

Literature review, meta-analysis, and technology overview articles

This page lists literature review, meta-analysis and technology overview articles that are potentially relevant for doctoral students in the edTech research group, School of Computing, UEF.

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Research methodology

Hrastinski, S., & Keller, C. (2007). An examination of research approaches that underlie research on educational technology: A review from 2000 to 2004. *Journal of Educational Computing Research*, 36(2), 175–190. <http://doi.org/10.2190/H16L-4662-6000-0446>

ICT for Development

Misaki E., Apiola M., Gaiani S., & Tedre M. (2018). Challenges facing sub-Saharan small-scale farmers in accessing farming information through mobile phones: A systematic literature review. *The Electronic Journal of Information Systems in Developing Countries*. <http://doi.org/10.1002/isd2.12034>

Mramba, N., Rumanyika, J., Apiola, M., & Suhonen, J. (2017). ICT for informal workers in Sub-Saharan Africa: Systematic review and analysis. In *2017 IEEE AFRICON* (pp. 486–491). IEEE. <http://doi.org/10.1109/AFRCON.2017.8095530>

Online/Distance/Blended learning

Liyanagunawardena, T., Adams, A., & Williams, S. (2013). MOOCs: A systematic study of the published literature 2008-2012. *The International Review of Research in Open and Distributed Learning*, 14(3). Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/1455>

Hart, C. (2012). Factors associated with student persistence in an online program of study: A review of literature. *Journal of Interactive Online Learning*, 11(1), 19–42. Retrieved from <http://www.ncolr.org/jiol/issues/pdf/11.1.2.pdf>

Jopling, M. (2011). 1:1 online tuition: a review of the literature from a pedagogical perspective. *Journal of Computer Assisted Learning*, 28(4), 1893–1925. <http://doi.org/10.1111/j.1365-2729.2011.00441.x>

Lee, S. W.-Y., Tsai, C. C., Wu, Y., Tsai, M.-J., Liu, T. C., Hwang, F.-K., ... Chang, C.-Y. (2011). Internet-based Science Learning: A review of journal publications. *International Journal of Science Education*, 33(14), 1893–1925. <http://doi.org/10.1080/09500693.2010.536998>

Lee, Y., & Choi, J. (2011). A review of online course dropout research: implications for practice and future research. *Educational Technology Research and Development*, 59(5), 593–618. Retrieved from <http://dx.doi.org/10.1007/s11423-010-9177-y>

Simonson, M., Schlosser, C., & Orellana, A. (2011). Distance education research: a review of the literature. *Journal of Computing in Higher Education*, 23(2–3), 124–142. <http://doi.org/10.1007/s12528-011-9045-8>

Means, B., Touama, Y., Murphy, R., Bakia, M., & Jones, K. (2010). *Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies*. U.S. Department of Education. Retrieved from <https://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf>

Social media in education

Hamza HAA, & Kommers P. (2018). A review on effect of social media on education in Sudan. *International Journal of Educational Technology and Learning*, 3(1), 17–23. <http://scipg.com/index.php/101/article/view/122>

Manca, S., & Ranieri, M. (2016). Is Facebook still a suitable technology-enhanced learning environment? An updated critical review of the literature from 2012 to 2015. *Journal of Computer Assisted Learning*, 32(6), 503–528. <http://doi.org/10.1111/jcal.12154>

Tess, P. (2013). The role of social media in higher education classes (real and virtual) - A literature review. *Computers in Human, 29(5)*, A60–A68. <http://doi.org/10.1016/j.chb.2012.12.032>

Gao, F., Luo, T., & Zhang, K. (2012). Tweeting for learning: A critical analysis of research on microblogging in education published in 2008-2011. *British Journal of Educational Technology*, 43(5), 783–801. <http://doi.org/doi:10.1111/j.1467-8535.2012.01357.x>

- Guy, R. (2012). The use of social media for academic practice: A review of literature. *Kentucky Journal of Higher Education Policy and Practice*, 1(2).
- Novak, E., Razzouk, R., & Johnson, T. E. (2012). The educational use of social annotation tools in higher education: A literature review. *The Internet and Higher Education*, 15(1), 39–49. <http://doi.org/10.1016/j.iheduc.2011.09.002>
- Conole, G., & Alevizou, P. (2010). *A literature review of the use of web2.0 tools in higher education*. Retrieved from <http://oro.open.ac.uk/23154/>
- Sim, J. W. S., & Hew, K. F. (2010). The use of weblogs in higher education settings: A review of empirical research. *Educational Research Review*, 5(2), 151–163.
- Minocha, S. (2009). Role of social software tools in education: a literature review. *Education + Training*, 51(5/6), 353–369. <http://doi.org/10.1108/00400910910987174>

Mobile learning

- Bano, M., Zowghi, D., Kearney, M., Schuck, S., & Aubusson, P. (2018). Mobile learning for science and mathematics school education: A systematic review of empirical evidence. *Computers & Education*, 121, 30–58. <http://doi.org/10.1016/j.compedu.2018.02.006>
- Fu, Q.-K., & Hwang, G.-J. (2018). Trends in mobile technology-supported collaborative learning: A systematic review of journal publications from 2007 to 2016. *Computers & Education*, 119, 129–143. <http://doi.org/https://doi.org/10.1016/j.compedu.2018.01.004>
- Crompton, H., Burke, D., & Gregory, K. H. (2017). The use of mobile learning in PK-12 education: A systematic review. *Computers & Education*, 110, 51–63. <http://doi.org/10.1016/j.compedu.2017.03.013>
- Anohah, E., Oyelere, S. S., & Suhonen, J. (2017). Trends of mobile learning in computing education from 2006 to 2014: A systematic review of research publications. *International Journal of Mobile and Blended Learning*, 9(1). <http://doi.org/10.4018/IJMBL.2017010102>
- Nguyen, L., Barton, S. M., & Nguyen, L. T. (2015). iPads in higher education-Hype and hope. *British Journal of Educational Technology*, 46(1), 190–203. <http://doi.org/10.1111/bjet.12137>
- Baran, E. (2014). A review of research on mobile learning in teacher education. *Journal of Educational Technology & Society*, 17(4), 17–32. Retrieved from <http://www.jstor.org/stable/jeductechsoci.17.4.17>
- Hwang, G. J., & Wu, P.-H. (2014). Applications, impacts and trends of mobile technology-enhanced learning: a review of 2008-2012 publications in selected SSCI journals. *International Journal of Mobile Learning and Organisation*, 8(2), 83–95.
- Pereira, O. R. E., & Rodrigues, J. J. P. C. (2013). Survey and analysis of current mobile learning applications and technologies. *ACM Computing Surveys*, 46(2), 1–35. <http://doi.org/10.1145/2543581.2543594>
- Wu, W. H., Wu, Y. C., Chen, C. Y., Kao, H. Y., Lin, C. H., & Huang, S. H. (2012). Review of trend from mobile learning studies: a meta-analysis. *Computers & Education*, 59(2), 817–827. <http://doi.org/j.compedu.2012.03.016>
- Hwang, G.-J., & Tsai, C.-C. (2011). Research trends in mobile and ubiquitous learning: a review of publications in selected journals from 2001 to 2010. *British Journal of Educational Technology*, 42(4), E65–E70. <http://doi.org/10.1111/j.1467-8535.2011.01183.x>
- Laine, T. H., & Joy, M. (2009). Survey on context-aware pervasive learning environments. *International Journal of Interactive Mobile Technologies*, 3(1). Retrieved from <http://online-journals.org/i-jim/article/view/680>

STEM

- Bray, A., & Tangney, B. (2017). Technology usage in mathematics education research - A systematic review of recent trends. *Computers & Education*, 114, 255–273. <http://doi.org/10.1016/j.compedu.2017.07.004>
- Potkonjak, V., Gardner, M., Callaghan, V., Mattila, P., Guetl, C., Petrovi, V. M., & Jovanovi, K. (2016). Virtual laboratories for education in Science, Technology, and Engineering: a review. *Computers & Education*, 95, 309–327. <http://doi.org/10.1016/j.compedu.2016.02.002>
- Zydney, J. M., & Warner, Z. (2015). Mobile apps for science learning: Review of research. *Computers & Education*, 94, 1–17. <http://doi.org/10.1016/j.compedu.2015.11.001>
- Cheung, A. C. K., & Slavin, R. E. (2013). The effectiveness of educational technology applications for enhancing mathematics achievement in K-12 classrooms: A meta-analysis. *Educational Research Review*, 9, 88–113. <http://doi.org/10.1016/j.edurev.2013.01.001>
- Lee, S. W.-Y., Tsai, C. C., Wu, Y., Tsai, M.-J., Liu, T. C., Hwang, F.-K., ... Chang, C.-Y. (2011). Internet-based Science Learning: A review of journal publications. *International Journal of Science Education*, 33(14), 1893–1925. <http://doi.org/10.1080/09500693.2010.536998>
- Li, Q., & Ma, X. (2010). A meta-analysis of the effects of computer technology on school students' mathematics learning. *Educational Psychology Review*, 22(3), 215–243. Retrieved from <http://link.springer.com/article/10.1007%2Fs10648-010-9125-8>

Educational technology

- Li, K., & Keller, J. M. (2018). Use of the ARCS model in education: A literature review. *Computers & Education*, 122, 54–62. <http://doi.org/10.1016/j.compedu.2018.03.019>
- Pérez-Sanagustín, M., Nussbaum, M., Hilliger, I., Alario-Hoyos, C., Heller, R. S., Twining, P., & Tsai, C.-C. (2017). Research on ICT in K-12 schools - A review of experimental and survey-based studies in computers & education 2011 to 2015. *Computers & Education*, 104, A1–A15. <http://doi.org/https://doi.org/10.1016/j.compedu.2016.09.006>
- Spolaôr, N., & Benitti, F. B. V. (2017). Robotics applications grounded in learning theories on tertiary education: A systematic review. *Computers & Education*, 112, 97–107. <http://doi.org/10.1016/j.compedu.2017.05.001>
- Çiftçi, E. Y. (2016). A review of research on intercultural learning through computer-based digital technologies. *Educational Technology & Society*, 19(2), 313–327. Retrieved from <http://www.jstor.org/stable/jeductechsoci.19.2.313>
- Berney, S., & Bétrancourt, M. (2016). Does animation enhance learning? A meta-analysis. *Computers & Education*, 101, 150–167. <http://doi.org/10.1016/j.compedu.2016.06.005>
- Toh, L. P. E., Causo, A., Tzuo, P.-W., Chen, I.-M., & Yeo, S. H. (2016). A review on the use of robots in education and young children. *Educational Technology and Society*, 19(2), 148–163.
- Veletsianos, G., & Shepherdson, P. (2016). A systematic analysis and synthesis of the empirical MOOC literature Published in 2013–2015. *The International Review of Research in Open and Distributed Learning*, 17(2). Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/2448/3655>
- Farrell, T., & Rushby, N. (2016). Assessment and learning technologies: An overview. *British Journal of Educational Technology*, 47(1), 106–120. <http://doi.org/10.1111/bjet.12348>
- Clements, K., Pawlowski, J., & Manouselis, N. (2015). Open educational resources repositories literature review – Towards a comprehensive quality approaches framework. *Computers in Human Behavior*, 51, 1098–1106. <http://doi.org/10.1016/j.chb.2015.03.026>
- Bacca, J., Baldiris, S., Fabregat, R., Graf, S., & Kinshuk. (2014). Augmented reality trends in education: A systematic review of research and applications. *Educational Technology & Society*, 17(4), 133–149. Retrieved from <http://www.jstor.org/stable/jeductechsoci.17.4.133>
- Kori, K., Pedaste, M., Leijen, Ä., & Mäeots, M. (2014). Supporting reflection in technology-enhanced learning. *Educational Research Review*, 11, 45–55. <http://doi.org/10.1016/j.edurev.2013.11.003>
- Börner, D., Kalz, M., & Specht, M. (2013). Beyond the channel: A literature review on ambient displays for learning. *Computers & Education*, 60(1), 426–435. <http://doi.org/10.1016/j.compedu.2012.06.010>
- Davies, D., Jindal-Snape, D., Collier, C., Digby, R., Hay, P., & Howe, A. (2013). Creative learning environments in education—A systematic literature review. *Thinking Skills and Creativity*, 8, 80–91. <http://doi.org/10.1016/j.tsc.2012.07.004>
- Liyanagunawardena, T., Adams, A., & Williams, S. (2013). MOOCs: A systematic study of the published literature 2008-2012. *The International Review of Research in Open and Distributed Learning*, 14(3). Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/1455>
- Hsu, Y. C., Ho, H. N. J., Tsai, C.-C., Hwang, G.-J., Chu, H.-C., Wang, C.-Y., & Chen, N.-S. (2012). Research trends in Technology-based learning from 2000 to 2009: a content analysis of publications in selected journals. *Educational Technology and Society*, 15(2), 354–370.
- Barreto, F., & Vavassori, B. (2012). Exploring the educational potential of robotics in schools: A systematic review. *Computers & Education*, 58(3), 978–988. <http://doi.org/10.1016/j.compedu.2011.10.006>
- Barbour, M. K., & Reeves, T. C. (2009). The reality of virtual schools: A review of the literature. *Computers & Education*, 52(2), 402–416. <http://doi.org/10.1016/j.compedu.2008.09.009>
- Alper, A., & Gülbahar, Y. (2009). Trends and issues in educational technologies: a review of recent research in TOJET. *The Turkish Online Journal of Educational Technology*, 8(2), 124–135. Retrieved from <https://files.eric.ed.gov/fulltext/ED505942.pdf>
- Luxton-Reilly, A. (2009). A systematic review of tools that support peer assessment. *Computer Science Education*, 19(4), 209–232. <http://doi.org/10.1080/08993400903384844>
- Hew, K. F., Kale, U., & Kim, N. (2007). Past research in instructional technology: Results of a content analysis of empirical studies published in three prominent instructional technology journals from the year 2000 through 2004. *Journal of Educational Computing Research*, 36(3), 269–300.

Serious games

- Gorbanev, I., Agudelo-Londoño, S., González, R. A., Cortes, A., Pomares, A., Delgadillo, V., ... Muñoz, Ó. (2018). A systematic review of serious games in medical education: quality of evidence and pedagogical strategy. *Medical Education Online*, 23(1), 1438718. <http://doi.org/10.1080/10872981.2018.1438718>
- Ravayse, W. S., Seugnet Blignaut, A., Leendertz, V., & Woolner, A. (2017). Success factors for serious games to enhance learning: a systematic review. *Virtual Reality*, 21(1), 31–58. <http://doi.org/10.1007/s10055-016-0298-4>
- Boyle, E. A., Hainey, T., Connolly, T. M., Gray, G., Earp, J., Ott, M., ... Pereira, J. (2016). An update to the systematic literature review of empirical evidence of the impacts and outcomes of computer games and serious games. *Computers & Education*, 94, 178–192. <http://doi.org/10.1016/j.compedu.2015.11.003>

Abdul Jabbar, A. I., & Felicia, P. (2015). Gameplay engagement and learning in game-based learning. *Review of Educational Research*, 85(4), 740–779. <http://doi.org/10.3102/0034654315577210>

Connolly, T. M., Boyle, E. A., MacArthur, E., Hainey, T., & Boyle, J. M. (2012). A systematic literature review of empirical evidence on computer games and serious games. *Computers & Education*, 59(2), 661–686. <http://doi.org/http://dx.doi.org/10.1016/j.compedu.2012.03.004>

Hwang, G.-W., & Wu, P.-H. (2012). Advancements and trends in digital game-based learning research: a review of publications in selected journals from 2001 to 2010. *British Journal of Educational Technology*, 43(1), E6–E10. <http://doi.org/10.1111/j.1467-8535.2011.01242.x>

Computing education

Petri, G., & Gresse von Wangenheim, C. (2017). How games for computing education are evaluated? A systematic literature review. *Computers & Education*, 107, 68–90. <http://doi.org/10.1016/j.compedu.2017.01.004>

Vahldick, A., Mendes, A. J., & Marcelino, M. J. (2014). A review of games designed to improve introductory computer programming competencies. In *2014 IEEE Frontiers in Education Conference (FIE) Proceedings* (pp. 1–7). IEEE. <http://doi.org/10.1109/FIE.2014.7044114>

Robins, A., Rountree, J., & Rountree, N. (2003). Learning and teaching programming: A review and discussion. *Computer Science Education*, 13(2), 137–172. <http://doi.org/10.1076/csed.13.2.137.14200>

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