

In Praise of (Reasoned and Reasonable) Speculation: A Response to Robinson et al.’s Moratorium on Recommendations for Practice

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Abstract In response to the call by Robinson et al. (25(2): 24–28, 2013) for a moratorium on recommendations for practice and policy in articles published in primary research journals, Alexander forwards four counterarguments that allow for what are termed reasoned and reasonable speculations. Among those counterarguments are the claim that (a) seeking influence in educational practice is a *raison d’être* for educational psychology researchers; (b) problems evident in authors’ conclusions and implications are indicative of a deeper and broader issue; (c) speculations are unavailable and essential aspects of educational research; and (d) potential recommendations should be situated within the primary research document and with the data that justify their articulation.

Keywords Empirical research · Educational implications · Theoretical framing

There are declarations made by Robinson et al. (2013) with which I emphatically agree. As someone involved in the editing of a “primary” research journal or two for over 20 years, I have witnessed the frequency at which researchers overreach their data and overstep their empirical boundaries both in amplifying the significance of their findings for the field and in forwarding implications for educational practice. Thus, I have sympathy for what this collection of noted scholars is attempting to accomplish in their decree that:

In the journal’s front matter and/or in its “Instructions to Authors,” contributors should be instructed to restrict their discussion and conclusions to the data they report and not to offer recommendations for educational practice or educational policy (authors’ emphasis). (p. 1)

However laudable these scholars’ intentions, they have not enticed me to sign on to their edict either as an independent researcher or as a journal editor. My reasons are adamant and

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multiple, as I will endeavor to articulate throughout this response. But my rationales essentially come down to the following arguments upon which I will elaborate.

1. One *raison d'être* for educational psychology researchers is to speak directly and meaningfully about learning and development as it unfolds in schools and classrooms.
2. The problem of overreaching and overstepping empirical data does not begin or end in the conclusions or implications of a study, but in the very framing of that investigation.
3. Reasoned and reasonable speculation is core to the design, execution, and interpretation of empirical research.
4. The forwarding of any reasoned or reasonable speculations should be immediately and explicitly tied to the empirical evidence or justifications that support them.

A Reason for Being

Many of us who call ourselves educational psychologists expressly chose to enter this field for the purpose of having an influence on learning and development in whatever context it unfolds (Alexander et al. 2012; Berliner 2006). And for many of us, that context pertains expressly to learning and development within schools and classrooms. Therefore, the value of the research we conduct does not lie solely in its ability to establish the statistical significance of outcomes but also in its practical significance. To thereby exclude our right as educational psychologists to speak to the potential value of our work to the very domain that so often drives our efforts is to remove a principal *raison d'être*—a central reason for our existence.

As support for this contention, I want to make reference to a collection of established researchers who recently came together at a special session of the American Educational Research Association devoted to “Examining Innovations: Navigating the Dynamic Complexities of School-Based Intervention Research” (Murphy 2013). While the focus of their research efforts varied widely—from violence prevention among young adolescents (Espelage 2013) to evidence-based arguments in literature, history, and science (Goldman 2013); from science diagram comprehension (Cromley et al. 2013) to algebra learning (Star et al. 2013)—all the presenters in this session expressed the mission of improving conditions of learning and development within educational contexts. To tell such researchers (and those who fund them) that they are not permitted to speak to the implications of their work within their research articles published within primary research journals is illogical. In fact, the failure to speak to the implications of their work for educational practice in a justified way and to the degree warranted by their studies and the resulting data represents a failure of the very mission of such school-based interventions.

The Core Problem

If the authors of this proposed decree are to be believed, then simply establishing a moratorium on recommendations for practice and policy within articles published in primary research journal will correct the problem of researchers overreaching and overstepping their data; proverbially sticking their empirical noses where they do not belong. Yet, my counterargument to this premise is that the problem that manifests in the concluding pages of empirical articles is much deeper and broader and, in actuality, manifests within the opening pages as well. What I frequently encounter in my review of hundreds of manuscripts per year is that authors often fail to understand the natural symbiosis between the framing of any research study and the conclusions reached.

Long before the statistical analysis is described or the outcomes interpreted, the authors must offer a concise and clear picture of what is already known about their area of inquiry, what gaps or problems persist, and what this current examination purports to contribute. If there are particular models or variables to be investigated, then those models or variables and the existing literature that supports them, must be well articulated. Similarly, the target population to which the present investigation is focused should be identified and justified. The culmination of this well-crafted theoretical framing is the research questions or hypotheses that guide the ensuing methods and analyses. When those questions or hypotheses are well written, then authors have signaled what manner of outcomes (e.g., descriptive, correlational, or causal) can be rightly anticipated. Thus, it is within this framing of the study that the parameters for conclusions and implications are made apparent. The framing thereby serves as one of the bookends to the effective reporting of the empirical research that lies within.

Sadly, as editors and reviewers are well aware, these guidelines for a well-crafted theoretical framework are just as problematic as conclusions and implications offered. It is my argument, therefore, that such problems witnessed within empirical research that are so pervasive cannot simply be addressed by creating a moratorium on recommendations for practice or policy. Rather, they are suggestive of the deeper and more endemic issue of researchers' difficulty situating any given study within the extensive literature that exists, understanding well the constructs and variables being studied, grasping the limitations and delimitations that are part and parcel of any investigation, and articulating appropriate questions that arise logically from what is known, unknown, and knowable. Even competence in the conduct and reporting of statistical procedures cannot compensate for a lack of such essential theoretical understandings—or vice versa. Those who hope to succeed at this complex endeavor of designing, executing, and reporting of empirical research must have both of these bookends in place or else risk the collapse of the pieces bound within. Simply constraining action at the one end, by excluding recommendations for practice or policy, does little to ensure the overall stability of the structure and may, unintentionally, contribute to its eventual collapse.

The Need for Reasoned and Reasonable Speculation

Continuing with the aforementioned discussion, I want to speak directly to the essential role that speculation plays throughout the empirical enterprise—from the conception of a research study to the conclusions and implications drawn. When I read the declaration offered by Robinson et al. (2013) at the outset of their article, I was reminded of the old TV show, *Dagnet*, I watched as a child on Thursday evenings. Sgt. Joe Friday, the series protagonist, was fond of saying, “Just the facts,” suggesting that only hard evidence counted. Imagine my surprise to find that the authors themselves had this analogy in mind and actually closed their treatise with a reference to this iconic show.

Indeed, in the research world envisioned by Robinson et al., we would restrict ourselves to “just the facts,” at least statistically speaking. But that is not the world in which we live as educational psychologists. Much of what matters to us is comprised of constructs or theoretical models that have no explicit, physical reality; they are latent, abstract, multidimensional, complex, and dynamic. We may identify proxies for these latent constructs, construct visual representations of these models, create measures with items about these notions, or employ sophisticated statistical procedures that address the inherent multidimensionality, complexity, and dynamism. But we can never deal explicitly, directly, or simply

with those constructs or models of importance. As such, we are invariably required to engage in speculation at some level and to some degree.

Moreover, no matter how many studies of a phenomenon or process are undertaken and not matter how many variations by age or context are considered, we can never be certain of the “truth” of what we discern in empirical research. As a result of carefully designed and replicated studies, we may be more confident about the generalizations we make, but we can never be absolute in the patterns we detect; we can never eliminate every possible threat to validity; we cannot completely account for unexplained variance. As a consequence, there is always some modicum of doubt in what we report, and, thus, a need for speculation.

What, thus, separates competent researchers from the less competent is not that they stick simply to “the facts” when drawing conclusions or forwarding implications. Rather, competent or expert researchers are highly skilled at reasoned and reasonable speculation. They understand how to constrain and contextualize their findings, and they recognize the importance of speaking not in absolutes or with unwavering conviction, but in terms of possibilities and probabilities. Competent researchers appreciate the critical distinctions between potential recommendations for research or instruction logically derived from their data and dictums or edicts for educational policy and practice. In effect, we cannot function as educational psychology researchers without speculation; we cannot deal with “just the facts” no matter how we pretend otherwise. After all, one person’s “facts” may be another person’s self-report data potentially froth with error—no disrespect for Sgt. Friday intended. Therefore, the goal should not be to purge our empirical research studies of all speculations (an untenable prospect), but for researchers to acquire the ability to form reasoned and reasonable speculations when and if appropriate that are justified by the empirical evidence.

Positioning Potential Recommendations within the Primary Document

It is not as if Robinson et al. (2013) do not recognize the need or value for recommendations for educational practice and policy. They do. However, their central argument is that such recommendations, even when reasoned and reasonable, do not belong in the articles published in “primary” research journals. Instead, in their judgment, such recommendations should be relegated to alternative venues, such as specialized journals, designated sections of professionals journals, or the books, newsletters, or magazines of professional societies devoted to research syntheses, commentaries, dialogues, or practice and policy discussions. Moreover, the authors state that: “recommendations for educational practice would then result from dialogues between researchers and individuals with specialized expertise and/or interest in educational practice or policy” (p. 9).

While I am not opposed to dialogues and interactions between researchers and practitioners or policy experts, I find it highly questionable to recommend that the suggestions for practice (or even research) be removed from the primary document and the very data source that serve as justification or evidence for them, and relegated to a secondary source or to some translator who would necessarily be less intimately familiar with the constraints and conditions under which any study or group of studies was conducted. We all know what happens when children play the “telephone” game. Whatever the message may have been at the outset gets mangled and mutilated by the end of the line.

If some legitimate implications can be forwarded from an empirical study or line of inquiry, then it should fall to the researchers themselves and not some assembled committee of researchers, practitioners, and policymakers to articulate those potential recommendations—or reasoned and reasonable speculations, as I prefer to call them. To do otherwise would be to risk

the practical significance of one's work being overlooked, misunderstood, or miscommunicated. Thus, I see it as a moral imperative that I, as the researcher of record, put forth what I regard as the potential and defensible recommendations both for future research and educational practice that arise from the empirical studies I conduct. Moreover, those reasoned and reasonable speculations belong with the data that support them within the primary research document and not distanced from those data in some secondary source.

Final Speculations

As I stated at the outset, I truly understand and appreciate the frustration that Robinson et al. (2013) and countless editors and reviewers have experienced when encountering unjustified and unwarranted recommendations for practice within empirical studies. But, as I have argued herein, I regard their attempt to correct this problem by advocating for the purging of all recommendations for practice—be they speculative, prescriptive, or proscriptive in nature—from research articles to be untenable. As support for my position, I have strongly contended that one reason that we exist as a field (Alexander et al. 2012; Berliner 2006) is to influence human learning wherever it occurs, including in schools and classroom. Removing our right and our need to formulate potential recommendations for practice, when those recommendations can be justified and carefully conditionalized and contextualized, is not a solution with which I can live.

Just as there are no “teacher-proof” materials that can ensure quality instruction and quality learning, there are not edicts like that offered by Robinson et al. (this volume) that can ensure the quality reporting of empirical research. Even if the malignancy of overreaching and unjustified recommendations for educational practice and policy could be eradicated by such an invasive procedure, like this dictum, the overall well-being and vitality of the research enterprise and those who engage in that research are sorely threatened. These are simply not risks I am willing to entertain.

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