Further exploring the rationality of evidence informed practice: A semiotic analysis of the perspectives of a school federation

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A B S T R A C T

This paper examines the rationality of evidence-informed practice (EIP) It presents pre intervention empirical evidence to provide an indication of what might facilitate more effective research-to-practice connections. The analysis is framed by two theoretical perspectives: 1) optimal rationality, and 2) semiotics. These perspectives are used to explore what evidence-use means to teachers, why they do or do not seek to use evidence to improve teaching and how these positions might be shifted in favour of more evidence informed approaches. Interviews were conducted with 15 teachers (the entirety of the teaching staff). Findings suggest that teachers need practical experience of EIP to engage with it, but they also need encouragement and support in relation to networked collaboration if EIP is to move out of individual classrooms and become a cultural norm at the level of the school/federation.

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1. Introduction: using evidence in education

The idea that 'evidence' can be used to improve teaching practices and pupil outcomes, ultimately leading to improvements at a system level, is currently fashionable in education, both nationally and internationally (Hammersley-Fletcher & Lewin, 2015). This focus is not without merit: for example it is observed by Supovitz (2015) that a common characteristic of some of the most highly performing school systems is that they facilitate the collaborative examination of research evidence in order to identify likely problem areas (in terms of teaching and learning) as well as potential solutions to these problems. Likewise, analysis by Mincu (2014) suggests that where research is used as part of high quality initial teacher education and ongoing professional development, that this makes a positive difference in terms of teacher, school and system performance.

Yet, at the same time, there exists a recognized failure, on an international scale, of evidence to make a widespread and sustained impact on the practices of educators (Bryk, Gomez, & Grunow, 2011; Nelson, Mehta, Sharples, & Davey, 2015); and, despite considerable activity, the development of system-wide processes to meaningfully connect research and practice across the piece remain underdeveloped (Gough, Tripney, Kenny, & Buk-Berge, 2011). In part this research and practice 'gap' may be a reflection of the critique often levelled at the perceived use value of educational research for practitioners. For instance, in relation to perceived deficits in the clarity, timeliness, relevance and usability of research; of the lack of ready amenability of research to action/transfer; or in terms of its lack of applicability and sophistication (e.g. how well the

research-based information aligns with classroom needs and local contexts) (Dagenais, Mayer, Wooley, & Haldeman, 2008; Nelson & O'Beirne, 2014). In addition, many schools have found it difficult to become 'research-engaged'; with teachers often lacking the skills, resource or the motivation to use evidence (e.g. Cooper, Levin, & Campbell, 2009).

Simultaneously however, it is recognized that there has been little research undertaken to provide a research base on evidence-use that might address this critique (Cain, 2015; Nelson & O'Beirne, 2014). In other words, perhaps in an ironic twist, the evidence-use movement is itself not yet able to draw on a comprehensive and rigorous evidence base to either justify its beliefs or to put forward proven suggestions for how teachers might employ evidence effectively (Cain, 2015). While this is now being addressed through initiatives, such as the Education Endowment Foundation's £1.4 m investment in projects focusing on approaches to increasing the use of research in schools, it will take a number of years before the evaluations of these projects emerge; and longer still before any meta-analysis or synthesis of them might be undertaken and used to provide an overarching frame outlining effective and less effective ways to connect research and practice. In the meantime this leaves simply the promising but nascent indication of benefit that already exists (detailed above) along with the strong moral and efficiency arguments for continuing to seek to better connections between evidence and practice (e.g. Shavelson & Towne, 2002; Oxman, Lavis, Lewin, & Fretheim, 2009).

This paper is situated within this context: it is grounded in the belief that approaches for connecting research and practice should be pursued, and presents pre intervention empirical evidence to provide an indication of what might facilitate more effective research and practice connections. The paper is also grounded in *[citation removed for peer review]'s* argument that, because the concept of evidence use is intrinsically bound to trends and phenomenon that affect our day to day lives, research on evidence use should be explicitly situated within current sociological theory. Correspondingly the empirical analysis that is presented is framed by two pertinent theoretical and methodological perspectives: 1) the concept of optimal rationality; and 2) the analytical approach of semiotics. These are used to explore what evidence use means to teachers, why they do or do not seek to use evidence to improve teaching and how these positions might be shifted in favour of evidence informed practice (EIP). It begins, however, by providing a definition for EIP as well as outlining the factors that affect its realisation.

2. Defining evidence-informed practice

The proposed relationship between evidence and practice can be found expressed in various ways; in themselves these broadly represent an evolution from the idea that teaching can be based on evidence, to the realisation that it is perhaps more realistic, relevant and effective to consider situations where teaching practice is *informed* by evidence: with the coining of the phrase *evidence-informed practice* (EIP) representing a change of emphasis that favours teachers employing a myriad of evidence types, including their tacit expertise, in order to make effective decisions in specific contexts (Hammersley-Fletcher & Lewin, 2015; Nelson & O'Beirne, 2014). This shift is reflected in the definition of EIP provided by England's (as was) National College for Teaching and Leadership who suggest EIP comprises a situation in which:

> All teaching practice reflects both individual teaching expertise and the best and most up-to-date external evidence from systematic research

More specifically in relation to this definition, and in keeping with *[citation removed for peer review]* for definitional purposes this paper considers 'external' research as that which has been peer reviewed and published by academic researchers. Systematic research, meanwhile, is considered to comprise meta-analyses or syntheses such as those produced by Hattie (2011). As with previous work and in keeping with these definitions, the terms 'research' and 'evidence' are used interchangeably within this paper and treated as synonymous throughout.

3. Optimal rationality

It is also important to recognize that the pursuit of EIP is (in theory at least) grounded in notions of rationality (*[citation removed for peer review]*). The concept of Optimal Rationality (OR) was originally presented by *[citation removed for peer review]* to explain why educators may or may not employ research to inform their practice, despite the apparent benefits of doing so. As *[citation removed for peer review]* explains, OR provides a conception of rationality grounded in philosophy rather than economics, and that originates from a rejection of the Kantian universal moral imperative, combined with a repositioning of Aristotelian reasoning. More specifically, optimal rationality suggests that any analysis of what rationality is or comprises should focus two things: 1) what individuals actually do in order to achieve goals (their *practical rational* acts); and 2) people's understanding of the wider context for their actions (the *cultural rational* environment). There are three key aspects of OR that spotlight its relevance to EIP: first is that OR examines people's behaviour, both in terms of the timescales involved and with regards to who might be affected by particular actions. In other words, OR argues that researchers should consider rationality according to both *when* the implications of actions are likely to materialize and in terms of *who* they might effect. According to OR, the effects of actions are therefore likely to range, on one hand, from being fully *universal* to being fully *individual*, and on another from focusing on the *short-term* to centering on the *long term*. This is important because factors such as time pressure (or even the pressures of accountability), are likely to encourage short term 'wins'; meaning teachers' attention can often be focused towards particularly narrow rational acts (in terms of the class they are teaching