Example: Curriculum Evaluation and Research (CER) Plan

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# Rationale

There is an opportunity to undertake a holistic and integrated program of research that includes curriculum evaluation and research (CER)[[1]](#footnote-1). The design of evaluation is an important theme in Higher Education literature ([Ruhe and Boudreau 2011](#_ENREF_2); [Sanders and Nafziger 2011[1976]](#_ENREF_3)). E-learning evaluation has particular characteristics which are important to accommodate, including concepts of life-cycle of e-learning artefacts ([Phillips, McNaught et al. 2012](#_ENREF_1)). Aligned with the national agenda for quality and accreditation, in particular implementing the Higher Education Standards Framework (HESF), the University is implementing evidence-based reporting against which the [course\_name] must demonstrate compliance.

A CER plan for the [course\_name] will support the project aims for high quality and strategic scholarly outputs as well as enabling School and Faculty reporting against the University’s quality framework and other reporting requirements such as the Learning and Teaching Strategic and Operational plans. Additionally, a CER program of work that encompasses all aspects of planning, resourcing and publishing evaluation and research activities will enable rigorous and valid evaluation of the [course\_name] and provide the evidence base for course (re)design and quality assurance. It will identify opportunities for publication in scholarly journals and conferences, the resources required and targets and timeframes for dissemination. Additionally, a plan for CER will ensure that the success indicators identified in the [course\_name] course proposal are validly and reliably measured for reporting. There is also an opportunity to ensure that CER for the [course\_name] is aligned to standards, indicators and measures specified by the University’s quality framework and any other institutional projects that connect with Learning and Teaching (e.g. new or upgraded LMS).

# Approach

**!** *A CER plan should be the product of a consultation process with all members of the development and implementation team. It will specify conceptual framework and philosophy of research that will underpin the research. It will set out the plan for educational evaluation and research activities, resource requirements and team responsibilities in the context of a whole of project research approach.*

The [course\_name] will be delivered [face-to-face, blended (online with some face-to-face delivery); fully online]. It is critical to capture feedback from all stakeholders (students, unit designers, staff who deliver units, employers of students) to ensure the design and delivery of the course meets identified needs.

Educational evaluation and research in the field of e-learning has particular complexity. E-learning artefacts vary in scale and timeframe of use and types of e-learning artefacts include interactive learning systems, generic learning tools and learning objects. These artefacts have a life-cycle that requires different kinds of research questions, with different approaches and methods, at different stages of design, implementation and ongoing use ([Phillips, McNaught et al. 2012](#_ENREF_1)).

Phillips *et al* argue for “an evaluation framework and a scaffolded approach to the design of an e-learning research study”([2012, p.13](#_ENREF_1)). The book provides a holistic framework for designing and implementing educational evaluation and research in e-learning programs as well as tools that support both developing and codifying a CER program of work and design of individual evaluation and research activities.

Drawing on ([Phillips, McNaught et al. 2012](#_ENREF_1)), the CER plan would adopt the Learning Environment, Learning Processes and Learning Outcomes (LEPO) conceptual framework to guide the design of evaluation and research activities for the [course\_name] course. The LEPO framework is a generalised and integrated conceptual framework for learning that focuses on learner and teacher roles and characteristics in relation to learning environments, processes and outcomes. The research approach would be a design-based research approach following the whole e-learning development life cycle.

A CER program of work will include a **baseline analysis** against which other evaluation activities can be assessed. The process of developing the course proposal means that many of the components of a baseline analysis are already completed. However, it is recommended that the team ensure that data related to decisions on the design and implementation of the course and individual units be documented in the context of research questions for later analysis and publication.

A CER plan will identify:

1. Conceptual framework for the CER design and implementation
2. Components for evaluation
3. Research questions for each component
4. Data sources for research question
5. Methods (data collection and analysis) for each research question
6. Target outputs (publications, conferences, reports)

Candidate components as a focus for course design evaluation include:

* Overall design
* Curriculum design
* Learning design
* E-learning artefact design (focus on student perceptions, fitness for purpose)
* E-learning environment design
* Learning Process design

Effectiveness dimensions include:

* Contextual learning processes
* Cognitive learning processes
* Learning outcomes

**!** *The CER plan will also provide a mechanism for team members to nominate evaluation research activities within the overall framework. A tool needs to be developed to collect team ideas and prioritise/allocate work (e.g. a Google Docs form and spreadsheet).*

# Identifying potential data sources to evaluate a course

Potential data sources can be identified by looking at intended or required outcomes for a course specified in institutional documents. The following are based on analysis of course proposal documents for [course\_name] and the University’s quality framework (specifying metrics for evaluation).

**!*****Method****: identify course characteristics and outcomes and suggest or select the relevant data that can be used to measure them. Write required data collection and analysis with timelines and reporting deadlines into an evaluation plan.*

## Course Evaluation and Research Plan - Example healthcare related course

### Objectives:

Identify any proposed beneficial outcomes for a course evaluation and research proposal. For example, a new course proposal for an healthcare related course listed the following benefits:

* Facilitate qualification upgrading and training future workforce
* Improvements in sector quality of care
* Dissemination of evidence-based knowledge informing practice
* Understanding of palliative care
* Flexible delivery options
* Effective recruitment of students

Which suggested the following *Potential Data Sets*

* # students graduating
* # quality improvement projects by students/graduates;
* benchmarking outcomes for providers against accreditation standards
* # self-reported changes in practice (e.g. learning portfolio)
* Student outcomes on palliative care assessment
* student perceptions of flexible delivery
* Benchmarking of course for flexible delivery quality
* # students recruited against expected

### Identified Need

A course proposal has a business case that identifies and quantifies the need for the course. For example, the healthcare related business case identified that appropriate level training was not available in the sector:

* current method of ‘modules’ of training insufficient to develop practice in the sector
* effective care requires an ‘integrated social model of care’ by skilled staff (which the proposed curriculum would deliver).

*Potential Data Sets*

* student and/or employer reporting on impact of trained staff applying core curriculum content (integrated social model of care)
* student reporting on impact of curriculum on own practice (e.g. learning portfolio)

### Course Learning Objectives

Course Learning Objectives should be framed to be measurable and deliver specific knowledge, skills and capabilities (aligned with the Australian Qualifications Framework). For example, the CLOs for the healthcare related course were based on four core outcomes:

1. Demonstrated and applied knowledge
2. Analysis and interpretation for strategic action
3. Communication in variety of ways and settings
4. Social responsibility demonstrated in care practice

*Potential Data Sets*

* Unit level assessment tasks (e.g. Student report to employer; student discussion posts on care practice in relation to social responsibility)
	+ Qualitative analysis (e.g. thematic analysis)
	+ Quantitative (e.g. cohort analysis)
* Unit level grades (student achievement)

### Graduate attributes

Generic graduate attributes (institutionally mandated) are additional required outcomes that are embedded in curriculum and achievement by students must be assessed and measured.

*Potential Data Sets*

* assessment tasks specifically related to Graduate Attributes

**Delivery using flexible learning strategies**

The method of delivery can be a focus of evaluation. The healthcare related course had ‘flexible delivery options’ as a key strategy for the intended student cohort (mature age, working in the industry) which suggested it was important to evaluate how well that was delivered.

* Foundation Units (face to face block and web supported)
* Distance/ online learning mode with concurrent workplace and university training (introductory and intermediate)
* Work based Units (electives – variety of skills development)

*Potential Data Sets*

* Unit evaluations
* Student perceptions of support
* E-learning artefacts design evaluation
* E-learning technologies

### Course recognition

* Contribute to workforce reform and regulation in the related healthcare sector

*Potential Data Sets*

* Graduate activities in policy and care reform arena

### Career Outcomes for graduates

* Advance provision of quality care
* Disseminate evidence-based knowledge informing practice
* Possibility to articulate to higher degree programs
* Involvement in changing scope of related healthcare (care provision; policy)

*Potential Data Sets*

* National surveys (Graduates)
* Graduate activities in policy and care reform arena
* # graduates articulate to higher degree programs
* Student and/or employer reporting of impact of course on workplace practices

## Course Design: Evaluation Activity Implications

**Evaluate**

* Curriculum design
* Unit design
* University Quality Framework indicators
	+ Student support dimension
	+ Curriculum dimension
	+ Teaching dimension
	+ Learning dimension
* Faculty/College L&T operational plan indicators
	+ Staff engaged in educational research
	+ Staff provided professional development opportunities
* Alignment with University
	+ TELT action plan
	+ Assessment policy
	+ Assessment procedures
* Student perceptions
	+ Support
	+ Engagement
	+ Unit and course survey outcomes

## Institutional metrics for course evaluation (quality assurance)

**!** *With the implementation of the Higher Education Standards Framework (HESF) in 2017, all courses must have an evaluation plan.*

Drawing on HESF and applying to the [course\_name] the following data should be collected, to enable unit, course and Faculty/College reporting against the standards.

* Existing quality assurance and review procedures at the University
	+ Student evaluation surveys
	+ unit reports
	+ annual course reports, course review reports
* Course specific questionnaires and focus groups
* Regular and rigorous assessment

*Potential Data Sets*

* Existing quality assurance and review procedures at the University
	+ Student evaluation surveys
	+ unit reports
	+ annual course reports, course review reports
* University Quality Framework indicators and measures
* [course\_name] development and implementation
* teaching team and individual academic involvement in SoTL projects

# References

Phillips, R., McNaught, C., et al. (2012). Evaluating e-learning: Guiding research and practice. New York, Routledge.

Ruhe, V. and Boudreau, J. D. (2011). "Curricular innovation in an undergraduate medical program: What is "appropriate" assessment?" Educational Assessment, Evaluation and Accountability **23**(3): 187-200.

Sanders, J. R. and Nafziger, D. N. (2011[1976]). "A basis for determining the adequacy of evaluation designs." Journal of MultiDisciplinary Evaluation **7**(15): 44-78.

1. Adopting (Phillips, McNaught et al. 2012) definition of e-learning evaluation research, “the evaluation component involves making judgements about the usability and usefulness of an e-learning environment, while the research component involves a search for fundamental understanding” (p. 62). [↑](#footnote-ref-1)