

## Exploring Graduate Students' Understanding of Research: Links Between Identity and Research Conceptions

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We are in an era that calls for increasing “training” in educational research methodologies. When the National Research Council (2004) calls for training in educational research that is “rigorous” and “relevant,” the focus strongly emphasizes WHAT should be taught instead of WHO is being engaged in the learning. Similarly, most of the research on teaching educational inquiry explores the “what” and not the “who” of the learning. In contrast, we explore conceptualizations of “research” as expressed by graduate students in a research methodology course, as well as the way that student narratives illustrate their own identity claims in relation to research. We develop the analytical concept of “pragmatic fissures” to explain the tension often present between the way students conceptualize research and the way they perceive themselves in relation to the research process. We suggest that these pragmatic fissures provide an opportunity for expanding pedagogical approaches to course delivery, as well as approaches to methodology textbook design. In the spirit of post-perspectives aimed at challenging the “methods” approach to research learning (St. Pierre, 2014), we welcome an opportunity for thinking about research instruction as more locally and organically connected to the lived experiences and conceptual make-up of students engaged in the learning process.

At the 2014 American Educational Research Association conference, there were several sessions that touched on the dilemmas of teaching qualitative inquiry. One of the basic challenges probably applies to any iteration of inquiry instruction in education, not just qualitative methodology: How can we provide educational opportunities that inspire and invigorate exploration without drawing on and recapitulating a formulaic canon that reinscribes the status quo of educational research? Such concerns have been vigorously identified amongst prominent qualitative methodologists, like Elizabeth St. Pierre (2014), but have not been entertained more broadly. In fact, while there is an abundance of literature on the pedagogy of teaching research methodology, there is little critical exploration of the deeply-seated assumptions about teaching inquiry as “methods.” Further illustrating the problem, little scholarship exists on the perspectives graduate students have about “research methodology,” indicating that much of the empirical literature follows the same path: treating research methodology as a canon of knowledge one must acquire as a graduate student independent and irrespective of student conceptualizations. This qualitative study seeks to turn the status quo inside out regarding typical approaches to study the teaching of research methodology in higher education.

As instructors of an introductory research methodology course for graduate student practitioners, we are not surprised that students’ conceptions of “research” play a pivotal role in how they approach learning methodological material. For example, we have noticed that many students perceive research as something academic experts do and not something they themselves might engage in through their daily

professional and personal lives. Thus, many of our students assume that doing research is irrelevant to their professional experiences as, for the most part, teachers, counselors, or administrators, an assumption which can undermine their motivation for learning. Furthermore, students often bring a “positivist-like” understanding of research to class and tend to hold to the idea that conducting research in the social sciences is all about numbers and experiments, which is consistent with the notion that a certain kind of expert carries out research, not educational practitioners. We argue that a better understanding of student conceptions can facilitate the teaching/learning process and help instructors better interact with students in ways that are meaningful to their own professional lives. More importantly, student conceptions are indicative of a cultural milieu, thus, being able to reconstruct the cultural “thinking” around educational research would benefit learning engagements. We agree with Lather (2006), who advocates for “teaching educational research in such a way that students develop an ability to locate themselves in the tensions that characterize fields of knowledge” (p. 47).

Typically in research methodology courses, students are exposed to a variety of different, even contradictory, ideas about what research entails, reflecting ongoing debates on the paradigms within the field of research methodology itself (Lather, 2006). Yet for practitioner-focused programs in education, discussions about these debates do not easily translate into professional action. In other words, for these students, their lived professional practice seems disconnected from what they are learning and how they think about educational research. Thus, perhaps these introductory courses (and indeed inquiry

methodology instruction writ large) could benefit from the kinds of critiques and challenges that have surfaced among qualitative methodologists. Some basic shifts indicated in the qualitative inquiry dialogue that surface as important pedagogical references include the following: (1) undermining the construction of “expertise” in the research process, (2) critiquing the “scientific” paradigm of objectivity, (3) challenging the status of “methods” in the field of methodology, and (4) thinking with theory. Each of these references positions the learner in a non-traditional space. The learner is no longer the non-expert acquirer of a methods/methodological cannon of post-positivism where the outcomes of teaching can be dictated without ever knowing the student.

These pedagogical references serve as touchstones for discussing our research project, which is aimed at better understanding student conceptualizations of research as part of the dialogic nature of the learning process. Our larger, exploratory study asks the following research questions: 1) How do graduate students in an introductory research methods course conceptualize the notion of “research?” and 2) How does participating in this course shape students’ conceptualization and understanding of “research?” In this paper we focus only on findings related to students’ conceptualizations at the start of the semester. This is because our research effort stems, in part, from re-centering learners in the methodology classroom; thus, by drawing on student essays about their conceptions as articulated during the first week of class we are able to understand their starting positions. Our analysis led us to develop the concept of “pragmatic fissure,” which describes a contradiction between the way students position themselves pragmatically in relation to the way they talk about inquiry and the substance of that talk itself. These pragmatic fissures constitute one set of starting places informing students’ entry into graduate research methodology. We discuss the implications of these fissures for developing pedagogically appropriate approaches for teaching introductory research methodology.

The primary contribution of this paper to the literature is our emphasis on the relationship between student identity and conceptualization of “research.” We contrast this with much of the existing literature on research methodology courses (and the proliferation of texts for use in such courses), which emphasize substantive content rather than focusing on students and their perspectives. We suspect that this focus perpetuates a positivist theoretical model of knowledge because these studies and texts fail to take up a dialogic relation with students’ own ways of thinking and being. Rather than ignoring these disjunctures, our study suggests they should be brought to the center. The

concept of “pragmatic fissures” thus provides us with the opportunity to relocate the content-based goals of introductory research courses within an understanding of student learning possibilities.

### Empirical Milieu

Our review of empirical research on teaching research methodology courses (e.g., Ball & Pelco, 2006; Barraket, 2005; Edwards, 2004; Hubbell, 1994; Mcburney, 1995; Onwuegbuzie, Frels, Leech, & Collins, 2011; Ransford & Butler, 1982; Takata & Leiting, 1987; Tashakkori & Teddlie, 2003; Winn, 1995) reaffirms the dominance of traditional approaches to teaching and learning methodology. It shows that these studies focus primarily on the logistics or outcomes of implementing pedagogical techniques without grasping how students and teachers conceptualize “research” in the context of learning and teaching inquiry or the intersection of these conceptualizations with pedagogical dynamics. These patterns in existing scholarship affirm the need to carry out more student-centered research in the domain of teaching inquiry, in particular scholarship focusing on students’ perspectives and on those students whose interaction with research is primarily as consumers rather than producers..

There is a much smaller body of literature addressing how “research” itself is conceptualized, which includes the perspectives of students, research supervisors, and senior researchers (Bills, 2005; Brew, 2001; Kiley & Mullins, 2004; Meyer, Shanahan, & Laugtsch, 2005; Pitcher, 2011). For instance, Meyer and colleagues (2005) conducted an open-ended survey to explore how doctoral students conceptualize research. Eight emergent categories, such as “information gathering” and “discovering truth,” were then systematically formulated into an instrument called Students Conceptions of Research Inventory (SCoRI). In a different study, Pitcher (2011) utilized metaphor analysis to illustrate dominant conceptions of research held by 59 doctoral students at an Australian university. Pitcher’s analysis points to four dominant metaphorical concepts characterizing the way that research is conceptualized: “research as explorative,” “research as spatial,” research as “constructive,” and “research as organic.” Beyond his description of research conceptualizations, Pitcher’s study is important in that his use of metaphor analysis provides some insight into the identity claims of respondents to his survey, though only superficially.

Other studies in this body of literature also provide implicit connections to the identity claims of those conceptualizing research. Of these, three in particular are relevant for our study. First, Brew’s (2001) phenomenographic study of 57 senior researchers yielded four main conceptions of research. These are:

- the “domino variation,” where research is conceptualized as a series of distinct, separate elements that can be combined or synthesized in different ways;
- the “trading variation,” which foregrounds the *products* of research (e.g., publications, grants, or social networks) as key elements to be exchanged for prestige or recognition;
- the “layer variation,” in which research is a process of uncovering layers underneath the surface; and
- the “journey variation,” which emphasizes the process undertaken and the transformation of the researcher through this process.

Brew also differentiated between those variations of research conceptualization in which researchers were present or foregrounded (as in the trading and journey variations where the researcher is central to the conception) and those where researchers were separated from the research process described (the domino and layer variations). In another study, Kiley and Mullins (2005) investigated how supervisors of doctoral students conceptualize research and how they perceive the relationship between their own conceptualization and those of their students. Finally, Bills (2004) utilized an ethnomethodological approach to identify the descriptive categories that research supervisors utilized when describing their conceptualizations of research. Through her analysis of focus group transcripts, Bills highlighted both the dichotomous categories of university and non-university researchers/research used by supervisors and the privileging of university research/researchers as “proper” in supervisors’ descriptions, in contrast with non-university research.

Together, these studies provide an initial understanding of how “research” is conceptualized by individuals in academic settings. However, existing studies tend to focus on established scholars or doctoral students who engage in formal academic scholarship rather than students whose primary relationship to inquiry will be from within non-academic personal and professional endeavors. Moreover, these studies are primarily descriptive in nature, and their examinations of the relationship between research conceptualizations and identity claims are implicit at best. These gaps set the foundation for our study.

### Methodology

We have designed this study as a critical action research project (Fine et al, 2003) contributing to the Scholarship of Teaching and Learning practices (Cerbin, 2013; Huber & Hutchings, 2005). Action research design blurs the traditional distinction between researchers and practitioners and effectively shortens

the distance of the transformation from academic findings to daily practices (Bensimon, Polkinghorne, Bauman, & Vallejo, 2004; Fine et al, 2003). In this study, we take on dual roles as instructors and researchers, bringing the integration of our own practices and research into purview. We consider the research design *critical* in the sense that we do not take notions such as “knowledge” and “research” for granted. We aim to make students’ and our own assumptions more explicit through the reflective process of research. We also hope to explore how students’ identity claims influence their conceptualizations of “research” and perhaps their underlying motivation during learning. This aim of making the implicit explicit is best supported by a critical approach. Our methodological design is guided by Carspecken’s (1996) critical qualitative research methodology and the Frankfurt School critical theory (Habermas, 1972, 1981), which acknowledges value orientations and advances methodological implications.

### Participants

Participants in the study included the four authors/researchers/instructors and 92 education graduate students at a large university in the Midwest who were enrolled in a required course titled “Introduction to Educational Research.” While this course occasionally enrolls doctoral students, most are Masters or Certificate students in the fields of school and counseling psychology, educational administration, instructional systems technology, or content areas in education (e.g. language education, art education, etc.). Most are practitioners in K-12 education, though some students (in counseling psychology and higher education administration/student affairs) work in university settings. Students were enrolled in one of four sessions of the course across the span of one academic year, including the summer. There were a total of 96 students enrolled, with 4 opting out of the study. Students were informed of the possibility of participating in the study at the start of the class by one of the researchers who was not their instructor.

### Data

The formats of the classes varied across the four sections: three online and one face-to-face. Data analyzed for this particular paper included introductory essays on the meaning of research/inquiry, assigned as part of the first week’s work, and asking students to write about what research is and how they relate to it. The length of student essays ranged from 250-700 words, with most students responding in approximately 350-500 words. The data collected in all sections were read by all four authors. Data were collected after the

end of the course, with grades having been submitted, as approved by the university Internal Review Board.

The larger study, which contextualizes our discussion, includes archived class discussions and other course assignments, as well as data generated through instructor written self-reflections on our own assumptions about research, email exchanges among instructors on pedagogical issues, and notes and audiorecordings of reflective meetings regularly held among the instructors throughout the teaching process.

### **Understanding Students' Writing of the Assignments as a "Speech Act"**

Before describing our analysis in detail, we note that central to our analysis is an engagement with our students' writings as "speech acts." Understanding these writings (or speech or any other form of communication) as "speech acts" means that we look at "speaking" as something in which individuals engage for the sake of "doing things." That is, speech acts are acts of communication that people utilize with intentions and effects in specific contexts where their actions are likely to be understood (Austin, 1975; Searle, 1965, 1969).

In face-to-face communication, understanding a speech act means taking into consideration not only the literal meaning of the speaker's words, but also tone, facial expressions and gestures, the underlying meaning she intends to convey, and the way in which the words "act" in an interaction, for example, as a request for more guidance or as a shield from questions. When this is translated to understanding the writing assignment analyzed to produce this paper, it is important to consider several factors beyond essay content. For instance, we considered impetus for the assignment and remembered that students wrote their essays both to meet a course requirement and to gain new understandings of research through self-reflection. Moreover, we considered the intended audience of the writing: the instructors. Students intended to communicate with instructors about their understanding of research, and for some of them, this assignment also served as an opportunity to establish a constructive relationship with course instructors at the starting point of the semester. Finally, we can examine this speech act in terms of intended format. In this assignment, students presented a final product in the form of an essay. While as instructors we did not explicitly require a specific writing format or genre, students knew that for an academic graduate assignment, they were not supposed to write, for example, a poem or something fictional. In our analysis, we addressed these considerations as well as the semantic content of students' responses.

In our analysis we also considered these essays as speech act that embody within them an identity claim –

an implication about the actor's identity (Carspecken, 1996). In other words, our identities are claims that we enact and present as our 'selves' in social contexts (Goffman, 1959); every time an actor acts meaningfully she is positing herself as a particular kind of person through that act (Carspecken, 2003). This understanding of identity is crucial to considering how speech acts can embody identity claims and therefore how our analysis can be used to interpret and understand student identity.

### **Analytic Procedures**

Our analysis for this manuscript consisted of reconstructive, emergent coding of the assignment described above (Carspecken, 1996, 2008, 2009). Reconstructing involves making explicit a range of implicit, plausible understandings that actors and their interlocutors might presume to share. The hermeneutic aspect of this approach refers to the situated, interpretive process implicated in reconstructing meaning (Carspecken, 1996). This process is characterized by the act of position-taking with respect to research participants, by being reflexive about the norms upon which one depends and how they influence meaning reconstruction, and then by using this reflection as the basis for modifying impressions of meaning, continuing to reflect, modify, and so on. A hermeneutic, reconstructive approach to research is thus an iterative process that enables researchers to approximate more and more closely the way participants would also interpret their own meaningful expressions.

Our approach to coding was to reconstruct the meaning of student texts through dialogue with one another. Reconstructive horizon analysis offered us a precise way to articulate the relationship between students' understanding of "research" and their own identity claims. While in some of the essays students' understandings of their own identities were thematically foregrounded, for other students those understandings were reconstructed through the use of writing style, language, and narrative structure. Therefore, our analysis went beyond thematic content to reconstruct (not represent) identity claims, in order to examine them in relation to simultaneously held conceptualizations of research (Carspecken, 2003; Korth, 2007). For example, some students said they were not researchers and simultaneously held a conception of research as something experts did. Both aspects co-informed our analysis, leading to the interpretation that these students did not perceive themselves as being or becoming experts, or as utilizing research expertise.

We used the qualitative data analysis software platform Dedoose (SocioCultural Research Consultants, LLC.) to coordinate our coding process and outcomes.

The collaboration was an important structure of the analysis process because through it we explicitly engaged in dialogue about the meaning of the texts we were analyzing and our own theoretical ruminations. Thus, the dialogue implicit to our analysis process was brought to the foreground as we asked one another to explain, revisit, re-articulate, and affirm interpretations. In the early part of our analysis and reflection on initial coding schemes, we focused on elucidating emergent themes related to students' understanding of research, how this understanding evolved (prior to the course), and in what sense students connected this understanding to their professional practices and their own identity. Our discussions led us to identify emergent themes centered on the relationship between students' conceptualizations of research and their own identity claims. Utilizing this approach also enabled us to examine the underlying tensions between students' identity claims and their relationships to the concept of research.

### Validity Concerns and Strengths

Admitting that there is much disagreement about the status of validity in research, we are of the view that validity is internal to meaning (Carspecken, 2003; Dennis, 2013; Habermas, 1981; Korth, 2002). This conception of validity was part of our approach to analysis, and we also take it up as the way to talk about the quality of the study itself.

To establish the validity of our analysis, we used peer debriefing, consistency checks, negative case analysis, strip analysis, and long term engagement with the data (Carspecken, 1996). We worked together recursively and challenged our interpretations over months, meeting regularly in pairs and as a group of four to review our interpretations. When we did not agree, we kept the disagreement alive and retained the complexity of meaning. The findings we report below will reflect those complexities.

We do not intend for these particular findings to be generalized to other student populations, though the process of looking closely at student conceptualizations might be applicable to other courses and groups of students. Primarily, we hope to spark dialogue about the link between identity and learning, conceptualizations of research, and tensions between those conceptualizations and one's identity engagements. By attending to these, we hope to contribute to a critique of methodological pedagogy as an instantiation of cannon and methods and to encourage ideas around re-centering the learner in pedagogy of research methodology courses.

### Limitations

Although we believe this analysis is worthwhile and will be useful to others, it is important to

acknowledge the limitations of our findings. In particular, we believe that our findings are limited by a lack of dialogue with our student research participants about their written essays and about the accuracy of our interpretations. Ideally, we would like to be able to invite students to respond to our analysis and interpretation, and this would accomplish two things. First, from a research perspective, it would enhance the validity of our study. Moreover, such a dialogue would serve to facilitate instructor-student interaction on issues such as these that have significant pedagogical implications. Given this limitation, we want to emphasize that there is more to do in the future.

### Fruits of the Analysis: Validity and Research, Identity Claims, and Pragmatic Fissures

#### Addressing Validity in Relation to Student Conceptions of "Research": Two Aspects

Prior to discussing student responses to the assignment prompt, we return to the concept of validity, as reconstructing students' understanding of research necessitates an examination of the underlying validity assumptions students enacted in writing their written assignments. Here we are referring to "validity" in the context of Jürgen Habermas' (1981) Theory of Communicative Action. According to Habermas, a pragmatic statement, such as the articulation of conceptions of "research" by our students, brings with it two aspects of validity:

- I. The responsibility for the actor/speaker to demonstrate that the statement is valid, which indicates that there are validity criteria presupposed by the statement through which its truthfulness might be assessed. For example, the specific claims students make related to underlying assumptions of "research" as a concept carry validity criteria such as whether or not they think that research can be valid if conducted by non-academics; and
- II. The validity assumed through the mode of expressing one's ideas about research. This aspect of validity is related to students' identity claims and is manifested in the ways in which they report their perspectives about what research is, such as using personal experience to make their point while denying that personal experience is a valid form of knowledge.

The first aspect (I) is linked most directly to the content and involves what the student takes to be valid research. For example, in our project, if a student wrote

that she understands research as so and so, and if she really means that (sincerely express her opinion), then she simultaneously bears the responsibility to defend her statement (to explain why she thinks that so and so is research) when others (like her instructor) challenge her. In other words, the student must be able to make a rational argument explaining her perspective if she is challenged. This is the first aspect of, or requirement for, validity in the student claim.

The second aspect (II) is entailed in the pragmatics of the communicative act. To use the same example, when this student makes a series of statements regarding research, the statements will proffer certain (usually implicit) assumptions about validity criteria based on which this student would consider a statement about “research” to be valid. These assumptions constitute the second aspect of validity. Some examples of this would include whether a certain way of articulating research is valid, such as using formal language versus personal narrative, and what assumed relationship to research is being manifested through the narrative mode chosen by the writer, such as writing in third person or writing in the first person.

While the first aspect of validity can be reconstructed primarily from thematic meanings in the text, the latter aspect of validity is mostly backgrounded in student responses and requires a different analytical approach. To exemplify this, take the case of a student who has written in her essay that “research should be objective,” but she has also written in a narrative way about how her various life experiences have led her to this understanding. In this case, she is simultaneously claiming that objective research is valid while also claiming that her personal experiences played a legitimate role in the formation of her conceptualization of “research.” Grasping both of these aspects requires approaching the essay in an integrated manner that takes into account things like its narrative structure and the formality of language used, in addition to semantic content. Together, the two aspects of validity comprise this student’s holistic understanding of “validity” in relation to her conceptualization of “research.”

Since these two aspects of validity claims always exist simultaneously in student responses, ideally they will complement or corroborate one another. However, across our data we see a large degree of tension or disjuncture between these two aspects of validity claims. This tension can be seen in the example above of a student who claims that research should be “objective” but uses narrative form to discuss her personal experiences. Although the student would not be expected to write *as a researcher* in this assignment, a discussion of personal experiences that positioned the student as a researcher or potential researcher would be expected to complement the manner in which research itself was conceptualized, in this case, in an “objective”

third person statement. The tension between these two aspects of pragmatic validity in this student’s speech act suggests a conflict between student’s conception of research and the identity positioning of the student toward research.

### **Conceptualizations of Research and Student Identity Claims: Exploring the Tensions**

In this section, we describe patterns in students’ conceptualizations of research that emerged from our data, as well in students’ positioning of self in relation to those conceptualizations. In particular, we highlight tensions between the two elements of validity discussed above. It is important to note that these patterns are not exclusive; indeed, there were overlaps among them in many cases. The emergence from our data of these four “ideal types” (Weber, 1925) of understanding research, however, serves as the foundation for developing the theoretical concept of pragmatic fissures.

#### **Research as a Means of Problem Solving**

For the largest group of students (48 out of 92 participants), research is presented as a way to “solve a problem,” “answer a question,” or “gather information.” In students’ descriptions of research, the term is thus conceptualized as externally oriented. Research is deemed as an act or intervention carried out by a researcher, a means to solve problems through discovering, accumulating, and evaluating knowledge. Research perceived in this way is also linked by students (in their essay responses) to a process with “a series of steps to be completed” or structured steps or procedures toward achieving the intended goal. Both the goal and the steps to reaching it are sufficiently known prior to engage with the process itself and are discrete enough to be articulated.

With this conception in mind, students often position themselves as problem solvers in relation to the act of research. In fact, some students provided concrete examples that occur in their everyday life (for instance, doing Google research before buying a product or collecting information to assist decision making) to explain their definitions of research. As one student put it, “I now can research anything I want at my fingertips. Broadly, I believe research to be a quest for further knowledge about a desired topic. We research everything: products to buy, vacations to go on, job descriptions.” These students drew a parallel between the act of research and every day acts in terms of their shared *purposive* action orientation: in other words, they see themselves as individuals who are a part of the research process. In the words of one student, “It’s really been since... I returned to academia as an employee that my opinion has be[en] pushed to ‘the

other side' by my experiences. I see on a daily basis the holes in what I know, and I finally have developed a thirst to fill them. My world is a constantly evolving one, and I'm excited it now has room for interest in things like 'research.'" Another student wrote, "Research is not that unapproachable. Everyone can design and conduct research. And even, research shares the similar logic with the process of problem solving in our daily life." Yet, as this latter example suggests, students describe the "act of research" as a "formal" process, whereas the latter process (problem solving in every day life) is "informal." Thus, we see a contrast between the "informal" activities undertaken by students and the "formal" activities that constitute valid research, suggesting a tension or disjuncture between how they understand research and how they position themselves in relation to it. In other words, students position themselves as problem solvers in informal settings but not researchers in formal settings. In claiming this subtle position, the students identify with certain aspects of research shared by those in both formal and informal settings, such as the genuine curiosity about certain issues and its problem-solving orientation, but they distance themselves from other aspects of formal research from which they feel excluded, and perhaps even alienated.

Here is another example of a disjuncture between conceptualization of research and student identity, in relation to research as problem solving. One student noted, "When researchers have questions they want to answer, they need to go through research to substantiate the answers that they find. Research provides the evidence or proof of how the individual came to their conclusions in answer of the question that was guiding their search." This student further noted the following:

"I would often say as a teacher that 'I may not have any published research, but here is what my students have taught me works for their individual learning'... followed by a story of what I had discovered worked for the learners in my care. I believe everyone has learned something new based on experience (many times due to a curiosity that an individual may have), but we often times don't justify or substantiate our findings through a formal research process.."

With this statement, s/he positioned him/herself as making the identity claim, "I am a researcher, but not in the sense of formal research." Instead of grounding formal research in everyday life, this student sees formal research as something distant from her everyday experiences.

### **Research as a Form of Expertise**

A second conceptualization of research (held by 9 participants) was as a form of expertise requiring specialized knowledge and skills. Students who described research in this way perceived researchers to

be experts who receive specific training in reading literature, writing academic papers, and developing knowledge in statistics. For instance, one student noted that research was a "serious" endeavor with "more opportunities to mess things up." In this way research becomes a "profession" for the experts in the academic domain. Graduate school training provides the opportunity for individuals to develop necessary levels of "expertise" and to be socialized into this profession.

Students who conceptualized research in this way tended to position themselves as outsiders in relation to the profession, or at least novices standing at the edge of the professional boundary. With this positionality, many students expressed feelings of "intimidation," or cynicism toward the identity of being an expert. For example, one student commented that research constitutes "an academic process that requires enormous amounts of talent, time, and effort in hopes of boosting one's reputation in the overly competitive world of academia." The language utilized to describe research in this example—specifically, use of negative tone as indicated by the phrase "overly competitive world"—illustrates the way this student positions herself as an outsider to the "world of academia" and the research process that occurs within it. When taken in contrast with the relatively neutral language used at the start of the student's sentence, stating that research is an "academic process," this example serves to highlight the insider/outsider tension between student conceptualization and student identity, in other words, the tension inherent in the requirement for researchers to be experts, whereas the student is not.

Here the tension is more stark than was presented in the conceptualization of research as problem solving, where there is a possibility for students, even those who see themselves as outside of the world of those conducting "formal" research, to take part in "informal" elements of problem solving and information gathering. Another student noted, "I think of research as something that scientists, people in think tanks, or people with PhDs do," and continued, "I have so rarely done intensive research that the concept still seems a bit foreign to me, a bit undefined." This example, too, suggests that the student sees him/herself as standing apart from the research world – in particular, not having the expertise to even fully define what research constitutes.

### **Research as Science**

A third type conceptualizes research as science and presents it as a process of testing hypotheses, or acquiring evidence to prove or disprove certain beliefs (21 students held this perspective). Such a conception of research is based solely on a scientific worldview and rationality in which the researcher always takes a universal third-person position to examine the

truthfulness of a claim about a phenomenon. This conceptualization may be thought of as a specialized form of the conceptualization of “research as expertise,” with an emphasis on a specific type of knowledge.

Students who conceptualize research in this way often focus on the position of a scientist in relation to research. Their conceptualizations emphasize the notions of “objectivity,” “scientific methods,” “numbers,” “experimentations,” quantitative methods, and statistics. One student described research specifically as “the pursuit of information through the scientific method.” With respect to this conceptualization of research, our data indicates both complementary and mutually exclusive student identity claims. For instance, the identity claims emergent from the assignment of one student who was raised by two parents working in professions related to natural sciences, and who also was an undergraduate researcher in a university-based laboratory, suggests that he perceives himself as someone who is both comfortable with, and who can be a part of, the research process (defined primarily as scientific). On the other hand, another student with a similar conceptualization of research described herself as being “overwhelmed” by the scientific research process when encountering it in an undergraduate class; her narrative presented her position as being “intimidated” by the research process. The insider/outsider dynamic discussed with respect to other conceptualizations of research is thus present here as well, although in this case the tension revolves around familiarity and comfort with the scientific process, something that for some students has been garnered through previous experience and in one instance was mentioned as a goal to be achieved through the research methodology class in which they were enrolled. In other words, students’ positionality vis-à-vis research, when it is presented as “science,” is based upon exposure to the research process and to situations where the scientific method is utilized, which position students either as an insider or outsider.

### Research as a Situated Practice

Finally, 3 students discussed research in terms of it being a practice situated in a community of researchers (i.e. the process of peer review and critique in the public domain). We include this perspective here to illustrate the range of conceptualizations. For these students, research entails a communicative action that involves more than one actor and is examined based on certain norms and standards created by a community of researchers. For instance, one student noted, “Sharing the results with the scientific community is an essential part of research.” The objectivity and the validity of research can be confirmed by others within the community by the discussions and further explorations

of the topic by others in the field.” Another student wrote, “Getting as many viewpoints as possible is another aspect of research. This can help in discovering confounding variables or just giving you a fresh look might help you to look at your research in a way you never thought of before.”

In contrast with the other conceptualizations, this perspective places less of a focus on outcomes or technical knowledge, but rather brings the researcher towards the center of the research practice and requires an ability to reflect on the practice itself. Students who conceptualized research in this way did not position themselves as outsiders but rather as part of a community, even if they see themselves at its periphery in this stage of their lives. This can be seen in the essay response of a student who wrote, “Another aspect of research that I find to be especially significant is that the process of research is cyclical in nature. In other words, research is never “finished.” There are always unanswered questions and researchers are always curious... As we continue to discover new and improved methods of obtaining data, research fields will continue to grow.” Here the use of “we” to refer to the research process suggests that the student sees him/herself as part of, and capable of moving closer to the center of, the research community. A few other students also used “we” and “our” in their statements, signaling identification with the research community, for instance: “Our assumption about reality and our knowledge are going to affect the methodology we adopt” and “...research is what we do to find answers to questions: What are things like? Why are they that way? What would happen if we made a change?” Notably, however, this conceptualization stands in critical relation to the others in the degree to which it was expressed – very few students described research in relation to a community of researchers *or* used language that positioned themselves within the research process or community.

### Exploring Pragmatic Fissures

Our analysis of research conceptualizations and identity claims helps us to grasp how identity claims relate to student understandings. Sometimes we grasped tensions or disjunctures between identity claims and students’ conceptualization of research, and other times we noticed that the relationship between the two assumed one of continuity and complementarity. In this manuscript our primary focus is on the disjunctures, due to the pedagogical insights these disjunctures can provide to us as methodology instructors. We discuss pedagogically relevant examples of pragmatic continuity as well.

Returning to the example of the student who understood research as “objective,” in her response,

recall that she had concluded that she herself is a practitioner rather than a researcher. Most of our students thought this way. The tension between how she sees herself and how she views research provides an explanation for the disjuncture in narrative form and content: the reason why she distances herself from research may be due to the distance she feels from being part of it in relation to the way she conceptualizes its validity. In other words, this student is a practitioner, and it is okay for a practitioner to use narrative form to talk about her understanding of research. Yet, on the other hand, her understanding of research as “objective” and formal may also function as a barrier that impedes this student from identifying herself with research and the research process.

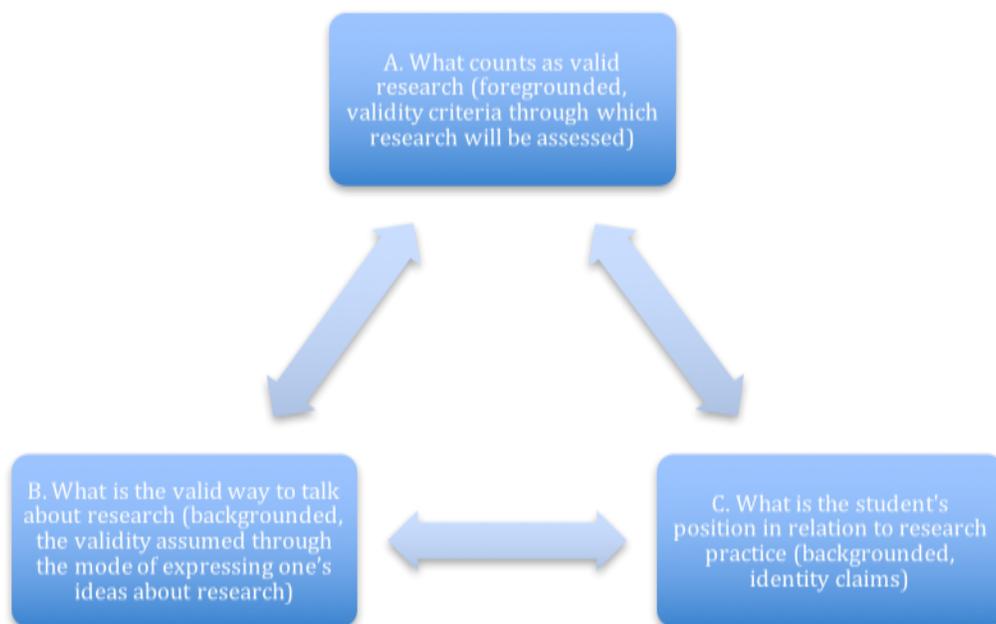
Another example of this tension can be seen in the words of the student who wrote, “I think of research as something that scientists, people in think tanks, or people with PhDs do.” This constitutes a claim about the nature of research, reflected in the content of the essay response. Yet there is a disjuncture between this statement and the student’s continued response, “I have so rarely done intensive research that the concept still seems a bit foreign to me, a bit undefined.” This tension is present not only in content, but also in the nature of language utilized in the narrative: whereas the initial statement is declarative and presented with confidence, the student’s later comment suggests uncertainty

through the use of terms such as “a bit” and “undefined.” The linguistic differences between the first and second statements reflect the tension between the student’s conception of research and his or her own sense of identity in relation to it.

This tension between the two aspects of validity elucidated in student conceptualizations of research and their own identity claims exemplifies the concept we refer to as “pragmatic fissures.” Specifically, these fissures lie at the intersection of the two aspects of validity and students’ own understanding of their identity. We suggest that they are “pragmatic” fissures both because they reflect a pragmatic element of students’ communicative acts, as discussed above, and because we see these tensions as having practical ramifications for learning. These fissures open spaces for teachable moments by allowing us to consider different pedagogical approaches that might enable a broadening of student perspectives on research and themselves as researchers, while still respecting the identity claims that they express.

In considering the concept of pragmatic fissures, it is helpful to think about the relationship of the three theoretical concepts discussed in this paper (what constitutes valid research, what constitutes valid ways of discussing research, and how do students perceive themselves in relation to research), as presented Figure 1.

Figure 1  
*Interrelationships Between Research Validity and Identity Claims*



A careful examination of these relationships suggests that pragmatic fissures in fact exist at multiple levels and that pragmatic continuity may also provide a space for pedagogical engagement. In our opinion, the complexity that the fissures reflect is intellectual material worth engaging. First, in examining the relationship between A (valid research; validity aspect I) and B (valid ways of discussing research; validity aspect II), we found the pragmatic fissures when our analysis went from the content/foregrounded level of “what is counted as valid research” to the deeper, pragmatic/backgrounded level of “what are valid ways to talk about research.” Specifically, fissures were expressed as a disjuncture between the content of student responses and the modes of expression utilized to articulate student thoughts. As noted above, the fissure was not present in all student responses; however, it is a salient fissures for many of them.

Second, we examined the relationship between A (valid research) and C (student identity claims). Our analysis suggests that while there are fissures here, they do not always lie at a disjuncture between students’ understanding of research and their own positionality. The reason is that, for example, if a student believes that research is valid only if it is conducted by experts and then he claims that he is not an expert, there is no semantic incoherence. He first defines valid research and then counts himself as someone who cannot do valid research. However, although this student defines himself as an outsider of the research according to his own definition of research, he has to stay in the classroom to study how to do research. Here, therefore, there is a fissure at the level of action orientation, as opposed to the expression-related fissure discussed above.

In our analysis, we did note some connections and coherence between A&B and A&C, but it is the disconnections/tensions between them that drew our analytic attention. However, in terms of the relationship between B (valid ways of discussing research) and C (student positionality vis-à-vis research), which are both backgrounded, there might be some coherence that deserves attention. For example, there are many examples in our data of students who believe themselves to be outsiders to research, using modes of expression inconsistent with their foregrounded understanding of valid research (say, a narrative form) to express their ideas about research, but we seldom see students who believe themselves to be research outsiders expressing their understanding of valid research using a mode of expression consistent with that conceptualization or understanding. That is to say, students may implicitly understand certain modes of expression as non-research-oriented (for example, narrative forms of expression), and utilize those modes as ways of highlighting the tension between their perspectives regarding valid research and

their own claims as non-research-oriented individuals. Here, therefore, it is the congruence between a student’s positionality and understanding of what constitutes valid modes of discussing research that opens up possibilities for pedagogical innovation and course instruction as a whole, as we discuss in the section below. Coherence across backgrounded claims is interesting, and the disconnect between backgrounded and foregrounded claims might be a site for further exploring the pragmatic fissures that have caught our attention.

### Discussion and Conclusions

As a whole, the four conceptualizations of research presented in this manuscript—problem solving, expertise, science, and as a situated practice—reflect a tension between externally- and internally-oriented views of research. In particular, the concept of research as problem solving emphasizes an external or product-focused orientation in which research is assumed to exist outside of the researcher. This concept aligns with what Brew (2001) refers to as the “domino variation” of research conceptualization, particularly with respect to considering research as a series of steps or elements to be synthesized, as well as (to some degree) with Pitcher’s (2011) metaphor of “research as constructive.” It can also be linked to what Weber described as purposive action, or in Habermasian terms, instrumental action: action undertaken in order to achieve a specific end (Habermas, 1981; Merton, 1936; Weber, 1925).

The concept of research as science also reflects an external orientation: the emphasis here is on a series of objective steps that make up the research process, independently of the researcher herself. In contrast with the concept of research as problem solving, however, conceptualizations falling into the category of research as science are process-oriented rather than product-oriented. In other words, this conceptualization focuses on the steps undertaken as part of conducting research rather than on the end result. This conceptualization best aligns with the description of research as “analytical and systematic inquiry” as categorized by Meyer and colleagues (2005). It is also closely related to the conception described above of research as expertise, particularly in the sense that the expertise referred to is primarily expertise in the specialized set of skills that are part of the systematic research process. However, there seems to be a salient difference between these two conceptualizations with respect to how students see themselves in relation to research. Students describing research as science are aware (at least in a general sense) of the steps that make up the research process; while they may not view themselves as individuals who engage in that process, this separation of self from the research process,

according to student essay responses, seems to be due to lack of exposure or training.

On the other hand, although “research as expertise” also entails exposure to, and facility with, specialized skills, this conceptualization seems to emphasize an internal characteristic that is not present in the conceptualization of “research as science.” In other words, the expertise gained through training as an academic or formal researcher is presented as something that these students – graduate students who are not going into academia but who see themselves primarily as research consumers – are not doing themselves. While students may have some exposure to research and may have even conducted research as part of their undergraduate or graduate courses, they do not see themselves as having sufficient skills or having been socialized into an identity that positions them as a part of the research community.

In contrast, the concept of research as a situated practice does not place students conclusively as insiders or outsiders. While students did not necessarily utilize language in their responses that placed them within the community of researchers, their responses, both in content and tone, were not characterized by the stark insider/outsider dichotomy emphasized in those conceptualizing research as “expertise.” On the other hand, the conception of research as expertise is similar to the conception of research as situated practice in the sense that, like the “journey” and “trader” variations described in Brew’s (2001) study, it is not characterized by an external or product-oriented orientation. The conception of research as situated practice, in particular, emphasizes the idea of research as a process that is undertaken by a community and that is cyclical rather than a linear or step-by-step process in which an individual researcher moves from initial question to knowledge building. In this sense, it can be characterized as an example of what Habermas (1981) refers to as communicative action – action oriented towards achieving understanding. In other words, unlike instrumental or purposive action-based conceptualizations of research, this conceptualization emphasizes the inter-subjective nature of knowledge building and the necessity of communication as part of the research process.

What are the implications of these specific conceptualizations? First, we note that the tensions between conceptualizations and accompanying identity claims implicate the surrounding social and cultural milieu that socialize students into certain beliefs about research. Specifically, the conceptualization in our student responses of “research as expertise,” along with the accompanying identity claims positioning students as outsiders to this form of research (a positionality nearly universal among those students conceptualizing research in this way) suggests that there are norms that

socialize students into believing that research must be conducted in a university setting, by research experts, often using a specific method (hypothesis testing), in order to be considered valid.

The seeming socialization of individuals into believing that only certain forms of research are valid is perhaps a reason for the existence of the “pragmatic fissures” we discuss above. As such, we suggest that a second implication of our analysis is its significance in terms of pedagogy for teaching research methodology. Specifically, we would like to suggest that it is important to understand “pragmatic fissures” as a pedagogical opportunity instead of a problem. Identifying these fissures is an important first step that can provide insights into our students’ thought processes and, therefore, opportunities for us to make pedagogical changes that improve the effectiveness of research methodology instruction. It provides us, as instructors, with a space where we might be able to integrate students’ positionality or identity claims into the content and structure of research methodology courses in a way that respects student identities, but ideally also allows them to develop broader conceptualizations of research and the research process.

At a concrete level, integrating learners pedagogically means, first of all, undoing methodology courses as perpetuating canons of knowledge. Instead, we suggest that an introductory methodology course can serve as a critique of, and engagement with, the concept of “research,” including as it is related to conceptualizations in the cultural context as a whole, to make the content more relevant.

Concretely, using the concept of “pragmatic fissures” also means considering in what forms or in what contexts research *is* relevant to our students. In our own classes, we emphasize the importance of practitioner-focused and non-traditional forms of research, *alongside* but not replacing discussions that focus on specific research techniques or steps in the research process. In other words, we try to help students find elements of the research process with which they can identify, regardless of whether this is research as a hypothesis testing endeavor in an academic setting or not. For instance, as many of our students are K-12 teachers, we discuss informal and formal classroom assessments as research tools that help generate usable knowledge; we similarly consider tools our counseling students can use to improve their practice. We also integrate into both readings and class discussions/activities materials that are not scholarly in nature but highlight research as it is both practiced and written about in a wide range of settings outside of academia: for instance, survey results as they are presented in popular media or evaluations carried out in organizational contexts. We also work to help students begin questioning the social norms around the

infallibility of numerical data—for instance, by having them engage in activities requiring interpretation of “unclean” data sets—in the hope that critiquing norms around certain elements of research can help dismantle a belief that “valid” research is immune from individual interpretation. Importantly, we do not discount the importance and relevance of specific skills; however, we try to help students understand that these skills are useful in a range of settings and that research itself is broader than what they often think of when they first enter our classrooms.

In addition to the concrete steps outlined thus far, we suggest that the very act of acknowledging and discussing the concept of pragmatic fissures with our students can help shed light on the way that research is inextricably linked with identity as well as with broader socio-cultural norms. Asking students to reflect on how they conceptualize research and on what in their own background or experiences has shaped that conceptualization—as we did in the assignment serving as the basis for this manuscript—is a necessary step, but only a first step, in helping elucidate these connections. Additionally, by reflecting on potential sources of tension and congruence between students’ conceptualization of “research” and their own research positionality, it may be possible to begin dismantling taken-for-granted assumptions about research. Indeed, close attention to both fissures and congruence between students’ conception and experiences as they are recognized in class discussion and assignments can afford ongoing opportunities to enhance student learning and engagement. Lastly, opportunities for looking closely at the relation students assume with research may have relevance for students outside the classroom and allow for a shift in their engagement with research in professional settings as well.

Beyond our own instruction, we suggest that the concept of pragmatic fissures is an important one for improving the teaching of research methodology in university settings as a whole, not only in terms of pedagogical techniques, but also in relation to methodology texts. Most existing textbooks (Creswell, 2012; Frankel & Wallen, 2009; Gall, Gall & Borg, 2006; McMillan, 2011) privilege discussions of research *methods*, which are often conflated with methodology and methodological approaches. This is accompanied by a minimal or lack of focus on the philosophical and theoretical foundations of research methodology, which serves to reduce research to a set of steps or techniques that must be followed in a linear manner. As such, existing texts reinforce a certain conception of research that might disengage students whose own conceptions do not align with what is written in the textbook; the way research is presented in these texts can also reinforce a sense of alienation or exclusion from the research process for some students.

Ultimately, therefore, we encourage instructors of research methodology and writers of research texts to take a more inclusive view when presenting the concept of research to university students.

Finally, from a methodological standpoint, we also wish to note the importance of a holistic, pragmatic analysis for highlighting the presence of pragmatic fissures in speech acts (in this case, in written student responses to an assignment prompt). As discussed above, our own analysis is based not only on thematic or semantic content, but also on writing style, narrative structure and form, and language. With only a thematic analysis, our ability to uncover implicit meanings is limited to what is directly stated in the text. In fact, this analytical approach alone may pose risks that limit our understanding of students’ conceptualization within the scope of positivism, the very limitation that we try to move away from in our teaching. In contrast, a reconstruction of the way the two aspects of validity are implicated in students’ textual performances and involving their own positionality vis-à-vis the research process necessitates an ability to draw out deeper, backgrounded, often very implicit claims.

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