

## DAFTAR PUSTAKA

- [1] T. Reeves *et al.*, *Usability and Instructional Design Heuristics for E-Learning Evaluation*. 2002.
- [2] T. Bates, “Online learning for beginners: 1. What is online learning?,” *Online Learning and Distance Education Resources*, 2016. <https://www.tonybates.ca/2016/07/15/online-learning-for-beginners-1-what-is-online-learning/>
- [3] B. Giesbers, B. Rienties, D. Tempelaar, and W. Gijssels, “A dynamic analysis of the interplay between asynchronous and synchronous communication in online learning: The impact of motivation,” *J Comput Assist Learn*, vol. 30, no. 1, pp. 30–50, Feb. 2014, doi: <https://doi.org/10.1111/jcal.12020>.
- [4] T. Bates, “A national survey of university online and distance learning in Canada,” *Online Learning and Distance Education Resources*, 2016. <https://www.tonybates.ca/2016/03/23/a-national-survey-of-university-online-and-distance-learning-in-canada/>
- [5] M. Alawamleh, L. M. Al-Twait, and G. R. Al-Saht, “The effect of online learning on communication between instructors and students during Covid-19 pandemic,” *Asian Education and Development Studies*, 2020, doi: 10.1108/AEDS-06-2020-0131.
- [6] K. Anwar and M. Adnan, “Online learning amid the COVID-19 pandemic: Students perspectives,” *Journal of Pedagogical Research*, vol. 1, pp. 45–51, Jun. 2020, doi: 10.33902/JPSP.2020261309.
- [7] S. Dhawan, “Online Learning: A Panacea in the Time of COVID-19 Crisis,” *Journal of Educational Technology Systems*, vol. 49, no. 1, pp. 5–22, 2020, doi: 10.1177/0047239520934018.
- [8] Y. Lin and H. Nguyen, “International Students’ Perspectives on e-Learning During COVID-19 in Higher Education in Australia: A Study of an Asian Student,” *Electronic Journal of e-Learning*, vol. 19, no. 4, pp. pp241-251, Aug. 2021, doi: 10.34190/ejel.19.4.2349.
- [9] K. K. Koo and M. Jiang, “What Does It Mean To Take Online Classes As An International Student During COVID-19?,” *Online Learning*, vol. 26, no. 4, Dec. 2022, doi: 10.24059/olj.v26i4.3495.
- [10] V. H. H. Le and O. T. K. Doan, “Comic Books: Overcoming Challenges in Online Collaborative Learning,” *International Journal of Computer-Assisted Language Learning and Teaching*, vol. 12, no. 4, pp. 1–22, Oct. 2022, doi: 10.4018/IJCALLT.310082.
- [11] M. Segbenya, B. Bervell, V. M. Minadzi, and B. A. Somuah, “Modelling the perspectives of distance education students towards online learning during COVID-19 pandemic,” *Smart Learning Environments*, vol. 9, no. 1, p. 13, Dec. 2022, doi: 10.1186/s40561-022-00193-y.
- [12] Y. Liu *et al.*, “Online Homework Intelligent Platform Based on Self-Regulated Learning (SRL): Essential for Sustainable Development of Online Higher Education,” *Sustainability*, vol. 14, no. 24, p. 16904, Dec. 2022, doi:

- 10.3390/su142416904.
- [13] C.-S. Lai, K.-M. Au, and C.-S. Low, “Beyond Conventional Classroom Learning: Linking Emotions and Self-Efficacy to Academic Achievement and Satisfaction with Online Learning during the COVID-19 Pandemic,” *J Educ Elearn Res*, vol. 8, no. 4, pp. 367–374, Nov. 2021, doi: 10.20448/journal.509.2021.84.367.374.
- [14] L. Song, E. S. Singleton, J. R. Hill, and M. H. Koh, “Improving online learning: Student perceptions of useful and challenging characteristics,” *Internet and Higher Education*, vol. 7, no. 1, pp. 59–70, 2004, doi: 10.1016/j.iheduc.2003.11.003.
- [15] S. Vonderwell, “An examination of asynchronous communication experiences and perspectives of students in an online course: A case study,” *Internet and Higher Education*, vol. 6, no. 1, pp. 77–90, 2003, doi: 10.1016/S1096-7516(02)00164-1.
- [16] E. C. Boling, M. Hough, H. Krinsky, H. Saleem, and M. Stevens, “Cutting the distance in distance education: Perspectives on what promotes positive, online learning experiences,” *Internet and Higher Education*, vol. 15, no. 2, pp. 118–126, 2012, doi: 10.1016/j.iheduc.2011.11.006.
- [17] J. Lau and B. Y. R. Dasgupta, “Will the coronavirus make online education go viral?,” *The World University Ranking*, 2020. <https://www.timeshighereducation.com/features/will-coronavirus-make-online-education-go-viral>
- [18] H. Baber, “Determinants of students’ perceived learning outcome and satisfaction in online learning during the pandemic of COVID19,” *J Educ Elearn Res*, vol. 7, no. 3, pp. 285–292, 2020, doi: 10.20448/JOURNAL.509.2020.73.285.292.
- [19] R. V. Roque-Hernández, J. L. Díaz-Roldán, A. López-Mendoza, and R. Salazar-Hernández, “Instructor presence, interactive tools, student engagement, and satisfaction in online education during the COVID-19 Mexican lockdown,” *Interactive Learning Environments*, vol. 0, no. 0, pp. 1–14, 2021, doi: 10.1080/10494820.2021.1912112.
- [20] G. El-Sayad, N. H. Md Saad, and R. Thurasamy, “How higher education students in Egypt perceived online learning engagement and satisfaction during the COVID-19 pandemic,” *Journal of Computers in Education*, vol. 8, no. 4, pp. 527–550, Dec. 2021, doi: 10.1007/s40692-021-00191-y.
- [21] S. Molinillo, R. Aguilar-Illescas, R. Anaya-Sánchez, and M. Vallespín-Arán, “Exploring the impacts of interactions, social presence and emotional engagement on active collaborative learning in a social web-based environment,” *Comput Educ*, vol. 123, no. November 2017, pp. 41–52, 2018, doi: 10.1016/j.compedu.2018.04.012.
- [22] H. Song, J. Kim, and N. Park, “I Know My Professor: Teacher Self-Disclosure in Online Education and a Mediating Role of Social Presence,” *Int J Hum Comput Interact*, vol. 35, no. 6, pp. 448–455, 2019, doi: 10.1080/10447318.2018.1455126.
- [23] C. W. Park and D. G. Kim, “Perception of instructor presence and its effects on learning experience in online classes,” *Journal of Information Technology*

- Education: Research*, vol. 19, pp. 475–488, 2020, doi: 10.28945/4611.
- [24] K. R. Vareberg, Z. Luo, D. Westerman, M. Bartels, and P. Lindmark, “For a good class, email: Technologically-mediated out-of-class communication and instructional outcomes,” *Internet and Higher Education*, vol. 47, Oct. 2020, doi: 10.1016/j.iheduc.2020.100761.
- [25] J. Lim and J. C. Richardson, “Predictive effects of undergraduate students’ perceptions of social, cognitive, and teaching presence on affective learning outcomes according to disciplines,” *Comput Educ*, vol. 161, no. May 2020, p. 104063, 2021, doi: 10.1016/j.compedu.2020.104063.
- [26] J. M. Orcutt and L. P. Dringus, “Beyond being there: Practices that establish presence, engage students and influence intellectual curiosity in a structured online learning environment,” *Online Learning Journal*, vol. 21, no. 3, pp. 15–35, 2017, doi: 10.24059/olj.v%vi%i.1231.
- [27] D. R. Garrison, T. Anderson, and W. Archer, “Critical Inquiry in a Text-Based Environment: Computer Conferencing in Higher Education,” *Internet High Educ*, vol. 2, no. 2, pp. 87–105, 1999, doi: [https://doi.org/10.1016/S1096-7516\(00\)00016-6](https://doi.org/10.1016/S1096-7516(00)00016-6).
- [28] T. Anderson, L. Rourke, R. Garrison, and W. Archer, “Assessing teaching presence in a computer conferencing context,” *Online Learning*, vol. 5, no. 2, Mar. 2001, doi: 10.24059/olj.v5i2.1875.
- [29] J. C. Richardson and K. Swan, “Examining social presence in online courses in relation to students’ perceived learning and satisfaction,” *Online Learning*, vol. 7, no. 1, Mar. 2003, doi: 10.24059/olj.v7i1.1864.
- [30] J. C. Richardson, A. A. Koehler, E. D. Besser, S. Caskurlu, J. Lim, and C. M. Mueller, “Conceptualizing and investigating instructor presence in online learning environments,” *The International Review of Research in Open and Distributed Learning*, vol. 16, no. 3, Jun. 2015, doi: 10.19173/irrodl.v16i3.2123.
- [31] J. B. Arbaugh and R. Benbunan-Finch, “An Investigation of Epistemological and Social Dimensions of Teaching in Online Learning Environments,” *Academy of Management Learning & Education*, vol. 5, no. 4, pp. 435–447, Dec. 2006, doi: 10.5465/amle.2006.23473204.
- [32] R. Benbunan-Fich and S. R. Hiltz, “Mediators of the effectiveness of online courses,” *IEEE Trans Prof Commun*, vol. 46, no. 4, pp. 298–312, 2003, doi: 10.1109/TPC.2003.819639.
- [33] Z. Akyol, D. R. Garrison, and M. Y. Ozden, “Development of a community of inquiry in online and blended learning contexts,” *Procedia Soc Behav Sci*, vol. 1, no. 1, pp. 1834–1838, 2009, doi: <https://doi.org/10.1016/j.sbspro.2009.01.324>.
- [34] D. R. Garrison, M. Cleveland-Innes, and T. S. Fung, “Exploring causal relationships among teaching, cognitive and social presence: Student perceptions of the community of inquiry framework,” *Internet High Educ*, vol. 13, no. 1, pp. 31–36, 2010, doi: <https://doi.org/10.1016/j.iheduc.2009.10.002>.
- [35] K. Kwon, Y.-H. Liu, and L. P. Johnson, “Group regulation and social-emotional interactions observed in computer supported collaborative

- learning: Comparison between good vs. poor collaborators,” *Comput Educ*, vol. 78, pp. 185–200, 2014, doi: <https://doi.org/10.1016/j.compedu.2014.06.004>.
- [36] E. Vuopala, P. Hyvönen, and S. Järvelä, “Interaction forms in successful collaborative learning in virtual learning environments,” *Active Learning in Higher Education*, vol. 17, no. 1, pp. 25–38, Nov. 2015, doi: [10.1177/1469787415616730](https://doi.org/10.1177/1469787415616730).
- [37] D. R. Garrison and M. Cleveland-Innes, “Facilitating Cognitive Presence in Online Learning: Interaction Is Not Enough,” *American Journal of Distance Education*, vol. 19, no. 3, pp. 133–148, Sep. 2005, doi: [10.1207/s15389286ajde1903\\_2](https://doi.org/10.1207/s15389286ajde1903_2).
- [38] J. Onrubia and A. Engel, “The role of teacher assistance on the effects of a macro-script in collaborative writing tasks,” *Int J Comput Support Collab Learn*, vol. 7, no. 1, pp. 161–186, 2012, doi: [10.1007/s11412-011-9125-9](https://doi.org/10.1007/s11412-011-9125-9).
- [39] J. Yuan and C. Kim, “Guidelines for facilitating the development of learning communities in online courses,” *J Comput Assist Learn*, vol. 30, no. 3, pp. 220–232, Jun. 2014, doi: [10.1111/jcal.12042](https://doi.org/10.1111/jcal.12042).
- [40] J. Banna, M.-F. Lin, M. Stewart, and M. Fialkowski, “Interaction matters: Strategies to promote engaged learning in an online introductory nutrition course,” *MERLOT Journal of Online Learning and Teaching*, vol. 11, Aug. 2015.
- [41] F. Martin and D. U. Bolliger, “Engagement Matters: Student Perceptions on the Importance of Engagement Strategies in the Online Learning Environment,” *Online Learning*, vol. 22, no. 1, Mar. 2018, doi: [10.24059/olj.v22i1.1092](https://doi.org/10.24059/olj.v22i1.1092).
- [42] R. Kaufmann and J. I. Vallade, “Exploring connections in the online learning environment: student perceptions of rapport, climate, and loneliness,” *Interactive Learning Environments*, vol. 0, no. 0, pp. 1–15, 2020, doi: [10.1080/10494820.2020.1749670](https://doi.org/10.1080/10494820.2020.1749670).
- [43] V. P. Dennen, “Facilitator presence and identity in online discourse: use of positioning theory as an analytic framework,” *Instr Sci*, vol. 39, no. 4, pp. 527–541, 2011, doi: [10.1007/s11251-010-9139-0](https://doi.org/10.1007/s11251-010-9139-0).
- [44] F. Martin, C. Wang, and A. Sadaf, “Student perception of helpfulness of facilitation strategies that enhance instructor presence, connectedness, engagement and learning in online courses,” *Internet and Higher Education*, vol. 37, no. March 2017, pp. 52–65, 2018, doi: [10.1016/j.iheduc.2018.01.003](https://doi.org/10.1016/j.iheduc.2018.01.003).
- [45] J. Dietrich, A.-L. Dicke, B. Kracke, and P. Noack, “Teacher support and its influence on students’ intrinsic value and effort: Dimensional comparison effects across subjects,” *Learn Instr*, vol. 39, pp. 45–54, 2015, doi: <https://doi.org/10.1016/j.learninstruc.2015.05.007>.
- [46] S. J. Lee, S. Srinivasan, T. Trail, D. Lewis, and S. Lopez, “Examining the relationship among student perception of support, course satisfaction, and learning outcomes in online learning,” *Internet High Educ*, vol. 14, no. 3, pp. 158–163, 2011, doi: <https://doi.org/10.1016/j.iheduc.2011.04.001>.
- [47] Y.-C. Kuo, A. E. Walker, K. E. E. Schroder, and B. R. Belland, “Interaction,

- Internet self-efficacy, and self-regulated learning as predictors of student satisfaction in online education courses,” *Internet High Educ*, vol. 20, pp. 35–50, 2014, doi: <https://doi.org/10.1016/j.iheduc.2013.10.001>.
- [48] A. Purarjomandlangrudi, D. Chen, and A. Nguyen, “Investigating the Drivers of Student Interaction and Engagement in Online Courses: A Study of State-of-the-art,” *Informatics in Education*, vol. 15, no. 2, pp. 269–286, Oct. 2016, doi: 10.15388/infedu.2016.14.
- [49] Y.-C. Kuo, A. Walker, and K. Schroder, “Interaction and Other Variables as Predictors of Student Satisfaction in Online Learning Environments,” in *Society for Information Technology & Teacher Education International Conference*, San Diego, CA, USA: Association for the Advancement of Computing in Education (AACE), Mar. 2010, pp. 593–600.
- [50] Y.-C. Kuo, A. E. Walker, B. R. Belland, K. E. E. Schroder, and Y.-T. Kuo, “A case study of integrating Interwise: Interaction, internet self-efficacy, and satisfaction in synchronous online learning environments,” *The International Review of Research in Open and Distributed Learning*, vol. 15, no. 1, Jan. 2014, doi: 10.19173/irrodl.v15i1.1664.
- [51] M. Moallem, R. Pastore, and F. Martin, “Interaction in Online Learning: A Comparative Study on the Impact of Communication Tools on Student Learning, Motivation, Self-regulation, and Satisfaction,” in *Society for Information Technology & Teacher Education International Conference*, New Orleans, Louisiana, United States: Association for the Advancement of Computing in Education (AACE), Mar. 2013, pp. 2286–2306.
- [52] P. Shank and V. Doughty, “Learning Anew: An Exploratory Study about New Online Learners’ Perceptions of People Interaction and Learning to Learn in an Online Course,” in *EdMedia + Innovate Learning*, Denver, Colorado, USA: Association for the Advancement of Computing in Education (AACE), 2002, pp. 2167–2171.
- [53] H.-Y. Ku, H. W. Tseng, and C. Akarasriworn, “Collaboration factors, teamwork satisfaction, and student attitudes toward online collaborative learning,” *Comput Human Behav*, vol. 29, no. 3, pp. 922–929, May 2013, doi: 10.1016/j.chb.2012.12.019.
- [54] J. T. Y. Tsang, M. K. P. So, A. C. Y. Chong, B. S. Y. Lam, and A. M. Y. Chu, “Higher education during the pandemic: The predictive factors of learning effectiveness in covid-19 online learning,” *Educ Sci (Basel)*, vol. 11, no. 8, Aug. 2021, doi: 10.3390/educsci11080446.
- [55] M. Thanasi-Boçe, “The Role of the Instructor, Motivation, and Interaction in Building Online Learning Satisfaction during the COVID-19 Pandemic,” *The Electronic Journal of e-Learning*, vol. 19, no. 5, pp. 401–415, 2021, [Online]. Available: [www.ejel.org](http://www.ejel.org)
- [56] K. Kozan and J. C. Richardson, “Interrelationships between and among social, teaching, and cognitive presence,” *Internet High Educ*, vol. 21, pp. 68–73, Apr. 2014, doi: 10.1016/j.iheduc.2013.10.007.
- [57] M. Oztok, D. Zingaro, A. Makos, C. Brett, and J. Hewitt, “Capitalizing on social presence: The relationship between social capital and social presence,” *Internet High Educ*, vol. 26, pp. 19–24, Jul. 2015, doi:

- 10.1016/j.iheduc.2015.04.002.
- [58] J. B. Arbaugh *et al.*, “Developing a community of inquiry instrument: Testing a measure of the Community of Inquiry framework using a multi-institutional sample,” *Internet High Educ*, vol. 11, no. 3–4, pp. 133–136, Jan. 2008, doi: 10.1016/j.iheduc.2008.06.003.
- [59] F.-L. Fu, Y.-L. Wu, and H.-C. Ho, “An investigation of cooperative pedagogic design for knowledge creation in Web-based learning,” *Comput Educ*, vol. 53, no. 3, pp. 550–562, Nov. 2009, doi: 10.1016/j.compedu.2009.01.004.
- [60] F. Biocca, C. Harms, and J. K. Burgoon, “Toward a More Robust Theory and Measure of Social Presence: Review and Suggested Criteria,” *Presence: Teleoperators and Virtual Environments*, vol. 12, no. 5, pp. 456–480, Oct. 2003, doi: 10.1162/105474603322761270.
- [61] K. S. Thweatt and J. C. McCroskey, “The impact of teacher immediacy and misbehaviors on teacher credibility,” *Commun Educ*, vol. 47, no. 4, pp. 348–358, Oct. 1998, doi: 10.1080/03634529809379141.
- [62] O. A. D’Alba, “A case study of student instructor connectedness in an asynchronous modular online environment,” 2014.
- [63] A. L. Vangelisti and J. P. Caughlin, “Revealing Family Secrets: The Influence of Topic, Function, and Relationships,” *J Soc Pers Relat*, vol. 14, no. 5, pp. 679–705, Oct. 1997, doi: 10.1177/0265407597145006.
- [64] F. M. Newmann, G. G. Wehlage, and S. D. Lamborn, “The Significance and Sources of Student Engagement,” in *Student Engagement and Achievement in American Secondary Schools*, F. M. Newmann, Ed., New York: Teachers College Press, 1992, pp. 11–39.
- [65] J. Dymont, C. Stone, and N. Milthorpe, “Beyond busy work: rethinking the measurement of online student engagement,” *Higher Education Research & Development*, vol. 39, no. 7, pp. 1440–1453, Nov. 2020, doi: 10.1080/07294360.2020.1732879.
- [66] J. A. Fredricks, P. C. Blumenfeld, and A. H. Paris, “School Engagement: Potential of the Concept, State of the Evidence,” *Rev Educ Res*, vol. 74, no. 1, pp. 59–109, Mar. 2004, doi: 10.3102/00346543074001059.
- [67] L. Blicher, “Evaluating Quality in the Online Classroom,” in *Encyclopedia of Distance Learning*, P. L. Rogers, G. A. Berg, J. v. Boettcher, C. Boettcher, L. Justice, and K. D. Schenk, Eds., Hershey, PA: IGI Global, 2009, pp. 965–973.
- [68] J. I. Vallade and R. Kaufmann, “Instructor misbehavior and student outcomes: Replication and extension in the online classroom,” *Journal of Research on Technology in Education*, vol. 53, no. 2, pp. 206–222, 2021, doi: 10.1080/15391523.2020.1766389.
- [69] S. B. Eom and N. Ashill, “The Determinants of Students’ Perceived Learning Outcomes and Satisfaction in University Online Education: An Update\*,” *Decision Sciences Journal of Innovative Education*, vol. 14, no. 2, pp. 185–215, Apr. 2016, doi: 10.1111/dsji.12097.
- [70] R. B. Ikhsan, L. A. Saraswati, B. G. Muchardie, Vional, and A. Susilo, “The Determinants of Students’ Perceived Learning Outcomes and Satisfaction in BINUS Online Learning,” in *2019 5th International Conference on New*

- Media Studies (CONMEDIA)*, Oct. 2019, pp. 68–73. doi: 10.1109/CONMEDIA46929.2019.8981813.
- [71] B. Chen, K. Bastedo, and W. Howard, “Exploring design elements for online STEM courses: Active learning, engagement & assessment design,” *Online Learning Journal*, vol. 22, no. 2, pp. 59–76, 2018, doi: 10.24059/olj.v22i2.1369.
- [72] C. Y. Su and Y. Guo, “Factors impacting university students’ online learning experiences during the COVID-19 epidemic,” *J Comput Assist Learn*, vol. 37, no. 6, pp. 1578–1590, Dec. 2021, doi: 10.1111/jcal.12555.
- [73] Y.-S. Wang, “Assessment of learner satisfaction with asynchronous electronic learning systems,” *Information & Management*, vol. 41, no. 1, pp. 75–86, Oct. 2003, doi: 10.1016/S0378-7206(03)00028-4.
- [74] J. Ponto, “Understanding and Evaluating Survey Research.,” *J Adv Pract Oncol*, vol. 6, no. 2, pp. 168–71, 2015, [Online]. Available: <http://www.ncbi.nlm.nih.gov/pubmed/26649250>
- [75] J. Check and R. K. Schutt, “Survey Research,” in *Research Methods in Education*, J. Check and R. K. Schutt, Eds., Thousand Oaks, CA: SAGE Publications, Inc., 2012, pp. 159–186. doi: 10.4135/9781544307725.n8.
- [76] R. Singleton and B. C. Straits, *Approaches to Social Research*. Oxford University Press, 2010. [Online]. Available: <https://books.google.co.id/books?id=o5yePwAACAAJ>
- [77] L. Klem, “Structural Equation Modeling,” in *Reading and Understanding MORE Multivariate Statistics*, Laurence G. Grimm and Paul R. Yarnold, Eds., Washington, DC: American Psychological Association, 2000, pp. 227–260.
- [78] R. Weston and P. A. , Jr. Gore, “A Brief Guide to Structural Equation Modeling,” *Couns Psychol*, vol. 34, no. 5, pp. 719–751, 2006, doi: 10.1177/0011000006286345.
- [79] J. H. Kahn, “Factor Analysis in Counseling Psychology Research, Training, and Practice,” *Couns Psychol*, vol. 34, no. 5, pp. 684–718, Sep. 2006, doi: 10.1177/0011000006286347.
- [80] N. Hernández-Sellés, Pablo-César Muñoz-Carril, and M. González-Sanmamed, “Computer-supported collaborative learning: An analysis of the relationship between interaction, emotional support and online collaborative tools,” *Comput Educ*, vol. 138, pp. 1–12, Sep. 2019, doi: 10.1016/j.compedu.2019.04.012.
- [81] G. Dash and J. Paul, “CB-SEM vs PLS-SEM methods for research in social sciences and technology forecasting,” *Technol Forecast Soc Change*, vol. 173, p. 121092, Dec. 2021, doi: 10.1016/j.techfore.2021.121092.
- [82] J. F. , Jr. Hair, L. M. Matthews, R. L. Matthews, and M. Sarstedt, “PLS-SEM or CB-SEM: updated guidelines on which method to use,” *International Journal of Multivariate Data Analysis*, vol. 1, no. 2, p. 107, 2017, doi: 10.1504/IJMDA.2017.087624.
- [83] J. F. , Jr. Hair, G. T. M. Hult, C. M. Ringle, and M. Sarstedt, *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, 2nd ed. Thousand Oaks, CA: SAGE Publications, Inc, 2017.

- [84] J. F. Hair, M. Sarstedt, C. M. Ringle, and J. A. Mena, "An assessment of the use of partial least squares structural equation modeling in marketing research," *J Acad Mark Sci*, vol. 40, no. 3, pp. 414–433, May 2012, doi: 10.1007/s11747-011-0261-6.
- [85] L. G. Grimm and P. R. Yarnold, *Reading and Understanding Multivariate Statistics*. Washington, DC: American Psychological Association, 1995.
- [86] K. A. Bollen, "A New Incremental Fit Index for General Structural Equation Models," *Sociol Methods Res*, vol. 17, no. 3, pp. 303–316, Feb. 1989, doi: 10.1177/0049124189017003004.
- [87] R. M. Baron and D. A. Kenny, "The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations.," *J Pers Soc Psychol*, vol. 51, no. 6, pp. 1173–1182, 1986, doi: 10.1037/0022-3514.51.6.1173.
- [88] D. A. Dillman, J. D. Smyth, and L. M. Christian, *Internet, Phone, Mail, and Mixed-Mode Surveys: The Tailored Design Method, 4th Edition*. Hoboken, NJ: John Wiley & Sons, Inc., 2014.
- [89] J. J. Hoogland and A. Boomsma, "Robustness Studies in Covariance Structure Modeling: An Overview and a Meta-Analysis," *Sociol Methods Res*, vol. 26, no. 3, pp. 329–367, 1998, doi: 10.1177/0049124198026003003.
- [90] R. B. Kline, *Principles and Practice of Structural Equation Modeling*. New York: Guilford, 1998.
- [91] P. Westfall and K. S. S. Henning, *Understanding Advanced Statistical Methods*. Chapman and Hall/CRC, 2013. doi: 10.1201/b14398.
- [92] R. B. Kline, *Principles and Practice of Structural Equation Modeling, Second Edition*. in *Methodology in the Social Sciences*. Guilford Publications, 2005. [Online]. Available: <https://books.google.co.id/books?id=EkMVZUxZrgIC>
- [93] R. A. L. F. van Griethuijsen *et al.*, "Global Patterns in Students' Views of Science and Interest in Science," *Res Sci Educ*, vol. 45, no. 4, pp. 581–603, 2015, doi: 10.1007/s11165-014-9438-6.
- [94] J. C. Nunnally, "An Overview of Psychological Measurement," in *Clinical Diagnosis of Mental Disorders*, Boston, MA: Springer US, 1978, pp. 97–146. doi: 10.1007/978-1-4684-2490-4\_4.
- [95] W. W. Chin, "The Partial Least Squares Approach for Structural Equation Modeling," in *Modern Methods for Business Research*, G. A. Marcoulides, Ed., Psychology Press, 1998, pp. 295–336. doi: 10.4324/9781410604385.
- [96] D. Barclay, R. Thompson, and C. Higgins, "The Partial Least Squares (PLS) Approach to Causal Modeling: Personal Computer Use as an Illustration," *Technology Studies*, vol. 2, Jan. 1995.
- [97] C. Fornell and D. F. Larcker, "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error," *Journal of Marketing Research*, vol. 18, no. 1, pp. 39–50, 1981, doi: 10.2307/3151312.
- [98] J. F. Hair, B. J. Babin, and N. Krey, "Covariance-Based Structural Equation Modeling in the Journal of Advertising: Review and Recommendations," *J Advert*, vol. 46, no. 3, pp. 454–454, Jul. 2017, doi: 10.1080/00913367.2017.1329496.

- [99] J. C. Anderson and D. W. Gerbing, "Structural equation modeling in practice: A review and recommended two-step approach.," *Psychol Bull*, vol. 103, no. 3, pp. 411–423, May 1988, doi: 10.1037/0033-2909.103.3.411.
- [100] J. P. Stevens, *Applied Multivariate Statistics for the Social Sciences*. Routledge, 2012. doi: 10.4324/9780203843130.
- [101] J. C. Anderson and D. W. Gerbing, "The effect of sampling error on convergence, improper solutions, and goodness-of-fit indices for maximum likelihood confirmatory factor analysis," *Psychometrika*, vol. 49, no. 2, pp. 155–173, 1984, doi: 10.1007/BF02294170.
- [102] S. A. Mulaik and R. E. Millsap, "Doing the Four-Step Right," *Struct Equ Modeling*, vol. 7, no. 1, pp. 36–73, Jan. 2000, doi: 10.1207/S15328007SEM0701\_02.
- [103] M. P. Martens, "The Use of Structural Equation Modeling in Counseling Psychology Research," *Couns Psychol*, vol. 33, no. 3, pp. 269–298, May 2005, doi: 10.1177/0011000004272260.
- [104] R. H. Hoyle and A. T. Panter, "Writing about Structural Equation Models," in *Structural Equation Modeling: Concepts, Issues, and Applications*, R. H. Hoyle, Ed., SAGE Publications, Inc, 1995, pp. 158–176.
- [105] D. A. Kenny, "Measuring Model Fit," <http://www.davidakenny.net/cm/fit.htm>, Jul. 05, 2020.
- [106] D. Hooper, J. Coughlan, and M. Mullen, "Structural Equation Modeling: Guidelines for Determining Model Fit," *The Electronic Journal of Business Research Methods*, vol. 6, Nov. 2007.
- [107] H. W. Marsh and D. Hocevar, "Application of confirmatory factor analysis to the study of self-concept: First- and higher order factor models and their invariance across groups.," *Psychol Bull*, vol. 97, no. 3, pp. 562–582, May 1985, doi: 10.1037/0033-2909.97.3.562.
- [108] H. Doloi, A. Sawhney, and K. C. Iyer, "Structural equation model for investigating factors affecting delay in Indian construction projects," *Construction Management and Economics*, vol. 30, no. 10, pp. 869–884, Oct. 2012, doi: 10.1080/01446193.2012.717705.
- [109] J. Jaccard and C. K. Wan, *LISREL approaches to interaction effects in multiple regression*, no. 114. sage, 1996.
- [110] M. W. Browne and R. Cudeck, "Alternative Ways of Assessing Model Fit," in *Testing Structural Equation Models*, K. A. Bollen and J. S. Long, Eds., SAGE Publications, Inc, 1993, pp. 136–162.
- [111] A. Diamantopoulos and J. Siguaw, *Introducing LISREL*. 1 Oliver's Yard, 55 City Road, London England EC1Y 1SP United Kingdom : SAGE Publications, Ltd, 2000. doi: 10.4135/9781849209359.
- [112] P. M. Bentler, *EQS Structural Equations Program Manual*. Multivariate Software, 1995. [Online]. Available: <https://books.google.co.id/books?id=9ZruAAAAMAAJ>
- [113] L. Hu and P. M. Bentler, "Evaluating model fit," in *Structural Equation Modeling: Concepts, Issues, and Applications*, R. H. Hoyle, Ed., SAGE Publications, Inc, 1995, pp. 76–99.
- [114] F. Jafari, H. Azadi, A. Abdi, N. Salari, and A. Faraji, "Cultural validation of

- the competence in evidence-based practice questionnaire (EBP-COQ) for nursing students.,” *J Educ Health Promot*, vol. 10, p. 464, 2021, doi: 10.4103/jehp.jehp\_1534\_20.
- [115] M. Norberg *et al.*, “Components of Metabolic Syndrome Predicting Diabetes: No Role of Inflammation or Dyslipidemia\*,” *Obesity*, vol. 15, no. 7, pp. 1875–1885, Jul. 2007, doi: 10.1038/oby.2007.222.
- [116] Y. Q. Chen, Y. B. Zhang, J. Y. Liu, and P. Mo, “Interrelationships among Critical Success Factors of Construction Projects Based on the Structural Equation Model,” *Journal of Management in Engineering*, vol. 28, no. 3, pp. 243–251, Jul. 2012, doi: 10.1061/(ASCE)ME.1943-5479.0000104.
- [117] J. Cohen, *Statistical Power Analysis for the Behavioral Sciences (2nd ed.)*. Routledge, 1988. doi: 10.4324/9780203771587.
- [118] P. I. Santosa, *Metode Penelitian Kuantitatif: Pengembangan Hipotesis Dan Pengujiannya Menggunakan SmartPLS*. Yogyakarta: Andi, 2018.
- [119] P. Barrett, “Structural equation modelling: Adjudging model fit,” *Pers Individ Dif*, vol. 42, no. 5, pp. 815–824, May 2007, doi: 10.1016/j.paid.2006.09.018.
- [120] F. Martin and D. U. Bolliger, “Engagement matters: Student perceptions on the importance of engagement strategies in the online learning environment,” *Online Learning Journal*, vol. 22, no. 1, pp. 205–222, 2018, doi: 10.24059/olj.v22i1.1092.
- [121] R. Guo, Y. Shen, and L. Li, “Using social media to improve student-instructor communication in an online learning environment,” *International Journal of Information and Communication Technology Education*, vol. 14, no. 1, pp. 33–43, 2018, doi: 10.4018/IJICTE.2018010103.
- [122] B. Xu, N. S. Chen, and G. Chen, “Effects of teacher role on student engagement in WeChat-Based online discussion learning,” *Comput Educ*, vol. 157, no. November 2019, p. 103956, 2020, doi: 10.1016/j.compedu.2020.103956.
- [123] H. Robles, J. Guerrero, H. Llinás, and P. Montero, “Online teacher-students interactions using Whatsapp in a law course,” *Journal of Information Technology Education: Research*, vol. 18, pp. 231–252, 2019, doi: 10.28945/4321.
- [124] N. Hernández-Sellés, Pablo-César Muñoz-Carril, and M. González-Sanmamed, “Computer-supported collaborative learning: An analysis of the relationship between interaction, emotional support and online collaborative tools,” *Comput Educ*, vol. 138, no. February, pp. 1–12, 2019, doi: 10.1016/j.compedu.2019.04.012.
- [125] J. K. Olsen, L. Faucon, and P. Dillenbourg, “Transferring interactive activities in large lectures from face-to-face to online settings,” *Information and Learning Science*, vol. 121, no. 7–8, pp. 559–567, 2020, doi: 10.1108/ILS-04-2020-0109.
- [126] C. Y. Su and Y. Guo, “Factors impacting university students’ online learning experiences during the COVID-19 epidemic,” *J Comput Assist Learn*, vol. 37, no. 6, pp. 1578–1590, Dec. 2021, doi: 10.1111/jcal.12555.
- [127] J. T. Y. Tsang, M. K. P. So, A. C. Y. Chong, B. S. Y. Lam, and A. M. Y. Chu,

- “Higher education during the pandemic: The predictive factors of learning effectiveness in covid-19 online learning,” *Educ Sci (Basel)*, vol. 11, no. 8, Aug. 2021, doi: 10.3390/educsci11080446.
- [128] B. Chen, K. Bastedo, and W. Howard, “Exploring design elements for online STEM courses: Active learning, engagement & assessment design,” *Online Learning Journal*, vol. 22, no. 2, pp. 59–76, 2018, doi: 10.24059/olj.v22i2.1369.
- [129] J. I. Vallade and R. Kaufmann, “Instructor misbehavior and student outcomes: Replication and extension in the online classroom,” *Journal of Research on Technology in Education*, vol. 53, no. 2, pp. 206–222, 2021, doi: 10.1080/15391523.2020.1766389.
- [130] M. Thanasi-Boçe, “The Role of the Instructor, Motivation, and Interaction in Building Online Learning Satisfaction during the COVID-19 Pandemic,” *The Electronic Journal of e-Learning*, vol. 19, no. 5, pp. 401–415, 2021, [Online]. Available: [www.ejel.org](http://www.ejel.org)
- [131] K. E. Wilson, M. Martinez, C. Mills, S. D’Mello, D. Smilek, and E. F. Risko, “Instructor presence effect: Liking does not always lead to learning,” *Comput Educ*, vol. 122, no. March, pp. 205–220, 2018, doi: 10.1016/j.compedu.2018.03.011.
- [132] J. Wang and P. D. Antonenko, “Instructor presence in instructional video: Effects on visual attention, recall, and perceived learning,” *Comput Human Behav*, vol. 71, pp. 79–89, 2017, doi: 10.1016/j.chb.2017.01.049.