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Valuing epistemic diversity in educational research: An agenda for improving research impact and teacher education programs

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Abstract

Research in education draws upon a wide range of epistemological traditions due in part to the wide range of problems that are investigated. While this diversity might be considered a strength of the field, it also makes researchers who work within it vulnerable to being divided into those worth listening to and those who should be ignored by those who are interested in the outcomes of our research, especially policy holders and system providers. Epistemological diversity in educational research also presents challenges for inducting teacher education students into the profession. We outline some of these challenges in a discussion of epistemological diversity in research in education. We also describe differences in how research traditions construct educational problems. We argue that crossing epistemic boundaries is a necessary condition of the educational practices of teachers, and of those preparing to join their ranks. We compare and contrast knowledge producing processes in education, and identify the repertoires of capabilities and habits of mind associated with different epistemologies or ‘angles’. We suggest that the impact of educational research, including its contribution to teacher education programs, policy and public debate about issues in education, might be enhanced through a heuristic suite of four angles that are each understood to be necessary but not sufficient on their own. We provide a brief worked example of how such a heuristic might be applied to make sense of the diverse bodies of research regarding student engagement in school.

“All we can do is gaze in wonderment at the diversity of discursive species, just as we do at the diversity of plant or animal species.” (Lyotard, 1979, p. 26)

Introduction

As teacher educators we work predominantly in units of study informed by the sociology, psychology, history, and philosophy of education. These are sometimes referred to as foundation units in teacher preparation programs. Over time, we have seen the relevance of these units increasingly challenged by policy interventions that do not value their contribution to enhancing the ‘quality’ of teachers’ practice. Particularly at the graduate level, the implementation of professional teaching standards emphasises the professional practices and school curriculum knowledge required by teachers, whereas the intellectual foundations of teachers’ professional practice - the ways of thinking that might support them to teach in diverse and complex settings - are left largely unspecified. The curricular space currently occupied by knowledge drawn from the foundation disciplines is coveted or already colonised by units on professional and school curriculum knowledge intended to fulfill the expanding mandatory curriculum requirements imposed by professional teaching standards and accreditation bodies (Doherty, Dooley & Woods, 2013).

It is ironic that the implementation of professional standards is widely accepted as a response to often-raised concerns about a perceived decline in the intellectual quality of the teacher workforce. Missing from these debates is an acknowledgement that practice is the realisation of a way of thinking about a task or a problem, even when these ways of thinking are not made explicit, or acknowledged. In other words, if the task of teaching is understood in narrow technical terms, then a narrow set of standards will suffice. However, if the task is considered to be complex, as seems to be indicated by the challenges faced by teachers generally and especially those working in challenging contexts, then we argue that foundation units in teacher preparation programs provide access to the repertoires of capabilities and habits of mind associated with different epistemologies or ‘angles’ required for professional practice in contemporary sites of learning.

We are not making a claim for a return to the model of scholar teacher, one of a number of models of teacher education delineated by Connell (2009), but we agree with Connell's critique that frameworks listing specific and auditable teacher competencies, associated with a competent teacher model, lack attention to the '*relations between competencies*' (p. 225, emphasis in original). Connell argues 'that some fundamental questions about teaching concern what might be called "meta-competencies", i.e. capacities to balance, choose among and deploy specific competencies' (p. 225). Such professional meta-competence is required to filter and sort competing knowledge claims, then select and deploy them in constructive ways that allow the profession to fulfil its social contract, in particular, to work towards a more equitable and fair distribution of knowledge resources regardless of gender, race, religion and region.

During teacher preparation programs, students engage with the products of a wide range of research conducted under the logics of different epistemologies. This variegated field of educational research reflects the commensurately wide range of problems considered by educational researchers, and the diverse audiences for their work (Yates, 2004). We suggest that the range of problems addressed by educational researchers underscores the potential of the field to contribute to important questions facing society. It also points to the challenges associated with inducting students into the epistemological premises of the profession given the multiple disciplinary boundaries they traverse in their programs.

Goodyear and Zenios (2007) argue that:

the traditional academic conception of higher education is richer and on firmer ground when teachers within disciplines pay explicit attention to the ways in which knowledge claims within those disciplines depend upon ontological and epistemological assumptions. More of our students spend more of their time working across disciplinary boundaries; greater awareness of the ontological and epistemological shifts entailed in each boundary crossing can help them become more confident and perceptive travelers. (p. 354)

Boundary crossing can involve moving across conflict zones. At a time when knowledge is being produced more rapidly, and is more accessible than in the past, there is open and highly politicized contest over knowledge claims, best illustrated by the ongoing denial of climate change by sections of the population. In education, there are ongoing disagreements about how to support literacy achievement, the effects of standardised

testing, and means by which to improve the quality of teaching, to name just a few. While these debates can advance knowledge, they are also prone to becoming bogged down in misconceptions arising from a general lack of research literacy within the population, and conflict between experts. In this paper, we link a consideration of how foundation units, and teacher education programs more broadly, might support their students' development of meta-competencies, particularly those that might enhance research literacy, to considerations of how educational researchers themselves might engage in more productive dialogue that enhances the reputation of our profession, and the impact of our research.

We argue that the reputation and impact of research within the field of education might benefit from its researchers being more explicit about the effects and limits of the choices they make while conducting research. Namely, how their choice of questions, theoretical frameworks and research methodologies constitute research problems and practical solutions in particular ways. For example, student disengagement, which sometimes manifests as conflict between teachers and students in classrooms, is an issue of ongoing practical concern, particularly in schools serving families whose children have not been well served by schooling. This issue might be understood as a problem arising from:

- Student disengagement, lack of motivation, or a fixed mindset;
- Poor behavior management, teacher inexperience, weak qualifications, or low quality teaching;
- Poor curricular design or weak differentiation;
- Inflexible school organisational processes, inexperienced school leaders, or limited professional development;
- Inequities in society that produce marginalisation, poverty, and racism

Each of these ways of approaching and constructing the 'problem' of disengagement and conflict in classrooms poses different sets of questions that invoke different modes of enquiry. While each potentially offers some insight into a complex problem, we argue that the importance of the problem, together with a general lack of research literacy, places additional responsibility on educational researchers to account for their particular contributions by making explicit what they pay attention to; what they choose to ignore; what they can speak about with authority; and the limits of their knowledge claims. In the

absence of such an accounting, it can simply appear to those outside academia that the experts are unable to agree, and are unable to contribute to practical solutions.

One way of accounting for differences in educational research is by exposing that which is taken-for-granted and hidden from view – meaning making processes and their relationship to power and knowledge. In the field of social theory, Levine (2015, p. 9) argued that ‘destructively conflictual modes of discourse among social scientists need to be transformed into discursive modes that embody dialogue’ for the sake of both the advancement of knowledge, and as an educational vehicle. Levine acknowledged that individuals who hold different views may be drawn into productive conflict in non-adversarial ways by engaging in dialogue for the advancement of their common objectives, and refraining from destructive combativeness that involves dismissiveness, caricature, and disavowal.

In this paper, we support this principle of greater dialogue across epistemological boundaries as a desirable, indeed necessary, feature of teacher preparation programs, and of relationships between educational researchers. We begin the discussion with a consideration of theoretical comfort zones, and the imagined capacity of researchers to impact policy and practice. We then share some provocations from recent scholarship that has raised similar concerns about the fractured and politicized condition of knowledge in educational research. These encourage us to think differently, and imagine forwards. We then propose a heuristic to capture and manage the variety of knowledge-producing paradigms that might be helpful for teacher educators to identify the repertoires of capabilities and habits of mind associated with different theoretical paradigms. We suggest that attention to the **relations between** such repertoires can harness shifts in meaning-making processes associated with crossing disciplinary boundaries, to provide a way to think about complex issues that matter.

We suggest that the influence of educational research, and relationships between researchers, as well as the induction of students into the profession of teaching will be enhanced through the meta-lens of four “angles” that are each necessary but not sufficient on their own. This heuristic provides ways of examining educational research processes to ask whether all angles have been considered, made explicit, or might contribute to the

consideration of important educational problems in teacher preparation programs. The model assumes that researchers start from common problems that matter; and that multiple lenses can be applied to the construction of the research question, design, and the production of knowledge. We provide a brief worked example of how such a model might be applied to understanding the educational issue we have already touched on - relations between teachers and students in contexts where there are high levels of poverty and difference.

Theoretical comfort zones and policy impact zones

Writing in the 1960s and 1970s, Kuhn noted that 'there are circumstances, though I think them rare, under which two paradigms can coexist peacefully' (p. ix). Kuhn's (1970) thesis regarding scientific paradigms, crises and revolutions traced the history of sciences as a series of 'incommensurable ways of seeing the world and of practicing science in it' (p.4) whose coexistence inevitably fuels 'controversies over fundamentals' (p. viii) leading to ruptures in the field over time akin to Foucault's disjunctive histories. For Kuhn, adherence to a paradigm develops through the scientist's 'educational initiation' which exerts 'a deep hold on the scientific mind' (p.5). We recognize this cultivation of a deep allegiance to particular theoretical approaches in our own journeys. Our theories of choice colonise our minds, resource our vocabularies, and precipitate the questions we ask in our research. We also recognize it in the enthusiasms of our postgraduate students who we tend to mould in our own image, convinced of the explanatory power of our familiar paradigms. In this way we build and sustain **comfort zones** in communities of like-minded scholars to rehearse our critiques of others. Kuhn suggested that such deep allegiance means old paradigms only fade as their adherents die out, rather than by falsification, crises in the face of anomalies, or conversion to alternative paradigms.

Writing in the late 1970s, Lyotard (1979) painted a very different picture, diagnosing the 'postmodern condition of knowledge' which has 'altered the game rules for science, literature and the arts' (p. xxiii). This condition is marked by 'incredulity towards metanarratives', 'heterogeneity of elements', proliferating commodified knowledges each with its own language games and rules of legitimation. These multiplicities fractured the imaginary unity of the modernist scientific enterprise, aided and abetted by the information technologies that were then just emerging. In Lyotard's opinion, the coexistence of

competing paradigms 'reinforces our ability to tolerate the incommensurable' (p. xxv) such that 'today more than ever, knowing about [a particular] society involves first of all choosing what approach the inquiry will take' (p.12). We recognise this **fracturing** of social science in the heteroglossia of our faculties and our journals, in the conference streams we don't understand so don't attend, the analyses we can't fathom so ignore, and the impossibility of staying on top of mushrooming bodies of literature.

Such a tolerant truce in companionable diversity both enables and constrains new habits of mind. We are no longer obliged to make our work dialogue with theoretical alternatives, to reconcile differences, or argue the superiority of our grip on the object of study. It's enough to assemble a coherent theoretical framework that serves the project to hand. We keep revisiting evergreen research questions under new policy conditions, and new discourses. Our empirical work serves to document fleeting historicized phenomena **rather than push to theory building**, because the questions driving big theory now smack of metanarrative and scholarly hubris. We are concerned that this freedom to differ undermines our capacity **to inform policy**, to profess, (though we keep writing empty promises in our grant applications), just when research is being held increasingly accountable to instrumental ends:

The important thing is not, or not only, to legitimate denotative utterances pertaining to the truth, such as 'The earth revolves around the sun,' but rather to legitimate prescriptive utterances pertaining to justice, such as 'Carthage must be destroyed' or 'The minimum wage must be set at x dollars' ... it is one thing for an understanding to be possible and another for it to be just. Knowledge is no longer the subject, but in the service of the subject: its only legitimacy (though it is formidable) is the fact that it allows morality to become reality. (Lyotard, 1979, p.36)

Educational research in particular, we argue, is held accountable to this moral imperative as its *raison d'être*, expected to draw some practical implications or 'prescriptive utterances' as a closing move, often prematurely, and often through the filter of an unexamined normative stance.

The fracturing of research fields is particularly problematic for projects invested in a social justice agenda. Lakoff's (2004) reflection on the political discourse of the US Left and Right identifies the underlying coherence of conservative frames under a metaphor of the strict

patriarchal family, and of progressive frames under a metaphor of the nurturing family. However, while the various policy interests of the conservatives can stack up and cohere around the principle of self-interest, Lakoff argues that progressive politics and its energies splinter to champion different groups and agendas that in effect compete against each other. We recognise this effect and would argue that neo-conservative agendas in the education arena build a consistent ideological message that erases the problem of complexity (see Buras, 1996), while the focus of critical scholars is refracted through a spectrum of identity categories, equity groups and contextual specificities. In this way, critical scholarly efforts to inform policy are dissipated across categories and causes that get lost in the vast scale of educational institutions and their bureaucratic imperatives.

We are concerned that, in this postmodern condition of proliferating knowledges, post hoc theorisations of technicist ‘what works’ research, replete with ‘before’ and ‘after’ snapshots and an authoritative fog of statistical technicalities, have captured the policymakers’ imagination. Such work offers a way to avoid complexity, rather than understand it. Speaking in numbers clears the palette of messy considerations, complex mitigations and contradictory theories. Eyes gravitate to the numerical so-what, and the statistical error inherent in every measurement and every subsequent analytic layer is allowed to evaporate. Anomalies and outliers fade out of focus when the policy gaze fixes on whole population averages and trends. The language of numbers disembods knowledge claims, allowing them to float above any particularities of contexts. It’s easier to get on with the job of policy-making with this clarified, standardizing vision. We take some comfort in Coburn & Talbert’s (2006) careful empirical work that suggests research ‘evidence’ does not speak for itself but rather is filtered through ‘norms of evidence use’ (p. 490), individual’s faith in research processes, professional affiliations and institutional histories.

We understand the current trend in politics governing the relationship between education research and education policy (Blackmore & Wright, 2006; Harrison & Seddon, 2013) to reflect demands for evidence-based practice, read narrowly as large-scale studies of ‘what works’. The appeal of this kind of research is that it speaks to politicians and policy makers in a language that they perceive to be credible, hopeful and reassuring. The complexities of sites, the inequitable distribution of resources and the impact of policies, such as increased parental strategy in school selection, are ‘controlled for’ in ways that

remove such complexities from the table. In contrast, explicit attention to theoretical choice among the range of possibilities could offer the many stakeholders (politicians and policy makers, those employed at the system-level of schooling, those employed locally such school leaders, teachers, as well as those preparing to teach) other means by which to understand problems and generate solutions. Not foreclosing on available meaning-making processes would broaden the repertoire of practices that may be considered and deployed.

Given the current politics around research and agendas for policy impact, we argue it is time to find a way to build new alliances across fracture lines, without losing the integrity of different knowledges. This is important for researchers, but perhaps even more important for the profession. We turn now to a variety of provocations urging a reframing of the education research and knowledge production in this field.

The literature's provocations

We have identified a number of different scholars seeking to articulate a way forward to overcome proliferating theoretical and methodological differences in educational research. Across their different arguments we recognise a theme of engaging across boundaries, wrestling actively with our differences, and the challenges such engagement would pose to business-as-usual.

Weis et al.'s (2009) review article is concerned about the way sociology of education has become increasingly splintered into mutually ignorant camps that don't talk to each other. The review celebrates work that 'trespasses', defined as 'accessing and building on work produced across contrasting theoretical and methodological frameworks' (p.93). The authors also celebrate work that 'traverses' the boundaries that have been erected between studies that focus on either structure or agency, then between those that privilege either quantitative or qualitative methodologies. The authors challenge allegiance to methodological defaults that 'lock in' differences, while masking deeper similarities in terms of efforts to understand inequalities in educational outcomes, rigour in empirical work, and conundrums of power and politics in the research processes: 'our point here is that we must embrace a predisposition to engage whatever methodology, method, or methods enable us to answer important research questions' (p.923). The review revisits the productive debates of the 1970s and 1980s, and the progress made from that eclectic

ferment between functionalist, resistance and critical work. They draw the contrast between those 'struggles' with the current 'staked out' camps of mutual ignorance:

Given ... that twists in theoretical framework emerge out of or in response to theory and accompanying empirical material generated across competing frameworks, the wholesale dismissal of theory, data, and method across difference both limits imaginative possibilities and is, quite frankly, counterproductive to scientific progress. (p. 921)

Perhaps more importantly, they argue that the fractured state of the discipline undermines any potential to make a difference in policy and practice: 'This state of affairs not only limits engagement with larger academic conversations. It also presents very serious impediments to challenging the dominant discourse, as isolated conversations are unlikely to be able to challenge the status quo' (p.920). Their point is that theoretical progress comes from struggle (not theoretical orthodoxies and boundary maintenance). A vibrant field is full of scholarly difference, so valuable research will seek to engage multiple frames, not just the usual suspects. By staying inside our theoretical or methodological boundaries we are only and always dealing with the abstractions made visible under that lens. Weis et al. point to the impact of Crenshaw's work on intersectionality between gender and race (and later class) that was precipitated by the desire to understand the intersecting vectors in concrete life circumstances that produce inequality - not just to extract the researcher's angle of interest. This encourages us to start from, and stick with, messy problems arising in authentic contexts.

Law (2004) is similarly interested in engaging with complex, messy research problems. His provocative book rattles the cage of neat, prescriptive methodologies, with their canonical references and itemised rule-governed steps:

I want to argue that while standard methods are often extremely good at what they do, they are badly adapted to the study of the ephemeral, the indefinite and the irregular ... the problem is not so much the standard research methods themselves, but the normativities that are attached to them in discourses about method ... we are being placed, however rebelliously, in a set of constraining normative blinkers. (p.4)

Law argues that methodologies are performative, in that they produce the realities they seek to understand. Their underlying presumption of social reality as regular, ordered, knowable, and determinate erases the complex, unknowable, and elusive aspects of social reality that 'necessarily exceed our capacity to know them' (p.6). He argues that orthodox methods 'distort' social complexities 'into clarity' (p.2), so we need new ways of knowing through 'techniques of deliberate imprecision' (p.3). For Law, reality is produced by the flux and 'maelstroms' (p.7) of multiple forces generating what eventuates or becomes empirically evident. This book helps us reflect on the current politics of social science research – what gets funded, what counts, what is dismissed. The rhetoric of Bush's 'gold standard' research design and 'what works' research invokes a stable, predictable, knowable, and manageable world. Such method asserts a flat ontology in effect, one that rules out more complex, problematic accounts of the social world and how it operates. In this way, reducing each child to a 'McDonalidized' data point erases all fuzzy complexity and fabricates 'efficiency, calculability, predictability, and control' (Ritzer, 2004, p. 12) in policy responses.

Lather and St. Pierre (2013) also trouble established methodological orthodoxies that fail to articulate with disruptive theory. They are interested in 'the movement of qualitative research toward useful, doable, and critical ends that help us all grapple with the implications of the "posts"' (p. 629). With the legitimacy of qualitative research established, this article does the work of 'imagining forward' (p. 631), asking what comes next in response to the chain of epistemological turns and ontological critiques. What do the provocations of post-structuralism, and the more complex ontologies of Deleuze and Barad mean for methodological precepts and empiricism more broadly? Research methodology designed for one ontology cannot simply be applied to another. They point to how assumptions of depth and stability in the humanist version of social science, criteria of rigour and systematicity, the authentic voice of the interview, and its logics of representation all come undone under these turns. They challenge our comfort zones: 'the ethical charge of our work as inquirers is surely to question our attachments that keep us from thinking and living differently' (p.631).

St. Pierre & Jackson (2014) critique conventions for coding qualitative data as incoherent, specious practice simulating a naïve scientism:

we are concerned about the analysis that treats words (e.g., participants' words in interview transcripts) as brute data waiting to be coded, labelled with other brute words (and even counted), perhaps entered into statistical programs to be manipulated by computers, and so on. In some cases, words are reduced to numbers. (p. 715)

This is another attack on the orthodoxies consecrated in introductory research methods textbooks, their simplistic approach to 'collecting' data in the 'real' world, and to flat treatments of language as an unproblematic window on reality. Their argument seeks to extend the idea of analysis to include 'thinking with theory' (p.717). The collection introduced by this article presents experimental modes of post-coding analysis, as 'non-technique and non-method that is always in a process of becoming as theories interlink, intensify and increase territory'(p. 717).

Lather (2013) engages more explicitly with the politics of education research by describing the front that has opened up in long running tensions between qualitative and quantitative researchers. She claims that this friction is exacerbated by demands for evidence-based practice and policy that 'pits the recharged positivism of neoliberalism against a qualitative "community" at risk of assimilation' (p.636). Some in this community have attempted to respond to these demands by expanding their research designs to include some element of quantitative research, and claiming the mantle of mixed methodologies. Lather warns that such measures reduce qualitative research to a form of 'instrumentalism that meets the demands of audit culture' (p.636). She encourages qualitative researchers, even though they may be weary and 'eager to get on with their work' (p. 635), to continue to resist such settlements by 'calling out the unthought in how research-based knowledge is conceptualized and produced' (p. 636).

Sriprakash and Mukhopadhyay (2015) offer another timely provocation in their argument that researchers' reflexivity should account for the 'second order' effects of their role as knowledge brokers and translators, in how the knowledge they legitimate produces effects and in how researchers themselves are enacting particular discursive traditions:

The educational researcher is positioned not as the interpreter (reflexive or otherwise) of an a priori world. But rather, the process of research itself engages actors (of which the researcher is one),

scripts, and performances which produce particular understandings of, and effects on, the world.
(p.237)

This argument implicates theoretical choices, methodological designs and research products in both the politics of knowledge, and the construction of the reality being researched.

Together these provocations in the literature mark a growing discomfort with past settlements and divisions of labour around educational research. We can't go back, but how do we move forward?

Fractures in the field of educational research

Our attempts to imagine forward when neo-positivism has reinvigorated a contest over knowledge claims, builds upon a long-term project of Lather to map paradigms in educational research (1991, 2006). Lather's early work responded to the foundational uncertainty thrown up by the challenges of postmodernism to positivism and postpositivist inquiry. She described such challenges as 'an opening for we who do our research and teaching in the name of liberation to make generative advances in the ways we conceptualize our purposes and practices' (p. 8). We view the challenge of neo-positivism in the same way. Lather described theoretical choices among a range of possibilities by drawing on an earlier classification developed by Habermas (1971), which identified three categories of human interest - prediction, understanding (explanation), and emancipation. Lather supplemented these with a post-Habermasian interest in deconstruction by challenging taken-for-granted assumptions, and tracing the effects of discourse (Dreyfus & Rabinow, 1982). More recently, Lather (2006) has extended this analysis by mapping the proliferation of paradigms. For example, she has added postcolonial and post-humanism to the category of deconstruction; and she has extended her mapping to include a still emerging category, 'Next?' into which she places neo-positivism. We understand Lather's already established categories as offering different 'angles' on issues of human sociality:

1. When the angle of human interest is prediction or explanation, the problem under consideration is understood by identifying causal determinants/correlates as sites for possible interventions.

2. When the angle of human interest is understanding, the problem under consideration is understood as the conditions that contribute to the undesirable behavior, and the experiences of those affected by it.
3. When the angle of human interest is emancipation, the problem under consideration is understood as liberating those who exhibit behaviors that limit and constrain their access to success and achievement from the oppressive relationships of power that produce such behaviours.
4. When the angle of human interest is deconstruction, the problem under consideration is understood as an effect of discourses.

These four categories of, or angles on, human interest, are shaped and sustained by different paradigms, each delineated by signature methodological tools or modes of enquiry. They will each provide some different purchase on a research problem, and generate different practices. While the contributions of each 'angle' might produce a different 'so what' for policy, collectively they enable a more comprehensive and nuanced representation and understanding of research in education. We claim that the capacity to work across these categories, to navigate across their implicit boundaries, to be mindful of their limitations, and to deploy them constructively for particular purposes illustrates the meta-competency that Connell (2009) considers fundamental to contemporary teaching practice. We interpret the type of meta-competency that Connell describes as making different ontological and epistemological assumptions explicit or, at the very least, recognizing their different textures, and thus assisting students in higher education to confidently traverse the epistemic boundaries they are routinely expected to cross (Goodyear & Zenios, 2007).

A worked example

We turn now to sketch out how these four angles might help make sense of a crowded and conflicted field of research addressing a messy problem that we touched on earlier – the inability of schooling to capture the imagination and interest of large numbers of students from disadvantaged backgrounds. In public discourse, this problem is typically perceived to

be one of student non-compliance, and solutions tend to focus on fixing students or modifying their behaviours. The associated tensions and disruptions in classroom interactions impact on both students and teachers. It is an ongoing matter of concern within systems of schooling, particularly public systems with a duty to provide for all young people. There is a proliferation of institutional responses ranging from punitive regimes to therapeutic treatments, practices of exclusion and inclusion, as well as curricular or pedagogical adjustments. This variety across both theory and practice speaks both to how the problem and hence solutions can be constructed differently, and to the historical waves of normative theory about how relationships between teachers and students should be managed. Even the language used to refer to permutations of this 'problem' is marked by the informing theory – is it 'non-compliance', 'misbehaviour', 'misconduct', 'resistance', 'conflict', 'disorder', 'disengagement' or 'refusal'? Is the response 'classroom management', 'discipline', 'engagement' or 'behaviour management'? Are the young people involved 'students', 'adolescents', or 'youth'?

Our own interest in this issue reveals our attention to the particular moral demands imposed by/in schooling contexts, with their density of people, power-differentiated roles, and unique requirements of silence, stillness, dress code, attention and scripted forms of participation demanded of the young people. Each choice for framing the problem indexes a theoretical predisposition/comfort zone that orients to, foregrounds and evokes some meanings, while suppressing other possible readings. These disparate efforts however do not negate the common purpose of bringing principled thinking and enquiry to bear on a problem that confronts institutions, teachers and students. In the following discussion, we illustrate how working with and across the four angles on this particular research problem, which foreground different categories of human interest, can make visible their respective meaning making processes and their limits.

The **prediction** angle underpins the Erklärung tradition of social science, historically associated with positivist philosophy as applied to social science, and quantitative methodologies. It attends to tenets of statistical significance and generalizability, thus seeks to understand causal pathways or correlations that can be isolated from the effects of specific context. For example, Demanet and Van Houtte (2012) seek to isolate the effect of teachers' low expectations as a factor. Crosnoe, Kirkpatrick Johnson & Elder (2004)

investigate the contributing effect of factors of school climate and demography. This angle also tests correlates across confounding variables such as race (Gregory, Skiba & Noguera, 2010), gender, class, or ability. As a sample of such work, Finn et al. (2008, p. 271) report:

Misbehaviour was greater among students from the lowest income homes, and less misbehaviour was exhibited by students whose parents completed four years of college. Last, we determined that less misbehaviour occurred among students living with biological and adoptive parents than among those in other family arrangements. (Finn et al., 2008, p. 271)

Such work is not necessarily within our own comfort zones, but nevertheless should be dignified because it achieves particular work for educational research by mapping the scope and distribution of the 'problem' and associated factors which help build the case of 'significance' for the research problem or targeted interventions. While those predictions may be well understood by any educator (if not spoken), rigorous work that establishes these patterns on grounds other than practitioner wisdom can help to mobilise policy and funding.

Under this angle of prediction, we would also include program evaluations, testing the claims and quantifying the impact of designed interventions (for example, Bohanon et al, 2006, 2012; Flannery, Sugai, Anderson, 2009). These in turn lend themselves to meta-analyses (for example, Durlack et al., 2011). As an example of this type of work, a recent report from the US National Council on Teacher Quality (Greenberg, Putnam and Walsh 2014) reviewed research against evaluative criteria to extract the 'five most important strategies' (p. i) for classroom management (rules, routines, praise, misbehavior, and engagement), 'strongly supported by research' that in their opinion should form the 'evidence base' for teacher education programs. A similarly framed review in Australia (O'Neil, & Stephenson, 2012) critiqued the absence of such a research-base behind some of the classroom management models promoted in Australian teacher education. Again, while undertaking such work is not necessarily our 'cup of tea', we acknowledge that this part of the literature has the potential to provide a level of rigorous scrutiny that guards against the overinflated promises of quick fixes. While it elides many of the complexities of schooling, it can provide a valuable starting place for the novice teacher who is beginning to understand the relationships between pedagogy and learning. However, we claim that it needs to work

in concert with the other angles, and that it alone is not a sufficient basis for the kind of knowledge required by teachers, and those preparing to teach.

The **understanding** angle grows from the Verstehen tradition of social science and its attention to understanding the meanings and sense made by participants involved in the social phenomenon. This angle has historically been associated with qualitative research design, in particular, interview studies and ethnography, and privileges the sentient social actor and the role of hermeneutic context. Rather than extrapolate generalizable factors from the empirical context, this angle seeks to understand the research problem in lived contexts. In this vein Willis's ethnographic study (1977) of recalcitrant 'lads', and successors such as Nolan (2011), Barnes (2012) and Laura (2014) help us understand how conditions, actions, beliefs, habits and opinions combine to produce noncompliant behaviours and their consequences. These rich descriptions put the lived flesh on the statistical bones of the prediction angle. Students are treated as thinking, feeling, talking and acting people, not just data points. Readers can take from these studies a sense of how noncompliance seems a reasonable response or outcome to the conditions and sense-making of the actors. We would also include ethnomethodological studies here with their detailed analysis of interaction that accomplishes either disruption or its management (for example, Margutti 2011).

The understanding angle captures different standpoints, frames of reference and voices (for example, Smyth & Hattam, 2001) that shed light on the complexity of the issue and the impossibility of universal fixes. This kind of research can also describe and illustrate the essence of 'what works' (see Munns, Hatton & Gilbert, 2013), but through contextualized case studies, rather than decontextualised variables. This angle is a more comfortable fit with our work (for example, Johnson & Hayes, 2008; Doherty, 2015). While we consider actors' perspectives to be necessary to understand a phenomenon, it may not be sufficient to direct large scale reform.

The **emancipation** angle underpins the social justice /critical tradition in educational research which seeks to redress inequitable life chances. This angle turns its attention to the structure of the educational institution, and constructs the problem as stemming from oppressive institutional practices and their role in the reproduction of social inequities

across generations (for example, Wacquant 2009). Hence the solutions are larger in scope, more socially radical and ambitious, and perhaps harder to act on. Student non-compliance is reconceptualised as resistance (for example, McFadden & Munns, 2002). This angle demands a larger analytical grasp that engages with large scale policy and systemic practices. The institution of schooling is not taken for granted as a natural or neutral part of social reality. Rather it is construed as a problematic social fact that serves the interests of some, and that should be re-constructed to better serve those disadvantaged by the institutional configuration. This angle is a necessary part of any analysis of education system that holds itself accountable to social justice and equity principles.

The goal of **deconstruction** is informed by post-structural theory that grants formative power to the discourses through which roles, subjectivities and practices are constituted and sustained. Schooling is constructed as an arbitrary social formation that might be otherwise. This angle attends to the language through which policy and practices are expressed, as evidence of discourses and the forms of governance they perform (for example, Harwood 2006). It highlights new points of intervention, and the capacity to act on the discourses that shape the work of teachers and their relationships with students. This lens can also be applied to scholarship which legitimates certain practices and policies, (for example Schussler & Johnson 2014) to show how the informing theory makes some things thinkable, doable and sayable, while other possibilities are suppressed or deferred. In this way, the provocations of the deconstructive angle can augment an emancipatory lens.

Deconstruction reminds us that power relations and problems are constituted in ways that make us forget that we made them up. While the three angles discussed earlier treat categories as stable, and relationships as measurable, a discursive analysis treats such categories and relationships as partial and contingent. This type of human interest insists that those who engage in prediction, explanation and emancipation also need to account for themselves and their interests in their knowledge-producing processes; they need to recognise that the answers they find are shot through by investments in relationships of power and knowledge.

Moving forward with angles on meta-competency

We suggest that the suite of four angles on human interest offers a heuristic by which research in education might be conceptualised as a more collective project, without erasing our differences and debates. It allows us to discuss the 'relations between' bodies of knowledge and the practice or competencies they inform. It also allows the field, or a sub-field, to be represented in a way that highlights the wide-ranging nature of research in a positive light. The four angles suggest a means by which educational researchers might locate themselves in this field, delineate the disciplinary boundaries and sensibilities that underpin their different projects, then dovetail or crosshatch our knowledge claims in constructive dialogues. Such meta-competency would also force us to share our meaning-making processes and their limits with our students. We can let them see how knowledge is made and legitimated in different ways, so they can appreciate the different textures of the professional knowledges they will traverse in their preparation and practice. The four angles can also be aligned with particular repertoires of capabilities and associated habits of mind, without losing the particular insights each affords. It allows us to work our way out of the 'stuck places into which tensions have gotten us' (Lather, 2013, p. 642). Our disciplinary differences become our strengths and resources, rather than our vulnerability. We also suggest that these concerns identify and dignify our common purpose in understanding messy problems arising from authentic contexts, then help us harness paradigmatic diversity in a principled way to think about complex objects of study. We suggest that such a heuristic might hold the angles together in a meaningful dialogue that would help the undergraduate student and teaching professional, as well as the researcher, navigate the complexities of, and contributions to, the field. If we cultivate the sense that each angle is necessary to our field, while not sufficient on its own, this agenda prompts us to engage in constructive dialogues that might take us out of our comfort zones.

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