Philosophy of Education and the Contested Nature of Empirical Research: A Rejoinder to D.C. Phillips

Emery J. Hyslop-Margison and M. Ayaz Naseem
Concordia University

Introduction

In a recent article published in the *Journal of the Philosophy of Education*, D.C. Phillips makes a valiant if ultimately unsuccessful attempt to rescue empirical research in education from a range of terminal defects.[1] With tongue in cheek, Phillips employs such weighty experts as Woody Allen and Sir Arthur Conan Doyle — we presume intentionally committing the fallacy of appeal to erroneous authority — to support his mission. In the final analysis, however, Phillips's wittily crafted apology for the dominant research paradigm in education unfortunately misrepresents important philosophical critiques on the limits of empirical research. In this essay, we challenge Phillips's defense of empirical research in education and argue that his attack on Kieran Egan in particular fails to address the considerable force of the latter's most contemporary critique. From the outset of this rejoinder, we also wish to convey our tremendous professional respect for Phillips and his many contributions to the philosophy of education.

There is no question that philosophical problems typically provoke a greater sense of anxiety among social science practitioners, including researchers in education, than among their counterparts in the natural sciences. One obvious reason for the increased philosophical scrutiny of social science is its relative lack of success when compared to seemingly impressive advances in the natural sciences. Empirical research in the field of educational psychology seems especially adrift, lacking any significant measure of demonstrable achievement regarding educational practice. Even longstanding theories such as Jean Piaget's stage development hypothesis are coming under ever-increasing attack as being fundamentally flawed in their postulations.[2] Some critics of empirical research in education, such as Egan,[3] have pointed to the unique conceptual and normative complexity of education as a subject matter while others, including Robin Barrow,[4] argue that, given the triadic and complex nature of the educational enterprise, searching for systematic principles of learning is an inherently misguided endeavor doomed to the inevitable failure it has heretofore experienced. Barrow also draws our attention to the frequent failure in educational research to distinguish between normative and empirical questions such as exemplified by intelligence testing.[5] For example, he correctly observes that the matter of intelligence is ultimately one for philosophical debate and argumentation rather than one lending itself to empirical testing. Questions of generalizability, predictive capacity, and construct validity continue to haunt the legitimacy of empirical research in education.

In his apology, Phillips initially employs a Hegelian synthesis to defend empirical research in education from what he considers two polarized groups of critics. The thesis of Phillips's imagined dialectic includes those academics and

policy developers who demand that empirical research in education respect classical experimental design while the antithesis is comprised of those academics dismissing empirical research entirely. In an attempt to identify the middle ground, or synthesis, Phillips pleads, "Let us have the wisdom to reject both poles — for neither points the way to the development of an empirical educational research that can illuminate educational phenomena and that can be useful to practitioners or policy makers as they hone their practice or shape their policies."[6] Although we sympathize somewhat with the view that certain types of empirical research may afford limited contributions to some areas of educational inquiry, Phillips's attempt to sort out the middle ground between two polarized positions fails to address the most trenchant contemporary criticisms of empirical research in education. Further, his somewhat taunting suggestion that most philosophers of education who criticize empirical research practices are entirely ignorant of the subject reflects his own lack of familiarity with current philosophical critiques in the area.

The Empirical Research Salvo

Phillips's condemnation of those philosophers willing to challenge the value of empirical research in education begins with what can only be described as a straw man argument. Based on a narrow and selective reading from a limited range of available critiques, he accuses philosophers of education of lacking knowledge about the methods and supposed vitality of empirical research. Based on this narrow analysis, Phillips draws the unwarranted conclusion that current criticisms of empirical research in education are woefully superficial and uniformly philosophically wrongheaded. For example, he offers the following observation, albeit with a minor qualifier, as evidence to support his claim:

> On closer examination, these books and papers, again on the whole but not quite invariably, are about empirical research but discuss it in a way that is bereft of detail — they adopt the interesting strategy of tackling the topic without paying serious attention (if any attention at all) to what actually transpires in real cases of research.[7]

Phillips singles out a text by Gert Biesta and Nicholas Burbules entitled *Pragmatism and Educational Research* for special criticism in this regard, suggesting that the book offers only a brief and contrived example to support its case against empirical research in education.[8] Phillips neglects to mention, however, that the authors' primary intention in the book is not to launch an attack on empirical research per se, but rather to investigate the possible contributions of pragmatism to the understanding, study, and enhancement of education. *Pragmatism and Educational Research* provides readers with a philosophical analysis of pragmatism that includes implications for educational research based on epistemic limitations. Specific examples of empirical research would therefore contribute little to the arguments advanced in the text. Of course, one obvious implication of pragmatist epistemology identified by the authors, and one that apparently troubles Phillips, is that a science of education founded on abstract and immutable pedagogical principles is impossible because pragmatists understand that "every situation we encounter [in education] is in some sense unique."[9] The empirical study of education is not necessarily meaningless to pragmatists, but given the impact of context on the claims of empirical research, any discovered pedagogical implications are

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inevitably mediated. The results of empirical research to the pragmatist, then, are not immutable recipes to follow on the path to culinary perfection, but information about possible ingredients to include in certain dishes. Hence, empirical research must be interpreted and applied by professional educators as active agents working within a recognized context instead of simply consumed and applied as abstracted pedagogical knowledge.

Again, we reiterate that Phillips's repeated central claim in defense of empirical research is that philosophers of education generally fail to analyze concrete cases of research to support their critiques. Before addressing this largely unjustified criticism, we suggest that Phillips himself appears guilty of the same sin he accuses other philosophers of committing. Ironically, Phillips fails to cite a single concrete study to support his contention that empirical research makes a significant contribution to educational practice.

Examples in Critiques of Empirical Research

In this section, we include examples to support our claim that Phillips is incorrect in suggesting that current critiques of empirical research in education fail to analyze specific cases of research. Specifically, we include examples from both Egan's and our own work to illustrate his error. Phillips gives exceptionally short shrift to a 1983 book by Egan that draws attention to the seemingly unproblematic observation that empirical research findings reported by educational psychologists are in fact the generally predictable consequences of classroom culture.[10] In response to Egan's observation, Phillips responds that "our research colleagues might ask what there is about a normative process of initiation that makes it unfit for empirical study."[11]

This particular criticism of empirical research, however, is not as easily dismissed as Phillips implies. Egan's critical point here, one supported by the work of both Lev Vygotsky and John Dewey and developed far more extensively by Egan in the final chapter of *Getting It Wrong from the Beginning: Our Progressivist Inheritance from Herbert Spencer, John Dewey and Jean Piaget,* is that research claims emerging from empirical observations represent the logical outcome of antecedent cultural and educational experiences. The outcome of pedagogical practice is analytically embedded in the forms and content of the applied instructional model. Dewey understood this point very well, of course, when he argued, without reference to empirical research, that fostering democratic dispositions among students was essential to promote their future participatory citizenship. Since the concept of democratic citizenship requires a certain level of individual political engagement, classrooms that prepare students for democratic experience must mimic that cultural requirement by being laboratories for democracy.[12]

As we pointed out above, Phillips advances an erroneous claim in his article that contemporary critiques of empirical research offer no specific examples in support of their position. In *Getting It Wrong from the Beginning,* Egan observes that most empirical research conducted in education has had "no discernible impact on general educational achievement."[13] He dismisses the range of responses typically offered by researchers to explain the problem, such as inadequate teacher education, teacher

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inattention to research findings, poor communication of results, or the need for additional research in the area under investigation.[14] The problem, he suggests, is far more fundamental in nature, and results from the logical implications of specific pedagogical practices, a problem that renders the implications for practice of what passes for empirical research in education as both pseudo-empirical and trivial. Egan suggests that the recommendations for classroom practice implied by empirical research simply advance definitions of the concept under investigation. Hence, the studied concept or phenomenon is analytically linked to the subsequent pedagogical recommendations antecedent to any empirically discovered relationship.

The statement that "all bachelors are unmarried men," where the predicate (unmarried men) is contained in the subject (bachelors) offers a classic example of an analytic proposition, or a logical tautology. An analysis of the concept of bachelor reveals a logical necessity in the above proposition because all individuals fitting that classification are, by definition, unmarried men. Some instances of analytic propositions are far less obvious. For example, the statement that "all men are mortal" advances another analytic claim since the concept of mortality is already embedded in the concept of men. Contrary to Phillips's critique, Egan also offers specific case study examples to illustrate how this particular problem manifests itself in what are highly regarded and exceptionally well-funded instances of empirical research in education.

Egan employs the How People Learn Project in the United States to illustrate his point about the analytic relationship between pedagogical recommendations and studied concepts. National Research Council (NRC) researchers, extremely well funded and presumably exceptionally well qualified in the field of empirical research, sought a scientific research base to identify the "best" available classroom practices. After a series of studies that involved elaborate empirical research methods and sophisticated data collection and analysis procedures, the researchers' recommendations for best practice included the following observations: "To develop competence in an area of inquiry, students must (a) have a deep foundation of factual knowledge, (b) understand facts and ideas in the context of a conceptual framework, and (c) organize knowledge in ways that facilitate retrieval and application."[15] The principles of effective learning identified in this report, then, are simply conceptual equivalencies, or definitions, of competence within a specific area of inquiry. Here, we are compelled to turn Phillips's term of consternation directed at the adversaries of empirical research on its head by exclaiming c*aveat emptor* indeed!

Our own additional investigation of a related section from the same NRC study reveals other analytic linkages between the studied concepts and the pseudo-empirical and trivial research outcomes offered by the report:

> In-depth understanding requires detailed knowledge of the facts within a domain. The key attribute of expertise is a detailed and organized understanding of the important facts within a specific domain. Education needs to provide children with sufficient mastery of the details of particular subject matters so that they have a foundation for further exploration within those domains.[16]

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Once again, the conclusions reached and the recommendations advanced for classroom practice are obviously analytically connected to the researched concepts. For example, "expertise" is normatively defined as "a detailed and organized understanding of the important facts within a particular domain," and massively funded research schemes are not required to demonstrate empirically the analytic relationship between subject mastery and domain expertise. Given the severity of Phillips's criticism of those condemning empirical research as an appropriate educational research practice, it is unfortunate that he fails to consider Egan's most recent and compelling criticism, one complete with the specific examples he contends are typically absent.

In a recent article that appeared in *Theory and Research in Social Education*, Arpi Hamalian, Germell Anderson, and Emery Hyslop-Margison evaluate the actual contribution to classroom practice of recent empirical research in citizenship education conducted by two major international organizations: the International Association for the Evaluation of Educational Achievement (IEA) and the National Foundation for Educational Research (NFER).[17] The article adopts Egan's critical framework (described previously) that contends that much of the current research in education simply establishes empirical connections between ordinary language concepts that are already conceptually linked. Consistent with Egan's observation, our analysis reveals a recurring pattern of analytic connections between the concept of democratic citizenship and the subsequent recommendations for practice offered in both of these reports. The studies suggest that activities such as community involvement, ensuring that schools practice democracy, and fostering student voice are central elements in citizenship preparation. We correctly conclude that empirical research is not required to establish that tolerance, willingness to participate, and understanding responsibilities as well as rights are important and required elements of democratic citizenship. The concepts of tolerance, willingness to participate, and understanding rights and responsibilities are inextricably connected to what we mean by democratic citizenship. The observation that democracy should be practiced in classrooms and schools, as argued and enacted by Dewey, simply represents yet another analytic claim.

Empirical Research and the Problem of Generalizability

The issue of generalizability is one that has dogged empirical research in the human sciences for quite some time. Phillips responds to Barrow's 1984 claim that empirical research in education is ungeneralizable because of the infinite range of contextual variables by advancing a rather uncharacteristically weak retort. Phillips defends empirical research against this charge simply by pointing out that there is considerable disagreement among experts in the field on the nature and seriousness of this particular problem:

> There are many anthropologists (including ethnographers) who study humans acting in specific sociological settings, and who claim to be doing rigorous science — although, crucially, they recognize that this is not science in the positivistic sense of the term. While some social scientists agree that generalization from specific contextualized cases is not possible, there are others who disagree.[18]

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Obviously, disagreement between experts in a field on such an important issue hardly instills confidence in the particular theory or practice in question. The issue of contextual variables and their impact on empirical findings, then, is worth exploring beyond the cursory defense Phillips provides in his apology.

In the course of predicting and explaining student behavior — the inevitable objective of empirical research in education, inferences are invariably made regarding the students' causal beliefs and desires. To make a certain theory generalizable, these mental states, both their antecedent causes and pedagogical implications, must be extended beyond individual cases and applied to specific groups with some confidence in their corresponding accuracy. If a researcher claims that collaborative learning enhances student knowledge of algebra, for example, an inference is made that collaborative learning generates mental states among students conducive to learning algebra. For empirical research to enjoy this measure of generalizability, education must be reducible to explanations about students' beliefs, their cognitive processes and dispositions, and the relationship of these to particular pedagogical situations. Put even more simply, rather radical behaviorist presuppositions must be tacitly advanced by the researchers.

There are a number of serious philosophical problems associated with this generalization requirement. Clearly, empirical researchers in education may observe specific phenomena but, since they do not have access to other minds, they cannot observe mental states, and, hence, nonempirical assumptions about antecedent causes, beliefs and dispositions, and their implications remain a necessary condition of empirical research that advances pedagogical recommendations. However, identical observable learning outcomes may result from entirely different antecedent causes in the form of specific beliefs, abilities, or dispositions. Assumptions about uniform antecedent causes, the holy grail of empirical research, are therefore beyond the empirical researcher's grasp. However, it is precisely these elusive generalizations and their antecedent causes that empirical research in education must identify to provide educators with the etiological principles they seek. It is one thing to provide an empirical account of some phenomenon and clearly quite another to cite the cause of the phenomenon in its analysis.

We do not wish to dismiss entirely the possibility of making limited claims, rather than sweeping generalizations, on the basis of empirical study. Some limited empirical generalizations, such as conclusions drawn about the effectiveness of whole language versus phoneme instruction for reading, may actually provide criteria for causal likelihood or identify something that operates as a potential causal factor in a significant number of cases. For example, an empirical researcher may legitimately claim that phoneme instruction offers a more effective approach to reading instruction in the hands of a certain type of teacher while instructing a certain type of student with a certain type of reading material and so on. However, we will leave it to the reader to determine the ultimate value of such claims when applied to practical cases of general classroom instruction that are subject to an indeterminate range of classroom variables.

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Empirical Research and Ideology

There is one final issue we wish to raise regarding empirical research that is entirely absent in Phillips's defense of it, and that issue involves the role played by the empirical research paradigm in the ideological manipulation of public opinion. Within the present educational paradigm, one driven primarily by instrumental learning objectives consistent with the economic goals of neoliberalism, empirical research in education clearly serves the socially reproductive interests of the ruling class. This concern is especially salient within the realm of empirical standardized testing that holds teachers, administrators, and schools directly accountable for student academic success and failure. The "scientific" evidence provided by empirical testing insulates the social structure of opportunity from criticism by deflecting public attention from the economic causes of academic underachievement and conveniently blames teachers and school administrators instead. Such applications of empirical research in education are deeply ideological in nature and profoundly disconcerting since the structural causes of educational failure in the United States are not being addressed. In this case, empirical research is not merely of dubious scientific or pedagogical value; it distorts public perception regarding the factors influencing educational quality and opportunity.

Paradoxically, there is actually a plethora of empirical data that supports the ideological charge against empirical research in education. The sociology of education provides educators and policy developers with an abundance of empirical data about the variables that correlate with student achievement.[19] However, this considerable body of scientific data is consistently ignored by the same Bush administration and the NRC advocates that champion empirical research because it invalidates a conservative educational agenda based on micro-level accountability. The prevailing neoliberal ideology, with its socially stratifying impact, is simultaneously naturalized by the absence of competing discourses and research practices that tell an entirely different story about the factors influencing student achievement. Phillips's defense of empirical research in education, then, ultimately has a deleterious and narrowing effect on the much-needed moral debate about economic equality and the impact of social stratification on educational opportunity in America.

The standardized testing craze affords one example of how empirical research circumvents the foundational and moral problems affecting both prescribed learning objectives and subsequent academic performance. It provides an effective ideological vehicle to divert attention from the deeply rooted structural causes of student failure and to redirect public attention toward teachers, administrators, and schools. Stanley Aronowitz puts the problem this way: "The fact is, science and technology have been constructed as discursive formations, which, by definition, exclude the social and cultural world as relevant influences in knowledge production."[20] If improving education is the actual goal of empirical study, the approach adopted in No Child Left Behind (NCLB) and in the NRC initiatives, among others, is doomed to failure because it refuses to grapple with the economic and social causes of

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educational outcomes or even to recognize the social structure of opportunity as a legitimate and primary unit of educational analysis.

In order to subvert the possibility of social change, neoliberal ideology portrays academic achievement as an outcome of microlevel interaction between teachers and students to distract political and public attention from the profound class inequalities of American society. A sweeping defense of empirical research exacerbates this unfortunate moral situation by incorrectly suggesting the problems of education are primarily caused by classroom or instructional variables and can be remedied by "scientific" solutions. Within such a framework, teachers, administrators, and schools become the convenient targets of a social, political, and economic system that by its very structure ensures the academic failure of certain groups of students. The U.S. education system simply manifests in academic terms the profound economic inequalities that affect American society as a whole, an empirically established relationship conveniently never mentioned by Phillips, the NRC, or the NCLB legislation.

Conclusion

In *The Unconscious Civilization*, Canadian intellectual John Ralston Saul condemns the social sciences for contributing to the rise of political passivity among contemporary academics. He suggests that the widespread political compliance of our colleagues occurs because we "still labor under the burden of false sciences." Saul describes the problem this way:

> Their experiments do not provide any measurable progress in the manner of a real science. In place of real evidence they are obliged to pile up overwhelming weights of documentation relating to human action — none of which is proof, little of it even illustration. This sort of material carries the force of neither history nor creativity. What they are working with is circumstantial evidence. They claim to produce truths, but these truths are too fragile to produce anything other than passivity.[21]

The end product of this form of research and the widespread passivity it generates among academics is that our universities — once centers of active social criticism and moral debate, an absolutely crucial role to fill within truly democratic societies — are reduced to institutions advancing the neoliberal causes of economic globalization, technological jingoism, credentializing and scientism.

There are many colleagues within our own research community who derive significant practical and professional benefit from the present focus on empirical research in education. In a brief footnote at the conclusion of his essay, Phillips himself confesses he was a member of the NRC committee charged with advancing empirical research in education. NRC research projects, the NCLB mandates, and the ongoing institutional support of meetings and seminars focused on empirical research create an interrelated set of subcultures that are dependent on and benefit from empirical methods of inquiry in education. The ensuing political and academic disconnect of genuinely human studies and moral discourse from research in education, combined with the lack of available funding for such research, validate empirical research at the expense of meaningful moral debate regarding appropriate educational objectives in a democratic society and the economic stratification

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affecting student academic achievement and attainment. Unfortunately, Phillips has merely added his call to the current cacophony of voices supporting this morally suspect, ideologically manipulative, and epistemologically misguided endeavor.

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1. D.C. Phillips, "The Contested Nature of Empirical Research," *Journal of Philosophy of Education* 39, no. 4 (2005): 577–97.

2. Emery J. Hyslop-Margison and John Dale, "Scientism as Neo-liberal Ideology: The Fallacy of Objectivity in Educational Research," *Journal of Curriculum Theorizing* 21, no. 4 (2005): 33–42.

3. Kieran Egan, *Getting It Wrong from the Beginning: Our Progressivist Inheritance from Herbert Spencer, John Dewey and Jean Piaget* (New Haven, Conn.: Yale University Press, 2004).

4. Robin Barrow, *Giving Teaching Back to Teachers* (Sussex, UK: Wheatsheaf Books, 1984).

5. Robin Barrow, "For Whom the Bell Tolls," *Alberta Journal of Educational Research* 41, no. 3 (1995): 289–96.

6. Phillips, "Contested Nature of Empirical Research," 570.

7. Ibid., 580.

8. Gert J.J. Biesta and Nicholas C. Burbules, *Pragmatism and Educational Research* (Lanham, Md.: Rowman and Littlefield, 2003).

9. Ibid., 110.

10. Kieran Egan, *Education and Psychology* (New York: Teachers College Press, 1983).

11. Phillips, "Contested Nature of Empirical Research," 589.

12. John Dewey, *Experience and Education* (New York: The Free Press, 1916).

13. Egan, *Getting It Wrong from the Beginning*, 151.

14. See, for example, Benjamin Levin, "Improving Research-Policy Relationships: Lessons from the Case of Literacy" (paper presented at the International Conference on Literacy Policies for the Schools We Need at the University of Toronto, November 2003).

15. John D. Bransford, James W. Pellegrino, and M. Suzanne Donovan, eds., *How People Learn: Bridging Research and Practice* (Washington, D.C.: National Academy Press, 1999), 12.

16. Ibid., 11.

17. Emery J. Hyslop-Margison, Arpi Hamalian, and Germell Anderson, "A Critical Examination of Empirical Research: The Case of Citizenship Education," *Theory and Research in Social Education* 34, no. 3 (2006): 2–14.

18. Phillips, "Contested Nature of Empirical Research," 592.

19. Alan R. Sadovnik, Peter W. Cookson, and Susan F. Semel, *Exploring Education* (New York: Allyn and Bacon, 1994).

20. Stanley Aronowitz, *Discourse and Ideology in Modern Society* (Minneapolis: University of Minnesota Press, 1988), 344.

21. John Ralston Saul, *The Unconscious Civilization* (New York: The Free Press, 1995), 69.

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