**Syllabus: ESETEC 8216**
Scholarly Perspectives in Learning Technologies
TERM: Spring 2020
Day/Time: Tuesdays, 4:10-6:50
Enarson Classroom Building 230

**Instructor:** Rick Voithofer, Ph.D.
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**Phone number:** 247-7945
**Office hours:** By Appointment

## Course description

This course will provide you with a foundation in conducing literature reviews related to the learning technologies field. The course will help you in developing skills in searching for sources, organizing and annotating sources, and summarizing and synthesizing bodies of research. We'll start by looking at the basics of developing research topics, argumentation, and the research process. Then we'll build your skills in searching, organizing, and synthesizing literature. We will be reading and analyzing a number of literature reviews in the field. These will not only provide you with examples, but will also give you a sense of the current state of the research in the field. By the end of the course you will complete a rigorous and original literature review in a new learning technologies topic.

## Course learning outcomes

By the end of this course, students should be able to:

- Recognize a compelling research topic
- Recognize and apply the basics of argumentation to a research topic
- Describe the current state of research in learning technologies as represented through published literature reviews
- Describe each step of a thorough literature review
- Conduct a sophisticated source search
- Organize and annotate a body of research
- Synthesize a body of research
- Produce a rigorous literature review of a current learning technologies topic

## Course materials

All readings will be provided in Carmen.

## Course schedule (tentative)

| Week | Topics, Readings, Assignments, Deadlines | Due |
|---|---|---|
| Week 1<br>1/7 | Course Introduction | |

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| Week 2<br>1/14 | Present Example(s)<br>Week 2 Readings<br>Craft of Research Chs. 1-11 | Article Summaries |
| Week 3<br>1/21 | Present Example (s)<br>Craft of Research Chs. 12-Ethics | Article Summaries |
| Week 4<br>1/28 | The Literature Review process pt 1<br>Read Ridley, D. (2012). The Literature Review: A Step-by-Step Guide for Students. Thousand Oaks: Sage. Chapters 1-6<br>Present Example (s) | Article Summaries |
| Week 5<br>2/4 | Searching – https://guides.osu.edu/education<br>http://www.powersearchingwithgoogle.com/<br>Complete questions for research librarian | Complete both courses in:<br>http://www.powersearchingwithgoogle.com |
| Week 6<br>2/11 | The Literature Review process pt 2<br>Read Ridley, D. (2012). The Literature Review: A Step-by-Step Guide for Students. Thousand Oaks: Sage. Chapters 7-11<br>Present Example (s) | Article Summaries |
| Week 7<br>2/18 | Organizing and Annotate Sources<br>Present Example (s)<br>Organizing – Present 1 tool - diigo, Evernote, academia.com, Zotero, Mendeley, Endnote, CMAP, Scrivener. | Article Summaries<br>Assigned Readings in Carmen |
| Week 8<br>2/25 | Project Proposal<br>Present Examples(s) | Project Proposal<br>Article Summaries |
| Week 9<br>3/3 | Present Example(s)<br>Progress Report (Search) | Article Summaries |
| Week 10<br>3/10 | Spring Break | |
| Week 11 | Present Example(s) | Article Summaries |

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|---|---|---|
| 3/17 | Progress Report (Organizing) | |
| Week 12<br>3/24 | Present Example(s)<br>Progress Report (Annotating) | Article Summaries |
| Week 13<br>3/31 | Present Example (s) | Article Summaries |
| Week 14<br>4/7 | Work on Final Project – Progress report | |
| Week 15<br>4/14 | Present Final Projects | |

## Grades

**Article Presentations (25 % of Final Grade) –** Over the course of the semester you will present 3-4 literature reviews to the class. The presentations should include the defining problem of the review, the framework used to address the problem, the data used in applying the framework to address the problem, the findings of the article, and an assessment of the quality of the research. The assessment will be based on a rubric that we develop as a class. You will be assigned your articles during the first week. See the bibliography below for a list of articles.

**Google Advanced Search workshops (5 % of Final Grade):** You will complete both online workshops found here: http://www.powersearchingwithgoogle.com

**Project Proposal (20 % of Final Grade) –** This project proposal should include: the defining problem of the review (identifying the hole in the literature), the framework used to address the problem, the data used in using the framework to address the problem (e.g., search terms, search locations, target indexes, journals, etc). More specific guidelines will be provided in Carmen.

**Literature Review (50 % of Final Grade) –** This will be substantial literature review in a topic of your choice. The final project should be ready for either a conference proposal or for submission to a journal. More specific guidelines will be provided in Carmen.

### Grading scale

93–100: A
90–92.9: A-
87–89.9: B+
83–86.9: B
80–82.9: B-
77–79.9: C+
73–76.9: C
70 –72.9: C-
67 –69.9: D+
60 –66.9: D
Below 60: E

### Course technology

For help with your password, university e-mail, Carmen, or any other technology issues, questions, or requests, contact the OSU IT Service Desk. Standard support hours are available at https://ocio.osu.edu/help/hours, and support for urgent issues is available 24x7.

- Self-Service and Chat support: http://ocio.osu.edu/selfservice
- Phone: 614-688-HELP (4357)
- Email: 8help@osu.edu

Baseline technical skills necessary for online courses

- Basic computer and web-browsing skills
- Navigating Carmen

**Necessary equipment**

- Computer: current Mac (OS X) or PC (Windows 7+) with high-speed internet connection

## Other course policies

### Ohio State's academic integrity policy

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the University's *Code of Student Conduct*, and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the University's *Code of Student Conduct* and this syllabus may constitute "Academic Misconduct."

The Ohio State University's *Code of Student Conduct* (Section 3335-23-04) defines academic misconduct as: "Any activity that tends to compromise the academic integrity of the University, or subvert the educational process." Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the University's *Code of Student Conduct* is never considered an "excuse" for academic misconduct, so I recommend that you review the *Code of Student Conduct* and, specifically, the sections dealing with academic misconduct.

If I suspect that a student has committed academic misconduct in this course, I am obligated by University Rules to report my suspicions to the Committee on Academic Misconduct. If COAM determines that you have violated the University's *Code of Student Conduct* (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the University.

If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Other sources of information on academic misconduct (integrity) to which you can refer include:

- The Committee on Academic Misconduct web pages (COAM Home)
- *Ten Suggestions for Preserving Academic Integrity (Ten Suggestions)*
- *Eight Cardinal Rules of Academic Integrity* (www.northwestern.edu/uacc/8cards.htm)

## Accessibility accommodations for students with disabilities

### Statement on Title IX

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at http://titleix.osu.edu or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at titleix@osu.edu

**Accessibility accommodations for students with disabilities**

If you would like to request academic accommodations based on the impact of a disability qualified under the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973, contact your instructor privately as soon as possible to discuss your specific needs. Discussions are confidential.

In addition to contacting the instructor, please contact the Student Life Disability Services at 614-292-3307 or ods@osu.edu to register for services and/or to coordinate any accommodations you might need in your courses at The Ohio State University.

Go to http://ods.osu.edu for more information.

**Accessibility of course technology**

This online course requires use of Carmen (Ohio State's learning management system) and other online communication and multimedia tools. If you need additional services to use these technologies, please request accommodations with your instructor.

- Carmen accessibility
- Streaming audio and video
- Synchronous course tools

**Book:**

An electronic version of each books will be provided in Carmen.

Booth, W. C., Colomb, G. G., & Williams, J. M., Bizup, J. & Fitzgerald, W. (2016). *The Craft of Research, 4th Edition*. University of Chicago Press.

Ridley, D. (2012). The Literature Review: A Step-by-Step Guide for Students. 2nd Ed. Thousand Oaks, Sage.

**Bibliography** (All articles will be provided in Carmen)

**Week 2 readings:**

Boote, D. N., & Beile, P. (2005). Scholars before researchers: On the centrality of the dissertation literature review in research preparation. Educational researcher, 34(6), 3-15.

Chen, D. T. V., Wang, Y. M., & Lee, W. C. (2016). Challenges confronting beginning researchers in conducting literature reviews. Studies in Continuing Education, 38(1), 47-60.

**Massiveness:**

Sean - Manathunga, K. & Hernández-Leo, D. (2015). Has Research on Collaborative Learning Technologies Addressed Massiveness? A Literature Review. Educational Technology & Society, 18 (4), 357–370.

Marie - Liyanagunawardena TR, Adams AA, Williams SA. MOOCs: A Systematic Study of the Published Literature 2008-2012. (2013). International Review of Research in Open and Distance Learning 14(3), 201-227.

Zilu- 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).

Chenxi - Bozkurt, A., Akgün-Özbek, E., & Zawacki-Richter, O. (2017). Trends and patterns in Massive Open Online Courses: Review and content analysis of research on MOOCs (2008-2015). The International Review of Research in Open and Distributed Learning, 18(5).

Hanna - Zhu, M., Sari, A., & Lee, M. M. (2018). A systematic review of research methods and topics of the empirical MOOC literature (2014–2016). The Internet and Higher Education, 37, 31-39.

Mitchell - Joksimović, S., Poquet, O., Kovanović, V., Dowell, N., Mills, C., Gašević, D., ... & Brooks, C. (2018). How do we model learning at scale? A systematic review of research on MOOCs. Review of Educational Research, 88(1), 43-86.

Online Learning

Fan- Tenório, T., Bittencourt, I. I., Isotani, S., & Silva, A. P. (2016). Does peer assessment in on-line learning environments work? A systematic review of the literature. Computers in Human Behavior, 64, 94-107.

Erin - Wingo,N. P., Ivankova, N. V., & Moss, J. A. (2017) Faculty perceptions about teaching online: Exploring the literature using the technology acceptance model as an organizing framework, Online Learning 21(1), 15-35.

Sean - Pulham, E., & Graham, C. R. (2018). Comparing K-12 online and blended teaching competencies: A literature review. Distance Education, 39(3), 411-432.

Marie - Singh, V, & Thurman, A. (2019). How Many Ways Can We Define Online Learning? A Systematic Literature Review of Definitions of Online Learning (1988-2018), American Journal of Distance Education, 33:4, 289-306, DOI: 10.1080/08923647.2019.1663082

Zilu - Lee, K., & Bligh, B. (2019). Four narratives about online international students: a critical literature review. Distance Education, 40(2), 153-169.

**Games**

Chenxi - 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.

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.

Hanna - All, A., Castellar, E. P. N., & Van Looy, J. (2016). Assessing the effectiveness of digital game-based learning: Best practices. Computers & Education, 92, 90-103.

Mitchell - Alejandro Calderón and Mercedes Ruiz. (2015). A systematic literature review on serious games evaluation. Computers & Education (September2015), 87. 396-422.

Fan - Boyle, E. A., MacArthur, E. W., Connolly, T. M., Hainey, T., Manea, M., Kärki, A., & Van Rosmalen, P. (2014). A narrative literature review of games, animations and simulations to teach research methods and statistics. Computers & Education, 74, 1-14.

Erin - Koutromanos, G., Sofos, A., & Avraamidou, L. (2015). The use of augmented reality games in education: a review of the literature. Educational Media International, 52(4), 253-271.

Sean- Moizer, J., Lean, J., Dell'Aquila, E., Walsh, P., Keary, A. A., O'Byrne, D., ... & Sica, L. S. (2019). An approach to evaluating the user experience of serious games. Computers & Education, 136, 141-151.

**Analytics / AI**

Marie - Korkmaz, C., & Correia, A. P. (2019). A review of research on machine learning in educational technology. Educational Media International, 56(3), 250-267.

Nunn, S., Avella, J. T., Kanai, T., & Kebritchi, M. (2016). Learning analytics methods, benefits, and challenges in higher education: A systematic literature review. Online Learning, 20(2).

Zilu - Papamitsiou, Z. K., & Economides, A. A. (2014). Learning Analytics and Educational Data Mining in Practice: A Systematic Literature Review of Empirical Evidence. Educational Technology & Society, 17(4), 49-64.

Chenxi - Alonso-Fernández, C., Calvo-Morata, A., Freire, M., Martínez-Ortiz, I., & Fernández-Manjón, B. (2019). Applications of data science to game learning analytics data: A systematic literature review. Computers & Education.

Hanna - Viberg, O., Hatakka, M., Bälter, O., & Mavroudi, A. (2018). The current landscape of learning analytics in higher education. Computers in Human Behavior.
Instructional/Learning Design

Puente, S. M. G., van Eijck, M., & Jochems, W. (2013). A sampled literature review of design-based learning approaches: a search for key characteristics. International Journal of Technology and Design Education, 23(3), 717-732.

Mitchell - Boelens, R., De Wever, B., & Voet, M. (2017). Four key challenges to the design of blended learning: A systematic literature review. Educational Research Review.

Fan - Hepplestone, S., Holden, G., Irwin, B., Parkin, H. J., & Thorpe, L. (2011). Using technology to encourage student engagement with feedback: a literature review. Research in Learning Technology, 19(2).

Technologies

Sean - Han, J. H. (2014). Closing the Missing Links and Opening the Relationships among the Factors: A Literature Review on the Use of Clicker Technology Using the 3P Model. Educational Technology & Society, 17(4), 150-168.

Marie - Weinerth, K., Koenig, V., Brunner, M., & Martin, R. (2014). Concept maps: A useful and usable tool for computer-based knowledge assessment? A literature review with a focus on usability. Computers & Education, 78, 201-209.

Zilu - Nakic, J., Granic, A., & Glavinic, V. (2015). Anatomy of student models in adaptive learning systems: A systematic literature review of individual differences from 2001 to 2013. Journal of Educational Computing Research, 51(4), 459-489.

Chenxi - 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.

Hanna - Baran, E. (2014). A Review of Research on Mobile Learning in Teacher Education. Educational Technology & Society, 17(4), 17-32.

Mitchell - Burden, K., Kearney, M., Schuck, S., & Hall, T. (2019). Investigating the use of innovative mobile pedagogies for school-aged students: A systematic literature review. Computers & Education, 138, 83-100.

**Misc. Topics**

Fan - Voogt, J., Fisser, P., Pareja Roblin, N., Tondeur, J., & van Braak, J. (2013). Technological pedagogical content knowledge–A review of the literature. Journal of Computer Assisted Learning, 29(2), 109-121.

Erin - van Laar, E., van Deursen, A. J., van Dijk, J. A., & de Haan, J. (2017). The relation between 21st-century skills and digital skills: A systematic literature review. Computers in human behavior, 72, 577-588.

Sean - Watts, L. K., Wagner, J., Velasquez, B., & Behrens, P. I. (2017). Cyberbullying in higher education: A literature review. Computers in Human Behavior, 69, 268-274.

Marie - Yadegaridehkordi, E., Noor, N. F. B. M., Ayub, M. N. B., Affal, H. B., & Hussin, N. B. (2019). Affective computing in education: A systematic review and future research. Computers & Education, 142, 103649.

Zilu - Stauter, D. W., Prehn, J., Peters, M., Jeffries, L. M., Sylvester, L., Wang, H., & Dionne, C. (2019). Assistive Technology for Literacy in Students With Physical Disabilities: A Systematic Review. Journal of Special Education Technology, 34(4), 284-292.

Chenxi - Van Den Beemt, A., Thurlings, M., & Willems, M. (2019). Towards an understanding of social media use in the classroom: a literature review. Technology, Pedagogy and Education, 1-21.

Hanna - Vieira, C., Parsons, P., & Byrd, V. (2018). Visual learning analytics of educational data: A systematic literature review and research agenda. Computers & Education, 122, 119-135.