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Research Literacy and Teaching: The Peculiar Case of Research about Teaching about Research

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Abstract

In recent times, the relationship between research and teaching has often been framed in terms of experimental investigations demonstrating what are effective pedagogical techniques. However, this is only one of several influential models of that relationship. While research literacy plays a key role in all of them, these models vary according to the type of research knowledge and skill felt to be of value to teachers, and in how teaching and education are conceptualised. This can be illustrated by the diverse forms of educational action research, and by different interpretations of "reflective practice". To further explore the role of research literacy, I examine the case of research on teaching about research play in research methods teaching? What might this tell us about the relationship between research and teaching more generally? What does it say about the notion of research literacy?

Keywords

Research literacy, evidence-based practice, research and teaching, action research, reflective practice, research on teaching research methods

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Introduction

It has long been argued that professions are, by their nature, based on distinctive bodies of research knowledge. In the case of teaching there are two aspects to this: the subject knowledge and skills to which children or students are to be introduced; and pedagogical knowledge about how best to teach this knowledge or to bring about the desired forms of learning.¹ The contribution of academic research to the first of these aspects is usually relatively uncontroversial, but that is certainly not true of the second. Here, the nature of the contribution that research can make has been the focus for much disagreement and discussion. It is in this context that arguments about the need for research findings or to use research methods to improve or transform their practice.

In this paper I will begin by examining the emergence of calls for professional practitioners to be "research literate", and then go on to examine the complexities of the relationship between research and teaching, stressing the implications of the fact that there can be different views about each side of this relationship. For this purpose, I will briefly explore notions of action research and reflective practice. In the second half of the paper I examine the peculiar case of the role of pedagogical research in teaching research methods. Here it can perhaps be assumed that the teachers will be research literate, usually being researchers themselves. Furthermore, their task is precisely to facilitate the development of research literacy on the part of their students.

Background to calls for research literacy on the part of professional practitioners

An influential view of the relationship between research and teaching in recent times has been the idea that practice should be "evidence-based", with research (of a specific kind) supplying evidence about the effectiveness of particular pedagogical techniques (Thomas & Pring, 2004).² In its strongest form this requires that professionals should only use those techniques that have been shown to be effective by research. And it has sometimes been argued that the evidence about effectiveness must come from experimental research—in particular, randomized controlled trials (RCTs)—findings from these being synthesized in systematic reviews. This is what I will call the classical model of evidence-based practice, which arose out of the evidence-based medicine movement that developed in the last couple of decades of the twentieth century. Over time this classical model was liberalized in some quarters: what

¹ For an interesting historical and theoretical discussion of these two aspects, see Shulman, 1986. A somewhat similar distinction can be found in medicine and law, this sometimes treated as showing their character as both sciences and arts: their scientific basis is medical or legal knowledge; whereas how best to deal with patients, or to win cases in court, is an art. For some advocates, evidence-based medicine was aimed at rendering this artistic element scientific.

² In fact, as Shulman's (1986) discussion shows, the idea that the task of educational research is to assess the effectiveness of different forms of teaching long predates the evidence-based practice movement.

could count as research evidence was broadened; and a more mediated, and therefore weakened, relationship came to be assumed between research and practice. This has sometimes been graced with the label "evidence-informed practice", and that label indicates how far the initial very strong claims about the role of research sometimes came to be watered down. After all, who would argue that teaching should not be *evidence-informed*? In practice, though, there is frequently flip-flopping between the classical and the more liberal conception of the role of evidence in relation to practice (Hammersley, 2013).

Interestingly, though, from the beginning of the evidence-based medicine movement, there was sophistication on the part of some advocates about the use of research evidence by practitioners. A stereotype of what I have called the classical model has research findings telling practitioners "what works" and what does not "work", and therefore what they ought and ought not to do. This interpretation was reinforced when the notion of evidence-based practice was incorporated into the sorts of quality assurance systems characteristic of the "new public management" adopted by many Western governments around the same time; these systems were seen by many practitioners as making discretionary action on their part vulnerable to bureaucratic or legal challenge, encouraging instead "formalistic deference to procedures" (Eriksen, 2022, p. 2). Yet some early advocates of evidence-based medicine had emphasised that clinicians must assess any research evidence in terms of both its validity and its relevance to the particular cases they were dealing with; treatment decisions being a matter of judgment on that basis (Sackett et al., 1996). Furthermore, some effort was made to provide clinicians with the necessary background knowledge about research for this to be possible (see for instance, Greenhalgh, 2014; Straus et al., 2019). In short, there was a concern with improving their research literacy, so that they could not just understand but also assess and use research evidence about the effectiveness of clinical techniques to improve their practice. Moreover, it was often recognized that this evidence had to be blended with other sorts of information and understanding that arose out of professional experience (see Eriksen, 2022).

Attention to the need for "research literacy" initially arose in a rather different way in the field of education: from teachers being encouraged to carry out research in their own class-rooms or schools. It had long been the case that some schoolteachers had taken courses concerned with doing educational research, many of them going on to do PhDs. But they were a small minority and, very often, this was part of their transition from being schoolteachers to academics involved in teacher education. However, in the 1970s, in the UK and some other countries, there was an action research movement that was specifically designed to encourage teachers to carry out investigations in their own classrooms (Elliott, 1991; Pine, 2008). This required them to be introduced to research methodology. Later, this idea was revived in the wake of the evidence-based practice movement, with teachers being encouraged to do research and submit it to "what works" clearinghouses. Even more recently, "close-to-

practice" research has been promoted, this again designed to involve teachers in the production and use of research evidence (Wyse et al., 2021a).

Looking across these developments, we find considerable variation both in ideas about the nature of research and in conceptions of its relationship to practice, the latter often reflecting different views about education. There is also significant variation in assumptions about what, and how much, teachers need to know about research methodology—in short, what level and kind of research literacy is required on their part. For instance, must they evaluate research in terms of normal academic standards, or do those standards themselves need revising?³

The example of action research is useful for illustrating variation in assumptions about both research and education. Several versions of this have been proposed:

1. There is what might be called means-focused action research, concerned with finding solutions to immediate practical problems so as to improve the effectiveness of current forms of teaching (see for instance, Hustler et al., 1986). There are some parallels here with the evidence-based practice model, except that usually the research is not strictly experimental, and is often qualitative in character.

2. Action research concerned with investigating what is to be taught as well as how it is to be taught. An example would be Stenhouse's (1975) notion of the teacher as researcher. Included in the focus here are the assumptions on which curriculum and pedagogy are based, and there is also often an emphasis on understanding the perspectives of children and students.⁴

3. Action research concerned with the professional and personal development of individual teachers, for example through the creation of "living educational theories" (Whitehead, 1989).

4. "Critical" action research focused on discovering ways of bringing about sociopolitical change, this being seen as an essential prerequisite for improving education. This research is primarily concerned with the ways in which schooling functions within society, how this is realised through classroom processes, and how change can be produced (see Carr & Kemmis, 1986; Kemmis, 1988). There are also feminist and antiracist versions of this approach.

³ For some relevant discussion of evaluation criteria for educational research, see Furlong & Oancea, 2005; Oancea & Furlong, 2007; and Hammersley, 2008.

⁴ For an assessment of Stenhouse's arguments, see Hammersley, 1993; and for a sceptical view of action research see Hammersley, 2004a.

To one degree or another, all of these versions of action research continue to have influence, particularly in the context of education courses in universities. Indeed, despite the initial location of some of these kinds of action research in networks of practising teachers committed to them, most action research has been carried out by students doing higher degrees in education. Outside of this, the proportion of schoolteachers actually engaging in independent research, or for that matter drawing on educational research in any sustained way, is probably relatively small.

Unlike the classical notion of evidence-based practice, much action research prioritised qualitative methods. And, very often, this reflected a different conception of the relationship between research and practice. As we have seen, while some action research was technical, in the sense of being aimed at finding solutions to classroom problems, much of it was more concerned with reflecting on assumptions and aims, or with pursuing emancipation from cognitive or institutional constraints. Furthermore, education was conceived not so much as a matter of acquiring knowledge and skills, even less as passing tests and examinations, but more as producing deep or broad understanding of the world, enabling the discovery of what is worthwhile in life, or facilitating "self-realisation" or "social transformation". However, there is room for ambiguity or even ambivalence here. For example, the recently promoted notion of "close-to-practice" educational research seems to lean towards the technical model, but its promoters deny this (see Hordern, 2021; Parsons, 2021; Wyse et al., 2021a, 2021b). There is clearly an issue about which conceptions of teaching and education are compatible with which conceptions of research; but there is considerable flexibility.

It is also worth noting the parallel development and influence of the notion of reflective practice (McLaughlin, 1999; Schön, 1983, 1987; Zeichner, 1994). This arose precisely out of the sense that there was a large gap between the knowledge produced in universities and taught as part of professional education, and what practitioners needed to know, and more especially how they needed to think, in order to do their work well. In one version of it, teaching was seen as a craft whose improvement depended primarily upon the adoption of a reflective attitude, both in the midst of practice and subsequently in thinking about what went well and what went wrong, and therefore what to do in the future. However, like action research, reflective practice came to be academicized to a considerable degree, being incorporated into education courses (and ones in other professional areas, such as nursing); and in these contexts, especially, it was often argued that reflection on action should draw on the results of educational research, this research usually taking an "interpretive" or "critical" form. Sometimes there was also a blending with action research. Against this background, one way of conceptualising variation in how the research-teaching relationship can be viewed is to contrast "engineering", "enlightenment", and "craft" models.⁵ In the engineering model research is treated as determining what are effective means for achieving pre-given goals. As we have seen, the notion of evidence-based practice, but also some varieties of action research and close-to-practice inquiry, approximate to this. The enlightenment model is more complex and variable in what it involves: we can distinguish between a stronger and a more moderate version. The first treats research as producing a theoretical perspective in terms of which practice can be reconceptualised and transformed. "Critical" action research would be an example, but perhaps also Whitehead's notion of "living educational theory". The second, "moderate", version of the enlightenment model treats research as providing resources that can be used by practitioners, who are assumed to operate more or less in the manner of reflective practice. However, as I indicated, there are versions of reflective practice that treat teaching as a craft, with little or no role being allowed for research: the notion of communities of practice centred on apprenticeship is more relevant here (see Lave & Wenger, 1991).⁶ The table below summarises features of the three models that do treat research as having a role in relation to practice:

Engineering Model	Strong Enlightenment Model	Moderate Enlightenment Model
Focus on documenting facts about the effectiveness of pedagogy.	Focus on understanding situations within the context of a comprehensive theoretical framework.	Aimed at supplying practitioners with resources of potential use that are diverse in character, from specific facts to theoretical ideas.
Methods of research must be capable of providing such facts.	Concerned with evaluating existing situations and policies with a view to bringing about personal and/or political change.	The assumption is that these may help practitioners to make sense of situations and of their own practice in ways that enable them to improve it.
Teaching is conceived as the adoption or refinement of pedagogical techniques that will serve the intended learning goals.	Teaching/education may be viewed as a process of emancipation from error or constraint.	There are no assumptions involved here about what constitutes improvement: that is for practitioners and stakeholders to decide in particular situations.

All three of these models assume some notion of research literacy, but what this comprises varies quite sharply. It also makes a difference, of course, whether teachers are assumed only to be "consumers" of research findings or are to carry out investigations themselves. In addition, some commentators portray the importance of research literacy as offering teachers a

⁵ For discussion and references dealing with the engineering and enlightenment models, see Hammersley, 2002, ch. 2. On teaching as a craft, in the context of teaching qualitative research methods, see Hammersley, 2004b.

⁶ This is not, however, true of all versions of the craft model: see Eriksen, 2022.

means to evaluate critically the official "guidance" about best practice to which they are increasingly subjected, this at least purportedly based on research (see Boyd, 2022).

In the remainder of this article I will focus on the peculiar case of the role that research about teaching research methods can play in teaching research methods, a topic that has attracted increasing attention in recent years. The value of this case is that it will enable us to examine issues surrounding research literacy in more detail, as regards both its nature *and* its significance for the relationship between research and teaching.

A peculiar case

The role of pedagogical research in teaching research methods is a peculiar case because, at face value at least, the issue of research literacy does not arise: given that they are researchers themselves, those who teach research methods can surely be assumed to already have sufficient knowledge and skill to understand and assess research findings. Therefore, the way is open for them to make immediate use of the findings of research about pedagogy, in a way that is not true for many other teachers. At the same time, this case will reveal some of the complexities involved in what might constitute research literacy since this is, at least in part, what teachers of research methods are seeking to generate in their students. Here, then, knowledge about research constitutes what is to be taught.

I should, perhaps, admit at this point that I have spent much of my career teaching research methods, across different types of course, many involving students who were schoolteachers. And in what follows I will draw on my own experience. I hasten to add, however, that I am under few illusions about my own abilities as a teacher. Furthermore, I am on record as doubting whether it is possible to teach social research methodology well today (Hammersley, 2012).

Courses introducing students to social research methodology have grown hugely in number since the middle of the twentieth century. In my experience, they have changed in character as well, in several respects. For one thing, originally they were intended to enable students to do their masters' level or PhD projects within particular, quite narrowly-defined and coherent, disciplines. However, with the fragmentation of the psychological and social sciences, a growing emphasis on interdisciplinarity, an emerging commitment to produce "generic" social scientists who are capable of using the full range of methods, and an emphasis on the broad need for research literacy, the character and assumed needs of the student body have diversified considerably over time. This clearly has implications for what should be taught on research methods courses, in other words for the content of "research literacy".

What is research literacy?

From the beginning it was recognized that teaching social research methods involved some difficulties. Initially, a major concern centred on how to facilitate students' understanding of statistical analysis, whose use was generally deemed to be essential at that time (in the 1950s

and 60s). Another issue was how to encourage students (perhaps especially those who were or had been practising teachers) to adopt the objectivity required for a research perspective, avoiding their tendency immediately to evaluate what was being investigated in terms of existing attitudes. The first of these problems eased over time, not only because of growing skill in teaching statistics but also because statistical analysis came to play a less central role in social research methods courses, sometimes not being included at all. Equally important, the task was facilitated by the availability of computer packages for statistical analysis, so that students no longer needed to know the formulae for various statistical tests and how to calculate the results. These changes did not mean that the problem disappeared, but it became less salient.

At the same time, another problem grew in difficulty. In the 1960s and 70s, courses would usually include, at most, only a very brief introduction to the philosophical ideas taken to underpin social and educational research. However, with the rise of qualitative methods— which often challenged quantitative research on ontological, epistemological, and/or axiolog-ical grounds—this was no longer adequate. Students had to be introduced to the debates at the centre of the "paradigm wars" (Gage, 1989; Guba, 1990) that were taking place. Furthermore, the subsequent diversification of qualitative research itself, again on "philosophical" grounds, exacerbated this problem. Just as some students struggled with statistics, many also had great difficulty grasping philosophical ideas and their relevance to social and educational research.

The diversification of social and educational research also complicated an inherent problem about coverage: what range of approaches and topics should be included in courses, and in what detail? Not just the balance between quantitative and qualitative (and, later, "mixed") approaches, but also, for example, decisions had to be made regarding how much to concentrate on practical methods as against methodological ideas, and on "the basics" versus introducing students to broader or more advanced matters. For example, do students need to know what "multiple regression" or "structural equation modelling" or "factor analysis" involves? Or must they simply understand that we can try to identify what causes what by comparing variation in relevant factors across and within cases?⁷ Do they have to understand the mathematical proof behind the chi-squared test, or "just" when and how to use it? And should they be introduced to the debates about misuse of significance testing (Morrison & Henkel, 1970; Oakes, 1986)? In terms of philosophy, do students need to know what it means to adopt a realist approach to qualitative research (Maxwell, 2011) or can we assume that they will be realists by default? If the latter, should this be challenged? And what about constructionism, postmodernism, and "new materialisms": do students need to know about these? Should

⁷ What I have in mind here is some of the basic techniques for "exploring data" discussed, for example, by Marshm, 1988. Aside from the practical aspect of student need, there is also a question about whether some of the advanced statistical techniques employed are legitimate given the nature of social science data. Another issue is whether the focus on numeracy covers up a problem of academic literacy: see Hammersley, 2014.

some methodological ideas or approaches be excluded; if so, on what grounds?⁸ Also at issue here, of course, is what students are capable of: what level of background knowledge and skills do they have, and what can they reasonably be expected to acquire during a course? Crucial here are their prior levels of numeracy and capacities for philosophical thinking. Might a little learning (superficial or even inaccurate) about some matters be worse than none at all? (Reading the research methodology literature, the inescapable answer, it seems to me, is Yes!)

It may seem that judgments about these matters would vary depending on whether the aim was to prepare students to carry out research themselves or simply to enable them to read and understand research reports. In my experience, though, this makes less difference than might be expected. For example, if one is committed to helping students to understand published quantitative research, some means must be found of informing them not just about the basics but also about a range of quite advanced statistical techniques that are frequently used in the literature. Similarly, for reasons already explained, understanding qualitative research today requires that one grasp a range of difficult philosophical ideas. Much more significant, I suggest, is the question of whether one is preparing students to be generic researchers or whether the task is to facilitate their work on a particular research project. But, in practice, this is a dimension rather than a dichotomy, not least as a result of growing emphasis on increasing the employability of PhD students.

It should be clear from this that the concept of research literacy is complex and its content and character are contentious. Of course the source notion of literacy is itself problematic. When I was learning Russian as a teenager, did the fact that I could read out loud a passage with relatively flawless pronunciation mean that I was literate in Russian; even though I did not always understand what I was reading? (Today I cannot even pronounce the words correctly; indicating that, even at this basic level, literacy is not a permanent acquisition.) Similar issues arise in the case of young children learning to read: judgments have to be made about degrees and kinds of literacy. It is not surprising, then, that the same is true of research literacy.

The contribution of research to research methods teaching

As I noted earlier, while lack of research literacy could be a barrier to the use of research for many teachers, this should not be the case with teachers of research methods: given that they are usually researchers themselves, it might reasonably be assumed that they will be

⁸ In one course I worked on there was a major dispute about whether only those techniques should be included whose use can be justified given the generally low measurement level of most social science data, or whether we should include techniques that are routinely employed by social scientists even though this is hard to justify in terms of statistical theory. Similar problems arise, for me, with some of the "new paradigms" to be found in qualitative research: are all of these to be treated as legitimate, simply because some social and educational researchers are committed to them?

sufficiently research literate to make use of pedagogical research relevant to their teaching, and indeed to carry out such research. Yet, I suggest, pedagogical research findings have played little role in most teaching of research methods, and this probably continues to be the case.

It is also worth noting that, up to now, this field has been little influenced by what I referred to earlier as the classical model of evidence-based practice: I know of no randomized controlled trials. Furthermore, most of the literature consists of accounts by research methods teachers of problems they have faced and strategies they have employed to deal with them (Earley, 2014; Nind & Katramadou, 2022). Even the third-party research that has taken place (that is, research carried out on others' practice) has often been more concerned with documenting teachers' experiences and views, or with developing these through dialogue, than with investigating or assessing the effectiveness of their practices (see for instance, Lewthwaite & Nind, 2016; Nind et al., 2015; Nind & Lewthwaite, 2018).

In line with this, a central theme in much of this literature has been the need for a pedagogical culture: the belief that teachers of research methods should engage in more sustained discussion with one another about how best to do their work (see Garner et al., 2009; Kilburn et al., 2014; Nind et al., 2016; Wagner et al., 2011).⁹ In addition, for the most part, the focus of this literature has been on the practical value of various strategies, albeit with a strongly student-centred emphasis: in other words, the concern has been with "pedagogical content knowledge" (Nind, 2020).¹⁰ This is an important topic, but as I emphasised earlier there are deep divisions among social researchers about the goal of social and educational inquiry and about what forms it should (and should not) take, and these surely affect the aims of teaching research methods. The only pedagogical issue related to this that has been given much attention, as far as I can see, is whether teachers should induct students into their own adopted approach, or introduce them to the range of approaches in the field so as to enable them to decide for themselves which one to select.¹¹ The latter is probably the predominant orientation, but there is also a more pragmatic approach whose recommendation is that methods be selected according to their fitness for purpose. This is especially common on the part of advocates of "mixing methods": of combining quantitative and qualitative forms of data collection and analysis. But there is a danger here that students will remain unaware that some of the assumptions on which they are relying in their work are highly contentious among fellow researchers. A side point worth mentioning is that some of the literature on teaching research methods, as with educational research more generally, seems to be "missionoriented": a conception of what is good practice is presupposed, and part of the aim is to

⁹ It is striking that Wagner et al., 2011 refer to "the art of teaching research methods".

¹⁰ This is illustrated by summary guidance provided on the basis of a major piece of pedagogical research: see Lewthwaite & Nind, 2015, 2017; Nind & Lewthwaite, 2015.

¹¹ For arguments from strikingly different quarters that approximate to the first position: see Lincoln, 1990, p. 87 and Shearmur, 2017, pp. 3–4.

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persuade others to bring their practice into line with it. For example, considerable emphasis is placed on student engagement, with more didactic forms of teaching being discouraged.¹² There are at least two arguments in support of this. First, a claim that "active engagement" motivates students, with motivation obviously essential for learning. Second, that active engagement leads to deeper forms of understanding. While I have sympathy with this emphasis, and have often used activities and projects in courses, students obviously do need to acquire a considerable body of knowledge, and it may often be more effective, or efficient, to present this knowledge more didactically; nor does this necessarily imply a lack of "involvement". Equally important, activities do not always lead to the learning that was intended; indeed, I would say that frequently they do not do so, for many students (see Hammersley, 2019).

Why does third-party research evidence play so little role in the teaching of research methods? This may arise from inertia and laziness, of course, or from time pressures. But, over and above this, I think there are some genuine difficulties about the usability of research findings for teaching, in this field as in others. This is especially obvious if we think in terms of the engineering model. A key problem here is that teaching rarely involves deploying standardized techniques, on analogy with dispensing specially prepared medicines.¹³ Instead, there is flexibility and variability in how teachers use any particular pedagogical strategy in presenting material to students, trying to shape their learning, or helping them to acquire skills and practical wisdom. This flexibility and variability is largely produced by the interactional character of the teacher-student relationship: teachers must adapt to the particular students in their classes, and to how teaching sessions progress.

This certainly obstructs any attempt to carry out randomised controlled trials, and exacerbates the problem of generalising from research findings: what "works" in one situation will not necessarily "work" in another (Cartwright, 2007). But, even if we adopt a broader view of the sort of research that could be of value in informing practice, this issue of applying the findings to new situations still arises. Furthermore, variation in views about the nature of social and educational research, and in the aims of teaching about research methods, means that any notion of what "works" or does not "work" is open to dispute. Finally, we should note a tension between the concern of research with what is *true*, and the preoccupation of practitioners with what will be *useful*. What is true is not always useful, and what is false or a matter of faith *may* be useful in their teaching—a point made, in general terms, a long time ago by William James (1897/2014).

For these reasons, in terms of the models of the relationship between research and practice I identified earlier, it would seem that, at best, research can only play the sort of role outlined by the moderate enlightenment model. Indeed, some will argue that teaching is closer to a

¹² A recent book—Dawson, 2016—exemplifies this emphasis on activities.

¹³ See Nind & Lewthwaite's 2020 attempt to distinguish approaches, strategies and tactics.

craft, so that research can make even less of a contribution.¹⁴ It might be added that, if we researchers do not view the engineering and strong enlightenment models as applying to our own teaching—indeed, if we assume that research can make only a relatively modest contribution to this, at most—perhaps we need to moderate our claims about the contribution that research can make to *others'* practice, and to policymaking too? I suggest that our failure to engage in much systematic third-party research on how we teach research methods may reflect a more realistic assessment of the practical value of social and educational research than the grand claims we sometimes make for it (see Hammersley, 2015).

Conclusion

In this paper I began by briefly outlining the history of ideas about the relationship between research and teaching: from more recent notions of evidence-based practice to conceptions of action research and reflective practice. I noted that even though the currently predominant model is a technical or engineering one, in terms both of the conceptualization of research and of teaching, there is considerable scope for variation in how the nature of the two activities, and their relationship, is understood. I conceptualised this through distinctions between engineering, enlightenment, and craft models.

Such variation in conceptions of the relationship between research and teaching clearly has implications for the notion of research literacy. I used the peculiar case of research about teaching research methods to illustrate some of the difficult issues involved. What is peculiar about this case is that, at face value at least, here research literacy on the part of teachers is not a barrier to the use of findings from pedagogical research. Indeed, the aim of teaching in this field is, to a large extent, precisely to produce research literacy on the part of students. Examining this case revealed a host of complexities and disagreements about what should be taught, and how, and therefore about the content of research literacy. Furthermore, I noted that most teachers of social research methods do not seem to believe that their own practice must be evidence-based, in the sense of being strongly informed by third-party empirical research. The literature on research methods pedagogy is predominantly concerned with sharing experience and ideas, rather than testing the effectiveness of techniques, or even exploring practice through interpretive or "critical" forms of inquiry. Furthermore, as far as one can tell, even this does not seem to be widely used by teachers of research methods. (I have to admit that I have not made much use of it myself.) I suggested that this may reflect genuine issues about the relationship between general guidance and how this relates to the particular situations that practitioners face, as well as the difference between what is true and what is useful.

All this leads to uncertainty about the character and relevance of research literacy for teaching. It perhaps suggests that we should view teaching as reflective practice, in which teachers

¹⁴ Ironically, much the same can be said about research itself—this too is not usually "evidence-based": see Hammersley, 2013, ch. 3.

draw selectively on research findings, but also on prior experience and other sources, in order to clarify what is to be done, why, and how it can best be achieved.¹⁵ This amounts to what I referred to as the moderate enlightenment model. It involves practitioners resolving for themselves the problematic relationships between what is true and what is useful, and what is general and what is particular. Interestingly, this is close to some early formulations of evidence-based medicine (see Eriksen, 2022; see also Sackett et al., 1996). It is not that research literacy has no relevance, simply that we must not overestimate the contribution it can make to teaching. This is certainly a risk built into the notion of "evidence-based practice", and also into what I called the strong enlightenment model. While research is an important resource for teachers to draw on, it is not the only one, nor can it usually offer immediate solutions to the problems they face, whether these are practical difficulties, political challenges, or existential dilemmas.

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¹⁵ There is a danger that this amounts to teachers "cherry-picking" research findings: selecting those they already agree with and ignoring the rest (much like politicians seem to do). How do we distinguish this from their using practical knowledge to evaluate research findings? There is certainly a difference, even if it may be difficult to detect in particular cases. But it is important to recognise the diverse functions that research can serve in relation to practice: see Hammersley, 2002, Conclusion.

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