

R10.2 Denbigh 1 Friday 7 December 9.00 - 11.00

Managing Complex Assessment Interventions: Research within Research (0598)

Carol Evans¹, Naomi Winstone², Annie Hughes³, Xiaotong Zhu¹, Kieran Balloo⁴, Christina Mitchener⁵

¹University of Southampton, United Kingdom ²University of Surrey, United Kingdom ³Kingston University, United Kingdom ⁴University of Surrey, Guildford, United Kingdom ⁵Kingston University London, United Kingdom

Abstract

Managing complex assessment interventions within higher education is especially challenging given transparency, accountability, equity, and value for money agendas impacting higher education (Caspersen, Smeby, & Aamodt, 2017; Mountford-Zimdars, Sabri, Moore, Sanders, Jones, & Higham, 2015). Institutional responses to such agendas directly impact work at the project implementation level requiring increasing agility and adaptability in the current HE climate.

This paper highlights the importance of evaluative processes as a central component of project design. We describe a process to explore the experiences of those leading and managing a complex assessment intervention focused on promoting the self-regulatory development of undergraduate students in three higher education institutions in the UK. In doing so, it highlights the importance of an iterative evaluative approach embedded within the project design and the complexities inherent in trying to implement the project in practice, mindful of the need for rigour regarding the use of data, choice of methodologies, and inferences that could reasonably be deduced from the research. The need for ongoing evaluation as integral to project management is highlighted. Tools and approaches to support this evaluative process as part of 'research within research' will be elucidated and shared.

Key words: Complex interventions, assessment, evaluation

Background to the complex intervention

The intention of the project was to implement a self-regulatory approach to assessment across three higher education institutions (HEIs) with the aim of reducing differential student learning outcomes (Mountford-Zimdars et al., 2015). Our premise was that by implementing a self-regulatory approach to learning would benefit all students and especially BME students and those from low socio-economic class (SEC) backgrounds; the foci of our research project. In practice, this meant deploying the EAT self-regulatory assessment framework (Evans, 2016) underpinned by a Personal Learning Styles Pedagogy (Waring & Evans, 2016) using inclusive approaches, learning tools (e.g. The Developing Engagement with Feedback Tool (DEFT) (Winstone & Nash, 2016), and analysis tools to capture measurement of students' assessment literacy, feedback orientation, engagement

with assessment, and metacognitive regulation. Students' and lecturers' perceptions of the interventions and learning outcomes were also explored as part of this project.

Methodology to explore process

In exploring elements of the process in this paper, we draw on Craig et al. (2008) guidance on managing complex interventions and Moore et al.'s (2015, p. 2) a process approach to evaluating complex interventions. To explore what elements of our intervention are working well, notions of *fidelity*, *dose*, and *reach* are applicable to our HEI educational context and provide a useful framing for evaluative work.

Fidelity involves exploring whether the intervention is being delivered as intended (e.g. aligned to the underpinning principles of the EAT Framework and intended project design); this is especially important given the need to tailor provision tightly to the requirements of different contexts. *Dose* refers to the quantity of the intervention implemented and can, for example, be considered in terms of how much training participants (staff and students) receive, and how this may impact student and staff self-regulatory assessment practices. The notions of fidelity and dose allow us to consider whether adaptations to the intended intervention are supportive or undermining of intervention fidelity. *Reach* concerns whether the intended audience comes into contact with the interventions, and allowing for contextual limitations as to the affordances of scale.

Moore et al.'s (2015, p.2) process model is a useful underpinning framework to support evaluative activity. The process model considers the nature of an intervention, what is implemented, and impact (expected and unexpected), and the role of contextual variables and causal mechanisms. Embedded within our project design we are able to concurrently explore the variables highlighted above.

Adopting a phenomenological methodology (Cresswell, 2007) using Heidegger's hermeneutical approach (van Manen, 1990) is appropriate to explore project lead and project managers' accounts of how the intervention was negotiated and implemented within each of the three HEIs. Inductive and deductive approaches are being used to explore how ideas are being developed and implemented with teams, and to explore the nature of perceived facilitators and barriers, along with consideration of on-going challenges and the impacts of specific design choices on outcomes. Methods used are aligned with a phenomenological approach to include semi-structured interviews with the core team (n = 6); group discussions; on-going reporting as part of project management; use of specific tools to facilitate discussion to include van der Zwet et al.'s (2011) Developmental Space approach to explore contextual and socio-emotional (individual) facilitators and barriers to implementing assessment change; exploration of process using 'Considerations in Managing Complex Interventions' derived from MRC (2008) guidance, and adapted following pilot work (Evans & Xiaotong, 2018).

In considering fidelity issues, while our research project, "what was implemented" was research-informed (well-trained) and well-designed from the outset, "how the intervention

was implemented” sometimes undermined its good design due to a number of variables (varying levels of commitment from colleagues and students albeit due to worthy competing demands; perceived limitations of context in what was seen as possible in different contexts; degree of ownership of the initiatives at the local level; quality of individual pedagogical designs and the degree of alignment of approaches with the project principles. Management structures (Moore et al. 2015) in relation to how teams distributed work and took ownership of projects impacted sustainability in both short and longer terms.

First stage analysis has resulted in the generation of a number of tools to assist evaluation to include an Evaluation Framework tool, informed by research on learning gain and reducing differential learning outcomes (McGrath et al., 2015; Mountford Zimdars, 2015; Kandiko Howson, 2018). Key themes under analysis include:

- How robust is our approach? Research-informed Underpinning theoretical / conceptual frameworks
- Evidence base to support initial hypothesis in relation to differential learning gains?
- Clarity of Purpose
- Appropriateness of interventions
- Ethical issues and Data Protection
- Suitability of Research Design
- Sustainability
- Embeddedness
- Scaleability:
- Transferability:
- Impact on learning and teaching practices
- Impact on students’ learning outcomes, approaches to learning, attitudes, engagement
- Impact on reducing differential learning outcomes

A key issue in moving the project forward is located in the concept of co-ownership. The importance of shared understandings of frameworks, tools, and concepts is essential if we are to move from ‘islands of innovation’ to a focus on genuinely engaged collaborative learning practices across the three institutions (Kuh, et al., 2017).

It is hoped that the tools developed and process identified to explore how the intervention was delivered can be used at a variety of levels to identify how the project design, its operationalisation, and the role of individual difference and contextual variables shaped the intervention to support interpretation of the findings, and to inform future iterations of the project.

References

- Caspersen, J., Smeby, J-S, & Aamodt, P. O. (2017). Measuring learning outcomes. *European Journal of Education*, 52, 20-30.
- Craig, P., Dieppe, P., Macintyre, S., Michie, S., Nazareth, I., & Petticrew, M. (2008). *Developing and evaluating complex interventions: new guidance*. Medical Research Council (MRC). Retrieved from: <http://www.mrc.ac.uk/documents/pdf/complex-interventions-guidance/>
- Creswell, J.W. (2007). *Qualitative inquiry and research design: Choosing among five approaches* (2nd ed.). Thousand Oaks, CA: Sage.
- Evans, C. (2016). Enhancing assessment feedback practice in higher education: The EAT framework. Southampton, UK: University of Southampton. Available at: <https://eatframework.org.uk/>.
- Evans, C. & Zhu. X. (2018). *Managing Complex Interventions Framework*. Researching Assessment Practices, University of Southampton, Southampton.
- Kandiko Howson, C. B. (2018). *Evaluation of HEFCE's learning gain pilot projects. Year 2 report*. The Office for Students. Retrieved from <https://www.officeforstudents.org.uk/media/1386/evaluation-of-hefce-s-learning-gain-pilot-projects-year-2.pdf>
- Kuh, G., O' Donnell, K., & Schneider, C. G. (2017). HIPs at Ten. *Change: The Magazine of Higher Learning*, 49(5), 8-16.
- Linderbaum, B. A., & Levy, P. E. (2010). The development and validation of the Feedback Orientation Scale (FOS). *Journal of Management*, 36(6) 1372-1405.
- McGrath, C., Guerin, B., Harte, E., Frearson, M., & Manville, C. (2015). *Learning gain in higher education*. Santa Monica, California and Cambridge UK: RAND. Retrieved from https://www.rand.org/content/dam/rand/pubs/research_reports/RR900/RR996/RAND_RR996.pdf
- Moore, G. M., Audrey, S., Barker, M., Bond, L., Bonell, C., Hardeman, W., Moore, L., O'Cathain, A., Tinati, T., Wight, D., & Baird, J. (2015) .Process evaluation of complex interventions: Medical Research Council guidance. *BMJ* 2015; 3350:h1258
- Mountford Zimdars, A., Sabri, D., Moore, J., Sanders, J., Jones, S., & Higham, L. (2015). *Causes of differences in student outcomes*. London: HEFCE. Report to HEFCE by King's College London, ARC Network and the University of Manchester. Retrieved from http://dera.ioe.ac.uk/23653/1/HEFCE2015_diffout.pdf
- Pintrich, R. R., & DeGroot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance, *Journal of Educational Psychology*, 82, 33-40.
- Smith, C. D., Worsfold, K., Davies, L., Fisher, R., & McPhail, R. (2013) Assessment literacy and student learning: the case for explicitly developing students 'assessment literacy'. *Assessment & Evaluation in Higher Education*, 38(1), 44-60,
- Van Manen, J. (1990). *Researching lived experience: Human science for an action sensitive pedagogy*. Albany: State University of New York Press.
- Van der Zwet J., Zwietering, P. J., Teunissen, P. W., van der Vleuten, C. P. M., & Scherpbier, A. J. J. A. (2011). Workplace learning from a socio-cultural perspective: Creating developmental space during the general practice clerkship. *Advances in Health Science Education*, 16, 359-273.

Waring, M., & Evans, C. (2015). *Understanding Pedagogy: Developing a Critical Approach to Teaching and Learning*. Abingdon, Oxford, United Kingdom: Routledge.

Winstone, N., & Nash, R. (2016). The developing engagement with feedback tool (DEFT).
<https://www.heacademy.ac.uk/knowledge-hub/developing-engagement-feedback-toolkit-deft>