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‘But what does it look like?’

The importance of exemplifying research in practice

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Recent years have witnessed huge interest in education research, with What Works Centres such as the Education Endowment Foundation (EEF) assuming an increasingly prominent role in promoting the use of high-quality evidence to inform school-based practice (Edoald and Nevill, 2020). However, ‘even when ideas are strongly supported by research, implementing them effectively can be difficult’ (Wiliam, 2017, p. 40). As observed by Wiliam, when implementing research-informed practices within diverse classrooms and contexts, there is a danger of ‘lethal mutations’, whereby over time, and through the dissemination process, sound pedagogic principles are gradually distorted, ultimately reducing their effectiveness.

Ensuring that teachers have a secure understanding of these research-informed practices prior to implementation can increase fidelity, thus increasing the likelihood that changes have the desired effect. The authors, from our diverse positions and settings encompassing Early Years, primary, secondary, and higher education contexts, are each responsible for designing and leading professional development (PD) opportunities for teachers. Drawing from the evidence, this article shares our reflections and experiences around characteristics of effective exemplification through discussion of three key principles: fidelity, accessibility and acceptability.

Fidelity

Fidelity, or the degree of exactness with which something is reproduced, is an important consideration when exemplifying research. Lack of fidelity can lead to poor replicability (Ellefson and Oppenheimer, 2022), reducing the impact of PD activities and potentially resulting in incorrect transmission and application of concepts and techniques.

In our own work, one strategy that we have adopted to promote fidelity is the exemplification of research-informed techniques using examples and non-examples. Non-examples clarify the boundaries of the concept, highlighting what it is *not*. Examples and non-examples also promote fidelity through pre-empting possible lethal mutations by strategically selecting non-examples to explicitly address common misconceptions. For example, when exemplifying dual coding, we provide a non-example, such as a PowerPoint slide with lots of redundant icons, to support our explanation of why this is not dual coding, helping to illustrate and contextualise features of the approach in a way that is relevant to the teachers with whom we are working.

Accessibility

We have also found that making research accessible is not just about helping teachers to understand the research itself, but also about supporting them to recognise how they can use this to impact their practice. Research that speaks to itself will not fundamentally alter pupil outcomes, yet many sources acknowledge a disconnect between research and practice, with one study finding that

'teachers overwhelmingly dismissed academic research on the grounds that it is not practical, contextual, credible, or accessible' (Gore and Gitlin, 2004, p. 35).

To counter this, we have found that it is important to contextualise concepts in a form that is relevant to the audience. For us, this has meant tailoring our content to suit the age phase, content and context of the setting with which we are working, supporting teachers to recognise the relevance of the focus techniques and facilitating transfer into their own practice.

Accessibility can also be promoted through incorporating opportunities to instruct teachers on how to perform focus approaches, as well as opportunities for clear modelling. Both instruction and modelling are identified as key mechanisms in the EEF's (2021) 'Effective professional development' guidance report, and our reflections upon this have led us to increase our use of observable samples of key techniques, either directly in-person, or indirectly via video footage, to demonstrate how this could look in the classroom. This is complemented through opportunities for teachers to reflect upon and evaluate these techniques, and to practise and rehearse them at least once in a context outside of the classroom, supporting them to enhance their skills and embed new habits.

Acceptability

Acceptability encompasses the extent to which an approach is perceived as worthwhile for improving pupil outcomes, as well as issues relating to the feasibility of implementation. Motivating teachers to adopt new or amended approaches is essential for effective behaviour change (EEF, 2021), and therefore, when planning PD activities, we consider how we can provide adequate time and support, including social support, to allow colleagues to successfully develop key techniques.

We have found that structuring PD to provide multiple short sessions allows a 'drip-feed' approach, which can provide valuable opportunities to revisit prior learning and support the retention of new knowledge, developing a deeper understanding of the focus concepts and techniques. As with the pupils with whom we work, we have learned to follow the advice of Sherrington (2020, p. 21) in recognising that providing multiple different examples can provide 'the key to unlocking the next step in their understanding: seeing how it can be done'.

To ensure that this remains purposeful, we have found that repeating the same core message, while varying superficial aspects of examples, focuses attention on the essential components of the focus techniques, combatting the tendency to focus on surface details. For example, when exemplifying retrieval practice, we provide examples involving different age phases, subjects and tasks – focusing particularly on ensuring variety and avoiding an overemphasis on quizzes. Over time, this also enables us to

Some studies have highlighted how teachers who endorse neuromyths often adopt teaching practices linked to these incorrect beliefs

increase the complexity of examples to support the development of more nuanced understanding of concepts and approaches.

Acceptability can also be influenced by the degree of flexibility with which research-informed approaches can be implemented, with Sims et al. (2021, p. 50) finding that teachers welcomed 'approaches which did not prescribe a particular teaching

behaviour, but instead offered a method to improve teaching and learning'. For example, when supporting pupils' writing across the curriculum, it is important that teachers are encouraged to adapt whole-school generic approaches in a more nuanced way to suit the demands of their subjects. Consequently, when communicating key techniques, we create space for 'intelligent adaptation' (EEF, 2021, p. 32), by highlighting those core components of approaches that are essential to their effectiveness and those elements that may be altered according to the individual needs of the teacher, age phase or specific context in which they will be implemented.

Concluding thoughts

Careful consideration of how we can best exemplify the use of research evidence in practice, in particular the exemplification of the concepts and techniques across our work, has proven instrumental in ensuring and sustaining change. Through outlining our approach to exemplification, considering the principles of fidelity, accessibility and acceptability, we hope that colleagues are better placed to draw on the findings of research evidence, using these to make meaningful changes to inform and develop classroom practice without the ever-present danger of lethal mutations.

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