ECiDC Early Childhood Intervention Doctoral Consortium

Creating Leaders in Intensive Interventions for Infants, Young Children and Their Families

Implementation Science

Sample Syllabus

Course Description

This graduate-level course introduces students to the principles and practices of implementation science, emphasizing its application in early childhood and early childhood special education. Students will explore frameworks, drivers, stages, and strategies for scaling evidence-based practices (EBPs) in educational settings. The course integrates theory, research, and practical tools.

Course Learning Objectives

As a result of active participation and successful completion of course requirements, students will be able to:

1. Define implementation science and its relevance to education.
2. Explain the Active Implementation Frameworks (AIF) and core implementation components.
3. Analyze barriers and facilitators to implementing EBPs in early childhood contexts.
4. Apply implementation science principles to design and evaluate interventions.
5. Critically examine case studies and develop strategies for scaling and sustaining EBPs.

Required Texts

Halle, T., Metz, A., & Martinez-Beck, I. (Eds.). (2013). *Applying implementation science in early childhood programs and systems* (pp. 1-18). Baltimore, MD: Paul H. Brookes Publishing Company.

Readings:

Cook, B. G., & Odom, S. L. (2013). Evidence-based practices and implementation science in special

Fixsen, D., Blase, K., Metz, A., & Van Dyke, M. (2013). Statewide implementation of evidence-based programs. *Exceptional children*, *79*(2), 213-230. education. *Exceptional children*, *79*(2), 135-144.

Fixsen, D. L., Blase, K. A., Naoom, S. F., Van Dyke, M., & Wallace, F. (2009). Implementation: The missing link between research and practice. *NIRN implementation brief*, *1*(1), 218-227.

Fixsen, D. L., Van Dyke, M., & Blase, K. A. (2019). Implementation science: Fidelity predictions and outcomes. *Chapel Hill, NC: Active Implementation Research Network*.

Moir, T. (2018, July). Why is implementation science important for intervention design and evaluation within educational settings?. In *Frontiers in Education* (Vol. 3, p. 61). Frontiers Media SA.

Accommodations

Section 504 of the Rehabilitation Act of 1973 and the American with Disabilities Act of 1990 require the institution to provide academic adjustments or accommodations for students with

documented disabilities. Students seeking academic adjustments or accommodations must self-identify with the Coordinator of Services for Students with Disabilities on the appropriate campus.

Attendance

Since many of the classes involve activities, videotapes, discussion, etc., regular attendance is vital to gain maximum benefit. Because this is a 15 weeks course, each class member needs to make every effort to be in attendance at each class. Anyone who misses more than one class will lose 5 points for each class missed after the first absence. Significant tardiness or early departure beyond 15 minutes will count as an absence. If you know ahead of time you will not be in class, please contact the instructor the day before the class.

Communicating with the Instructor

All correspondences from the instructor to the students by way of announcements, updates, assignments, and so forth, will be communicated via school email or online learning management system if not verbally in class. It is the student's responsibility to ensure their university e-mail is corrected, provided, and valid. Failure to do so may result is missing important information that could negatively impact your grade. Please be mindful of professionalism.

Course Outline

The following schedule is subject to change. For any course syllabuses posted prior to the beginning of the semester, the course instructor reserves the right to make changes prior to or during the semester. The course instructor will notify students, via e-mail or verbal announcements when changes are made in the requirements and/or grading of this course. ***The course instructor reserves the right to revise the schedule/assignments if needed.***

Week	**Topics**	**Reading**	**Activities**
1	Introduction to Implementation Science	Halle et al. (2013), Ch 1 & 2; Moir (2018); Fixsen et al. (2007)	**Discussion Prompt**: What are the key components of implementation science?
2	Evidence-Based Practices in Early Childhood and Special Education	Cook & Odom (2013); NIRN resources on EBPs	**In-Class Activity**: In small groups identify EBP in ECI and make the connection to implementation science. Share out with the larger group. Use the NIRN website.

3	Active Implementation Frameworks (AIF)	Halle et al., (2013); pp 28-33 Fixsen et al. (2011); Fixsen et al. (2007) https://implementation.fpg.unc.edu/wp-content/uploads/Active-Implementation-Overview-M1.pdf	**Discussion Prompt:** Describe AIF – how would this apply for early childhood?
4	Stages of Implementation	Fixsen et al. (2007); Moir (2018)	**In-Class Activity**: Identify the stages of implementation. Next, identify an EBP that occurs in your current setting. Map out where in the stage of implementation that current EBP is and what are the next steps.
5	Fidelity, Adaptation, and Sustainability	Halle et al., (2013) Ch 3, 7 & 8 Fixsen et al. (2019); Moir (2018)	**Case Examples:** Use Incredible Years and PATHS case studies for discussion. How do these show fidelity vs. adaptation challenges and sustainability strategies? **Discussion Prompt**: What strategies from the readings can help ensure that EBPs are sustained over time? How do implementation drivers (competency, organization, leadership) contribute to sustainability?

6	Implementation Teams and System Supports	Fixsen et al. (2011); Fixsen et al. (2019)	**Case Examples:** Teaching-Family Model and MST examples. What can we learn about implementation teams and systems supports based on these two case examples? **Building Effective Implementation Teams for High-Fidelity Practice**
7	Scaling Up and Systems Change	Halle et al., (2013), Section III & IV	**Case Examples:** State Capacity Development and SWPBS case studies. What lessons are learned from these two case studies?
8	Evaluation and Continuous Improvement	Halle et al., (2013), Moir (2018); Fixsen et al. (2019)	**Case Example:** Analyze fidelity data from these cases and link to outcomes. **Applying the Active Implementation Frameworks to an Early Childhood Program**

Major Assignments

1. **Building Effective Implementation Teams for High-Fidelity Practice**
    a. Students will apply concepts from Fixsen et al. (2011) on Active Implementation Frameworks and Fixsen et al. (2019) on Fidelity Predictions and Outcomes to design an implementation team that supports the successful adoption of an evidence-based practice (EBP) in early childhood education.
    b. Design an Implementation Team to support the adoption of this EBP in a school or district.
    c. Address the following:
        i. Team Composition: Who should be on the team? What roles and expertise are needed?
        ii. Core Functions: How will the team ensure fidelity, provide coaching, and use data for decision-making?

iii. Link to Outcomes: Explain how the team's work will influence fidelity and child outcomes, referencing Fixsen et al. (2019).
iv. Improvement Cycle: Outline one Plan-Do-Study-Act (PDSA) cycle the team could use to address a barrier (e.g., low staff buy-in or turnover).

d. Present to the class.

2. **Applying the Active Implementation Frameworks to an Early Childhood Program**
   a. Students will demonstrate their understanding of the five Active Implementation Frameworks (Usable Innovations, Implementation Stages, Implementation Drivers, Implementation Teams, and Improvement Cycles) by applying them to a real or hypothetical early childhood or early childhood special education program.
   b. **Select an Evidence-Based Program (EBP):**
   Choose an early childhood or early childhood special education program (e.g., Incredible Years, PATHS, or another EBP from NIRN resources).
   c. **Analyze Using Active Implementation Frameworks:**
   For your chosen program:
   d. **Usable Innovations:**
      i. Describe the program and identify its essential functions.
      ii. Explain how you would ensure it is teachable, learnable, doable, and assessable.
      iii. Include how you would use tools like the Hexagon Tool to assess fit.
   e. **Implementation Stages:**
      i. Outline activities for each stage (Exploration, Installation, Initial Implementation, Full Implementation).
      ii. Provide a timeline and key milestones.
   f. **Implementation Drivers:**
      i. Identify competency drivers (selection, training, coaching, fidelity assessment).
      ii. Describe organizational drivers (data systems, facilitative administration, systems interventions).
      iii. Explain leadership strategies.
   g. **Implementation Teams:**
      i. Design an implementation team structure.
      ii. Define roles and responsibilities.
   h. **Improvement Cycles:**
      i. Create a **Plan-Do-Study-Act (PDSA)** cycle to address a potential barrier (e.g., low fidelity or staff turnover).

3. **Discussion Group Participation**
   - To prepare for the discussion sessions, students will be required to complete the readings leading up to the discussion session. Students will be asked to respond to the discussion prompt by Friday evening and give substantive feedback to 2 (or more) classmates by Sunday evening. Submit the discussion questions by 5 pm the day before the discussion. Students receive points for timely and in-

depth discussion responses. Evidence of integrating reading and applying theory to practice is necessary to receive full points. Students will receive points based on the quality of feedback given to peers.

Course Grading

Assignments are due by 11:59pm on the indicated date. Late assignments without previous written approval of the instructor will incur a 50% penalty for the first time and lost all points beyond. This instructor and learners are required to adheres to the University's Academic Integrity policy. Any plagiarism will not be tolerance and referred to the Academic Integrity Office. And the learners will be given an "F" in the course and be recommended to the Student Conduct Office.

Learners will be evaluated based upon the assignments described below. The plus/minus grading system and scale is as follows:

Letter Grade	Grade Range
A	93 and above
A-	90-92
B+	88-89
B	83-87
B-	80-82
C+	78-79
C	73-77
C-	70-72
D	60-69
F	59 and below

Course Grading Systems

Component	Weight for final grade
Bridging Research and Practice: Evaluating Inclusive Practices in Early Childhood Settings	30%
Classroom Consultation Plan	20%
Discussions	10% (including responding to other peer's posts)
Classroom Design	20%
Family Engagement & Advocacy Resource Binder	20%

Resources

Resources to supplement the Syllabus:

https://nirn.fpg.unc.edu/

https://implementation.fpg.unc.edu/implementation-practice/

Journals in EI/ECSE

Below are examples of journals that publish topics about EI/ECSE. Faculty may want to explain how to use articles to support practice and to examine current research. Clarify the difference between practitioner-based journals and research-based journals.

- *Child Development*
- *Journal of Early Intervention*
- *Journal of Pediatrics*
- *Journal of Intellectual & Developmental Disability*
- *Journal of Developmental and Physical Disabilities*
- *Journal of Pediatric Nursing*
- *International Journal of Early Childhood Special Education*
- *Pediatric Research*
- *Topics in Early Childhood Special Education*
- *Young Exceptional Children*

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