

# Why Publish a Systematic Review: An Editor's and Reader's Perspective

#### Alicia C. Dowd and Royel M. Johnson

"Stylish" academic writers write "with passion, with courage, with craft, and with style" (Sword 2011, p. 11). By these standards, Mark Petticrew and Helen Roberts can well be characterized as writers with style. Their much cited book Systematic Reviews in the Social Sciences: A Practical Guide (2006) has the hallmarks of passion (for the methods they promulgate), courage (anticipating and effectively countering the concerns of naysayers who would dismiss their methods), and, most of all, craft (the craft of writing clear, accessible, and compelling text). Readers do not have to venture far into Petticrew and Roberts' Practical Guide before encountering engaging examples, a diverse array of topics, and notable characters (Lao-Tze, Confucius, and former US Secretary of Defense Donald Rumsfeld, prominently among them). Metaphors draw readers in at every turn and offer persuasive reasons to follow the authors' lead. Systematic reviews, we learn early on, "provide a redress to the natural tendency of readers and researchers to be swayed by [biases], and ... fulfill an essential role as a sort of scientific gyroscope, with an in-built self-righting mechanism" (p. 6). Who among us, in our professional and personal lives, would not benefit from a gyroscope or some other "in-built self-righting mechanism"? This has a clear appeal.

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College of Education, Department of Education Policy Studies, Center for the Study of Higher Education (CSHE), Department of African American Studies, The Pennsylvania State University, Pennsylvania, USAe-mail: rmj19@psu.edu It is no wonder that the *Practical Guide* has been highly influential in shaping the work of researchers who conduct systematic reviews.

Petticrew and Roberts' (2006) influential text reminds us that, for maximum benefit and impact, researchers should "story" their systematic reviews with people and places and an orientation to readers as audience members. If, as William Zinsser says at the outset of On Writing Well (1998), "Writing is like talking to someone else on paper" (p. x), then the audience should always matter to the author and the author's voice always matters to readers. This is not the same as saying 'put the audience first' or 'write for your audience' or 'lose your scientific voice.' Research and writing in the social and health sciences is carried out to produce knowledge to address social and humanistic problems, not to please readers (or editors). In answer to the central question of this chapter, "Why publish systematic reviews?", the task of communicating findings and recommendations must be accomplished, otherwise study findings will languish unread and uncited. Authors seek to publish their work to have their ideas heard and for others to take up their study findings in consequential ways. In comparison with conference presentations, meetings with policymakers, and other forms of in-person dissemination, text-based presentations of findings reach a wider audience and remain available as an enduring reference.

As an editor (Dowd),<sup>1</sup> researcher (Johnson), and diligent readers (both of us) of systematic reviews over the past several years, we have read many manuscripts and published journal articles that diligently follow the steps of Petticrew and Roberts' (2006) prescribed methods, but do not even attempt to emulate the capacity of these two maestros for stylistic presentation. Authors of systematic reviews often present a mechanical accounting of their results—full of lists, counts, tables, and classifications—with little pause for considering the people, places, and problems that were the concern of the authors of the primary studies. The task of communicating "nuanced" findings that are in need of "careful interpretation" (Petticrew and Roberts 2006, p. 248) is often neglected or superficially engaged. Like Petticrew and Roberts, we observe two recurring flaws of systematic review studies (in manuscript and published form): a "lack of any systematic

<sup>&</sup>lt;sup>1</sup>Alicia Dowd began a term in July 2016 as an associate editor of the Review of Educational Research (RER), an international journal published by the American Educational Research Association. All statements, interpretations, and views in this chapter are hers alone and are not to be read as a formal statement or shared opinion of RER editors or editorial board members.

critical appraisal of the included studies" and a "lack of exploration of heterogeneity among the studies" (p. 271).

In addition, many scholars struggle to extract compelling recommendations from their reviews, even when the literature incorporated within it is extensive. To be influential in communicating the results of systematic reviews, researchers must consider how they will go about "selling the story" and "making sure key messages are heard" (Petticrew and Roberts 2006, p. 248). However, as these leading practitioners and teachers of systematic review methods have observed, researchers often lack or fail to engage the necessary storytelling skills. Although research is produced and read by "by people in specific times and places, with lives as well as careers," as sociologist Robert R. Alford pointed out in *The Craft of Inquiry: Theories, Methods, Evidence* (1998, p. 7),<sup>2</sup> the prescriptions of systematic reviews (in our readings) are often not well variegated by the who, what, where, and why of the research enterprise.

#### 1 Starting Points and Standpoints

We believe the remedy to this problem is for authors to story and inhabit systematic review articles with the variety of compelling people and places that the primary research study authors deemed worthy of investigation. Inhabiting systematic review reports can be accomplished without further privileging the most dominant researchers—and thus upholding an important goal of systematic review, the "democratization of knowledge" (Petticrew and Roberts 2006, p. 7)—by being sure to discuss characteristics that have elevated some studies over others as well as characteristics that *should* warrant greater attention, for reasons the systematic review author must articulate. A study might be compelling to the author because it is highly cited, incorporates a new theoretical perspective, represents the vanguard of an emerging strand of scholarship, or any number of reasons that the researcher can explain, transparently revealing epistemological, political-economic, and professional allegiances in the process. This can be achieved without diminishing the scientific character of the systematic review findings.

<sup>&</sup>lt;sup>2</sup>Although Alford was referring specifically to sociological research, we believe this applies to all social science research and highlight the relevance of his words in this broader context.

Alford (1998) argues for the integrated use of multiple paradigms of research (which he groups broadly for purposes of explication as multivariate, interpretive, and historical) and for explanations that engage the contradictions of findings produced from a variety of standpoints and epistemologies. This approach, which informs our own scholarship, allows researchers to acknowledge, from a postmodern standpoint, that "knowledge is historically contingent and shaped by human interests and social values, rather than external to us, completely objective, and eternal, as the extreme positive view would have it" (p. 3). At the same time, researchers can nevertheless embrace the "usefulness of a positivist epistemology," which "lies in the pragmatic assumption that there is a real world out there, whose characteristics can be observed, sometimes measured, and then generalized about in a way that comes close to the truth" (p. 3). To manage multiple perspectives such as these, Alford encourages researchers to foreground one type of paradigmatic approach (e.g., multivariate) while drawing on the assumptions of other paradigms that continue to operate in the background (e.g., the assumption that the variables and models selected for multivariate analysis have a historical context and are value laden).

#### 2 An Editor's Perspective

During my years of service to date (2016–2019) as an associate editor of the *Review of Educational Research* (RER), a broad-interest educational research journal published by the American Educational Research Association (AERA) for an international readership, I (Dowd) reviewed dozens of manuscripts each year, a great number of which were systematic reviews. Approximately one-third to one-half of the manuscripts in my editor's queue at any given time were specifically described by the authors as involving systematic review methods (often but not always including meta-analysis). Although many other authors who submitted manuscripts did not specifically describe systematic review as their methodology, they did describe a comprehensive approach to the literature review that involved notable hallmarks of systematic review methods (such as structured data base searches, well defined inclusion and exclusion criteria, and precisely detailed analytical procedures).

Given the nature of the supply of manuscripts submitted for review, it is not surprising that a large and growing proportion of articles published in RER in recent years have involved systematic review methods. Table 1 summarizes this publication trend, by categorizing the articles published in RER from September

Year <sup>a</sup>	Systematic Review	Systematic Review with Meta- Analysis	Meta-Analysis without Systematic Review	1	Other <sup>c</sup>	Total	Proportion Systematic Review <sup>d</sup>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2009	0	0	6	0	3	9	0.00
2010	2	3	4	4	5	18	0.29
2011	0	1	5	5	6	17	0.06
2012	0	0	3	5	5	13	0.00
2013	4	0	4	4	4	16	0.25
2014	3	0	4	6	5	18	0.17
2015	4	1	7	5	3	20	0.25
2016	6	4	13	7	4	34	0.29
2017	6	7	6	9	4	32	0.41
2018	4	6	5	6	2	23	0.43

**Table 1** Articles Published in the Review of Educational Research, Sept. 2019–Dec. 2018, by Review Type

*Note.* Authors' calculations based on review of titles, abstracts, text, and references of all articles published in RER from Sept. 2009 to Dec. 2018, obtained from <a href="http://journals.sagepub.com/home/rer">http://journals.sagepub.com/home/rer</a>. An article's assignment to a category reflects the methodological descriptions presented by the authors

<sup>a</sup>The count for 2009 is partial for the year, including only those published during Gaea Leinhardt's editorship (Volume 79, issues 3 and 4). The remaining years cover the editorships of Zeus Leonardo and Frank Worrell (co-editors-in-chief, 2012–2014), Frank Worrell (2015–2016), and P. Karen Murphy (2017–2018, including articles prepublished in Online-First in 2018 that later appeared in print in 2019).

<sup>b</sup>Refers to articles that do not explicitly designate "systematic review" as the review method, but do include transparent methods such as a list of searched data bases, specific keywords, date ranges, inclusion/exclusion criteria, quality assessments, and consistent coding schema

<sup>c</sup>Reviews that do not demonstrate characteristics of either systematic review or meta-analysis, including expert reviews, methodological guidance reports, and theory or model development

<sup>d</sup>Includes both Systematic Review (col. 2) and Systematic Review with Meta-Analysis (col. 3) categories as proportion of the total

of 2009 to December of 2018 by their use of systematic review methods. Two categories, called "systematic review" (col. 2) and "systematic review with meta-analysis" (col. 3), include those articles where the authors demonstrated their use

of systematic review methods and specifically described their study methodology as involving systematic review.

The share of systematic review articles (with or without meta-analysis) as a proportion of the total published is shown in column 8. The proportion has fluctuated, but the overall trend has been upward. In all except one of the past five years, systematic review articles have contributed one-quarter or greater of the total published. From 2013 to 2016 the share ranged from 17% to 29% and then increased in 2017 and 2018 to 41% and 43% respectively. Keeping in mind that even those meta-analyses that were not described by the authors as involving systematic review (col. 4) and all of the articles we chose to categorize as "comprehensive" (col. 5) have hallmarks of the systematic review method, it is clear that we and other RER editors and readers have been well exposed to systematic review methods in recent years.

The summary data in Table 1 indicate that systematic reviews are finding a home in RER, which is a highly cited journal, typically ranking (as measured by impact factor) near the top of educational research journals.<sup>3</sup> However, for each article published in RER, there were many more submitted works that were reviewed by the editorial team and peer reviewers and not accepted for publication.<sup>4</sup> In my role as editor, I was struck by the high number of authors of submitted manuscripts using systematic review methods who reported their findings in algorithmic terms. The methods had swallowed the authors, it seemed, who felt compelled to enumerate in their text all of the counts, proportions, lists, and categories used to taxonomize the results of these reviews.

Even where thematic findings had been generated, many authors still led their presentation with an "x of y studies examined [X topic]..." formulation, rather than advancing their synthesis using integrative topic sentences. While counting and enumeration are often appropriate forms of summary, when this sentence structure recurs repeatedly as the first sentence of the multiple paragraphs and pages of a results section, it is easy to lose interest. I encountered authors who were using this enumeration approach alongside useful and extensive summary tables and figures designed to convey the same information. Such

<sup>&</sup>lt;sup>3</sup>Based on the Journal Citation Reports, 2018 release; Scopus, 2018 release; and Google Scholar, RER's two-year impact factor was 8.24 and the journal was ranked first out of 239 journals in the category of Education and Educational Research (see https://journals.sage-pub.com/metrics/rer).

 $<sup>^4</sup>$ The RER publication acceptance rate varies annually but has consistently been less than 10% of submitted manuscripts.

recounting left me as a reader and editor without a toehold or a compass to enter what was often a vast landscape of scholarship, sometimes spanning decades and continents and very often focused on topics that were new to me. Peer reviewers, too, would comment on the challenge of investing themselves into the findings of studies that the authors had not shaped through meaningful synthesis for their readers.

In such a landscape, an editor must lean on the author as the "intelligent provider" of the research synthesis (Petticrew and Roberts 2006, p. 272, citing Davies 2004). The intelligent provider of the results of systematic review is scientific in their approach—this is clearly a primary value of the systematic review research community—but is also a guide who invites readers into the reviewed literature to achieve the goals of the review. The goal of systematic review is not merely to be "comprehensive"; the objective also is to "answer a specific question," "reduce bias in the selection and inclusion of studies," "appraise the quality of the included studies," and "summarize them objectively, with transparency in the methods employed" (Petticrew and Roberts 2006, p. 266).

It struck me that the majority of researchers within my (non-random and not necessarily representative) sample of RER manuscript submissions who had utilized systematic review methods had gone to tremendous lengths to conduct extensive data base searches, winnow down the often voluminous "hits" using clearly defined inclusion and exclusion criteria, and then analyze a subset of the literature using procedures well-documented at each step. These rigorous and time-consuming aspects of the systematic review method had perhaps exhausted the researchers, I felt, because the quality of the discussion and implications sections often paled in comparison to the quality of the methods. This was understandable to me and I was motivated to write this chapter for scholars who might benefit from encouragement and advice from an editor's perspective as they tackled these last stages of the research and publication process.

My scholarship has involved multivariate and interpretive methods of empirical study. As an action researcher I have foregrounded an advocacy stance in my work, which has been focused on issues of equity, particularly racial equity (see e.g., Dowd and Bensimon 2015). Neither a practitioner nor scholar of systematic review, I encountered the method through my editing. To learn about these methods in a more structured manner, in April 2018, I attended an introductory-level AERA professional development workshop focused on this methodology. I also asked my faculty colleague Royel Johnson for his perspective, because I knew he had immersed himself in reading the methodological literature as he embarked on

a systematic review study of the college access and experiences of (former) foster youth in the United States.

### 3 A Reader's (and Researcher's) Perspective

As an educational researcher and social scientist, I (Johnson) have relied on qualitative and quantitative methods and drew, in my work, on multivariate and interpretive epistemologies. These approaches have been useful in exploring complex social phenomena, as well modeling and testing the relationships between variables related to college student success, particularly for vulnerable student populations in higher education. During the summer of 2017, however, I was introduced to a new method—well new to me at least: systematic literature review.

My introduction to the methods of systematic review was quite timely as I had begun expanding my research on students impacted by foster care (e.g., Johnson and Strayhorn, 2019). I was particularly struck by headlines that were popping up at that time in news and popular media outlets in the United States (U.S.) that painted a "doom and gloom" picture about the education trajectory and outcomes of youth formerly in foster care. Equally troubling, it struck me that efforts to improve the college access, experiences, and outcomes of this group of students through evidence-based policy and practice would be poorly informed by the work of my own scholarly field (higher education), which to the best of my knowledge at the time had produced little empirical research on the topic.

Like all good researchers embarking on new studies, it seemed important to me, before reaching any stronger conclusions about the quality of the research base, to first locate and familiarize myself with the broader existing literature on the topic, including studies conducted in other fields of study. What is it that we know from research about the experiences and outcomes of college students formerly in foster care in college? This was my guiding question as I searched the literature of the higher education field and in related areas such as social work and public policy.

Searching the literature to answer this question was initially daunting. There were no apparent comprehensive literature reviews on the topic. And the places where I was *inclined* to look for studies yielded very few returns. Notice my emphasis on "inclined." One of the goals of systematic literature review is to reduce reviewer bias. If not careful, such inclinations can lead to incomplete or partial collections of information or studies, and also result in erroneous (and biased) conclusions about the state of knowledge on a given topic. Winchester and Salji (2016) refer to this as "cherry picking" (p. 310). Indeed, as researchers, we are not empty vessels, nor do we approach our work as such—though some

might suggest otherwise. Our backgrounds, experiences, and perspectives (e.g., about what constitutes as knowledge) all shape the questions we ask, the places we search for answers to those questions, and what we deem as credible.

To avoid "cherry picking" and produce the most comprehensive literature review possible, I set out to learn as much as I could about conducting a systematic literature review. I identified at least a dozen texts and scholarly publications, including Higgins and Green's (2006) widely-cited book. I also reviewed the recommendations incorporated in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses for Protocols (Moher et al. 2015)—also known as the PRISMA statement. These sources, while instructive, seemed to almost exclusively focus on the more technical aspects of systematic reviews, offering steps, guidance, and recommendations for developing protocols, defining search terms, outlining inclusion/exclusion criteria, and critically appraising studies—the traditional hallmarks of 'rigor' and 'quality' for this method. However, few resources, as mentioned in previous sections, offer recommendations or strategies for "telling the systematic review story" (Petticrew and Roberts 2006, p. 248).

As I worked on turning the results of my systemic review of college students impacted by foster care into a journal article (Johnson, In Press), I read studies published in RER and other journals. I looked for models that would help me to determine how to position myself as a compelling and persuasive storyteller of my study's topic, methods, findings, and recommendations. Of the dozen or so reviews I read, published over the past decade, only a few emerged as exemplars to inform my decisions as a writer. One such study was a review published by three colleagues in the field of higher education, Crisp et al. (2015). Their study focused on identifying factors associated with academic success outcomes for undergraduate Latina/o students. It stood out to me for its clarity of purpose and rationale. Another study by Poon and colleagues (2016), which examined the model minority myth among Asian Americans and Pacific Islanders (AAPI), stood out as well. Notably, the authors offered insight about their motivations for the work while clearly stating their researcher positionalities, describing themselves "as longtime educators and scholars in the fields of higher education and student affairs committed to AAPI communities and social justice" (p. 476). Such statements acknowledging one's relationship or commitment to the subject of study were rare in the systematic review literature I read. This statement resonated with me because, just as Poon et al. were committed to social justice for AAPI communities, I, too, was vested in and committed to improving the material conditions students impacted by foster care experienced in college.

From these starting points and standpoints, and as we move to argue for 'storying' the systematic review, we acknowledge that our epistemological values may not align with those of the leading methodological experts of systematic review (or of other editors and readers of systematic reviews). Our recommendations may, therefore, be of more interest and value to researchers who are interested in carrying out comprehensive reviews that are systematic (rather than, specifically, "systematic reviews"). This distinction is reflected in our selection of a few published RER articles discussed in the following section, where the topics of the featured studies also reflect our interests in educational policy, equity, and student success. There we include works identified by the authors as a systematic, comprehensive, meta-analytic, or critical review. It is important to note, given the emphasis on unbiased reporting in the systematic review methodology, however, that we judged all of these works as providing a transparent and detailed description of their purpose and methods. All studies reported search criteria, data bases searched, inclusion and exclusion criteria moving from broader to narrower criteria, and supplementary tables providing a brief methodological summary of every article included in the group of studies selected for focal synthesis.

#### 4 Storying the Systematic Review

The five studies discussed in this section were successful in RER's peer-review and editorial process. We selected them as a handful of varied examples to highlight how authors of articles published in RER "story" their findings in consequential and compelling ways. These published works guide us scientifically and persuasively through the literature reviewed. At the same time, the authors acted as an "intelligent provider" (Petticrew and Roberts 2006, p. 272, citing Davies 2004) of information by inhabiting the review with the concerns of particular people in particular places. The problems of study are teased out in complex ways, using multifocal perspectives grounded in theory, history, or geography. Two had an international scope and three were restricted to studies conducted in settings in the U.S. Whether crossing national boundaries or focused on the U.S. only, each review engaged variations in the places where the focal policies and practices were carried out. Further, all of the reviews we discuss in this section story their analyses with variation in the characteristics of learners and in the educational practices and policies being examined through the review.

### 4.1 Theoretical Propositions as Multifocal Lenses: Storying Reviews with Ideas

Østby et al. (2019) of "Does Education Lead to Pacification: A Systematic Review of Quantitative Studies on Education and Political Violence" capture the

attention of the non-specialist RER reader by citing Steven Pinker's acclaimed book *The Better Angels of Our Nature*. They highlight Pinker's metaphor characterizing education as an "escalator of reason," an escalator that has the power to act globally as a "pacifying" force (p. 46). Noting wide acceptance of the idea that societies with a higher level of education will experience lower levels of political violence and armed conflict, the authors quickly shake this assumption. Recent studies have shown, for example, that terrorists and genocide perpetrators have had higher than average levels of education relative to others in their societies. Further, the story of the relationship between increases in educational attainments and political violence in a society unfolds in a more complicated manner when factors such as initial baselines of education in the population, gender disparities in access to elementary and secondary schools, and inequalities among socio-economic groups are taken into account.

Østby et al. (2019) organize their review of 42 quantitative studies of education and political violence around theoretical propositions that add complexity to the notion that education is a pacifying force. From an economic perspective, there are several reasons why education should lead to a decrease in political violence and social unrest. Those with more education typically have higher earnings and may be deterred from engaging in social unrest because they may lose their jobs, a consideration of less consequence to the unemployed or those with marginal labor force status. Alternatively, a political explanation for a positive impact can be found in the fact that those who are more highly educated are more greatly exposed to and culturally inculcated through the curriculum sanctioned by the government, which may be dominated by nationalistic historical narratives.

In contrast, a sociological explanation based in theories of relative deprivation points in the opposite direction, as the sociologist attends to inequality among socio-economic groups. Groups that lack political power and have historically been oppressed or disenfranchised may become more likely to engage in violent political action as they gain in educational attainment yet continue to lag behind dominant social groups. When it comes to the study of the relationship between education and political violence, Østby et al. (2019) show that it is insufficient to characterize a country in terms of the educational attainment of a population without also considering governmental influence in the curriculum, political oppression, and educational inequality.

As Østby et al. (2019) discuss contrasting theoretical propositions for positive and negative associations between education and violence, the reader quickly buys into the premise that the authors' study of this "complex, multi-faceted, and multidirectional" phenomenon is highly consequential (p. 47). More nuanced understandings clearly hold the potential to inform the manner and

degree of governmental and philanthropic investments in education in developed and developing countries around the globe.

Similarly, García and Saavedra (2017), in their examination of the impacts of "conditional cash transfer programs," utilize human capital and household decision making theories to introduce readers to a very precise, yet varied, set of hypotheses that they subsequently use to structure the reporting of their results. These economic hypotheses postulate the potential effects of governmental programs that provide cash rewards to households or individuals to encourage them to who respond to policy incentives in desired ways. They highlight that the direction and strength of effects depend on a range of household inputs such as parental education, sources of income (e.g., formal and informal labor force participation), time use among household members (adults and children), and community characteristics. As other researchers have before them, these authors meta-analyze impact estimates from studies meeting their threshold methodological quality criteria for making causal claims. Their review synthesizes 94 studies of 47 conditional cash transfer (CCT) programs carried out in 31 countries (p. 929, 934). Their work builds on and extends the findings of prior meta-analyses that produced CCT impact estimates by also examining questions of costeffectiveness.

In García and Saavedra's (2017) study, the examination of effects comprises seven outcomes: "primary school enrollment, primary school attendance, primary school dropout, secondary school attendance, secondary school dropout, and school completion" (p. 933). The authors demonstrate that variations in program characteristics delineated in their review correspond to variations in program effectiveness, both in terms of these various effects and of economic investments in the intervention. An important finding of this study (among many others) is that "all else constant, primary enrollment impact estimates are greater in CCT programs that complement cash transfers with supply-side interventions such as school grants" (p. 923). The finding is consequential to future policy design because less than 10% of the CCT programs studied had a design component that attempted to incentivize changes in schooling practices at the same time they were providing incentives for greater household investments in education.

## **4.2** Engaging Interactions: Storying Reviews with People, Policies, and Practices

The capacity to model, measure, and attend to dynamic interactions among governmental policies, educational institutions or settings, and the behavior of

individuals is a hallmark of the quality of this small set of exemplar RER articles. Each of the studies we reviewed in this chapter attend to differences among students in their experiences of schools and educational interventions with varying characteristics. For some this involves differences in national contexts and for others differences among demographic groups.

Welsh and Little (2018), for example, motivate their comprehensive review through synthesis of a large body of research that raises concerns about racial inequities in the administration of disciplinary procedures in elementary and secondary schools in the U.S. Prior studies had shown that Black boys in U.S. schools were more likely than girls and peers with other racial characteristics to receive out-of-school suspensions and other forms of sanctions that diminished students opportunities to learn or exposed them to involvement in the criminal justice system. The authors engage readers in the "complexity of the underlying drivers of discipline disparites" (p. 754) by showing that the phenomenon of the unequal administration of discipline cannot be fully accounted for by behavioral differences among students of different racial and gender characteristics.

By incorporating a synthesis of studies that delineate the problems of inequitable disciplinary treatment alongside a synthesis of what is known about programmatic interventions intended to improve school climate and safety, Welsh and Little make a unique contribution to the extant literature. Winnowing down from an initial universe of over 1300 studies yielded through their broad search criteria, they focus our attention on 183 peer-reviewed empirical studies published between 1990 and 2017 (p. 754). Like García and Saavedra (2017), these authors use critical appraisal of the methodological characteristics of the empirical literature they review to place the findings of some studies in the foreground of their analysis and others in the background. Pointing out that many earlier studies used two-level statistical models (e.g. individual and classroom level), they make the case for bringing the findings of multi-level models that incorporate variables measuring student-, classroom-, school-, and neighborhood-level effects to the foreground. Multi-level modeling allows the complexities of interactions among students, teachers, and schools that are enacting particular policies and practices to emerge.

Teasing out the contributors to disciplinary disparities among racial, gender, and income groups, and also highlighting studies that show unequal treatment of students with learning disabilities and lesbian, bisexual, trans\*, and queer-identified youth, Welsh and Little (2018) conclude that race "trumps other student characteristics in explaining discipline disparities" (p. 757). This finding contextualizes their deeper examination of factors such as the racial and gender "match" of teachers and students, especially in public schools where the predominantly White,

female teaching force includes very few Black male teachers. Evidence suggests that perceptions, biases, and judgments of teachers and other school personnel (e.g. administrators, security officers) matter in important ways that are not fully addressed by programmatic interventions that have mainly focused on moderating students' behavior. The interventions examined in this review, therefore, run the gamut from those that seek to instill students with greater social and emotional control to those that attempt to establish "restorative justice" procedures (p. 778).

Ultimately Welsh and Little (2018) conclude that "cultural mismatches play a key role in explaining the discipline disparities" but "there is no 'smoking gun' or evidence of bias and discrimination on the part of teachers and school leaders" (p. 780). By presenting a highly nuanced portrayal of the complexities of interactions in schools, Welsh and Little create a compelling foundation for the next generation of research. Their conclusion explicates the challenges to modeling causal effects and highlights the power of interdisciplinary theories. They synthesized literature from different fields of study including education, social work, and criminal justice to expand our understanding of the interactions of students and authorities who judge the nature of disciplinary infractions and determine sanctions. Their insights lend credence to their arguments that future analyses should be informed by integrative theories that enable awareness of local school contexts and neighborhood settings.

The importance of engaging differences in student characteristics and the settings in which students go to school or college also emerges strongly in Bjorklund's (2018) study of "undocumented" students enrolled or seeking to enroll in higher education in the United States, where the term undocumented refers to immigrants whose presence in the country is not protected by any legal status such as citizenship, permanent resident, or temporary worker. This study makes a contribution by synthesizing 81 studies, the bulk of which were peerreviewed journal articles published between 2001 and 2016, while attending to differences in the national origins; racial and ethnic characteristics; language use; and generational status of individuals with unauthorized standing in the U.S. Generational status contrasts adult immigrants with child immigrants, who are referred to as the 1.5 generation and "DACA" students, the latter term deriving from a failed federal legislative attempt, the Deferred Action for Childhood Arrivals (DACA), to allow the children of immigrants who were brought to the country by their parents to have social membership rights such as the right to work and receive college financial aid from governmental sources. DACA also sought to establish a pathway to citizenship for unauthorized residents.

Using the word "undocumented" carries political freight in a highly charged social context in which others, with opposing political views, use terms such as

"illegal aliens" (Bjorklund 2018, p. 631). Bjorklund acknowledges that he is politically situated and that his review has a political point of view by titling his study a "critical review." Rather than claiming a lack of bias with respect to the treatment of undocumented students, the author positions himself within the literature with a clear purpose of generating findings that will inform policy makers and practitioners who would like to support the success of undocumented students. Bjorklund then stories his findings through a review of relevant judicial cases, changes in and attempted changes to federal law, and variations in state laws and policies, the latter of which are highly salient in the U.S., where education is primarily governed at the state level. These accounts are more accurately described as purposeful relative to the goals of the review, rather than unbiased. Nevertheless, in describing historical facts and the specifics of policy design, the author's account proves trustworthy to readers in the sense that these details are transparently referenced with respect to documented legislative actions, proposed and implemented federal and state policies and judicial case law, including Supreme Court rulings.

The extent to which individual legislatures in the 50 U.S. states allow undocumented students to access state benefits (such as reduced college tuition charges for state residents) emerges as an important aspect of this review. Geography matters, too, in the consideration of student characteristics and the design of institutional practices and policies to meet the varied needs of undocumented college students. Some states, cities, and rural areas have a larger proportion of unauthorized immigrants from border countries such as Mexico and countries in Central and South America (which figure prominently in the narratives of those opposing state and federal policies that would provide higher education benefits to undocumented college students), whereas other regions have a larger proportion of immigrants from Asia and Europe.

In addition to reporting salient themes and appraising studies for their intellectual merit, authors of systematic reviews help translate a research purpose for intended audiences and offer a charge for the future. Crisp et al. (2015) accomplish this precisely in their review of literature on undergraduate Latina/o students and factors associated with their academic success. The authors firmly establish the significance of their review, using trend data and statistics showing the growth of the Latina/o population in the U.S. broadly to demonstrate the timeliness of their topic. This growth, the authors note, has also resulted in increases in college enrollment for Latina/o students across the wide variety of postsecondary institutions in the U.S, but institutional policies and practices have not kept up in response to this demographic change. Appreciating the within-group differences of Latina/o students, Crisp and colleagues also acknowledge the varied experiences of Mexican, Peruvian, Colombian, and Salvadoran college students. Such

distinctions and clarifications help frame their review within the full context of the topic for the reader.

Crisp, Taggart, and Nora's (2015) methodological decisions for their systematic review are also clearly informed by the authors' positionalities and commitment to "be inclusive of a broad range of research perspectives and paradigms" (p. 253). They employ a broad set of search terms and inclusion criteria so as to fully capture the diversity that exists among Latina/o students' college experiences. For instance, the authors operationalize the conceptualization and measurement of 'academic success outcomes' broadly. This yields a wider range of studies—employing quantitative, qualitative, and mixed methodological approaches—for inclusion.

Consistent with this approach, prior to describing the methodological steps taken in their review, the authors present a "prereview note." The purpose of this section was to offer additional context about larger and overlapping structural, cultural, and economic conditions influencing Latina/o students broadly. For instance, the authors discuss how "social phenomena such as racism and language stigmas" impact the educational experiences of Latina/o students. They also acknowledge cultural mismatch between students' home culture and school/classroom culture, which "has been linked to academic difficulties among Latina/o students" (Crisp et al. 2015, p. 251). These are just several examples of how the authors help contextualize the topic for readers, especially for those not familiar with the topic or with larger issues impacting Latina/o groups. This is also necessary context for a reader to make sense of the major findings presented in a later section.

Finally, we appreciate the way that Crisp et al. (2015) also make their intended audience of educational researchers clear. They spend the balance of their review, after reporting findings, making connections among various strands of the research they have reviewed, their goal being to "put scholars on a more direct path to developing implications for policy and practice." They direct their charge, specifically, to call on "the attention of equity-minded scholars" (p. 263). As these authors illustrate, knowing your audience allows you to *story* your systematic review in ways that directly speak to the intended benefactor(s).

#### 5 Gaining an Audience by Connecting with Readers

This chapter posed the question "Why publish systematic reviews?" and offered an editor's and a reader's response. The reason to publish systematic reviews of educational research is to communicate with people who may or may not be familiar with the topic of study. In the task of "selling the story" and "making sure key messages are heard" (Petticrew and Roberts 2006, p. 248), authors must generate new ideas and reconfigure existing ideas for readers who hold the potential, informed by the published article, to more capably tackle complex problems of society that involve the thoroughly human endeavors of teaching and learning. More often than not, this will not involve producing "the" answer to a uni-dimensional framing of a problem. For this reason, published works should engage the heterogeneity and dynamism of the educational enterprise, rather than present static taxonomies and categorizations.

Good reviews offer clear and compelling answers to questions related to the "why" and "when" of a study. That is, why is this review important? And why is *now* the right time to do it? They also story and inhabit their text with particular people in particular places to help contextualize the problem or issue being addressed. Rich description and context adds texture to otherwise flat or unidimensional reviews. Inhabited reviews are not only well-focused, presenting a clear and compelling rationale for their work, but they also have a target audience. Petticrew and Roberts (2006, citing "Research to Policy") ask a poignant question: "To whom should the message be delivered" (p. 252). The 'know your audience' adage is highly relevant. We have illustrated a variety of ways that authors story systematic and other types of reviews to extract meaning in ways that are authentic to their purpose as well as situated in histories, policies, and schooling practices that are consequential.

Introducing one's relationship to a topic of study not only lends transparency to the task of communicating findings, it also opens the door to acknowledging variation among readers of a publication. Members of the research community and those who draw on research to inform policy and practice were all raised on some notion of what counts as good and valuable research. Critical appraisals of research based in the scientific principles of systematic review can warrant the quality of the findings. Absent active depictions of the lived experiences and human relationships of people in the sites of study, systematic reviews frequently yield prescriptions directed at a generic audience of academic researchers who are admonished to produce higher quality research. How researchers might respond to a call for higher quality research—and what that will mean to them—will certainly depend on their academic training, epistemology, personal and professional relationships, available resources, and career trajectory.

One way to relate to readers is to explicitly engage multiple paradigms and research traditions with respect, keeping in mind that the flaws as much as the merits of research "illustrate the human character of any contribution to social science" (Alford 1998, p. 7). The inhabited reviews we have in mind will be as systematic as they are humanistic in attending to the variations of people, place,

and audience that characterize "the ways in which people do real research projects in real institutions" (Alford 1998, p. 7). Their authors will keep in mind that the quest to know 'what works' in a generalized sense, which is worthy and essential for the expenditure of public resources, does not diminish a parent's or community's interests in knowing what works for their child or community members. Producers and consumers of research advocate for their ideas all the time. Whether located in the foreground or background of a research project, advocacy is inescapable (Alford 1998)—even if one is advocating for the use of unbiased studies of causal impact and effectiveness.

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