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(E)pistemological Awareness, Instantiation of Methods, and Uninformed Methodological Ambiguity in Qualitative Research Projects

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What is This?



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This article explores epistemological awareness and instantiation of methods, as well as uninformed ambiguity, in qualitative methodological decision making and research reporting. The authors argue that efforts should be made to make the research process, epistemologies, values, methodological decision points, and argumentative logic open, accessible, and visible for audiences. To these ends, they discuss two ways of conceptualizing the role of epistemological awareness and instantiation of methods, including (a) a series of decision junctures and (b) a spatial conceptualization of epistemological decision making. Through an analysis of researchers' decision junctures drawn from studies published in high-impact education journals in 2006, the authors illustrate current methodological awareness and instantiation of methods in the field of education research.

Keywords: awareness; epistemology; methodology; qualitative research

he main focus of this article is to note various research practices related to epistemological awareness, which in this context refers to the articulated representations and/ or informed positionings taken with regard to knowledge, truth(s), epistemic conditions, and justifications within particular research projects and the instantiation of methods that signifies the ways in which researchers provide instances or "evidence" in support of theories, claims, and method choices. The argument for epistemological awareness, instantiation of methods, and methodological transparency becomes especially important in the current political and academic climate, in which many question the design choices, purposes, and trustworthiness of qualitative studies and other alternative research approaches (e.g., Freeman, deMarrais, Preissle, Roulston, & St. Pierre, 2007; St. Pierre, 2006). Based on our observations and the results of our review of empirical education articles, some of this critique might be justified by the incomplete descriptions of research designs and limited methodological details in a number of published qualitative research reports, which, in turn, could increase perceptions of randomness and convenience.

In this context, we borrow from Thayer-Bacon's (2003) distinction between transcendental epistemology and nontranscendental epistemology and will mark the nontranscendental epistemological positions, which are also taken in this article, as (e)pistemology. For Thayer-Bacon, the concept transcendental refers to knowing what is True and Real in a universal way, whereas nontranscendental knowing is situated in the context of the world and in our everyday experiences. To accentuate the departure from a transcendental point of view and reconstruct epistemology, Thayer-Bacon adds parentheses around the e, as in (e)pistemology. According to Thayer-Bacon, this reconstruction of traditional and transcendental epistemologies enables conversations and discussions about epistemology without "getting tangled up in the shimmering ontological nest of universal essences" (p. xi).

Multiple reasons emerge for attending to the issues of (e)pistemological awareness and instantiation of methods, especially when conducting qualitative research that is theoretically and (e) pistemologically diverse. First, we believe that (e)pistemological awareness is an important and informative part of the transparent research process that needs to be addressed and communicated to readers (see "Standards for Reporting on Empirical Social Science Research in AERA Publications," American Educational Research Association, 2006). Moreover, when authors make their (e)pistemological awareness and desired knowledge(s) within a particular research project unambiguous and explicit, this process of selfreflection can assist authors in selecting methods that instantiate and support their knowledge building (see Carter & Little, 2007), as well as choosing a theoretical perspective that is suited to the purposes of their research. Because the concept of theoretical perspective has been understood and named in a variety of ways, we wish to clarify the conceptual understanding that will inform our discussion in this article. Whereas scholars such as Guba (1990), Guba and Lincoln (2005), Denzin and Lincoln (2005), and Lather (1991, 2006) introduced and widely distributed similar terms, such as paradigms, theoretical paradigms, and perspectives, among qualitative researchers, Crotty (1998) specifically distinguished between a theoretical perspective as a reference to a "philosophical stance informing the methodology" and an epistemology as a "theory of knowledge embedded in the theoretical perspective" (p. 3). In this article, we build on Crotty's definition of theoretical perspective. In addition, a theoretical perspective

and the (e)pistemology(ies) embedded in a theoretical perspective (which could exemplify variety of (e)pistemologies, as illustrated in Table 1) can indicate the type(s) of knowledge guiding a research project, writing, or an argumentation structure. Therefore, an articulation of a study's theoretical perspective(s) and the description of (e)pistemology(ies) that frame one's research could serve as one possible identifier, as a proxy, or as an explicit connection to the researchers' (e)pistemological awareness.

Furthermore, to illuminate the (e)pistemological shifts and possible paradoxes that sometimes accompany teaching and learning about qualitative research, we present two different ways of conceptualizing (e) pistemological awareness. To accommodate these simultaneous yet diverse conceptualizations of (e)pistemological awareness that are based on different assumptions about knowledge, we employ a hybrid theoretical perspective in this article (see Table 1). Our hybrid theoretical perspective utilizes the (e)pistemologies of internalism and constructionism to construct two different argumentation structures.

When taking an internalist position toward knowledge (i.e., knowing and reasons for actions are grounded in motivation, desires, and goals), we argue that justifications can be provided when individuals have some kind of access to the "facts" that determine justification. This access could be gained through methodological traditions, categories, introspection, and learned systems of knowledge construction within particular methodologies or methods. Therefore, an internalist perspective on knowledge and epistemic justification would determine some methodological choices as more suitable for and instantiative with particular (e)pistemological positions. In addition, internalist epistemic conditions would be accompanied by relatively objective descriptions of (e)pistemological awareness, instantiation of methods, and methodological transparency that view knowledge as somewhat paradigmatic (Kuhn, 1996), normative, containable, to some extent predictable, and unified within specific contexts (see also Turner, 1992). When these conditions and assumptions of knowledge are applied to a qualitative research process, the research process can be viewed through a series of decision junctures (see Table 1). This series of decision junctures illuminates the various (but not inclusive) methodological options and connections that qualitative researchers use when designing their studies and how these options could be affiliated with particular epistemic conditions and justification systems. The concepts presented in Table 1 are drawn from past and current qualitative methodology literature. In other words, the series of decision junctures can (a) serve as a tool to access methodological knowledge and point readers to the disparate methodological choices that scholars might make during the qualitative research process, and (b) help authors align these choices in ways that provide support for the selected (e)pistemological and theoretical goals of the research project. In a way, this internalist approach suggests and supports various ways of "getting smart" (Lather, 1991), most specifically with regard to the diverse (e) pistemological and methodological approaches that qualitative researchers can employ to access, create, and interpret different social phenomena.

In subsequent sections of this article, we discuss a second spatial perspective of (e)pistemological awareness. In this case, we build on the epistemology of constructionism, and the epistemic conditions of our arguments shift to reflect construction and pluralism. This constructed and plural view on (e)pistemological awareness and instantion of methods highlights the role of interactions, language games, situatedness, and the uncertainties and flexibilities associated with knowing, signifiers, discourses, and justification systems. Within this epistemic system—which could also be marked by a move toward a postmetaphysical space knowledges, the instantiation of methods, and transparency become more situational, complex, nuanced, and discourse dependent. Scholars working from this perspective might believe in language games, multiplicity, and fragmented and decentered knowledges (see, e.g., Derrida, 1997, and Spivak, 1993, for additional information about multiplicity and decentering). Furthermore, when adopting this spatial perspective, researchers might ask questions about the complicities, privileges, inadequacies, absences, and losses in ways that do not desire or welcome simplified, a priori solutions. This kind of positioning could be characterized as "getting lost," both (e)pistemologically and methodologically, and moving toward postfoundationalism, where "one epistemologically situates oneself as curious and unknowing" (Lather, 2007, p. 9).

We would also like to point out that discussions about (e)pistemological awareness and instantiation of methods are not new. For example, Carter and Little (2007) and Villaverde (2008) proposed that epistemologies and ideologies guide methodological choices. Furthermore, Pallas (2001) argued that epistemologies are essential to the construction and use of education research and that preparing researchers for epistemological diversity is one of the most important tasks of research universities. Insufficient (e)pistemological awareness and knowledge become especially problematic when one considers the implications of this lack of awareness for the uses and applications of field methods (e.g., Coe, 2001). Moreover, when researchers do not make as explicit as possible their (e)pistemologies, theoretical perspectives, justification/argumentation systems, and methodologies, as well as the alignment of their research designs within the decision junctures that guide research processes, their research designs can appear random, uninformed, inconsistent, unjustified, and/or poorly reported. Even though, for the purposes of this article, (e)pistemological awareness is analyzed within the field of qualitative research, a lack of theoretical and epistemological awareness is a common problem in the field of all education research. For example, St. Pierre (2002) argued that "much educational research, in fact, does not even acknowledge its epistemological groundings, much less take into account the limits of that epistemology, and its methodology, in the production of knowledge" (p. 26).

Finally, we will support our argument for increased (e)pistemological and methodological awareness and the instantiation of methods in qualitative research reports by discussing and ultimately problematizing some recently published qualitative research studies through focusing on the instances and descriptions of the authors' (e)pistemological and methodological awareness, their instantiation of methods, and their articulation of decisions made throughout the research process. We will use the first conceptualization of an instantiation of methods (the series of decision junctures in Table 1) to analyze these articles

(continued)

Series of Decision Junctures: Examples of Theoretical and Methodological Choices That Could Be Associated With Particular Theoretical Perspectives

			;		Theoretical Perspective	erspective				1
			Interpretivist				Crit	Critical		Pluralist
Decision Juncture Example	Ethnography	Constructivism	Social Constructionism	Phenomenology	Hermeneutics	Feminism	Critical Theories	Postmodern/ Poststructuralism	Postcolonialism	Hybrid Perspectives
Epistemologies	Objectivism, subjectivism, constructionism	Subjectivism, constructionism, contextualism	Objectivism, subjectivism, constructionism, social epistemology	Objectivism, subjectivism, constructionism, idealism, naturalized epistemology, empiricism empiricism	Subjectivism, constructionism, contextualism, externalism	Objectivism, subjectivism, constructionism, feminist epistemology	Objectivism, subjectivism, constructionism, contextualism, feminist epistemology	Objectivism, subjectivism, constructionism, relativism, skepticism, pluralism	Objectivism, subjectivism, constructionism, social epistemology	Dependable on the epistemologies associated with the combined positions
Purpose statements	To describe a culture and its various characteristics	To describe individuals' perspectives, experiences, and meaning-making processes To describe individuals' values and beliefs	To describe socially constructed view on the phenomenon To describe socialization, roles, dialogue, and transformation	• To describe the essence of a phenomenon • To describe participants' life worlds	To understand holistically and cyclically participants' experiences To interpret a phenomenon	To emancipate women To investigate the inequities shaping the lives of women	To produce a sociopolitical critique To address equities in order to promote change in the communities	• To deconstruct grand narratives or To address and re-create binaries and stable structures	To address and rupture colonial practices To produce more nuanced discourses of particular historical events	To combine various (e)pistemological and theoretical positionings, e.g. feminist/ poststructuralism
Research questions	How do teachers and adminis- trators describe the current school culture at Lincoln High School?	How do classroom teachers describe their experiences of professional development workshops?	How does a mentor-mentee dyad describe the socialization process that takes place during the professional development workshop?	What is the essence of professional socialization (in the context of professional development)?	How do classroom mentees understand the role of professional development?	How do current professional development opportunities perpetuate relations of dominance?	How do Black and White administrators describe the educational and social elements that influence the professional development of African American teachers?	What sociopolitical meanings and assumptions are associated with "being a good teacher"? How does the binary "successful and unsuccessful teacher"? function?	What are existing forms of colonization of primary schools in Native American communities?	How can the body be used as a site for learning and pedagogical exposure?
Sampling strategies	Closed (within a culture or particular unit)	Homogeneous, purposeful	Variety of options including purposeful, homogeneous, maximum	Homogeneous	Variety of options including purposeful and maximum variation	Variety of options including purposeful and homogenous	Purposeful	Variety of options including purposeful and maximum variation	Variety of options including purposeful and maximum variation	Variety of options including purposeful and maximum variation

variation

Table 1 (continued)

F.					Theoretical Perspective	erspective				
-			Interpretivist				Cri	Critical		Pluralist
Decision Juncture Example	Ethnography	Constructivism	Social Constructionism	Phenomenology	Hermeneutics	Feminism	Critical Theories	Postmodern/ Poststructuralism	Postcolonialism	Hybrid Perspectives
Main data collection methods	Ethnographical interviews and observations	Individual interviews, journals	Group interviews, focus groups, group assignments, archival materials	Interviews	Interviews, archival materials	Interviews, observation, reflective journaling	Interviews, observations, reflective journaling	Interviews, archival materials	Interviews, archival materials	Interviews, observations, reflective journaling, archival materials
Analysis method	Analysis method Domain analysis, content analysis, thematic analysis	Narrative analysis, grounded theory, conversation analysis	Discourse analysis, conversation analysis	Phenomenological analysis	Hermeneutical analysis, narrative analysis	Narrative analysis, conversation analysis, biographies, discourse analysis	Narrative analysis, conversation analysis, biographies, discourse analysis	Archaeology, genealogy, discourse analysis, rhizoanalysis	Narrative analysis, conversation analysis, biographies, discourse analysis	Archaeology, genealogy, discourse analysis, rhizoanalysis
Trustworthiness/ validity	Validity (Creswell, 2007)	Trustworthiness/ Validity (Creswell, Communicative and validity 2007) pragmatic validity (Rorty, 1979)	Validity as social phenomenon (Gee, 2005)	Validity (Creswell, 2007; Polkinghorne, 1989)	Ethical and substantive validation (Angen, 2000)	Ironic, paralogic, rhizomatic, voluptuous, transgressive validity (Lather, 1993)	Validity as communication and reflection (Habermas, 1990)	Validity as multiple and perspectival (Scheurich, 1996; Lather, 1993, 2001)	Crystallization (Richardson & St. Pierre, 2005)	Ironic, paralogic, rhizomatic, voluptuous, transgressive validity (Lather, 1993)
Main knowledge Participant and producer researcher	Participant and researcher	Participant	Group of participants together	Participant	Participant and researcher	Participant and researcher	Participant and researcher	Participant and researcher	Participant and researcher	Participants and researcher
Role of researcher	Level of participation varies	Detached	A group member	Detached	Interpreter	Active, advocate	Active, political, advocate	Involved and constructive	Involved and political	Active, political
Research's relation to practice	Describe the practice	Describe the practice	Negotiate and transform the practice	Describe the practice	Interpret the practice	Change and transform practice	Change and transform practice	Deconstruct and rebuild practice	Change and transform practice	Change, transform, deconstruct, rebuild practice

Note. For definitions see, for example, Audi (1995) and Blaauw and Pritchard (2005), and for similar conceptualization see Lather (2007). We acknowledge that the theoretical perspectives and (e)pistemologies embedded in these perspectives and labels are provided for discussion and reflection purposes only.

because the concepts presented in the series of decision junctures are drawn from both past and current qualitative methodology literature and might prove more accessible for diverse readers. In addition, we believe, and illustrate in our analysis, that many qualitative researchers have yet to implement instantiations of methods in ways that support their selected (e)pistemologies and desired ways of knowing. It could also be argued that incoherences and a lack of clarity from the internalist perspective (as presented in the series of decision junctures) might be indicative of (e)pistemological and methodological "sloppiness," which should be addressed and discussed. Second, we believe that the documentation and analysis of any uncertainties, ruptures, and inconsistencies associated with an instantiation of methods, as represented in our second spatial conceptualization, might require another discourse (or discourses) to be created, presented, and articulated. We propose that this is an important task requiring further conversations and social conceptualizations among qualitative researchers interested in multiplicity, coherentism, and diffusions of knowing.

A Review of Education Research Articles

In an effort to better understand the problem of (e)pistemological awareness and instantiation of methods, as well as the problem associated with uninformed ambiguity as represented in the series of decision junctures, we conducted a systematic review of published journal articles to illustrate recent methodological awareness and instantiation of methods in the field of education research. Using examples from studies published in high-impact education journals in 2006, we explored how (e)pistemological awareness shaped, or in some cases failed to shape, the qualitative research process. More specifically, we looked at the role that a chosen theoretical perspective and (e) pistemology played in guiding a researcher's methodological decision making within the documented qualitative research processes. These decision junctures, used in our review of research studies in selected journals, include the formulation of research questions, selection of sampling criteria, and data collection and analysis methods.

Our approach was one attempt to provide a reflection upon and another reading of the reviewed articles to focus our readers' attention on the issues of theory and methodology (see also McCormick, Rodney, & Varcoe, 2003). Because we did not have information about preferences, editorial policies, reviewers' comments, or other possible reasons for the limiting of methodological descriptions or omitting of statements regarding the researchers' (e)pistemological connections, we wish not to identify the authors of these articles by name. In fact, a lack of attention to describing these decision junctures could have occurred for any of these reasons and may not have been the decision of the authors. Thus, the authorship of the text becomes secondary and less relevant. In addition, our purpose was not to critique individual authors but, rather, to illuminate pervasive methodological problems across fields, journals, and authors. For these reasons, we use double quotation marks to indicate direct quotes from the texts of the discussed articles.1

We chose to review high-impact journals that invited qualitative research reports published in 2006. To locate possible journals, we mined the ISI Web of Knowledge database using the subject categories "education" and "educational research." We

Table 2
Summary of Reviewed Articles

Type of Article	Number Identified
Total number of articles reviewed	100
Nonqualitative (conceptual, historical, quantitative, mixed methods)	56
Qualitative articles	44
Qualitative articles with reference to theoretical perspective	24
Qualitative articles with reference to theoretical perspective that described an (e)pistemological position	17

then sorted the list by impact factor. The journal impact factor was calculated based on a 3-year period and served as an approximation of the average number of citations in a year. Of the top 100, we culled the first 10 journals that specified "education" and "qualitative" and referred to a variety of qualitative theoretical perspectives (e.g., ethnography, constructionism, interpretivism, critical theory, and poststructural theories) in their mission statements. We believed that these were journals that would most likely insist on attention to methodological detail.

In each 2006 journal issue we reviewed the first and last research articles. A team consisting of two faculty and four doctoral students read and reread the articles. We met frequently to discuss the articles to ensure consistency in our review. Based on these readings, a master table was created that enabled us to distinguish between qualitative, quantitative, and mixed-methods research (see Table 2).

After reviewing all the research articles, we identified the qualitative research articles with clearly stated theoretical perspectives. During this identification process we searched for keywords describing the researchers' positioning, (e)pistemological references and statements, and other references to knowing, desired knowledge, and truth. The outcome of this process is described in Table 3, which lists each journal, the number of qualitative articles in each journal (counting first and last articles only), and the number of qualitative articles with a specified theoretical perspective within each journal. Our final review did not include articles that were quantitative, mixed method, or qualitative with a solely conceptual or theoretical focus (those without any reference to research questions, methods, or interactions with participants).

We began by examining the theoretical perspectives referenced by the authors. Six of the 24 papers used the terms theoretical framework or conceptual framework to refer to discipline-specific theories without identifiable references to (e)pistemologies or theories of knowing. Even though these authors clearly articulated their disciplinary traditions, existing models, and domain-specific conceptualizations, and the literature base in which their works were situated, none of these examples made clear reference to (e)pistemologies or described the desired knowledge(s) that the authors sought to produce (e.g., objectivist, internalist, subjectivist, constructionist, or feminist epistemologies). Only 6 of the 24 (25%) qualitative articles were identified as articulating an (e)pistemological position or theoretical perspective that was aligned with their purpose statements.

Table 3
Number of Qualitative Articles by Journal

Journal	Impact Factor	Total Number of Articles	Nonqualitative	Qualitative	Qualitative With Theoretical Perspective	Qualitative With Theoretical Perspective and Articulated (E)pistemology
American Educational Research Journal	1.388	8	2	6	3	1
Early Childhood Research Quarterly	0.951	8	8	0	0	0
Educational Evaluation and Policy Analysis	1.000	8	7	1	1	0
Gender and Education	0.767	12	3	9	5	5
Journal of Research in Science Teaching	1.022	20	6	14	8	4
Language Learning	0.714	8	8	0	0	0
Language Learning and Technology	1.310	4	2	2	2	2
Learning and Instruction	1.717	12	11	1	0	0
Reading Research Quarterly	1.218	8	4	4	3	3
Science Education	1.362	12	5	7	2	2

Notes on Studies That Illustrated (E)pistemological Awareness and Instantiation of Methods

Our first example of an article that illustrated (e)pistemological awareness, a study published in Science Education, provided a well-stated articulation of the decision junctures involved in designing (e)pistemologically guided qualitative research. The author used a critical theory perspective to challenge the discourse practices of two teachers in secondary science classes and examined how the teachers' practices promoted their students' feelings of alienation toward science. The author posed the following research question: "How [can] critical discourse analysis . . . be used to explore a way of challenging the dominant discourse in teacher-student interactions in science classrooms?" The researcher also shared her decision to utilize "textual analysis of science classroom discourse to re-examine the failure of science education to achieve the goal of producing scientifically literate citizens." Data for this study included interviews and audiotaped class interactions, which provided materials and insights relevant to the author's investigation of how teachers, through their engagement in talk and discourses, challenged dominance and worked against hegemony. Consistent with the author's chosen critical perspective, which guided and shaped the research design, critical discourse analysis was used to analyze the data.

A second example, published in the *Journal of Research in Science Teaching*, provided another well-stated expression of the decision junctures. This critical ethnography explored how engaging in the cultural practices of science, including the discursive practices of science classrooms, can initiate cultural conflict for marginalized students. Two overarching research questions guided the study: (a) "How does the use of science-specific classroom discourse frame issues of access for students of traditionally underrepresented cultures? (b) How are students' identities

affected by their use of scientific classroom discourse?" The researcher employed an ethnographic approach to study the socialization process of urban high school science students and drew on critical theory and critical pedagogy in the literature review. Data sources for this study relied on seven focus group interviews with 29 students from an introductory life science class. Within the text the author provided a rationale for this methodological choice by stating, "The use of focus group interviews is connected to the theoretical notion that students from minority cultures tend to perceive themselves as being participants in a monolithic culture." In addition, the author provided a detailed description of the domain-coding process utilized, a process focused on capturing "students' perceptions of their experience in science classrooms by exploring their perceptions of the cultural practices of science, the (e)pistemology of science, and the role of discourse in science education." This analysis process provided a tightly coupled set of findings that implicated science discourse as a problematic component of science learning and recommended a discussion of scientific culture in the areas of (e)pistemology, practices of scientific research, and science discourse.

Notes on Studies That Illustrated Some Concerns About (E)pistemological Awareness, Instantiation of Methods, and Uninformed Methodological Ambiguity

As a result of our reflections on and reviews of these articles, we identified five major categories of concern that might be related to a lack of (e)pistemological awareness and instantiation of methods and/or to methodological ambiguity. Table 4 presents the frequency of these concerns and notes that many of the articles demonstrated more than one concern. In the following sections, we discuss each of these concerns in more detail.

Table 4

Summary of Concerns Related to (E)pistemological Awareness, Instantiation of Methods, and Aspects of **Uninformed Methodological Ambiguity**

(E)pistemological Awareness, Instantiation of Methods, and Uninformed Methodological Ambiguity ^a	Number of Articles
(E)pistemological awareness and instantiation of	
methods	
Lack of integration among various theoretical perspectives	2
Connection between purpose statement and the chosen theoretical perspective	5
Connection between research questions and the chosen theoretical perspective ^b	12
Connection between data collection methods and the chosen theoretical perspective	3
Uninformed methodological ambiguity	
Missing design details	5
Purpose statement and/or research questions did not make references to (e)pistemology	8
Theoretical perspective was present but did not have a function ^c	2

^aOf the studies, 6 illustrated (e)pistemological awareness and instantia-

Concerns Related to Lack of (E)pistemological Awareness and Instantiation of Methods

Connection between purpose statement and the chosen theoretical perspective. We noted that even when a purpose statement was clearly set forth, the purpose was not always supported by the researcher's theoretical perspective. Misalignment or incomplete alignment between a study's purpose statement(s) and the researcher's chosen theoretical perspective(s) has the potential for creating gaps and unclear connections in the research process and can lead to difficulty in making sound or appropriate methodological decisions. Ultimately, research studies that required readers to infer the connections between the purpose and the theoretical perspective of the research made it difficult to assess the trustworthiness of the conclusions or outcomes of the study.

An example of an ambiguous alignment between the researcher's purpose and theoretical perspective was found in an article reported in Language Learning and Technology. This research was part of a larger study that examined the influences of popular culture and the Internet on heritage language maintenance. In fact, the purpose of this research was related to the larger study and focused on the electronic literacy practices of two Korean American language learners who managed Korean weblogs. The author framed the purpose and methodological choices of this study in a social constructivist paradigm as defined by Lantolf and Appel (1994) and Vygotsky (1978). According to the researcher, this theoretical perspective seemed well suited to the study, as it "places social interaction at the core of second language learning

and provides a foundation for understanding how electronic literacy practices within online communities can contribute to language maintenance and development."

However, as the author became more specific about the purpose of this research, the focus of the study seemed more individualistic than social. He wrote that the study "examines the linguistic and pragmatic practices of these learners [the participants] online and the perceived effects of non-standard forms of computer-mediated language on their heritage language development and maintenance." This purpose seemed largely constructivist in nature, and although the influence of social interaction through the electronic context of the weblogs might be inferred, it was not specifically referenced or explicitly stated. However, the influence of the social constructivist paradigm was once again evident in the author's interpretations of the data and the ways in which the findings were framed.

In another example, reported in Reading Research Quarterly, the authors began their article by stating that their research investigated "the unofficial peasant uses of writing in the Andean province of Azángaro," and they clearly identified ethnography as their chosen theoretical perspective. However, the authors also maintained that their research focused on the "Quechua households' memories of acquiring literacy and their ways of reading, making, using, and curating the documents resulting from it." To this end, the authors employed field researchers who interviewed rural herder-farmers about their past and present literacy practices. In this instance, the perspective that grounded their methodology and purpose might have been a constructivist one, as they seemed to focus on the individual memories and practices of the "other." The authors also suggested that the findings of their research might enable them "to say more about how much internal agency literacy affords and how it can be made to serve local concerns and relations with the powerful." In this instance, the purpose of the research seemed better suited to a critical perspective. However, we wondered how the different knowledges the authors wished to investigate and interpret might work toward the same (e)pistemological goal and be aligned within a theoretical perspective, or how all of the desired knowledge(s) and (e) pistemological goals could be integrated.

Connection between research questions and the chosen theoretical perspective. Selecting theoretical perspective(s) and clarifying one's (e) pistemological position can assist researchers in conceptualizing and wording their purpose statements and research questions. Morse and Richards (2002) referred to the inseparable union of research goals and methods as "methodological congruence" (p. 23). This (e)pistemological awareness connected to or supported by the instantiation of methods can assist researchers in conducting and designing studies that are driven by meaningful research questions supported by their selected ways of knowing. For example, some feminist researchers assume an inquiry stance and ask feminist research questions that are framed in feminist terminology and discourse. Feminists might ask, "How do girls conceptualize, negotiate and act on their understandings of gendered physicality?" (Hills, 2006, p. 540-541) In this instance, the researcher's (e)pistemology plays an important role in the design and wording of research questions.

^bThis category includes the articles without research questions.

^cFor example, feminism was mentioned among disciplinary theories and models as one reference point.

Alternatively, some researchers begin with the research questions and the specific aims of their research, which then determine the theoretical perspective and (e)pistemological position that support those particular questions. In this circumstance, the research questions guide the selection of a theoretical perspective, rather than the theoretical perspective guiding the development of research questions. Regardless of the approach, the development and wording of research questions can illustrate connections among the theoretical perspective, disciplinary framework, and substantive interests (Denzin & Lincoln, 2000; Hatch, 2002).

Moreover, the wording of research questions may specifically indicate the researcher's perspective through distinct rhetorical strategies and markers (Schwandt, 2001), including the possible use of identifiers (i.e., from Habermas's [1968/1971] knowledge interest framework). These rhetorical markers and identifiers can, in turn, be directly linked to specific theoretical perspectives (see also Lather, 2006). For example, in the case of interpretivist research, rhetorical markers and signifiers related to meanings, understandings, experiences, and participants' perceptions would be present in the research questions, which would directly reflect the researcher's theoretical perspective. In the case of multiple research questions and purpose statements, it would be important for researchers to define their research goals clearly and prioritize purposes and questions or illustrate the interconnectedness between the multiple purposes and questions of the study.

In our review we also noted instances in which the research questions did not seem to support the theoretical perspective that was used to frame the study. For instance, a group of authors who published a study in the *Journal of Research in Science Teaching* described their qualitative study as interpretative in its theoretical perspective. Generally, interpretivism "looks for culturally derived and historically situated interpretations of the social lifeworld" (Crotty, 1998, p. 67) and often seeks to describe and understand the participants' and/or researchers' meanings and understandings. However, interpretivism is a rather broad stance that encompasses a number of more specifically defined theoretical perspectives. Thus, we wondered—was this research framed by symbolic interactionism, phenomenology, hermeneutics, or something else?

With regard to this specific article we also found problematic the alignment of the authors' research question within any interpretivist perspective. The authors asked, "What teaching practices foster inquiry and promote students' learning of challenging subject matter in urban schools?" Stated this way, the research question would be best supported by an objectivist (e)pistemology, possibly a postpositivist theoretical perspective, as if there existed a correlation or external connection between specific teaching practices and students' learning, rather than the kinds of constructionist or subjectivist (e)pistemologies most often associated with interpretivism.

Connection between data collection methods and the chosen theoretical perspective. A final concern regarding the methodological choices of the researcher was related to the alignment of a study's data collection methods to the researcher's specified theoretical perspective. In addition to constructing a research purpose and questions that are instantiative of the selected theoretical perspectives, it could be beneficial for researchers to consider

how specific data collection and analysis methods support their desired ways of knowing. Quantz (1992) stated that "method is fully embedded in theory and theory is expressed in method" (p. 449). Thus methods, analytical approaches, and other techniques do not exist in a vacuum. Rather, uses of methods are often (e)pistemologically guided, thereby accommodating and creating different ways of knowing. In addition, researchers' training, theoretical approaches, and particular viewpoints create parameters and tools that reference particular ways of approaching research designs (Bogdan & Biklen, 2006). Crotty (1998) explained, "Justification of our choice and particular use of methodology and methods is something that reaches into the assumptions about reality that we bring to our work. To ask about these assumptions is to ask about our theoretical perspective" (p. 2). In other words, the choice of a specific method of data collection or analysis may indicate particular (e)pistemological interests and provide support for specific claims.

Greckhamer and Koro-Ljungberg (2005) argued that the processes of data collection and analysis are interrelated and serve the (e)pistemological goals of particular kinds of knowledge production. For example, if a researcher designs a constructivist study that focuses on participants' meaning-making processes or individual perceptions, researcher-driven methods such as structured questionnaires, structured observations, or some forms of archival materials may not support participant-centered and subjective (e)pistemologies. Consequently, researchers cannot "collect data without keeping in mind their (e)pistemological purpose, nor can they use particular analysis methods without considering their appropriateness to produce the type of knowledge desired" (Greckhamer & Koro-Ljungberg, 2005, p. 733). Similarly, Yanchar and Williams (2006) pointed out that particular methods are generally outgrowths of particular theories concerning how to study phenomena. In addition, we would recommend that more qualitative researchers ask questions such as "Who is/ are the main knowledge producer(s) in this research project?" "What are the researchers' and participants' roles in the field and during the data analysis?" and "How does this research relate and inform practice?" These questions and reflections are ultimately (e)pistemological questions that could assist a researcher in designing a study that reflects and supports the researcher's (e) pistemological stance and theoretical perspective.

The lack of instantiation of methods can be found in a study published in *Reading Research Quarterly*. In this case the author clearly stated that her study was framed within a constructivist perspective, citing both the socioconstructivist theory of Kamberelis and Dimitriadis (2005) and the theory of reader response criticism. Given that her purpose was to understand "how African American students interpret literature containing 'authentic' depictions of their own ethnic group," a constructivist theoretical perspective seemed an appropriate choice.

However, the author reported that she had gathered the data for her study through audiotaping large-group discussions regarding the literature, collecting individual students' written responses to specific chapters, and taking field notes during the large-group discussion. With the exception of the individual students' written artifacts (assuming that students themselves interpreted the literature), these data collection methods might not highlight individual meaning-making processes and might be more suitable for a social

constructionist or hermeneutical study. It could be argued that meanings generated in large-group discussion are socially constructed and an individual's meaning-making processes could not be separated from the social context within which they were produced (Morgan, 1988; Wilkinson, 2004). Thus some of the author's choices regarding data collection methods appeared ill suited to exploring and producing the kind of knowledges she desired.

Concerns Related to Uninformed Methodological Ambiguity

Missing design details. During our article review we observed missing design elements and insufficiently described identifiers, labels, and concepts, which hindered our analysis of the interconnectedness among diverse design components. The most problematic missing detail was the absence of a research question or questions. This problem was present in five qualitative articles. Without clearly stated research questions, we were not able to investigate the (e)pistemological or discipline-specific research goals, even if the theoretical perspective might have been mentioned or a general purpose statement was included. For example, in an article published in Gender and Education, the author framed her research as feminist and stated the following purpose: "I am exploring how culturally differentiated emotions, as inscribed in the three women's epistolary narratives, can open up spaces for the subject of feminism to emerge." A number of questions occurred to us. What is the author's exact empirical and/or conceptual problem? How does the narration of emotions enable the description of feminist subjects and objects? How do culturally differentiated emotions create participants' identities or subjectivities? How do women describe culturally differentiated emotions in their stories? In any case, the specific research and/or empirical problem(s) that the authors intended to investigate were not clearly communicated. As a consequence, the kind of knowledge the researchers desired to produce remained undefined and enigmatic.

In other article examples, the text often lacked a description of the sample (if it was even mentioned at all) and specific details about the data collection methods. For example, an article published in American Educational Research Journal stated:

We combine our previous research, ongoing fieldwork, and archival sources to explore how themes of literate disconnection are educationally experienced and contested by people with significant disabilities and their allies. The stories may appear to be from disparate sources, but each exposes particular dimensions of the collective effort toward a recognition of human competence and literate citizenship.

Based on what the authors shared in their text, the nature of their specific data sources, how data were collected from those sources, how the sources from previous and ongoing work were integrated, and how much information informed the authors' arguments remained unclear.

Purpose statement and/or research questions did not make references to (e)pistemology. Throughout our analysis, we also encountered work in which the statements of purpose were vague and did not appear to indicate or support the authors' (e)pistemologies or desired ways of knowing. In a multitude of articles, statements were made that suggested an (e)pistemologically driven desire to

uncover meanings; however, a further delineation of the authors' (e)pistemological groundings for that desire was often absent, and this omission stymied our attempts to situate and understand the authors' work. Without an explicit purpose statement, readers were left to conjure up their own frameworks for the knowledge produced by the research.

In evaluating an article from the journal Language Learning and Technology, we uncovered a relevant illustration of the potential consequences of not disclosing the author's ways of knowing. An article discussing second-language learners' e-mail literacy suggested as its purpose providing a "deeper understanding" of how learners developed e-mail literacy. We expected the author to move forward and define how he or she conceptualized this "deeper understanding." However, such a discussion was not present, making it impossible to relate the findings of the research to the stated purpose or to evaluate whether the author's curiosities were satisfied. Did the author find "deeper understanding," or did the findings only partially satisfy the curiosities that led to undertaking this research process? The author also made reference to "uncovering the complexities" and "exploring . . . factors" in the learning process. Again, we were provided with no further explanation as to what, for the author, constituted these intended purposes. As a result of these limitations we could only "see" what answers the author uncovered; whether these answers supported the (e)pistemological assumptions and conceptual understandings of the author remained unclear.

Theoretical perspective was present but did not have a function. During our review process, we were, in some cases, able to discern a theoretical perspective for the work even though the author only alluded to it and even though the author did not illustrate how the perspective functioned within or shaped the research process and provided a framework for the research questions. Illustrative of this dynamic was an article reviewed from Gender and Education. We understood that the author was operating from a feminist perspective. However, although the author made reference to feminist traditions, focusing on "the emotional labour of working class mothers" and calling for "a greater recognition of the contributions made by working class mothers in enabling their children to survive school," specific discussions of and references to feminism and how it helped the author to situate the research were lacking.

Furthermore, the uncertainty about (e)pistemological and theoretical connections drew us into making judgments about this research that might have been altered had the author been clearer in delineating her perspectives and conceptions of how these perspectives influenced her work. Another article in Gender and Education, which we also believed was written from a feminist perspective, provided evidence of this (e)pistemological uncertainty as the author chose to include some aspects of the data collected and exclude others. For example, there was significant discussion about the role of the mother in providing emotional support for her children through the academic process, yet no attention was paid to the role of the father in this process, even though fathers were used as research participants along with the mothers. We found this differentiated and selective use of collected data disturbing without a clear delineation of the author's and study's focus and perspective. Had we, as readers, been privy

to the author's own interpretation of feminism and emotional labor and its role in guiding the research, we would, perhaps, have had fewer reservations about the lack of discussion of gender differences as they applied to the emotional support for academics and parental resources, the stated focus of the article.

Alternative Perspective on Spatial (E)pistemological Awareness

We need to acknowledge that some researchers might not want to emphasize instantiation in the ways described in the previous section of this article. They may find stable (e)pistemological commitments too limiting—even when (e)pistemology is broadly defined—or they may operate in the intersections among multiple theoretical perspectives and methods. Possibilities for these more fluid research approaches might include, for example, poststructural feminism within qualitative approaches or forms of mixed-methods research. Our series of decision junctures, as one structure for (e)pistemological awareness and instantiation of methods, does not provide sufficient support for multiple or plural ways of knowing that are connected to and created within various theoretical perspectives. In addition, the proposed series of decision junctures does not clearly promote or support the movement(s), fluidity, or methodological adjustment(s) that might prove necessary to accommodate the complexities associated with implementing research designs in practice. For example, participants' resistance to specific data collection methods might require researchers to move beyond the methods best supported or aligned with their theoretical perspectives toward alternative methods that are viewed as acceptable by their participants.

Whereas the series of decision junctures offers concrete examples of possible research questions, methods, and positions that could be taken within the contexts of particular ways of knowing, the spatial conceptualization of (e)pistemological awareness provides a more open-ended and instable approach that incorporates unknowing and alternative methodological discourses. In the spatial conceptualization, decision points during the research process are anchored in the researcher's (e)pistemology and desired way(s) of knowing, illustrating the interconnectedness of design choices as described in the previous section. In addition, the spatial thinking enables diversity of methodological dimensions to emerge that can change and mutate as a result of institutional boundaries, personal preferences, various values and belief systems, research implementation issues, and so on. In other words, various combinations of (e)pistemologies give rise to different methodological spaces. It should also be noted that any established methodological space may lack boundaries or impenetrable limits unless there exist institutional structures (i.e., institutional review boards), regulations, or community practices that form a strict, predetermined, and/or ultimate border for decision making.

Finally, our spatial perspective on (e)pistemological awareness has been influenced by a relational (e)pistemological perspective (Thayer-Bacon, 2003) in which reality cannot be separated from the subject, and plurality is needed to compensate for fallibility (see Thayer-Bacon, 2003). For example, when researchers' and participants' roles change during the research process, the space for knowing changes, and adjustments in other aspects of the research design may be needed. We also acknowledge that cognitive movement from a structured model of decision junctures to a spatial conceptualization can be challenging for some scholars, graduate students, and readers. Thus, familiarizing oneself with the decision junctures before one moves toward working within shifting (e)pistemological approaches, as denoted in our spatial conceptualization, may be conceptually advantageous, particularly for those beginning their work as qualitative researchers.

Concluding Thoughts

As previously noted, a study's theoretical perspective and (e)pistemological consistency are not always adequately addressed when authors design the qualitative research process or explicate it in journal articles. However, we argue that (e)pistemological awareness and instantiation of methods present one way of assisting qualitative researchers in constructing research studies that appear better justified and informed and that provide instances of "evidence" to support their particular claims and theories regardless of whether researchers' (e) pistemological positionings are traditional, linear, relational and spatial, or something else. When (e)pistemological awareness as a way of shaping and influencing qualitative studies and designs is dismissed or deemed less important, we would expect researchers to create alternative ways to justify, situate, or explain their design choices and explicitly describe how all design components are related to each other. An articulation of how one's research design can be viewed as an interconnected unit of research questions, knowledges, methods, and methodologies that contribute to achieving the study's aims avoids a characterization of the study as random, unintentionally intuitive, or nonsystematic. Like Thayer-Bacon (2003), we also contend that researchers should not relinquish the concept of (e)pistemology entirely, because it holds power over people's lives; instead, scholars can move toward addressing and dissolving the dualisms (e.g., knowing-not knowing, reality-unreality, truth-untruth) it creates. Moreover, as Thayer-Bacon argues, knowers could build assertions warranted by "evidence," and they could indicate whom they engage in dialogue about these assertions in their environment.

In qualitative research articles, (e)pistemological awareness and the way(s) in which researchers conceptualize knowledge in a particular research project could be articulated and illustrated in various ways. Researchers could explicitly state their (e)pistemological beliefs and positioning, for example, by referring to "a feminist project," "self as a critical theorist," or "similar to Heidegger's (1996) view on Being and Dasein." But this simplest of presentations regarding one's (e)pistemological awareness often proves insufficient, especially when more details and reference points are needed to differentiate among the diversified and complex practices and conceptualizations. In these instances, researchers could provide clarity within their theoretical perspectives or (e)pistemologies to prevent misalignment between the researcher's understandings of an (e)pistemology and the understandings of the reader. Alternatively, (e) pistemological positioning can be suggested and explained by referencing literature that illustrates a specific (e)pistemological position, theoretical perspective, or variety of combined and hybrid positions and perspectives, including (anti)(e)pistemological positions that refute knowledge claims altogether for specific reasons. For example, by referencing Peter Berger and Thomas Luckmann's (1967) views on socially constructed reality, feminist epistemologies (e.g., Alcoff & Potter, 1993; Harding & Hintikka, 2003), or Jean-Francois Lyotard's (1979/1999) report on postmodern knowledge and explaining how these references have shaped the construction of the authors' research and claims, scholars situate their work (e)pistemologically and communicate to readers their positioning(s) and assumptions about desired ways of knowing.

We also acknowledge that sometimes it can be challenging and/or impossible to label, conceptualize, articulate, and intentionally know what we know. Acknowledging the limits of positions taken, the limits of our knowing, and ultimately the extent of our not knowing can be as important and valuable as the articulation of an (e)pistemological position. McIntyre (2004) proposed that although no explanation of human behavior can ignore intentionality or mentality, it should not be described or explained in intentional terms alone. We agree that intentionality, the use of descriptive, available, and precise language, does not by itself guarantee rigorous and thoughtful scholarship. However, we also believe that efforts could be directed toward (e)pistemological reflexivity and learning to read one's research practices.

When considering some of the implications of our work, numerous questions require further attention. First, many journal articles seem relatively inattentive with regard to our notions of (e)pistemological awareness and instantiation of methods. We also wonder about the role of editorial decision making and the effect of reviewers' preferences in terms of (e)pistemology and methodology in the articles that are chosen for publication. It could be postulated that (e)pistemological awareness and instantiation of methods existed in the designs of the original studies but were determined to be irrelevant on the basis of publication policies, page limitations, or the readerships of the journals.

Another question that occurs to us concerns the preparation of education researchers who are able to understand (e)pistemological and methodological diversity and the complexity of designing qualitative research that is (e)pistemologically informed and theoretically explicit. How do we bring greater attention to the dilemma that qualitative researchers and reviewers face in judging the quality of research from so many theoretical perspectives? There is a need for all of us—reviewers and experienced and novice researchers alike—to continue "becoming smart." Because qualitative inquiry embraces such a breadth of (e)pistemologies and methodologies, this will always be a complex and ongoing endeavor. Those who design and conduct research that provides a clearly articulated and transparent description of the values, beliefs, and (e)pistemologies that have shaped their decision making throughout the research process will provide the scaffolding to help us "become smarter" about these aspects of research.

One could argue that reliance on (e)pistemological positioning or coordination of one's research actions in relation to desired ways of knowing is a naïve and simplistic way to approach or document an individual researcher's complex research process. In addition, one might propose that knowing is an intuitive and unconscious process that is an integral part of research and not to be considered in isolation. However, the point argued in this article is that (e)pistemological awareness should not be avoided or construed as a completely unconscious or uninformed process.

Rather, efforts should be made to make the research process, knowledge and value priorities, methodological decision points, and argumentative logic as open and visible as possible. If the onus of responsibility for determining the trustworthiness of a qualitative research piece is shared with the reader, then these details are important for the reader's understandings of research texts and proposed knowledge claims. Increasing one's awareness of and knowledge about the role of (e)pistemology could also provide a helpful reference point for structuring empirical research designs, especially for those who engage in a number of projects with disparate research purposes, aims, and methodologies and who feel they do not have sufficient theoretical and practical grounding in all of the various theories and methods employed within their projects. In addition, (e)pistemological awareness, accompanied by instantiative uses of methods, can assist those researchers who desire to situate their work across traditions and within a larger body of literature that holds similar meanings across contexts.

Furthermore, we believe that the field of education research will benefit from the ways in which we have conceptualized (e)pistemological awareness and instantiation of methods in this article. Increased awareness and information about diverse (e)pistemological positions and possible methods that support specific knowledge claims (i.e., through internalist positioning) enables researchers to create understandings of methodological traditions, categories, and systems of knowledge construction. However, other constructed (e)pistemological positionings can highlight the ambiguities, uncertainties, and flexibilities associated with awareness and instantiation of methods. Finally, it is also important to consider what is gained and what is lost by engaging in (e)pistemological consistency and increased (e)pistemological awareness. How can the paradoxes and tensions we encounter as we design our research studies encourage and enable us to stretch, permeate, or redefine the boundaries among (e)pistemologies and methodologies? We wonder how (e)pistemological consistency might lose or interrupt itself in order to change, adapt, and continually mutate. Future explorations need to address a multitude of possibilities for scientific inquiry that illustrate how (e)pistemological awareness or curiosity can be represented in the intersections of methods, theories, and knowings that are always changing and often yet to come.

NOTES

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¹Readers who believe that they would benefit from additional details and who would like to know more about the reviewed articles can contact the first author for complete references.

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