

**College of Education and Psychology
School of Education
Ed.D. in School Improvement**

EDRM 6351 – Design-Based Implementation Research

Instructor: *Michael Odell, Ph.D.*
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Term: Summer 2025 (Online includes occasional scheduled Synchronous sessions TBD)

Course Description

A course designed to introduce design-based implementation research as a method to design, sustain and evaluate programs in education. The course will focus on the use of the approach to ground systematic inquiry and build capacity to engage in continuous improvement while adhering to the four principles of design-based implementation research.

Program Goals

- a. Produce the next generation of educational leaders who understand the philosophical and historical perspectives of school reform, diversity, learning opportunities for all, and can address educational issues using a variety of strategies.
- b. Develop critical reasoning and a deep understanding of change theory to address challenges in school improvement contexts. This will include the skills to provide transformative leadership to schools that are failing to meet academic, social, and emotional standards.
- c. Provide opportunities to develop doctoral students' ability to approach challenges in innovative data-driven ways, including the use of interdisciplinary teams, as well as expand their problem solving, creative design, communication, and collaboration skills.
- d. Challenge the norms within educational systems using data and the engagement of other educators and stakeholders in professional learning to lead disruptive change through interdisciplinary work with experts in other educational fields.
- e. Conduct research of practice and responsiveness to improve teaching and learning experiences, counseling and support services, school leadership, educational organizations and structures, and all other educational disciplines.
- f. Prepare the next generation of educators with the knowledge, skills and tools to utilize data to guide school improvement and policy and to improve learning outcomes leading to college and career readiness.
- g. Prepare educators with a deep understanding of assessment and accountability systems.

- h. Produce scholar practitioners that have a P-20 perspective of the education system to address school improvement in the broader perspective including educator preparation, teaching and learning.

Student Learning Outcomes

The student will...

- Understand the various forms of design-based research.
- Investigate historical and current literature describing and evidencing design research.
- Identify and focus on persistent problems of practice, as experienced from multiple stakeholders' perspectives, to explore through design research.
- Begin to delve into the literature review corresponding to the problems of practice.
- Begin to plan a design-based study within one of the emergent forms.
- Engage in group design activities and discussion to explore multiple approaches to investigate the chosen phenomenon.
- Offer constructive feedback on colleagues' work and incorporate feedback into one's own work.

Required Textbooks

Philippakos, Z. A., Howell, E., Pellegrino, A., & Reinking, D. (2021). *Design-based research in education theory and applications*. The Guilford Press.

Bryk, A.S., Gomez, L.M., Grunow, A., & LeMahieu, P.G. (2015), *Learning to Improve: How America's Schools Can get Better at Getting Better*. Cambridge, MA: Harvard Education Press. ISBN-978-1-61250-791-0.

Optional Textbooks

McKenney, S. & Reeves, T. C. (2018). *Conducting Educational Design Research*. New York: Routledge. ISBN-13: 978-1138095564

Penuel, W. R., Gallagher, D. J. (2017). *Creating Research-Practice Partnerships in Education*. Cambridge, MA: Harvard Education Press. ISBN-13: 978-1682530481.

Required Readings (to be distributed by instructor):

Fishman, B. J., Penuel, W. R., Allen, A. R., Cheng, B. H., & Sabelli, N. O. R. A. (2013). Design-based implementation research: An emerging model for transforming the relationship of research and practice. *National society for the study of education*, 112(2), 136-156.

Means, B., & Harris, C. J. (2013). Towards an evidence framework for design-based implementation research. *National Society for the Study of Education Yearbook*, 112(2), 350–371.

LeMahieu, P. G., Nordstrum, L. E., & Potvin, A. S. (2017). Design-based implementation research. *Quality Assurance in Education*, 25(1), 26-42. Retrieved from <https://ezproxy.utt Tyler.edu/login?url=https://search-proquest-com.ezproxy.utt Tyler.edu/docview/1865729647?accountid=7123>

Penuel, W. R., Fishman, B., Cheng, B. H., & Sabelli, N. (2011). Organizing research and development at the intersection of learning, implementation, and design. *Educational Researcher*, 40, 331–337. doi:10.3102/0013189X11421826.

Plomp, T. & Nieveen, N. (Eds.) (2010). *An Introduction to Educational Design Research*. Netherlands: SLO: Netherlands Institute for Curriculum Development. Retrieved from https://ris.utwente.nl/ws/portalfiles/portal/14472302/Introduction_20to_20education_20design_20research.pdf

Russell, J. L., Jackson, K., Krumm, A. E., & Frank, K. A. (2013). Theory and research methodologies for design-based implementation research: Examples from four cases. *National Society for the Study of Education Yearbook*, 112(2), 157–191.

Course Content: See Canvas Modules

Course Evaluation

Project Report	25%
Total	100%

Assignment	% of grade	Description
Class Disussions	20	Active participation includes posting responses on-time and attending scheduled synchronous sessions. Class and Small Group Discussions are only effective if everyone participates. I expect everyone to post multiple times during the week for discussions.
Revise POP	20	Finalize Chapter 1
Case Studies/Case Studies	20	DBIR Case Studies Reviews and Reflections
Draft Chapter 3 Evaluation	40	Students will submit a detailed Draft Chapter 3 Evaluation that includes DBIR tools based on the evaluation plan developed in EDRM 6350. See Canvasfor format. (Chapter 3)
TOTAL	100%	

Grading Criteria

Performance standards			
Points	Percent	Grade	Standard
90-100	90	A	Superior
80-89	84%	B	Meets Standard
0-79	75%	Not Acceptable	Below Average

Bibliography

- Fishman, B. J., Penuel, W. R., Allen, A. R., Cheng, B. H., & Sabelli, N. O. R. A. (2013). Design-based implementation research: An emerging model for transforming the relationship of research and practice. *National society for the study of education*, 112(2), 136-156.
- Fixsen, D. L., Naoom, S. F., Blase, K. A., & Friedman, R. M. (2005). *Implementation research: A synthesis of the literature*. Tampa: Louis de la Parte Florida Mental Health Institute, National Implementation Research Network, University of South Florida.
- Lemahieu, Paul G, Lee E Nordstrum, and Ashley Seidel Potvin. (2017) Design-based Implementation Research. *Quality Assurance in Education* 25(1), 26-42.
- LeMahieu, P. G., Bryk, A. S., Grunow, A., & Gomez, L. M. (2017). Working to improve: Seven approaches to improvement science in education. *Quality Assurance in Education*, 25(1), 2-4. Retrieved from <https://ezproxy.uttyler.edu/login?url=https://search-proquest-com.ezproxy.uttyler.edu/docview/1865729625?accountid=7123>
- LeMahieu, P. G., Nordstrum, L. E., & Potvin, A. S. (2017). Design-based implementation research. *Quality Assurance in Education*, 25(1), 26-42. Retrieved from <https://ezproxy.uttyler.edu/login?url=https://search-proquest-com.ezproxy.uttyler.edu/docview/1865729647?accountid=7123>
- LeMahieu, P. G., Grunow, A., Baker, L., Nordstrum, L. E., & Gomez, L. M. (2017). Networked improvement communities: The discipline of improvement science meets the power of networks. *Quality Assurance in Education*, 25(1), 5-25. doi: <http://dx.doi.org.ezproxy.uttyler.edu:2048/10.1108/QAE-12-2016-0084>
- Means, B., & Harris, C. J. (2013). Towards an evidence framework for design-based implementation research. *National Society for the Study of Education Yearbook*, 112(2), 350–371.
- Means, B., Padilla, C., DeBarger, A., & Bakia, M. (2009). *Implementing data-informed decision making in schools: Teacher access, supports and use*. Washington, DC: Office of Planning, Evaluation and Policy Development, Policy and Program Studies Service, U.S. Department of Education.

Penuel, W. R., & Fishman, B. J. (2012). Large-scale intervention research we can use. *Journal of Research in Science Teaching*, 49(3), 281–304.

Penuel, W. R., Fishman, B., Cheng, B. H., & Sabelli, N. (2011). Organizing research and development at the intersection of learning, implementation, and design. *Educational Researcher*, 40, 331–337. doi:10.3102/0013189X11421826.

Russell, J. L., Jackson, K., Krumm, A. E., & Frank, K. A. (2013). Theory and research methodologies for design-based implementation research: Examples from four cases. *National Society for the Study of Education Yearbook*, 112(2), 157–191.

Spillane, J. P., & Coldren, A. F. (2010). *Diagnosis and design for school improvement: Using a distributed perspective to lead and manage change*. New York, NY: Teachers College Press.

UNIVERSITY POLICIES

UT Tyler Honor Code

Every member of the UT Tyler community joins together to embrace: Honor and integrity that will not allow me to lie, cheat, or steal, nor to accept the actions of those who do.

For a full list of university policies including information related to the topics listed below, click [here](#).

- Students Rights and Responsibilities
- Campus Carry
- Tobacco-Free University
- Grade Replacement/Forgiveness and Census Date Policies
- State-Mandated Course Drop Policy
- Disability Services
- Student Absence due to Religious Observance
- Student Absence for University-Sponsored Events and Activities
- Social Security and FERPA Statement
- Emergency Exits and Evacuation
- Student Standards of Academic Conduct

UT Tyler Resources for Students:

- UT Tyler Writing Center (903.565.5995), writingcenter@uttyler.edu, <http://www.uttyler.edu/writingcenter/>
- UT Tyler Tutoring Center (903.565.5964), tutoring@uttyler.edu, <https://www.uttyler.edu/tutoring/>
- The Mathematics Learning Center, RBN 4021, This is the open access computer lab for math students, with tutors on duty to assist students who are enrolled in early-career

courses.

- UT Tyler Counseling Center (903.566.7254) <https://www.uttyler.edu/counseling/>

[University Guidelines, Links and Policies](#)

COLLEGE OF EDUCATION AND PSYCHOLOGY (CEP) VISION AND MISSION

Vision: The College of Education and Psychology is nationally recognized and respected for its academic programs and opportunities. It is a center of academic excellence, scholarly inquiry, and public service. The College prepares leaders to meet the critical challenges of the 21st Century through productive contributions to local and global communities and toward individual and cultural equity.

Mission: The mission of the College of Education and Psychology is to provide a positive environment that fosters the acquisition of knowledge and skills. The mission is individually and collectively realized through a community of scholars that contributes to knowledge through scholarly inquiry; organizes knowledge for application, understanding and communication; and provides leadership and service. We affirm and promote global perspectives that value individual and cultural diversity to enhance learning, service, and scholarship.

UT TYLER'S SCHOOL OF EDUCATION STANDARDS FOR EDUCATOR PREPARATION PROGRAMS

[Texas Education Standards](#): The School of Education are committed to teaching and implementing the Texas Educator Standards at the highest level. The School of Education faculty use the Texas Education Standards, along with the Interstate New Teacher Assessment and Support Consortium (InTASC) standards used by educator preparation programs throughout the United States.

The list of [Texas Education Standards](#) can be accessed [here](#).

Access the [Code of Ethics and Standard Practices for Texas Educators](#).