ Computer Science*, vol. 9, p. e1625, 2023.

[76] J. Scheibmeir and Y. K. Malaiya, "Quality model for testing augmented reality applications," in *2019 IEEE 10th Annual Ubiquitous Computing, Electronics & Mobile Communication Conference (UEMCON)*, New York, NY, USA, 2019, pp. 219–226.

[77] J. H. Kim, Y.-H. Bae, S. S. Kim, M. Lee, and S. H. Ho, "Formative usability evaluation of a three-way digital healthcare system for the people with disabilities and their caregivers: A cross-sectional study," *Healthcare*, vol. 10, no. 11, p. 2325, 2022.

[78] M. Hyzy, R. Bond, M. Mulvenna, L. Bai, A. Dix, S. Leigh, and S. Hunt, "System usability scale benchmarking for digital health apps: Meta-analysis," *JMIR mHealth and uHealth*, vol. 10, no. 8, p. e37290, 2022.

[79] J. R. Lewis and J. Sauro, "The factor structure of the system usability scale," in *Human Centered Design (HCII 2009), Lecture Notes in Computer Science, vol. 5619*, M. Kurosu, Ed. Berlin, Heidelberg: Springer, 2009, pp. 94–103.

[80] A. Bangor, P. Kortum, and J. Miller, "Determining what individual SUS scores mean: Adding an adjective rating scale," *Journal of Usability Studies*, vol. 4, no. 3, pp. 114–123, May 2009. [Online]. Available: https://uxpajournal.org/wp-content/uploads/sites/7/pdf/JUS_Bangor_May2009.pdf

[81] D. Y. Pramesti and R. W. Arifin, "Metode multimedia development life cycle pada media pembelajaran pengenalan perangkat komputer bagi siswa sekolah dasar," *Journal of Students' Research in Computer Science*, vol. 1, no. 2, pp. 109–122, 2020.

[82] F. N. Kumala, A. Ghufron, P. P. Astuti, M. Crismonika, M. N. Hudha, and C. I. R. Nita, "Mdlc model for developing multimedia e-learning on energy concept for primary school students," *Journal of Physics: Conference Series*, vol. 1869, no. 1, p. 012068, 2021.