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The Philosophical Dimensions of Teachers' Research Literacy

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Abstract

In this paper, I investigate the place of philosophical literacy in teachers' research literacy. Drawing on Pring, Bridges and Winch, I ask what the relationship is between being "research literate" in the field of education and understanding key philosophical debates in the field. I hold that properly implementing research findings in educational practice depends on a philosophical understanding of (a) normative, (b) conceptual and (c) methodological matters and that, therefore, "research literacy" in education must also include "philosophical literacy". I question whether it is too much to expect that, in order to become research literate, teachers must also become philosophically literate. However, I demonstrate that questions of the utilisation of research cannot be separated from questions of the production of research. In the end, I hold that "research literacy" is simply a different way of looking at deep methodological questions that have always been part of the discipline of Education.

Keywords

Research literacy, evidence-based education, Christopher Winch, cognitive division of labour, philosophical literacy

1. Introduction

The field of educational research is not only concerned with the conditions for producing research, but in recent years, considerable attention has been paid to the use of research in education. Two broad questions in the area return time and again. The first question is what kind of research should be conducted best to help improve teaching practice. According to the "Evidence-Based Education" (EBE) movement teachers should base their teaching practices on the best available scientific evidence, with the "gold standard" of evidence being the randomised controlled trials (RCTs) of educational interventions. Another question is how teachers engage with research. The "teachers as researchers" movement has long held that teachers should engage with research, that teachers should conduct research on their own teaching practice and, even, that being a researcher of their own practice should be part of the professional orientation of the teacher.

These two questions come into contact in the debate about teachers' "research literacy". The debate about teachers' research literacy takes in a number of questions: whether teachers (as a matter of fact) base their professional practice on research or not, whether they base it on the right kind of research, and whether they understand and interpret that research correctly. In this debate, one can discern several camps. Some hold that mainstream educational research is of poor quality, that the field should be strengthened and that all educationalists (both teachers and researchers) should become more literate regarding the *best kind* of educational research: randomised controlled trials of the effectiveness of educational interventions. Other researchers hold that the EBE agenda is misguided and that the research method of educational trials is unworkable in practice. They hold that teachers should be literate about *some other kind of research* (for instance, action research regarding the teacher's own teaching practice, or critical research concerning the political forces operative in education). Yet others agree with the outlines of what the EBE movement proposes, but call for greater sophistication in how such research is carried out.

In this paper, I investigate the debate about teachers' research literacy from a philosophical perspective. Based on arguments by Pring, Bridges and, most notably, Winch, I build an argument that knowledge of philosophy is an essential part of conducting empirical educational research and that educational research literacy therefore includes a considerable component of philosophical literacy. Most obviously, this implies that teachers cannot be properly research literate without being philosophically literate and that efforts to inculcate research literacy amongst teachers must also include efforts to educate them regarding the philosophy of education and the philosophy of social science more broadly. However, at a deeper level, the realisation that research literacy also includes philosophical literacy brings into sharp focus that "research literacy" is not a straightforward concept, but that what "research literacy" is taken to be depends on your whole philosophy of research. I hold that "research literacy" is not a simple solution to the problems of implementation of research in the classroom. It is

simply a different name (or a different way of looking at) philosophical problems about educational research that have been part and parcel of the field of educational research since the birth of the discipline.

2. Quality in educational research: A potted history of "Evidence-based education" (EBE)

Ever since the Hillage report (Hillage et al., 1998), concerns have been raised about the quality of educational research in the United Kingdom. Authors like Tooley and Darby (1998) and Goldstein and Woodhouse (2000) have criticised the U.K. education research community for producing research that is, amongst other things, small-scale, mostly qualitative, and poorly designed. Other authors have held that the *kind* of research done in the field of education is systematically unhelpful to or irrelevant to classroom teachers. Hargreaves (1996), for instance, holds that educational research is generally not relevant to classroom practice and that educational research does not provide the right knowledge base to enable teaching to count as a truly research-based profession.[1] To transform educational research, a number of authors (e.g. Coe, 1999; Hargreaves, 1996; Slavin 2002, 2004; Gorard et al., 2017) have proposed that the field should be reformed on "evidence-based" lines. The Evidence-Based Education (EBE) movement holds that educational research should emulate the rigour and certainty of medical research by adopting, as its gold standard, the randomised double-blind controlled trial of the effectiveness of educational interventions. Moreover, educational research should strive to be more directly applicable to practice by focusing on research into the comparative effectiveness of classroom interventions.

EBE is a controversial idea. Advocates of EBE promote a very specific conception of good educational research and aim to decrease the influence in the field of what they regard as poor research. As Shahar holds:

> [EBE's] name is a slogan whose rhetorical effect is to discredit opposition. After all, who would argue that practice should not be based on evidence? (Shahar, 1997, p. 110, quoted in Hammersley, 2004, p. 134).

However, Pring holds that, what EBE fundamentally *is* can be defined in different ways.

> Sometimes it might manifest itself as a linear, top-down approach to educational improvement; sometimes as a technocratic model assuming that the only worthwhile research questions concern effectiveness of means; sometimes as entailing a limited and specific conception of professional practice, and sometimes as restricting democratic participation and deliberations about the aims of education (Pring, 2015, p. 4).

[1] For overviews of the criticisms that have been voiced against educational research, see Oancea, 2005 and Wyse, Selwyn, Smith and Suter, 2017.

It might even mean:

> all educational research should be experimental research in the service of improvement of student achievements as measured on standardized tests […] (Pring, 2015, p. 4).

What is certain is that the influence of Evidence-Based Education is consistent and growing in the field of educational studies. Over the course of the last three decades, many governments and research agencies around the world have promoted a strategy of (a) commissioning and funding "Evidence-Based" research preferentially over other kinds of research, (b) giving a special place to such research in educational policy-making and (c) collecting and disseminating the findings of such research preferentially and highlighting those findings as authoritative to the research use community. This strategy of promoting evidence-based research and boosting its reception in the research use community is driven by such organisations as the Institute for Education Sciences in the United States or the Education Endowment Foundation in the United Kingdom.

The EBE movement makes a number of important assumptions about the field of educational research. The first assumption is that Evidence-Based Education, modelled on trial-based interventional research in medicine, is superior to other kinds of educational research (Goldacre, 2013); let us call this the "superiority assumption". Closely related to the superiority assumption is the assumption that most existing educational research is of low quality and needs to be improved along evidence-based lines (Gorard et al., 2020); let us call this the "low quality assumption". However, a third assumption is less clearly articulated and that is that the solution to the low quality problem lies not only in shaping what research the educational research community produces, but lies in shaping what research the users of educational research (that is the policy makers, school leaders and teachers who might apply educational research in their day-to-day work) actually use. According to this third assumption, if we can ensure that research users only pick evidence-based research to read or apply in practice, low quality research will disappear over time as the producers of low quality educational research find that their research is not read or used in practice. Let us call this the "user-focussed education improvement strategy". The user-focused strategy plays out in attempts by advocates of EBE to influence the readers of educational research, to shape what they read and to influence what they think about the nature of educational research. One of the ways that this strategy plays out in practice is in efforts to promote "teacher research literacy", but also, more deeply, to control perceptions of what "teacher research literacy" *is*. I turn to this question next.

3. Teacher research literacy: A vague and contested concept

Like "Evidence-Based Education", "research literacy" is a vague concept that is given different meaning by different role-players; it is also a loaded concept, because it is presented as a

solution to a perceived problem and, how the problem is defined naturally shapes what the solution is taken to be.

A number of possible drivers behind calls for teachers to be more "research literate" can be discerned in the literature. Firstly, governments call for the implementation of certain teaching practices that it anticipates will solve some local educational problem or will help the country to become more competitive in international educational rankings. Secondly, the scientific community regularly calls for the profession better to utilise their research and to adopt teaching practices in line with their findings. Thirdly, regular calls for more teacher research literacy are made from within the teaching profession itself, for instance from the leadership of teachers' professional organisations or teaching unions; such calls may be made with an eye to boosting the status of the profession, secure greater recruitment to the profession, provide a basis for calling for better renumeration for teachers, etc. In all of these examples one can see that "research literacy" is presented as an answer to a particular problem; for instance governments might see research literacy as the answer to the problem of PISA rankings, the research community might see it as a way to gain larger readership and influence amongst the practitioner community ("research impact"), and the teacher professional community sees research literacy as a way to boost the standing (and perhaps the pay and conditions of) the teaching profession.

A good place to start in defining research literacy is the influential British Educational Research Association (BERA) Action and Research Center (RSA) (BERA-RSA, 2014) report *Research and the Teaching Profession* that defines research literacy as:

> the extent to which teachers and school and college leaders are familiar with a range of research methods, with the latest research findings and with the implications of this research for their day-to-day practice, and for education policy and practice more broadly (BERA-RSA, 2014, Appendix 2).

The BERA-RSA definition of research literacy has been influential in the field; however, since its publication, a number of questions have been raised regarding it.

A first question is whether research literacy is "passive" or "active". Eriksen (2022, p. 6) holds that literacy is a "two-sided competency"; it involves both familiarity with the field that one is "literate" about and also competent action in that field. For instance, literacy in its original meaning means being able to write, which involves not only familiarity with reading and writing, but also the ability to write oneself. From this, we can see that BERA's definition of research literacy deals mostly with one side of the competency: familiarity with research (rather than being able to do research oneself). This naturally raises the question:

> [what does it mean] for professionals to reason in ways that aim not only at comprehension but also at application of research in a way that respects role-specific responsibilities. How can research literacy serve a mediating function between the domain of "what works" and the domain of "what is appropriate"? (Eriksen, 2022, p. 7).

Next to the question of whether "research literacy" should be about "familiarity with" research or "the ability to research" another important question is what kind of research teachers should be literate about: Should it be theoretical research or practical research? Burn and Mutton (2015) point out that there are strongly contrasting perspectives on the role of "theoretical" and "practical" knowledge within the professional knowledge base of teachers. Amongst the former kind of knowledge, one can count knowledge of the foundation disciplines of education—philosophy, history, psychology and sociology of education. Amongst the latter, one can count practical knowledge of the success or failure of particular teaching approaches through "hands on" experience in the classroom. It is clearly difficult for teachers to be equally knowledgeable about *all* research (even all educational research), so the question naturally arises whether teachers should perhaps be literate about a particular subset of educational research or whether, perhaps, they should be literate only about the basics of conducting research, for instance, regarding research design, ethical consent, sampling, surveying, interviewing and basic analysis.

A third debate is over what sources of research teachers should be literate about in order to count as "research literate". For instance, Bell et al. (2010) identify a number of possible sources of relevant research that teachers could be familiar with: large-scale researcher-led studies; teacher-initiated small-scale studies, or Master's-based teacher enquiry (that is, studies conducted by new teachers as part of a Master's degree). To this, one could add other possible categories of research, such as research from sanctioned school improvement researchers who work for government or for school improvement organisations.

A last issue is that the concept of research literacy is tied up with the concept of the teacher as professional. Winch, Oancea and Orchard (2015), for instance, contrast "craft" and "professional" views of teachers' professional identity. If teaching is relatively simple, routine and predictable work, the teacher is akin to a craftsperson; however, if teaching is varied, specialised and individualised work, the teacher is more akin to a professional worker (like a doctor or a lawyer). The more professional we conceive the work of the teacher to be, the more research knowledge they require; re-phrased in the language of research literacy, depending on how professional the teacher's work is, the more extensive will be the concept of the research literacy that they require. In short, what "teacher research literacy" is, exactly, is not fixed: it depends on philosophical conceptions of (a) what teaching work is and (b) what kind of a worker the teacher is.

4. Philosophical assumptions in all educational research

In section 2, I outlined a set of debates about the "production" of educational research (about what kind of educational research is done) and, in section 3, I outlined a set of debates about the "consumption" of research (about what research teachers should read, and how they should understand and use this research). What is striking is the philosophical nature of the debate: questions about the production and consumption of research raise difficult philosophical questions about matters like what "research" is and what "a teacher" is.

Indeed, in the literature on the philosophy of education, a number of authors have pointed out the extent to which all educational research, not only more conceptual research, but also empirical research, is shaped by philosophical assumptions. A number of authors—notably Richard Pring (2015), David Bridges (2017) and Christopher Winch (2022) hold that philosophical thinking about education is a prerequisite to important steps in the research process like formulating good research questions and clarifying the fundamental concepts used in empirical educational research. They hold that better philosophising regarding education is essential to improving empirical educational research; in particular, they hold that taking philosophy seriously offers some solutions to the problems wrought by the EBE movement in educational research.

Pring: Philosophical understanding of educational encounters and practices

In a widely read book (2015), Pring provides an introduction to the philosophical issues that arise in the context of doing educational research. Amongst the varied arguments that Pring uses to back up this claim, one can discern the following main strands of argument.

The importance of norms in education

Pring frequently stresses that education and educational concepts are normative and not (purely) descriptive. When one describes a person as "educated" or "not educated" one does not only convey factual information about that person (for instance about the highest level of qualification that they hold), one also makes an evaluative judgement about that person; after all, calling someone "educated" is a form of praise and calling someone "uneducated" is a criticism. Indeed, the very idea of an education, according to Pring, is the idea of a "worthwhile" learning process that "changes a person for the better as a person" (Pring, 2015, p. 16). However, as Pring stresses, what *is* a worthwhile learning process and what it *is* to change for the better as a person is a contested matter. For instance, some people hold that being able to recite passages from religious books is a sign of being educated; others hold that recitation is not a form of education at all. Because different people have different conceptions of what it means to be educated, Pring holds that it is inevitable that people will always disagree about "[…] what precisely a good education should consist of" (Pring, 2015, p. 16).

The normativity of education implies a particular problem for the EBE movement in that many researchers in the EBE tradition take it for granted what the aims of education are. For instance, they may assume that the aims of education are those educational outcomes that form part of a particular government policy, or are simply the most obvious and basic educational aims, like, reading, writing and mathematics. However, Pring notes that what the aims of education are is a highly contested matter in the first place. This means that thinking about education is not just thinking about what is the best means to achieve some pre-determined or obvious educational aim or outcome but also includes thinking about what the aims of education should be in the first place.

Educational research as conceptual analysis

After outlining how education is a normative concern, Pring makes clear why it is so important to pay close attention to the central concepts in education and to elucidate them clearly. Take central educational concepts like "learning" (Pring, 2015, p. 21) and teaching (Pring, 2015, p. 23). Pring stresses that what even so basic a thing as "learning" or "teaching" amounts to is never one sort of process or activity: it is individual to a particular learner or to a particular teaching situation. This point follows from the point about normativity, above. Let us grant that "learning" and "teaching" are processes of changing and developing young people for the better and let us also assume that what is worthwhile for one young person to learn depends on their own situation (including things like what they have already learned and the course that their life is taking). It follows from both of these points that whether an activity really counts as "learning" will differ from student to student. To take a simple example, hearing classical music in a concert hall may not be a learning experience for one student (who is used to classical music and concert venues) but may be a true learning experience for another student (who has not had the opportunity to hear classical music or visit a concert hall). For Pring, this means that we cannot *generalise* about what learning is or about how best to achieve learning. Rather than study large-scale patterns of learning or causal processes that bring about learning, Pring holds that educational research should consist of conceptual or philosophical analysis of individual instances of teaching and learning and individual teaching practices. Based on these observations, Pring concludes that the scientific model is not appropriate for educational research; as he puts it "Man" is not "a subject of science" (Pring, 2015, p. 32).

Educational practice and the need for philosophy

Finally, Pring stresses the ethical dimension to educational research. It is not just that one needs to understand meanings in order to understand individual educational practices. He holds that, in actual teaching practice, teachers need to make decisions about how to teach so that their students can learn in worthwhile ways. As he puts it:

> In "practising education" one is engaged in a moral enterprise, and one cannot escape the subtleties of moral discussion and its roots in different moral traditions as one engages in research (Pring, 2015, p. 208).

By this, Pring means that the individual teacher will always make pedagogic decisions based on motivations that are (deep down) philosophical. He holds that if educational researchers are truly to understand how pedagogic decisions are made, they need to adopt a philosophical focus and understand the underpinning motivations of teachers making pedagogic choices.

Bridges: Humanistic educational research

In his book *Philosophy in Educational Research*, David Bridges outlines the importance of philosophy to all social science (not just to education). Like Pring, Bridges holds that social science should not only provide causal explanations of what causes events in the human world; social science needs to provide an understanding of the meaning of intentional human action. He draws on Peter Winch to hold that social science should understand not only patterns of human behaviour, but must seek to understand the *meaning* of behaviour (Bridges, 2017, p. 65).

Bridges outlines how all social science needs to be able to understand human agency and human self-consciousness: by this, he means that social science needs to present not only generalisations of what events in the world lead to what other events, but needs to understand human agency and human self-consciousness as *intentional*. Social science needs to present an account not just of what humans do, but *why* they do it (what they intend or for what purpose they act) and what action *means* to them. Key to understanding either of these things—the intentions with which people act and the meanings that they assign to actions is an understanding of the sociocultural and historical locatedness of human experience; that is to say, in order to understand intentions and meanings that individual people assign to actions, we need to understand how other people understand those actions and how those actions have been understood over time. In short, Bridges holds that social science should "enter into the minds, worlds, language and understandings" of the people studied (Bridges, 2017, p. 66).

Bridges holds that the "proper study of mankind" is this humane way of understanding meanings. Bridges draws on the work of scholars like Peter Winch, Max Weber, Giambattista Vico, William James and Isiah Berlin and advocates a form of social science that models itself more on the humanities than on scientific psychology (Bridges, 2017, pp. 60-68). In particular, he holds that educational enquiry should not be reduced to randomised controlled trials of the effectiveness of educational interventions. While such trials may establish whether interventions lead to certain desirable outcomes, Bridges holds that RCT methodology cannot yield understanding of what these educational interventions *mean* to the teachers who teach them or to the children who undergo them.

Winch: The nature of educational explanations

In a recent book, *Educational Explanations: Philosophy in Empirical Educational Research*, Winch (2022) pushes the field further and presents the most detailed argument yet for the

centrality of philosophy in educational research. Winch presents four main arguments that overlap with, but also pushes forward, the arguments of Pring and Bridges, reviewed above.

1. The normativity of educational research

Firstly, like Pring, Winch stresses that education is purposive or normative (Winch, 2022, p. 6). In order to make judgements about the success or otherwise of education, one must be able to say what the *purpose* of education (and of smaller sub-parts of the educational enterprise) is. Moreover, educational aims are always *contestable* (Winch, 2022, p. 6); we can always disagree about what our educational aims should be and, indeed, that different actors or role-players within education are likely to disagree substantially about the proper ends of education. For this reason, *research* (and certainly empirical research) cannot in itself settle the aims of education; it will need to be settled on the basis of philosophical debate.

2. Conceptual understanding

A second reason why Winch holds philosophy is important in empirical educational research is its unique ability to (i) investigate concepts—that is, to understand what actors mean by the ideas that they are investigating and to clarify them for a general audience in order that they may be operationalised in research. Like Pring, he holds that conceptual understanding of educational practices and institutions are a prerequisite for investigating them empirically (Winch, 2022, p. 82). Winch holds that all empirical educational research—and especially causal educational research in the RCT tradition—concerns the relationship between a dependent variable and a (set of) independent variables. In order to quantify the strength of these relationships precisely, the variables in question have to be measured precisely; this first requires careful definition of these variables and, as Winch points out: "[…] conceptualisation of contested concepts requires philosophical discussion […]" (Winch, 2022, p. 90).

3. "Why" explanations

Much like Bridges, Winch holds that any true explanation of educational phenomena would involve a philosophical component. However, while Bridges stresses the affinities between the field of Education and the humanities and the need for deep understanding of intentions and meanings to understand educational encounters, Winch stress the importance of what he calls "why" explanations for the implementation of educational research findings. Winch reminds us that, in the social sciences, we find two broad kinds of explanations of events: explanations regarding "what" happened and explanations regarding "why" something happened. He stresses that empirical educational research (and especially RCT's) mostly provides "what" explanations: explanations regarding the relationship between a dependent and an independent variable. However, EBE is an *interventional* research programme: it seeks not just to describe states of affairs, but to improve educational practices. It seeks to find interventions that have been proven to work in one context and can be transplanted to a different context in order to bring about improvement there. However, social interventions are multifaceted: unlike medical interventions that can work through something as simple as taking a

certain drug, social interventions take much time, involve many actors and have many different parts. In order to ensure that an intervention can be transplanted from one context to another, one needs to understand not only the degree to which the intervention works, but also which parts of it are most important or why it works. As he writes:

> RCTs can identify a cause or the point of origin for a change […] although they have the potential to eliminate alternative explanations, they cannot by themselves provide explanations (Winch, 2022, p. 154).

Following on, the reason why a certain intervention works may even differ from person to person or may differ over time. For this reason, one also will not be able to implement an educational intervention (even one that has been validated through a RCT) successfully without relevant understanding of not only that it works, but why it works. Whereas Bridges holds that one can only come to a full, humane understanding of education if one understands individual perspectives on the learning encounter, Winch holds that these individual learning perspectives are part and parcel of what must be studied if one is to intervene successfully to improve education.

4. Understanding truth and quality criteria for research

As we saw, Winch's arguments regarding (i) the normativity (or purposiveness) of education, (ii) educational concepts and (iii) "why" explanations overlap in many ways with the arguments of Pring and Bridges. However, Winch's argument goes further when he considers what an educational explanation fundamentally *is* or what it means to explain anything in doing educational research. The foundational idea for Winch is that the quality of educational explanations is relative to the reasons for which the explanations are being sought. Winch holds that educational explanations are not in themselves adequate or inadequate, good or bad, but that their quality is "relative to the purpose of those who seek an explanation and the context in which they seek it" (Winch, 2022, p. 65).

Take the following example of two people who might try to explain the same educational event in two different ways and for two different purposes.

Imagine that a group of first-year university students have failed their logic exam. The examiner reads through the exam scripts and notices that many of the students made a predictable and common mistake like affirming the consequent.[2] The examiner concludes that the students did not grasp the operation of hypothetical syllogisms properly and, therefore, that the fail grade awarded to these students was justified.

Imagine that the same class of students was being studied by a cognitive psychologist, interested in the development of undergraduates' thinking skills. In explaining why the students

[2] Affirming the consequent is reasoning, fallaciously, that if it rains the streets get wet and the streets are wet, therefore, it rains.

failed their logic exam, the psychologist will be interested in very different matters compared to the examiner: they will consider the students' prior preparation, their home background, their study skills, the class atmosphere, the students' cognitive abilities, etc. For the examiner's purposes, the explanation about affirming the consequent is a perfectly good explanation as to "why the students failed the exam": the students did not understand one of the main principles of syllogistic reasoning and therefore cannot pass first-year logic. However, for the psychologist's purpose it is not a good explanation as to "why the students failed the exam"; indeed, for the psychologist, the explanation "the students kept making the logical error of affirming the consequent" simply raises the deeper psychological question: "why did the students keep making the mistake of affirming the consequent?"

Winch would hold that the examiner's explanation and the psychologist's explanation have *different purposes*: the examiner's explanation is needed to justify and explain the failure of a large group of students, but the psychologist is interested in the reasons behind the failure. Winch holds that, in evaluating educational research, it is necessary to understand the criteria that one needs to apply in order to judge whether an educational explanation is "good" or not; crucially, these criteria will vary depending on the purposes of the research (a form of "perspectivalism") (2022: 26). Winch holds that philosophical reasoning—about the truth criteria that one should apply to research—is part of assessing whether research is good or bad and that this philosophical understanding of the differences between different kinds of research and differences in quality assessments is required to do good empirical educational research. What Winch really points to is that, in understanding educational research, one needs to understand quite deep points about the purpose and quality of educational research; different pieces of research have different purposes and should therefore be judged differently for quality. Moreover, one needs to understand that "quality" in educational research is not a matter that can be fixed once and for all (and summarised in a "hierarchy of evidence"), one needs to understand the questions that the researcher asks (and the reasons why they ask it) in order to judge the quality of research.

Philosophy as an essential part of empirical educational research

If Pring, Bridges and Winch are right that all empirical educational research needs to be underpinned by philosophical thinking, two things follow: Firstly, all educational researchers will have to be minimally competent philosophers. After all, it is only if educational researchers apply concepts sharply and correctly that their empirical claims make sense. Secondly, *users* of educational research—like teachers—will have to understand enough philosophy in order to be able to (1) understand the more philosophical claims that researchers make in doing their research and (2) be able to evaluate the quality of educational research based on its purpose (as we saw in the section above).

Winch, in particular, holds that discussion of these philosophical topics should be a crucial part of teachers' initial education (Winch, 2022, p. 274). He holds that it is not only desirable

but, unavoidable that teachers should be familiar with research; if they do not actively engage with research, teachers will still be confronted with research findings in school, but will only do so in a distorted or simplified way via the teacher professional organisations or via informal staffroom talk (Winch et al., 2015). Winch holds that it is far better for teachers to have an active awareness of research issues and to be able to judge research actively for themselves rather than being exposed, passively, to poor research or misunderstanding of good research. Winch thinks that the kind of philosophical literacy that he calls for to inform empirical educational research is really part and parcel of teachers' professional knowledge and should therefore be studied seriously and adequately mastered by all teachers.

5. Philosophy and evidence-based approaches to educational improvement

Above, we saw that Winch holds that empirical educational research requires much preparatory philosophical work. Interestingly, if this is true for education, the same holds for the other empirical social sciences and in particular for the policy-focused social sciences, like social or public policy. Just like education policy, all social and public policy making is not just about the investigation of the best means to achieve pre-specified social ends; the ends themselves are part of what needs to be determined. Moreover, concepts in social and public policy are disputed and what are true social explanations depends on the criteria that one applies. Just like in education, social interventions are also multifaceted and hard to implement across different settings. In general, whether *any* social intervention (not just an educational intervention) "works" is a matter of the criteria you apply to count something as "working" (and the "what works" agenda is criticised not only in education, but across the fields of public policy).

What Bridges, Pring and Winch are really pointing towards is the need for the following three kinds of theoretical thinking that must accompany all good empirical social science:

- Normative thinking regarding the best policy goals to pursue and the way for practitioners to achieve them
- Conceptual analysis of the central concepts in the relevant field
- Methodological thinking about matters like scientific method and the appropriateness of research strategies to particular research questions

To see why these matters are important, let us turn again to the EBE movement's conceptualisation of research literacy. According to advocates of EBE the ideal process of teacher use of research follows these steps:

> Step 1: The teacher has the aim to promote a certain outcome amongst her students
>
> Step 2: The teacher searches the literature for studies of the most effective way to promote this outcome

Step 3: She compares the effectiveness of all of the interventions

Step 4: She picks the intervention to implement that is most robustly evidenced as effective in promoting the outcome in the literature.

Against the backdrop of the discussion above, it should immediately be clear where the philosophical assumptions in each of these steps are hidden. Firstly, without understanding the normative assumptions underpinning step 1, it will be hard when reading research for teachers to evaluate whether the aims or outcomes of educational interventions are sensible ones. Secondly, it is often the case that the outcome defined in step 1 is a vague (or contested concept) like, for instance, "literacy" or "well-being" or "creativity"; without philosophical understanding of concepts, the teacher may fall into the trap of assuming that concepts are clear when they are not. The same goes for step 2: the literature that the teacher searches is likely to define both the outcome and the input variables differently and "most effective" is a normative notion in any event: prior normative assumptions about what a "good education" is will rule certain interventions "in" or "out" of consideration from the start. Thirdly, consider the philosophical assumptions hidden in step 3: the educational studies that the teacher reviews in step 3 will have been conducted for different purposes and to answer different questions. What methodological standards to apply in judging which of the studies in the field are "best" will be a complicated matter and how to compare the "effectiveness" of interventions will not be straightforward. Lastly, in step 4, "implementing" whatever intervention the teacher picked as "best" will raise questions of *how* to implement that intervention in her particular class or school, given that her class or school is a unique real-world setting that will not precisely match the controlled setting in which the original effectiveness study was conducted. It is clear that all steps of "evidence-based" approaches to educational planning and improvement are suffused with assumptions that can trip up the philosophically unaware teacher and that being "philosophically literate" enough about research is a prerequisite to engage in serious evidence-based thinking about education.

6. An objection: The demandingness of philosophical research literacy

Above, I outlined an argument that research literacy should include a good deal of philosophical literacy about educational research. Advocates of EBE are, however, likely to protest that building philosophical literacy into research literacy is very demanding: requiring that teachers must not only be "research literate" but must also be "philosophically literate" is to demand that they possess whole new sets of knowledge of norms, concepts and truth criteria over and above what we have previously regarded as the core of research literacy (considerations of research design, research quality, research synthesis, etc). In particular, advocates of EBE might say that philosophical literacy is not part of teachers' research literacy; but that it is part of the *researchers'* research literacy. They might say that it is not the teacher's duty

to evaluate matters like whether educational aims are well chosen or whether the methodology of a study is suited to answer its research questions, but that this is the responsibility of the *researcher*. If the researcher settles answers to these more philosophical questions and then explains them well in her research, is it not enough for the teacher simply to read these explanations and take them on trust? Against Pring, Bridges and Winch, the advocate of EBE might propose a more "minimal" conception of research literacy according to which research literacy does not involve understanding the philosophical dimension and presuppositions of research, but consists in taking for granted the researcher's word for it that they have adequately paid attention to norms, to concepts and methodological dimensions in setting up their research.

To this objection, the following counter-objection deserves to be offered. Even if all researchers were (a) very sophisticated, philosophically speaking, (b) considered normative, conceptual and methodological matters in their research and (c) wrote about these matters clearly in their published research, the teacher who is not philosophically literate would not *be able to understand* what the researchers wrote about these matters or would not even *know what is at stake* when the research takes a particular philosophical position on an issue. Moreover, consider that it is extremely unlikely that all researchers will have exactly the same philosophical orientation or will reach exactly the same philosophical conclusions regarding what educational aims we should promote (norms) how to understand concepts (concepts) or what truth-criteria a piece of research should satisfy given its aim (methodology). There is likely to be *dispute* between researchers about these matters and, without philosophical literacy, teachers as readers of research will not be able to know which researchers to believe or what research to subscribe to. Put differently, saying that teachers need not understand philosophical matters, but can simply take them on trust does not answer the question of *which researchers to trust*. To this last point, the advocate of EBE is likely to answer: "it is easy, trust the EBE researchers!" However, given that in fact the field of educational research consists of different camps, and that each of these camps is likely to say "trust us!", the EBE researchers have available no non-circular justification for why they (and not another camp of researchers) are in a unique position of trustworthiness compared to all other methodological camps in the field of education. True enough, the EBE researchers may say that teachers should understand, on a methodological or *philosophical* basis why EBE is superior to all other forms of educational research […] but then we are right back to where we started by including philosophical considerations within the field of research literacy.

Indeed, consider the matter in the light of Eriksen's question about whether research literacy is a "passive" or an "active" competency (section 3), that is the question whether research literacy requires that the literate person merely be able to *understand* research or whether it demands that the literate person be able to *participate* in research themselves. Anyone who takes the line that research literacy requires only that the reader of research "takes the researcher's word" for the philosophical aspects of the research thereby quite clearly takes a

"passive" line on the nature of research literacy. As Pring, Bridges and Winch make clear, however, philosophical issues are very much live in the discipline and are not settled; insisting that, to be research literate, one simply needs to "take EBE researchers" word for it that the EBE approach to educational research is "best" is in itself to take a philosophical position (that EBE is the best form of educational research) in a much larger debate about educational research and how it should be done.

In sum, considering the question of what research literacy is—considering the question of how research should be *consumed*—is not easily separable from the question of methodology in education—that is the question of what research should be *produced*. The kind of research that should be produced is obviously the methodologically strongest kind of research. In deciding what to read (and deciding what interventions to implement as a consequence), teachers should, obviously, read the research that is the strongest, methodologically speaking. However, this question "what is methodologically the strongest research" is (as we saw in the sections above) a deep question in the field of the philosophy of education specifically and the philosophy of social science more broadly and teachers will *only know what research to read* if they also know *what is methodologically the strongest research*.[3] This means that the question of what is required for teachers to be "research literate" cannot be thought of separately from (a) debates in the discipline about what good research is (b) the quality of research that is actually produced. The questions of what research should be *used* and what research should be *produced* go hand-in-hand.

As we have seen above, there are regular doubts expressed about the quality of educational research, about its relevance to practitioners and about its philosophical presuppositions. Calls for teachers to be more "research literate" are, in effect, calls to short-circuit all of these debates: could we not, in bottom-up fashion, rely on *consumers of research* to drive improvements in *research production* through being more discerning and demanding? As I tried to argue above, however, calls for "research literacy" amongst teachers as the consumers of research cannot be the solution: they are completely tied up with debates about the state of the discipline, and in large part arise exactly *because there is such fierce debate on the producer side* about what research is best and what research should be read. After all, consider that it is only because some educational researchers are so dissatisfied with what they see as the low quality of educational research that they wish to follow a user-focused educational improvement strategy at all.

Viewed like that, the question of teachers' research literacy is really simply a different way to think about questions that have always existed in the discipline about philosophical matters

[3] Unless, of course, some outside person or body tells them what is methodologically the strongest research… but, in this case, teachers will not truly understand what is the strongest research, they will simply have to take it on trust.

like what the best kind of research is, what educational research is ultimately for and what the teacher's role is in improving educational practice based on her reading of the research.

7. Conclusion

In this paper, I investigated the debate about teachers' research literacy from a philosophical perspective. Based on arguments by Pring, Bridges and, most notably, Winch, I argued that knowledge of philosophy is an essential part of conducting empirical educational research and that educational research literacy therefore includes a considerable component of philosophical literacy. This implies that efforts to enable teachers to become more research literate should also include efforts to ensure that they are philosophically literate. The realisation that research literacy also includes philosophical literacy brings into sharp focus that "research literacy" is not a straightforward concept, but that what "research literacy" is taken to be depends on your whole philosophy of research. In the end, "research literacy" is not a simple solution to the problems of implementation of research in the classroom. It is simply a different name (or a different way of looking at) philosophical problems about educational research that have been part and parcel of the field of educational research since the birth of the discipline.

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