ICO Course Manual

Basic information

Course name: Conducting Educational Design Research
Theme group: T6: Educational design and curriculum development
Tutors: Susan McKenney & Ruben Vanderlinde

Course description

Design research is a genre of inquiry in which the iterative development of solutions to problems in practice provides the setting for scientific inquiry. To conduct ecologically valid studies that also yield relevant and usable solutions, design research is carried out together with practitioners in authentic learning settings not laboratories. Researchers and practitioners collaborate through three main phases of work, to analyze the problems being tackled; to develop and refine solutions; and to ensure that these are informed by (formative) evaluation along the way. For example, topics tackled by previous participants in this course include: a video coaching routine to support early career teacher reflection; national and local ICT policy implementation in Chinese schools; design principles for teaching text structure in relation to primary school science learning.

In these studies, the function of the investigator is typically multifaceted, including the roles of: consultant, designer, and researcher. For example, investigators in these studies often: help practitioners to identify and articulate their contextual knowledge (consultant); structure the design process as well as the designed solutions (designer); and rigorously evaluate the effectiveness, practicality, or relevance of solutions (researcher). While most design researchers are afforded formal opportunities to develop their research skills (e.g. through seminars and courses on research design, interview techniques, data analysis, etc.), the consultant and designer skills receive far less explicit attention and tend to be learned informally, at best.

This course focuses primarily on understanding the tasks required of each role and in each phase of design research. Secondarily, attention is given to key competencies design researchers must develop to serve the work within and across each role. If sufficient participants desire, some of the course time will be allotted to practicing elements of the work within a particular phase (e.g. doing or critiquing design).

Consistent with the design research approach, this workshop is responsively grounded. Prior to its start, data will be collected on participant concerns, background, and own cases. These will help fine-tune the specific activities undertaken during the face-to-face time.

Graphical preview

While further information is given below and details are available on Canvas, the table below offers an at-a-glance view of the main course events.

Events	Before	During	After
Days 1-2 28&29/9	Read chapters 1-3 of textbook plus pdf of handbook chapter	Explore EDR broadly through varied exercises in pairs	Read chapters 4-7 of textbook
Poster 13/10	Prepare poster	Upload poster	Reflect on poster-making experience
Comments 1/11-9/11	Explore other posters	Comment on at least 6 other posters	Reflect on comments received
Days 3-4 30/11 – 1/12	Read chapters 8 and/or 9 of textbook	Individually imagineer one EDR project	Read chapter 10 of textbook (optional)
Writing Early 2024	Write essay + personal reflection	Submit essay + personal reflection	Participate in course evaluation

Legend: Grey cells indicate contact events; white cells indicate assessment events

Course objectives
Students completing this course will be able to:
- Engage in informed debate about the warrants and risks of design research
- Identify the main activities and outcomes of the key phases of design research
- Articulate how a given study (their own or that of a fellow researcher) maps onto a generic model for design research, informed by deconstruction and reflection of inspiring practices
- Write a proposal or report of an actual (sub-study within a) case of educational design research
- Describe the three roles design researchers take on and cross-cutting competencies needed by all
- Reflect on one's own existing and desired EDR competencies, and plan for growth, accordingly

Requirements/entry level
Not applicable

Course Set up
Type of course: ☐ Face-2-face course
☒ Blended Course
☐ Online Course

Specify the starting dates, end dates and other deadlines of the course:
- ***F-2-F or Blended course***: The course will start with a two-day f-2-f session and end with a two-day f-2-f session. Dates: 28 & 29 September; 30 November and 1 December
- ***Blended or Online course***: During the course, an online asynchronous discussion will be organized featuring brief participant presentation of digital posters (audio required, video optional) as well as peer feedback/discussion. This week-long discussion will conclude with a 2 hour session on the last day. Dates: November 1-9
- ***All course types***: Assignment due dates:
    o Online poster presentation: October 13
    o Online poster feedback/discussion: November 9
    o Written personal reflection: Tbd
    o Written essay (proposal or report): Tbd

Modules
F-2-F Day 1: Intense, fun and interactive
- *Before*
    o Brief preflections sent per email
    o Required reading
- *During*
    o Introductions to participants and course
    o Overview of EDR, including its warrants and challenges, form pairs
    o Analysis and exploration mini-lecture + Q&A (with peer panel if possible)
    o Design and construction mini-lecture + Q&A (with peer panel if possible)
    o Evaluation and reflection mini-lecture + Q&A (with peer panel if possible)
    o Reflection and projection

F-2-F Day 2: Sharing, exploring and supporting
- *During*
    o Initial phase mapping in pairs
    o 2-min pitches, discover phase-alikes
    o Elaborated phase mapping in pairs

- o Poster and essay assignment descriptions
- o Reflect on own EDR competencies, identify growth areas
- o Reflect on the day
- *After*
  - o Poster preparation/feedback/discussion

Asynchronous online
- *Before*
  - o Prepare/post own digital poster and narrative
- *During*
  - o View the posters and listen to the narratives of others
  - o Post feedback and join the discussion
  - o Participate 2-hour online session on the final day
- *After*
  - o Consolidate feedback received

F-2-F Day 3: Digging deep(er)
- *Before*
  - o Required reading
- *During*
  - o Poster recap and reflection
  - o Explore phase-specific approaches to writing about EDR
  - o Share observations and patterns encountered
  - o Create a concept map of key areas for your essay
  - o Give and receive tips/tops/questions
  - o Plan for tomorrow, plenary Q&A

F-2-F Day 4: Bringing it home
- *During*
  - o Outlining tools
  - o Outline essay
  - o Give/gain support
  - o Peer review
  - o Completing the course
  - o EDR competencies: interim update
  - o Reflections
  - o Evaluation forms
- *After*
  - o Write/submit personal reflection
  - o Write/submit essay

What work forms will be used

☒Workshop (f2f)	☐Videoclips
☒Lectures (f2f)	☒Forum
☒Discussion (f2f)	☐Wiki
☒Online poster feedback discussion	☒Other: Digital posters with audio narration

Specification of the workload
3 ECTs ~ 84 hours in total
- Fixed scheduling:
    o F@F sessions - 26 hours (2 x 2 days in Utrecht)
- Flexible scheduling (but with deadlines)
    o Reading literature - 20 hours*
    o Poster presentation – 4 asynchronous hours (after F2F day 2)
    o Poster feedback/discussion – 2 asynchronous hours + 2 synchronous hours
    o Writing application essay – 28 hours (after F2F days 3 & 4)
    o Personal reflections - 2 hours (outside of all F2F meetings)

*The textbook falls well within the range of time required when calculated using a conservative estimate of 100wpm: 100x60x20=120,000 words max. The textbook is less than 120,000 words. Further, 3 chapters are optional and at least 10,000 words are references.

Assessment
Prior to the start of the course, participants are asked to respond to an email query designed to inventory their prior knowledge and goals of attending the course. This is not assessed. Pass/fail grades will be given on the basis of three participant assignments. For each one, deadlines are given but the work is outside of class with no synchronous online participation:
- Not assessed: Email inventory prior to the start of the course
- Assessed:
    o Online poster presentation (asynchronous)
        ▪ Goals: Apply theory to practice + vice versa
        ▪ Content: Map one phase of educational design research using an authentic case; show this work in a single page/slide + present it through a 3 min audio pitch (both uploaded in Canvas)
        ▪ Criteria: Focus, chain of reasoning, feasibility, completeness
    o Feedback/discussion of others' online poster presentations (asynchronous)
        ▪ Goals: Learn from the work of others + critique others' understanding and application of design research principles
        ▪ Content: Provide tips and tops to fellow participants (minimum of 6: 3 assigned via Canvas and 3 of own choosing)
        ▪ Criteria: Focus, chain of reasoning, feasibility, completeness
    o Written essay (proposal or report); written personal reflection
        ▪ Goals: Write to think + practice describing design research
        ▪ Content: Articulate detailed planning or reporting of one phase of design research in an essay
        ▪ Criteria: Focus, chain of reasoning, feasibility, completeness

Feedback
During f-2-f meetings, participants will receive:
- Verbal plenary feedback from peers and facilitators on their deconstruction and reflection of inspiring practices.
- Verbal plenary feedback from peers and facilitators on their poster discussions
Outside of meetings, participants will receive:
- Individual written feedback from both peers and facilitators on the posters.
- Individual written feedback from facilitators on their written proposal or report.

Across all assignments, feedback will be aligned with the self-evaluation checklists in the textbook. Broadly, this will focus on:

- *Focus of the work:* Is it on-task, i.e., does it reflect attention to achieving the key outputs for the phase(s) of research being undertaken?
- *Chain of reasoning:* Are thoughtful and plausible arguments given throughout the document?
- *Feasibility:* Is this work reasonable given the timeframe and with the cooperation of others that has been envisioned, and what risks accompany these choices?
- *Completeness:* Area all aspects of the phase(s) being undertaken clearly attended to, and if not, are the reasons for omission clear and compelling?

Literature
Required literature:
- Textbook (available in print or as eBook): McKenney, S. & Reeves, T. (2019). *Conducting Educational Design Research* (2nd Ed). London: Routledge.
- Handbook chapter (available electronically via Canvas): McKenney, S. & Brand-Gruwel, S. (2018). Roles and competencies of educational design researchers: One framework and seven guidelines. In J. M. Spector, B. B. Lockee & M. D. Childress (Eds.), *Learning, design, and technology. An international compendium of theory, research, practice, and policy.* London: Springer.

Reading pace:
- Required before the course: Textbook chapters 1-3; handbook chapter
- Required during the course: Textbook chapters 4-7; 8 and/or 9
- Optional: Chapter 10