Using a sociocultural approach to critical action research, this book is a primer in doing reflexive, authentic inquiry research in teaching and learning for educators as teacher | researchers. Rather than the artificial dichotomy between theory and practice, the roles of teacher and researcher are instead seen in a dialectic relationship (indicated by the symbol “|” in teacher | researcher) in which each informs and mediates the other in the process of revising and generating new knowledge that is of benefit to those being researched.

In addition to providing a theoretical foundation for authentic inquiry, Being a Teacher | Researcher provides a detailed framework with ideas and strategies that interested educators can apply in exploring teaching and learning in both formal and informal settings. It provides concrete examples of how to use authentic inquiry as a basis for collaborating with others to improve the quality of teaching and learning while cogenerating new theory and associated practices that bridge what has been described as a theory-practice divide. Included in this book are how to plan and carry out authentic inquiry studies, choosing appropriate methodologies, methods of data collection and analysis, negotiating research with human participants, using authenticity criteria and characteristics, and addressing challenges and conflicts for teacher | researchers. As a primer, this book serves the needs of many different populations including prospective and practicing teachers, teacher educators, beginning researchers and seasoned researchers who are making changes to what and how they research.
Being a Teacher | Researcher
Bold Visions in Educational Research
Volume 50

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Bold Visions in Educational Research is international in scope and includes books from two areas: teaching and learning to teach and research methods in education. Each area contains multi-authored handbooks of approximately 200,000 words and monographs (authored and edited collections) of approximately 130,000 words. All books are scholarly, written to engage specified readers and catalyze changes in policies and practices. Defining characteristics of books in the series are their explicit uses of theory and associated methodologies to address important problems. We invite books from across a theoretical and methodological spectrum from scholars employing quantitative, statistical, experimental, ethnographic, semiotic, hermeneutic, historical, ethnomethodological, phenomenological, case studies, action, cultural studies, content analysis, rhetorical, deconstructive, critical, literary, aesthetic and other research methods.

Books on teaching and learning to teach focus on any of the curriculum areas (e.g., literacy, science, mathematics, social science), in and out of school settings, and points along the age continuum (pre K to adult). The purpose of books on research methods in education is not to present generalized and abstract procedures but to show how research is undertaken, highlighting the particulars that pertain to a study. Each book brings to the foreground those details that must be considered at every step on the way to doing a good study. The goal is not to show how generalizable methods are but to present rich descriptions to show how research is enacted. The books focus on methodology, within a context of substantive results so that methods, theory, and the processes leading to empirical analyses and outcomes are juxtaposed. In this way method is not reified, but is explored within well-described contexts and the emergent research outcomes. Three illustrative examples of books are those that allow proponents of particular perspectives to interact and debate, comprehensive handbooks where leading scholars explore particular genres of inquiry in detail, and introductory texts to particular educational research methods/issues of interest to novice researchers.
Being a Teacher | Researcher

A Primer on Doing Authentic Inquiry Research on Teaching and Learning

Konstantinos Alexakos

Brooklyn College, City University of New York, USA
To Dina

Whose unwavering love and support have been the source of my strength.
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*Mitch Bleier*  

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Research in education has become increasingly irrelevant mainly because of entrenched methods that privilege systems of logic associated with a “scientific method” that is consistent with crypto-positivism (Kincheloe & Tobin, 2009). Unsatisfactory outcomes of this situation have been pervasive acceptance of oversimplified approaches to teaching and learning about research (e.g., retention of a bankrupt system of classifying research courses as quantitative, qualitative, and mixed method), research designs that align with oversimplified models of social life, acceptance of reductionism (i.e., focus only on a small number of variables), and the assumption that research participants are a sample of objects from a population of interchangeable objects (i.e., statistical generalizability). It would be bad enough if this system of logics was one of many. However, the mainstream regards its methodology and associated methods as the only game in town. For decades crypto-positivism has provided a foundation for mainstream scholars, and literate citizens accept its tenets as common sense. Continued adherence to this traditional, mainstream approach contributes to the emergence of serious questions about the survival of education. Increasingly, education lacks social relevance and is impotent to address grand challenges that face humanity and more broadly, the planet (e.g., climate change, health, sustainability). Konstantinos Alexakos seeks to disrupt mainstream trends using authentic inquiry research as part of a multilogical approach to research and education. Although this Primer will necessarily compete in a social system that is dominated by a one-size-fits-all model for research in the social sciences, I am optimistic that enough scholars will learn about and employ authentic inquiry research in a multilogical methodology that can contribute to a growing and persuasive body of scholarship to inform and improve the quality of social science research in educational settings.

An example of the marginal status of alternative approaches being emphasized by tacit adherence to crypto-positivism is that many researchers do not regard authentic inquiry research as a viable approach that yields trusted outcomes. In large part I think this is because authentic inquiry research does not embrace random sampling of subjects from a population and statistical analyses of data that enable research outcomes to be generalized to a population. That is, skepticism, and
sometimes antagonism are grounded in what our research is considered not to do. Critics adopt deficit perspectives that identify fatal flaws, as they perceive them in a study, and judge accordingly. Judgments are warranted in the context of their value system, which is saturated with crypto-positivism. Critics expect “good” research to include, among other things, fixed and enduring research questions as starting points, research hypotheses framed in terms of operationally defined variables, and empirical analyses and interpretations that interconnect variables and sample, all resulting in findings that can be generalized to a population, and contribute to a peer-reviewed and accepted knowledge base.

In his Primer, Konstantinos goes against the grain. He presents his own biography as a teacher-researcher and in so doing shows a journey that eschews crypto-positivism and raises questions about the purposes of research, using constructs that include collaboration, difference, epistemology, ontology, and axiology. Furthermore, Konstantinos highlights the importance of listening to and learning from all participants in a study – especially those who are different. In his valuing of authentic inquiry and his explication of its theoretical underpinnings and associated methods he maintains a bold vision that offers the hope that research with teachers and learners will be transformative.

A second example of marginal status of authentic inquiry research is the important idea that research should benefit all participants. Design and enactment should afford all participants changing their ontologies while learning from and about others’ perspectives in ways that show value for and respect of different standpoints and practices. Ethical conduct and respect are themes that permeate the chapters of this book. Konstantinos provides concrete examples of how to do authentic inquiry ethically, protecting all individuals from harm, ensuring that all benefit from being involved in the research, and allowing everybody to transform both the design and enactment of research. The approach stands in contrast to mainstream approaches that embrace crypto-positivism and invoke statistical generalizability.

Konstantinos emphasizes that authentic inquiry research does more than pay attention to ethics and beneficence. As well, the use of authentic inquiry contributes to knowledge by producing theory and practices that can be used to improve the quality of teaching and learning. A consistent feature is Konstantinos’s respect for others, including those who constitute the IRB. The Primer provides examples of how authentic inquiry research can be presented to the IRB in ways that maximize the chances of approval. In similar fashion Konstantinos provides concrete advice on how to write and publish authentic inquiry.

A different perspective offered by authentic inquiry and its potential to move the field of education away from the mainstream is that most examples provided by Konstantinos are associated with college classes. This is a departure from the mainstream, which tends to emphasize pre-K-12 education. However, it is clear that authentic inquiry research on teaching-learning can be situated in virtually any context. Once again, this is a bold vision. Konstantinos broadens the focus on learning content to include, as central, emotions and wellness. He even addresses
affordances of non-Western knowledge systems, such as Jin Shin Jyutsu. As a step in the progression of becoming aware of frameworks used by teacher | researchers, valuing difference, beneficence, and polysemia, it is liberating for social science researchers to shift their gaze to everyday life and the conduct of authentic inquiry in the myriad places where teaching | learning are continuously enacted. By laying out the affordances of authentic inquiry, Konstantinos provides a bridge for all researchers in the social sciences to cross toward new horizons and embrace a vista of expanded possibilities. In an era characterized by grand challenges, it is refreshing to have the bold vision of authentic inquiry research presented in such a clear, coherent, and appealing fashion. My hope is that the researchers | scholars | teachers will embrace and further elaborate the vision.

REFERENCE

Research that is polysemic and polyphonic, like the work described in this volume, can, should and often does encompass and reflect many more voices and viewpoints than those of the teacher-researchers and co-researcher/participants involved in the day-to-day experiences in the classroom or other research environment.

As part of a university research squad, which includes Konstantinos, I was peripherally involved in the research projects described in Chapter 11. Our research squad is composed of a somewhat fluid group of professors, doctoral students, other graduate and undergraduate students, visiting scholars, friends and associates of the projects and scholars at our large, urban, public institution.

The research squad is both a plastic and malleable entity that can be, and is shaped to the continually changing needs of its participants. One of its weekly sessions might consist of a participant bringing video data to the group for a structured session designed to help make sense of puzzling events in a college classroom; the next week might see a researcher sharing a draft of an article in-progress for feedback before publication; another session might have visitors from a university in Brazil or New Zealand presenting their own work that has parallels, similarities, and contradictions with the work going on in the squad; yet another session may be devoted to giving time for several squad members to “test drive” their dissertation defenses. Members of the squad also meet and work together in many and various combinations.

During the study discussed in Chapter 11, I had the opportunity to be part of long discussions about various aspects of the research and the experiences upon which it was based. It was remarkable how different the stories of different participants were in describing and reflecting upon the same events, even in the presence of videotape and other data. At times it was as if the participants were describing completely different events from each other as they depicted their shared experiences. Of course, there were points of resonance and agreement, but the dissonances, contradictions, conflicts and complete non-intersections often produced the richest knowledge and understandings. The comings together and meaning-making resulted from many different factors including cogenerative dialogues, squad discussions, and in my case, the inclusion of peripheral and “outsider” voices and viewpoints. This all is made possible because of the culture of respect and acceptance of differing voices and viewpoints that characterizes our research squad.
My own current research is not closely related to Konstantinos’s work, but our interactions in and outside of squad meetings and our discussion of each other’s and fellow squad members’ professional work, have moved my research forward, and, in several cases, changed its direction completely. Research that is a thriving multi-headed beast with a life of its own, provides views of a world that is rich, varied, and complex in ways that the lone researcher or the traditional, positivistic social science research paradigm with its a priori questions and limited scope cannot begin to address. Polysemia and polyphonia in the context of authentic inquiry research, which forms the core/focus of this book, produce a picture of the messy world of lived experience in ways that emulate that lived experience. Because of its connections to lived experience, the knowledge produced may be more useful to research, researcher, researched, and the world(s) which all of us jointly construct, reconstruct and inhabit.
PREFACE

Using a sociocultural approach to critical action research, this book is meant as a primer for educators in doing reflexive, authentic inquiry research in teaching and learning as teacher/researchers. Rather than the artificial dichotomy between theory and practice, teacher and researcher are instead seen in a dialectic relationship in which each informs and mediates the other (hence the use of the |) in the process of revising and generating new knowledge that is of benefit to those being researched. In addition to providing a theoretical foundation, this book provides a detailed framework with ideas and strategies that interested educators can apply in exploring teaching and learning in formal and informal settings. It discusses and provides examples of how to plan and carry out authentic inquiry studies, including methodologies, methods of data collection and analysis, working with human participants, authenticity criteria and characteristics, challenges and conflicts for teacher/researchers.

Like good hermeneutic inquiry, the focus of this book on authentic inquiry was a bit unexpected to me. It emerged as I was writing it. The intent from the beginning was to write a primer for teachers interested in researching their own practices and doing research in their own classroom. Authentic inquiry organically emerged as the way to do it.

Through my collaboration with Ken Tobin these past few years, my classrooms have been the center of much ongoing research, by myself, my graduate and doctoral students, as well as many other participant researchers. It was in negotiating through some of the conflicts and contradictions I faced as a classroom teacher as a researcher and as an educator for new teachers and researchers, that I began to use and focus on his authenticity criteria, and examine sociocultural theory and hermeneutic phenomenology more deeply.

This book went through two or three stages of writing. From the beginning, my intent was to write a book for teachers as professionals, not for teachers as technicians, generating their own knowledge as they critically and systematically investigate teaching and learning theories and practices. I started by writing up what I thought any good research book for teachers should include – not just the mechanics on how to do such research and anecdotes from my own work, but also the theory behind it. Then as I realized that the book should be about doing authentic inquiry research. This led to the development and inclusion of the authentic inquiry heuristic and necessitated the rewriting of the rest.

Lastly, the manuscript was then sent to some very critical though kind reviewers who pointed out areas that were not clear or that needed further development. These last revisions alone took me over a hundred drafts to get through. I am very proud of the final product. I hope you, the reader, find the product relevant and useful in your own research and teaching.
ACKNOWLEDGEMENTS

This project would have been inconceivable had I not had the good fortune and privilege of working closely with Ken Tobin for the past few years. Working alongside him helped me develop as a teacher | researcher and as a person. He has been a great friend and mentor.

In writing this book, the person who helped me shape it more than anyone else was Malka Perelman Akerman. Especially with the early drafts, her unrelenting “Make it personal!” and “Who is your audience?” helped me find my stride and gave this book its personality.

I am also very grateful to members of our research squad(s) for their very helpful comments and criticisms: Leah Pride, Shequana Wright, Corinna Zapata, and Mitch Bleier.

Finally, I wish to thank my family for their support and understanding, my wife Dina in particular. Her unwavering love and support have been the source of my strength and fortitude.
CHAPTER 1

INTRODUCTION

The longer I am in this profession, the more mindful I become of the complexity of teaching and learning, our practices, our emotions, how we communicate across boundaries, and how we change and are transformed in the process. Perhaps the greatest influence in reshaping how I think of teaching and learning and what constitutes knowledge has been the research I have done in my own classroom. Researching our own practices as teachers contributes to our learning, understanding, and the growth of ourselves and our students. Beyond these obvious benefits, what I have found very empowering and emancipatory is that we as teacher-researchers become the creators of new knowledge and theories from which we, as well as other teachers, can share and benefit.

Throughout this book, authentic inquiry is developed as a research framework. It is based on collaborative research and used to improve practice. Rather than privileging one type of knowledge over another, or one worldview over another, authentic inquiry emphasizes polysemia and polyphonia. It is holistic and recursive. The researched are invited to be co-researchers. Our inquiry changes as we learn from the research, as we too become transformed by the experience. We do not wait for the research to be concluded to suggest changes; instead, interventions are implemented and refined while the research is ongoing and become part of that research. Rather than separating “theory” from “practice” and “research” from “findings,” each of these exist in a dialectical entanglement with the other in its pair. I use the phrase “teacher-researcher” to express the dialectical relationship, the mutually contingent and emergent characteristics of the two that mediate and are mediated by the other (Alexakis, forthcoming). Teaching, learning, and research are interrelated and dialectically entangled processes.

Teachers generally are not encouraged or taught how to research how they teach, how they learn, how their students learn, what constitutes knowledge, or how to analyze classroom interactions. This book aims to fill the need for a primer for educators interested in using authentic inquiry to conduct such research, and provides the theoretical background, methodologies, and methods to get started.

TEACHER VOICES IN GENERATING THEORY

Teacher inquiry into one’s own practices may be of limited scope such as self-improvement, part of a wider, more formal and complex research project with the goals of public dissemination, or something in-between. As professionals, we as
teachers often ask, “How am I doing” “Is this the best way to teach?” How do my students learn?” “Is this working?” “What can I do differently?” “How can my class become more enjoyable?” Perhaps we even push beyond questions of “practicality” in the classroom and explore emotional climate, race, gender, class, culture, equity, and inclusiveness. All are important elements of inquiry in teaching and learning, as are societal structures such as schools and schooling, educational policies, teacher assessments, official and unofficial curricula, and questions of what constitutes “knowing,” “knowledge,” “teaching,” and “learning.” While undertaking such inquiry into teaching and learning, we may notice that how we stand in front of the classroom or how we talk to our students may change how students respond to us. We may find that we actively encourage some, while inadvertently marginalizing others. This may be because of their gender, their race or just that they are somehow different in the way they dress or the way they walk or talk. It is possible that until we began our inquiry, we were not aware of our own reactions. Similarly, we may not have thought much about what is communicated through our voice or facial expressions or how our interactions with students and colleagues can affect how we feel or what actions we take. Our value systems and those of others, which up to now seemed “okay,” all of a sudden may take on different meanings and values.

For those of us who are passionate about being teachers, teaching and learning are incredible joys! Like a life-long friend, the pursuit of teaching and learning, contributing to the betterment of society and hopefully the world, is emotionally very rewarding and exhilarating. Many of us set out to become teachers for these reasons. Despite the attacks on teaching so in vogue these days, we remain in the profession because we continue to enjoy being teachers and we believe in teaching, even if the professional rewards have diminished or perhaps never materialized. Unfortunately the current political paradigm favouring policies aimed to privatize, dismantle, or re-segregate public education has deliberately attacked and marginalized teachers’ voices. Teachers are told that their classroom knowledge does not count in generating educational theory and educational policy. We are told teachers’ knowledge is too subjective, too idiosyncratic, too localized. How do we as teachers respond to these pressures and added stress? Do we go home and cry at night, or become sick? Researching our and our students’ emotions and wellness, becoming aware of expressed emotions and physiological responses, and creating interventions to help alleviate or minimize the negative impact on our health these stressors may have, may make the difference between us (we and our students) persevering or instead becoming depressed, sick and burning out.

The teacher research that is officially encouraged and valued by mainstream educational policies is not the kind that is interested in teacher or student empowerment, or that explores inequity in schools or social justice. Instead, mainstream research is limited to investigating “why your students did not do so well on their last state exam,” or “why they are not learning this topic.” The stated, or unstated, intent is not to investigate the issues of why schooling has failed and continues to fail the students, the teachers, and our society, but to shift the blame to the teacher as if teaching is
merely about teaching the content. While we understand that part of teaching is about the content, there are so many other things that influence learning and teaching.

So how do we improve learning and teaching? If teacher knowledge really does matter, how should we go about investigating such knowledge and how do we further develop it? The answer is, in part, through inquiry as teacher researchers. In working with preservice and inservice teachers, I have found that they must be convinced that their knowledge is real and meaningful – that, as teachers, their knowledge as it emerges out of their everyday experience does matter. While traditional “objectivist” research may not value research done by teachers, there is a long tradition of teacher research within other theoretical frameworks, like hermeneutic phenomenology and various forms of critical ethnography.

Undoubtedly some readers will come to this book already convinced that “objectivity” based on outside, impartial authority is an excuse used to empower one type or another of knowing and knowledge for the benefit of the status quo. Many may even believe that this “objectivity” in teacher research is a construct used to disenfranchise and marginalize teachers and their students, especially those that have been historically disadvantaged by the system. Present examples of teacher, student, and school assessment that are based primarily on political and economic agendas abound. That such “objectivist” research is privileged over teachers doing their own research is not surprising, as it is they who benefit from the exclusion and belittling of teachers that decide what is privileged. In contrast, authentic inquiry research is a useful tool and methodology towards teacher empowerment and professionalism.

THE “OBJECTIVITY” OF RESEARCH, KNOWLEDGE AND KNOWING

But does research done by the teachers themselves “count?” Is it not too “subjective?” As classroom teachers, don’t we need outside researchers setting up and guiding the work so that we may have “objectivity” in the research? That teachers conducting research in their own practices are subjective is irrelevant to whether such research is “valid,” as all research that requires human interpretation and value judgments is subjective. What is important is that teachers conducting such inquiry do so systematically and rigorously, are open to difference, and include the participants’ voices and interpretations in what is being learned, are honest in their stances, and disclose and are overt in every aspect of their research. Arguments about objectivity are just smokescreens for disempowering us as teachers and privileging and making “valid” those in the assessment business who can somehow magically transform themselves into uninvolved and neutral outside observers despite their personal prejudices, biases and economic and political interests.

The popular conception of research as a set of procedures, “the scientific method,” taken at face value makes research seem above and separate from the persons that practice it. From such a perspective, research that follows this set of procedures is considered “scientific” or “objective” and thus can claim to be free of politics and personal and cultural biases. But as Steven J. Gould argues (Gould, 1994), science
itself can be fully objective is not only a myth that serves to cover up its human face, but that this pseudo objectivity is also harmful in that it is the creativeness of individuals that drives scientific progress. Biases and interests in research, as in science, can either impede understanding or lead to innovative thought and revolutionary breakthroughs.

I agree with Joe Kincheloe’s (2011c) argument that, rather than being limited to a set of skills, teacher knowledge is epistemological. Thus, research into what is “knowledge” is complex, situational, multidimensional, with multiple interpretations and “truths,” and encompasses questions of power and ideology. Because teaching and learning are re/produced and re/developed in ever-changing relationships and contexts that encompass conflicts and different perspectives, what constitutes teacher knowledge is complex and dialectical rather than linear. Researching questions of morals, values and power goes beyond “subject matter” and skills, but these questions are necessary in formulating critical professional practices.

WHY AUTHENTIC INQUIRY?

Why call this type of research authentic inquiry? Authentic inquiry research does not refer to some hypothetical “true” form of inquiry but instead is a framework for doing research (Tobin, 2014). Authentic inquiry is framed by hermeneutic phenomenology. It is interpretive, participant-centered, emergent from the research as the research happens, and contingent on what is being learned. It is dialectical, since it attempts to draw connections and interrelatedness, arrive at multiple views, and explore contradictions. It is authentic, for it embraces a set of values, criteria and characteristics proposed by Egon Guba and Yvonna Lincoln (1989) and adapted by Ken Tobin (2006) that address concerns of justice, power, and benefits in research.

Authentic inquiry criteria include that the researchers are not privileged over the researched. In the case of teachers doing research in their classrooms, authentic inquiry means that the positioning of the teacher as the researcher and their students as the participants does not privilege the teachers’ views, interests, and interpretations over their students’. The participants are not treated as “subjects” but as co-researchers, and multiple voices (polyphonia) and perspectives (polysemia) are included in the research and its interpretations.

Both researchers and researched are expected to become more aware and mindful and to learn and change as a result of such work. Thus the research will benefit those being researched. It does not privilege research generating theory over practices (Arendt, 1988), but values doing research to improve practices, and practice to improve theory. It includes a reflexive social inquiry component (Bourdieu, 2003) that obliges us to examine and reflect on our practices, our epistemological stances, our own relation to the past, present, and future within and outside of the controls of consciousness. These may include our social origins, embodied dispositions, situatedness, positionality, and trajectory, as well as habits of thought, shared beliefs, rituals, and values as researchers, as practitioners, and as participants.
AUTHENTIC INQUIRY AS A CONSTRUCT FOR SOCIOCULTURAL RESEARCH

Understanding its sociocultural foundations is critical to doing authentic inquiry research. Unlike traditional academic types of research where culture, individual identity, goals, and values (of the researcher and the researched) are mostly made invisible, in sociocultural research these are part of the underlying questions to be researched and interpreted.

Framed by hermeneutic phenomenology (Guba & Lincoln, 1989) as applied to educational research (Tobin & Ritchie, 2012), and learning from Ann Brown’s design studies research (1992), authentic inquiry research is dialectic, fluid, and organic. It is emergent and contingent and, thus, continually changing. The research analysis starts as soon as the study begins, it is ongoing, and includes multiple perspectives, voices, and interpretations. While we may start with a focus of inquiry, researcher and participant feedback, interests, and interpretations of what is learned constantly are used to re-evaluate and rethink our inquiry and interventions, examine underlying assumptions, and create new understandings and knowledge. As new questions, practices, and interventions emerge from the ongoing research, our inquiry shifts. It is transformative to itself, the researchers, and the participants.

This holistic approach is exhilarating in its commitment to transformation, justice, and beneficence, liberating us from the stagnation and hegemonic values and agendas that are part of the fictional objectiveness of the “traditional” crypto-positivistic research designs and methodologies. Questions dealing with problems of practice are investigated, as are actions and interventions meant to address them. This approach includes exploration and discovery, but also tries new practices and solutions to address emergent issues. These new practices and interventions also become part of the “findings.” That is, research is part of, and an outcome of, itself.

Our identities undergo a continual shift because of this work. We change as we interact with ourselves, with others, and with our environment. The experiences we have change us as we, too, change our experiences. What is and how we experience an event or an interaction is refracted through who we are, our emotions, and how we think. Dewey and Vygotsky viewed the process of experience as ongoing, where the individuals mutually mediate one another (Roth & Jornet, 2014). Vygotsky used the Russian term “perezhevania” to describe the emotional and cognitive experiences we have and how we in turn process, interpret, and respond to them because of these experiences (Vygotsky, Veer, & Valsiner, 1994).

Unlike manuals on doing educational research that focus on either “qualitative” or “quantitative” methods as their primary and most important characteristic, this book addresses issues of authenticity criteria, reflexivity, context, values, interactions, “making meaning,” and analysis. Instead of the artificial quantitative and qualitative dichotomy by which mainstream research is bounded, authentic inquiry research may include both qualitative and quantitative data. The type of data collected and analyzed is framed by the authenticity criteria and depend on our research interests and goals, the resources available, what emerges while we are conducting this
research, what we decide to utilize to collect the data (methods and tools), and how we collect it.

In the traditional view of teaching and learning, the teacher stands up and delivers while the students, sponge-like, absorb this transmitted knowledge. Investigating the science of teaching and learning opens up a lot of possibilities beyond this very simplified and likely harmful view of learning. Such inquiry may be initiated at any site where learning and teaching take place, such as traditional schools, museums, parks, or even at home. Laughter, anger, prosody, facial expressions, and wellness are all important topics of research inquiry. Our study could involve our own emotions, thinking, and practices, as well as those of our students. What our topic is and how deeply and for how long we explore it will depend on us, the teacher | researchers doing the inquiry – our values and goals, the context of our study, the student participants if they are part of the study, and the resources available. Newly discovered possibilities and understandings have their own theoretical and classroom implications. We may try different approaches and experiment with different ways of thinking about teaching. Sometimes these new strategies or approaches will work, sometimes they will not, and sometimes we will just become more baffled by what we learn.

As multiple and diverse voices are empowered, reflexivity, learning from the other and from difference, become central. In becoming reflexive, the norms, morals, and values of all concerned (researchers and participants) become part of what may be investigated. Participants (other teachers, administrators, our students) are not “subjects,” but co-researchers. Their voices, interests, values, analysis, interpretations, and feedback become part of the research and the research findings, helping define emergent understandings, theories, and practices.

REFLEXIVE AXIOLOGIES AND EPISTEMOLOGIES

As I began writing this book on teachers researching their own practices, I realized that this could not be done without developing and discussing my own epistemological philosophy that frames such a research choice, especially as my philosophy contrasts with positivistic research. Questions of epistemology, what constitutes research, knowledge, and learning, emerged as central and essential. As such, I hope that the readers find the discussions on these topics salient and applicable to their own work and understandings as teacher | researchers. One element whose significance cannot be over-emphasized (though it is often forgotten in “normal” mainstream research”) is our axiology: the morals and values that we hold, and how important these are, for they frame and guide who we are and what we do, including our teaching, research, and decisions. Unlike positivistic research, where axiologies are hidden or made invisible, as researchers doing authentic inquiry into our own teaching and learning practices, we need to be aware of what our values and our moral are, and their strength. For many of us, these values, such as contributing to society, righting injustice, providing hope, or just plain love for what we do, may be
the main reason(s) why we teach and why we may undertake research into our own practices. Our axiologies and those of the participants, instead of being unimportant, are a major component of our research and could very well be the focus of our studies. These axiologies should be made explicit and be out in the open for anyone interested in our work.

**USING THIS PRIMER**

Different readers may use this book in different ways. Classroom teachers may focus more on the methods and methodology sections. Students in education programs may want to focus more on the organization of the research for a required thesis, while academic researchers may focus more on the foundational theory. Some may be interested more in teacher research while others more on doing authentic inquiry. The research could be in collaboration with others or alone. It is all good. What I would emphasize is that the different components of being a teacher-researcher, like the different sections and chapters of this book, are interrelated. Theory is not disconnected from practice, or disconnected from the way we view, theorize, and generalize about knowledge and learning. Each of these includes the others. Sometimes we might only be interested in the findings, while at other times the process of learning and growing may be as important, if not more so. When we focus on one element, we must not forget its interconnectedness and interrelatedness to the others.

This primer can be divided into 4 sections. The first section, Chapters 1–5, makes up the theoretical foundations and framework for authentic inquiry. The second section, Chapters 6–9, can be viewed as more of the operational side of doing research, a guide to how to go about it. The third section, Chapters 10 and 11, is two narratives from my own experience as a teacher-researcher. Chapter 12, meanwhile, is more a reflective/reflexive piece about the making of this book since, after all, writing a book is also a learning experience. It certainly transformed me in the process of this project! While Chapter 12 was the chapter written last, it brought big changes to many of the earlier chapters, especially Chapters 1 and 2.

The theoretical framework for authentic inquiry is not linear and therefore this book should not be thought of linearly. While the chapters are ordered in a numerical sequence, it is not necessary to read them in one. I definitely did not develop as a teacher-researcher in that order, nor were the chapters written in that order. With the exception of the final chapter (Chapter 12), Chapter 5 was the last major chapter to be written. Creating the heuristic for authentic inquiry changed the entire focus of this book. It was then that I realized that this primer was really about doing authentic inquiry research, and I went back and rewrote the first four chapters and many of the other ones. Like hermeneutic research, readers may choose to focus on one chapter more than others, or go back and forth to the chapters that capture their attention based on what they find the most important and useful at the moment.
Without a doubt, the first four chapters, especially Chapters 1 and 2, are very dense and may take a long time to read. Even now, it takes me a day just to read these chapters. Of all the chapters, Chapter 1 was the most difficult to write, while Chapter 2 was almost as tough. Theoretically, they represent a lot of learning for me and were very transformative to my thinking. My hope is that, as teacher-researchers become more and more familiar and experienced with research and develop their own theories of knowledge, teaching, and learning, they will find these chapters even more helpful.

The discussions in Chapters 2 and 3 are meant to be theoretical and historical resources for teacher-researchers who are interested in developing their own theories and practices within a sociocultural framework. Perhaps nowhere else in this book is the artificial linearity of the chapters more obvious than with these two chapters. The order of these two chapters could easily have been reversed. As I developed as a teacher-researcher-educator, I had to search for theoretical frameworks that were in harmony with my practices, my morals, my values, and my thinking. In the process, as I began to be drawn more and more into a dialectical, Vygotskyian, hermeneutic theoretical framework, these new theories, in turn, began to transform my practices and my thinking (my epistemologies, my ontologies and my axiologies, discussed later in Chapters 4 and 5). Readers can decide which of these two chapters would be best for them to read first, or may choose to leave both for later.

Chapter 2 provides a background on the sociocultural theory in which authentic inquiry is rooted. It includes a discussion of Lev Vygotsky’s theories on the social and cultural context of knowledge and knowledge creation (Vygotsky, Cole, John-Steiner, Scribner, & Souberman, 1978). Since much of authentic inquiry is about interactions and emotions, Mikhail Bakhtin’s work (1994) on dialogic discourse, polyphony and polysemy is discussed, as is the work of Randall Collins (2004) on rituals, Jonathan Turner’s on interpersonal interactions (2002), and William Sewell’s (2005) on symbols, meanings, and practices.

In Chapter 3, I discuss salient theory on research done on teachers, teaching, and learning, either by teachers in collaboration with outside researchers, or teachers reflecting on or doing research on their own practice. This includes Dewey’s writings on reflective practices (Dewey, 1910, 1929), Marilyn Cochran-Smith and Susan Lytle’s (1993) work on practitioner research and the difference between teachers doing the research and doing research on teachers, Joe Kincheloe’s (2003) writings on teachers as critical researchers, and Lawrence Stenhouse’s classic work (1985) on teachers researching their own practice through systematic and sustainable inquiry.

In Chapter 4, I discuss the methodologies teachers can use in doing sociocultural research in general and authentic inquiry research in particular, including generalizability, cogenerative dialogues, ethnography, hermeneutic phenomenology and design studies research, as well as many of the concepts, and methods used to frame this research. Also discussed are various “-ologies”: ontology, epistemology,
axiology, and methodology (and how methodologies are different from methods). Key to these discussions will be some of the work by Tobin as well as by Guba and Lincoln on methods and methodologies.

Chapter 5 focuses specifically on authentic inquiry research. Included is a heuristic (Alexakos & Tobin, 2015) that discusses many of the characteristics that can be used to frame, develop, and analyze authentic inquiry research, including using research as transformative, participatory research, inclusion of difference, participant input, authenticity criteria, and reflexivity.

Chapter 6 discusses the ethics, benefits, tensions, and potential issues that may arise as part of doing research as a teacher. Before starting any type of inquiry, it is important that teacher researchers consider the ethics, vulnerabilities, and any issues that may arise in the process or as a consequence of the research. This is especially so, given the dual role teacher researchers have in their classrooms as teachers and researchers: their responsibilities to their students in terms of required subject matter and grades being assigned versus the kind of knowledge production and data gathering needed, available time, potential conflicts, and potential student or teacher discomforts or vulnerabilities.

For those researchers who want to carry their research beyond just improving their own practice, Chapter 7 includes a discussion on the difference between doing research for publication or solely to improve our own practices, as well as doing research with human participants, Institutional Review Boards (IRB), human subject research approvals, and samples of consent forms.

Chapter 8 focuses on designing, planning, and doing a research project, using methodologies and multi-methods (such as video recordings), and creating interventions as part of a dynamic, reflexive process. It includes discussions on choosing research questions, frameworks, event-oriented inquiry, findings, and generalizability.

Chapter 9 discusses the various components in writing up the research, with descriptions of the various elements, such as finding and including a review of literature, issues of language, and use of references. It ends with a discussion on presenting the research. Within the hermeneutic framework of this book, the write-up and presentation plans are more organic than in mainstream-type research. Possible components are listed as guides.

Chapters 10 and 11 consider and reflect upon examples of two different types of research I did as a teacher researcher. Chapter 10 discusses my research with high school students taking a College Now-type of physics class. This was the first time I, as a teacher, undertook formal classroom research and I had to learn much about doing such research on my own. The classroom research discussed in Chapter 11, on the other hand, was part of a much larger collaborative project that included a second primary investigator, Ken Tobin, and a research squad of about a dozen graduate and Ph.D. students. This study also involved learning many new practices, though as part of a collective that presents teacher researchers with unique benefits and challenges.
The closing remarks in Chapter 12 wrap up this work with a discussion on research reshaping teaching and teaching reshaping research, as theory reshapes practice and practice reshapes theory.

Readers of the prepublication manuscript of this book had their own favorite chapters (and more or less did not agree). Some preferred the narratives in Chapters 10 and 11, others focused more on the “doing the research” part, especially Chapter 6, while yet others liked the theoretical discussions. This primer is meant to be read and used heuristically—that is, different chapters will emerge more useful and germane depending on the reader’s interests, intent, and needs. Their meanings, too, will be different for different teacher/researchers—and as the teacher/researcher changes, these meanings too will change.
CHAPTER 2

SOCIOCULTURAL THEORY AND TEACHING
AND LEARNING

… human essence is no abstraction inherent in each single individual. In its reality is the ensemble of social relations. (Marx & Engels, 1968, p. 29)

What are the theoretical foundations in doing sociocultural research? Teaching and learning embody dialectical relationships that frame and mediate interactions. As teachers, we contribute to how knowledge is created, recreated, and understood. In the process we ourselves are changed continuously and often unexpectedly. Teaching is not about the “transmission” of knowledge, but about the very complex process of learning through social interactions that include emotions, gestures, expressions, prosody, values, ethics, and many other biological and cultural relationships and symbols. Within the sociocultural framework presented here, what constitutes knowledge and knowledge production is viewed as problematic, provisional, speculative, and very political. In this chapter, I draw on some likely and perhaps some unlikely, sources in laying out such a framework.

The social theories discussed in this chapter are powerful but often difficult to grasp. Some readers may decide to skip this chapter altogether and go straight to Chapter 3 or 4. That is fine. Each reader has her or his own interests, goals, and needs. At the same time, it is my opinion, and this is why this chapter is so important, that teacher | researchers need to have a deep theoretical foundation as professionals and as scholars. After Chapter 1, Chapter 2 was probably the toughest to write. It meant my going back to many of the original works discussed here, not just to understand them but also to adapt them to theorizing and creating a foundation for authentic inquiry, specifically for teacher | researchers. In some ways, writing this chapter is compatible to the experience a lot of us have going into teaching. While we may be familiar with the content, teaching it and making it meaningful to our students is a very different experience and requires different forms of knowledge and understanding. The theoretical works discussed here and in Chapter 3 are by no means comprehensive in authors or their theories and philosophies. They represent only a glimpse. Initially as a teacher, I was more interested in skills, how to teach, how to create an exam. But as I developed, I found that I also had to understand these various knowledge systems. Hence, the discussion in this chapter represents a goal very much in line with authentic inquiry, that research is of benefit to the teacher, and the teacher too becomes a creator and contributor of theory and knowledge that
can be of benefit to society and those whom she or he teaches, not just a simple technician who perpetuates various forms of inequity and disenfranchisement.

WHAT IS KNOWLEDGE?

Perhaps one of the most vexing questions in doing educational research is, “What constitutes knowledge?” This question is not often acknowledged in research, as it is assumed that there can exist only one type of knowledge, one that is neutral and derived through scientific processes and without any personal biases. It is thus that claims can then made as to the objectivity, validity, and generalizability of the research findings that generated it. For those of us who do research through a critical sociocultural lens though, this aforementioned ideology and way of seeing knowledge and values is quickly revealed as reflecting dominant thinking, values, and power structures that are hostile to the inclusion of other voices – that, as the quote by Marx above alludes to, knowledge and values are not objective but arise out of the social relationships that gave birth to them. Unfortunately, claims about “objectivity” pervades almost areas of research. What constitutes knowledge or fairness for each of us, may be, and likely is, different for a child living in poverty, or to a laborer, a policeman, or a Goldman Sachs executive. In dominant research, a lot of assumptions and simplifications are made about “truths” that hide not just oppressive power relationships, but also the intricacies and interrelatedness of what is studied. Authority acts to impose coherence and uniformity across culturally contested terrain. Sociocultural practices that do not adhere to mainstream practices can be excluded and marginalized. In contrast to “objectivist” research, authentic inquiry (and the sociocultural framework on which authentic inquiry is based) encompasses, and welcomes as resources, multiple and different ways of seeing and interpreting questions of knowledge, learning, and of doing research. Critical sociocultural investigations explore what may normally be taken for granted or hidden, especially questions of hegemony and power, and encourages inclusive, critical, reflective, and interpretive practices.

“Objective” or Positivistic Knowledge

That knowledge can be separated from the knower, “objectivity,” is one of the major tenets found within the philosophy known as positivism. Knowledge, as traditionally conceived from a positivistic perspective, is essentially static, independent of the individual, and free from personal, cultural and historical biases (Kincheloe & Tobin, 2009). Research pretends to be detached from what is studied, conducting inquiry from a neutral, objective stance. To appear “objective,” it generally employs quantitative measures using instruments that focus on randomness and sampling to “discover” “truths” or “ideals” under very controlled conditions. Though many judgments and personal values frame the
conception, design, research, interpretations, and claims, the cover of “objectivist” methodology hides such value systems. Traditional schooling, too, has been set up within such a paradigm, where teachers are responsible for “transmitting” “objective” knowledge to their students and using “objective” methods to measure their “progress.” Similarly too, teachers themselves are now held accountable through various value-added schemes, bringing into mind Guba and Lincoln’s critiques of such assessments (Guba & Lincoln, 1989), as nothing other than tools used to further the agendas of those who are funding them.

Science, arguably the most “objective” of all human endeavors, is fraught with subjectivity and preconceived assumptions in “neutral” decisions, like how to do an experiment but also (because of special interests the researcher or the funder may have) what to report and how to report it. We do not even need to go back to past and not-so-distant past pseudo-scientific arguments on eugenics or race superiority as current scientific understandings on energy, drugs, food production, and health and wellness are fraught with underlying cultural, economic, political, and often religious assumptions.

Descriptions and assumptions of “normal” research are stereotypical of that objectification of very subjective meaning – producing often befuddling and highly subjective findings. Once in a while, even in science, we see something or hear a story that sheds these covers to pretentious objectivity of knowledge. One of my favorite anecdotes of the complexities of doing research in science is from an article I read several years ago in the journal of Natural History. Steven Austad (2002), was investigating how lab mice, bred for generations to be used in labs, may have changed over time as compared to their wild relatives. In one such experiment, he tied a string across two vertical supports and counted how long lab mice could hang onto the line by their front paws. The lab mice would last a few seconds, after which they would let go and drop down. Austad then caught a house mouse and tried the same test to see what would happen. To his surprise, the house mouse pulled him (or her)-self up on the string and scurried off. I love this story and often share it with my students as a way of illustrating how real-life research, unlike a hypothetical lab-controlled experiment, is an idiosyncratic process with many variables, and with often unexpected and unintended findings. What is claimed to be objective (or an independent variable), as the story above illustrates about the use of lab mice versus their wild relatives, is only so because its subjective aspects are not investigated or nuanced thoroughly enough. As an addendum to this story about mice, what has been making the news lately concerning the behavior and stress levels of lab mice is that the mice respond differently (Sorge et al., 2014) depending on whether the person handling them is male or female. The argument made throughout this book is that all human knowledge is by nature of its human origins subjective and historically, culturally, and socially constructed. Not that subjectivity necessarily plays a negative role. One can argue that if it wasn’t for difference, many extreme leaps in human thought, creativity, knowledge, and technology may never have occurred.
CHAPTER 2

SOCIOCULTURAL FRAMEWORK

Authentic inquiry uses a sociocultural framework. Sociocultural research focuses on the political, social, cultural, and historically mediated and developed aspects of life. As such, it is a very useful theoretical framework for investigating classroom interactions, including tools and symbols used, and otherwise hidden or concealed characteristics of knowledge. It is holistic (Wertsch, 1985) and interpretation plays a central role (Cole, 1996). Participants are active agents in their own development (independent of whether they have control or choice).

The sociocultural framework is generally associated with the work of Lev Vygotsky. As the quote at the beginning of this chapter illustrates, its roots are in Marxist philosophy in that it views human consciousness as social in origin and framed by competing forces and interests (Thorne, 2005). As a methodology, it is founded on the biological sciences, sociology, and the humanities. Social practices are viewed as culturally mediated, contingent, emergent and fluid. It is deeply dialectical and rejects cause and effect.

According to Cole (1996), sociocultural theory has several elements. Practices are seen as culturally mediated. Through the use of tools such as language, participants themselves are changed. New knowledge is socially and historically constructed, as we learn from our own and others’ experiences (participants do not exist in a vacuum). New knowledge production is therefore grounded in participants’ everyday experience. By participating in interactions, individuals are not only guided by culture and prior knowledge but also shape, mediate, and transform culture, knowledge, and what is considered knowledge.

For Vygotsky (1981), the individual emerges from the collective life. Humans transform their existence through making meaning. Social interactions provide meaning and generate new cultural forms. Rather than language being seen as objective, it too is seen as one of the cultural tools used in making and creating meaning. Following Vygotsky, Bruner argues that symbols are culturally embodied products of social interactions. Rather than having a universal validity, knowledge becomes problematic, contextualized, constructed, and interpretive, with situated meaning and meaning-making (Bruner, 1997).

Rather than static, “being” exists only as part of the process of becoming – that is, we change as we interact with the world, as does the world around us. In contrast, conventional positivistic educational theories assume that teaching and learning are independent or distinct from context, culture and environment (J. S. Brown, Collins, & Duguid, 1989). Vygotskian sociocultural theories of learning and knowledge (such as by J. S. Brown et al., 1989; Engeström, Miettinen, & Punamäki, 1999; Lave & Wenger, 1991) argue instead that our cognitive and emotional past and present experiences (perezhvania) not only mediate how we experience life, but also what we choose to experience and what we focus on, that the social is dialectically interconnected with the individual, that the “I,” while separate, is also part of the
“other” (living and inanimate) and the two contextually and culturally situate and mediate each other.

Much of this has its roots in Vygotsky’s work, Marxist philosophy, especially Marx and Engels’s *Thesis on Feuerbach* (Engels, Marx, & Plekhanov, 1976), and in V. I. Lenin’s thoughts on knowledge and materialist dialectics. The following quote by Lenin, for example, is quite illuminating on the I | other dialectic:

The universal exists only in the individual and through the individual. Every individual is (in one way or another) a universal. Every universal is (a fragment, or an aspect, or the essence of) an individual. Every universal only approximately embraces all the individual objects. Every individual enters incompletely into the universal, etc., etc. Every individual is connected by thousands of transitions with other kinds of individuals (things, phenomena, processes) etc. (Lenin, 1976, p. 359)

The multi-ontology (multiple perspectives of what reality may be) suggested in the above passage is a very powerful construct. Lenin posits that an individual cannot exist outside of the universal, and the universal cannot exist separate from the individual. Furthermore, he is also arguing against the view that there is no reality or that there is only one truth or reality, that while there may be a “reality,” what we see as ours is a reality from our own very limited perspective. Such reality is not a complete reality or the only way “reality” can be seen or interpreted.

*Dialectics, Knowledge, and Learning*

What are dialectics? Dialectics are the living, organic, multi-sided knowledge that presupposes infinite approaches and approximations to reality. Nothing is absolute except the transitory character of being and the continuous process of becoming and passing away (Engels et al., 1976). In dialectics, a whole is composed of mutually exclusive, contradictory and opposite parts. These opposites are not absolute and independent, but conditional and relative. This is referred to as the identity or unity of opposites. Similar to yin and yang, each contains the other and cannot exist separately. The individual and the universal are two such opposites. Development of knowledge is contingent on these opposing tendencies. Thus, all knowledge is relative, even as it includes the absolute. The difference between the two, relative and absolute, is itself relative and conditional. In its development, such knowledge resembles more of an endless spiral, rather than independent straight knowledge (Lenin, 1976). Within such dialectical processes, seeming contradictions or opposites, such as being while simultaneously becoming, sustaining and transforming, empowering and constraining (Sewell, 1992) are understood as mediating and shaping one another. Unfortunately, mainstream knowledge, beyond some quantitative developments, is often represented not only as objective, but also as permanent and absolute. What is missing is that the processes that drive our understandings and that connect the often
seemingly contradictory parts to a greater whole are in constant change and that their interpretations, as products of the human mind, are themselves socially constructed. Within a sociocultural framework, learning and teaching take on meanings different from the traditional understanding of what it means to be, know, and learn. Applying dialectics to research, teaching and learning would then mean that there are no dichotomies among what constitutes knowledge, teaching, learning, and research, i.e., knowledge | teaching | learning | research. Learning is something individuals do in the process of interacting with others (and thus shaped by these interactions) and as part of self-reflection. Hence, learning is subjective and social, challenging the mainstream dichotomy between the individual and her or his teaching and learning experience (Roth & Jornet, 2014).

SOCIAL INTERACTIONS

Within sociocultural theory, far from being independent, meaning and knowledge creation become inseparable from the individual and the context (historical, social, cultural, political), as well as from the practices and the intersections and interactions, verbal and non-verbal, between the individual and the collective “other.” Bakhtin (1994), in making sense of social interactions, argues that meaning and values are dialogic, as are the words used in an interaction. Meaning is created and understood within the process of the interaction (an event), and constantly re-evaluated within an active and changing context, interlinking past utterances to future responses framed by emotions, intentions, and ideology. What we say to someone is mediated by how we expect the other person to respond. Meaning resides in the in-between between participants in the interaction. Thus, as dialogic discourse is multilogical, it is inclusive of a plurality of worldviews and truths, and antagonistic to a single (monological) “objective” truth or reality. Dialogic discourse incorporates heteroglossia (diverse social voices, even by the same person in different situations or occasions) as opposed to the absolutism of a single, dominant language or perspective (monoglossia). The discourse site then, is where these conflicting understandings and ideologies meet, take place and are re|created.

These multiple languages and voices can vary across social groupings, generations, and professional associations, in our case, between students, between teachers, and between teachers and students. As such, words themselves are not neutral in meaning (ideological, emotional, contextual, historical, political, social, etc.) or used in isolation. When such discourse between multiple interacting voices and perspectives takes place, but on equal terms and with equal validity, where no one voice is privileged above the others, Bakhtin refers to it as polyphonia.

Understanding, too, is dialogic as we interpret the words, emotions, expressions, and intonations as we perceive them, into our own words and translate them into our minds within the context that they are being exchanged, not only with meaning but also with values. As such, Bakhtin writes that “meaning is realized only in the
process of active, responsive understanding” (Bakhtin et al., 1994, p. 35). This is so with outer speech as well as with inner speech.

Social Interactions and Emotions

Interpersonal interactions are heavily invested with emotions. According to Turner (2002), emotions drive our interactions while at the same time experienced or expected emotions drive our reactions. These interactions are dialogic. We look at the feedback from others to monitor our own emotions and roles. Our past experiences (perezhevania) and expectations meditate how we behave towards one another and how we recognize and interpret clues and meanings in ritual displays, language, and gestures. Expectations successfully met though confirmation and verification of self, role, status, etc., result in positive emotional energy and social bonding. Failure in interactions results in disruptive, or negative, emotions and encounters. Though emotions are part of the new neural underpinnings of the process we call reasoning (Damasio, 2005), they have generally been neglected in modern theories of human cognition (Damasio, 2005) and in education (Schutz & Zembylas, 2009).

Emotions vary in strength as well as importance (what Turner (2002, p. 100) called “core self feelings”) to us. The more interactions involve the core emotional elements (like self-respect or honesty) the more they matter to us and the more intense our emotional reactions are when they meet or fail to meet our goals or expectations. Individuals may feel more exposed when dealing with elements of their core self, because any failure in these would produce many more negative emotions with stronger intensities.

Beginning with the work of Durkheim and Goffman, Randall Collins (2004) further builds on the sociology of interactions and emotions. The interaction ritual (IR) is a mechanism for mutual focus and emotional entrainment within a group that forms the basis for solidarity among the participants. Such interactions generate, produce, and reproduce symbols infused with emotional energy. Intense emotions may be carried across situations into other fields, (especially if we think of these fields as having no boundaries (Tobin & Ritchie, 2012)), setting up interaction ritual chains. Since the individual is made up of past, present and future interactions, emotions, and rituals are the organic component of interaction ritual chains. These conversational rituals can include salutations like, “Hi, how are you?” or “I hope you are feeling better.” When used as expected, they can help create successful interactions. If they are omitted when they are expected, it may result in social disharmony or scorn. As interactions are not predetermined, interaction rituals are situational and emergent.

Successful participation in rituals reinforces self as well as group identity and group membership. Similar to being at a concert of our favorite music or in a stadium with other supporters of our favorite team, the high degree of mutual focus of attention and the intense moments of interaction rituals result in emotional
entainment. This experience includes bodily synchronization and a high degree of emotional arousal as part of joining in a collective, highly emotional activity. Because of their emergent nature, interaction rituals generate emotional energies that can be transformative for the individuals and the group as well as for the ritual.

Critical View of Culture in Our Classrooms

Applying sociocultural theory to inquiry into teaching and learning, affords us a critical view of the classroom. According to Sewell (1999), there exists a dialectic between systems of symbols, meanings, and practices in that one frames and changes the other. While there may be shared understanding of the meanings of symbols within a culture, what Tobin (2009b, p. 163) calls “family resemblance,” these meanings themselves are contested and ever changing, not just across participants but also within each participant. These shared understandings frame the emotional weight or personal value placed on these symbols and meanings.

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Cultural practices, therefore, do not possess uniform meaning across time or across participants (what Sewell refers to as “thin coherence” (Sewell, 1999, p. 49)). This is especially so across different social, economic, gender, racial and/or cultural groups. In a classroom where teachers may try to impose uniformity, students that do not adhere to the teacher’s cultural norms, values, and practices, like dress codes, language, and sense of propriety, may be penalized for being different, excluded, and/or marginalized. Schooling, too, may try to impose its own coherence and homogeneity, including what is valued as knowledge and knowing, what is valued in teaching and learning, gender roles, and mores concerning sexuality. These impositions create further incongruence and conflict. Because they are common, we may become desensitized to these impositions and thus they become hidden from or missed by everyday introspection. Because such culturally contested terrains and practices are so embedded in everyday life, they are usually taken as the norm in “objectivist” type of research.

Similarly, what is “safe” and “caring” do not have universal applicability nor are they neutral. Instead they are entangled with politics, power, culture, and privilege and shaped by dominant ideologies and hegemonic structures. Thus, because power relationships in the classroom are unavoidable, it is important to become aware of them and what they are (Zembylas, 2014), for they shape and magnify emotions, like apathy, remorse, resentment, shame and guilt. As teacher-researchers, we not only need to explore these power relationships but also need to create and develop interventions for more successful, equitable, and socially just interactions.

Creating Meaning

While our emotions, thoughts, and interpretations are, at some level, biological, they are also socially constructed. Thus, what we claim to be our realities or “truths”
are also socially constructed. This is illustrated not only by the examples of the arguments on climate change and evolution, but also by how we construe the purpose of schools, and what constitutes good teaching and learning. Meaning resides in our interactions with others and our environment, as such interactions encompass multiple social realities, emotions, and interpretations. What we think and what we are cognizant of are framed and mediated by our values, contextual and historical positionality, and interests. Natural laws, which we use in science to provide us with predictability, are also framed by this subjective “objectiveness” as they are mediated by our epistemologies and ontologies. Sometimes, as in the science world, there may exist some “thin coherence” across epistemologies, while at other times there may not.

What constitutes science is an evolving process and what we consider natural laws changes. Kuhn (1996) argued that scientific progress is framed and bound by existing sociocultural paradigms and thus can never reach some “objective” truth. Whether these laws exist because a “truth” truly exists independent of human interpretation or not is irrelevant, as we so far remain the only known interpreters and users of these laws. Even in the “hard sciences,” quantum physics teaches us that it is impossible to separate the inquirer from the inquiry and its findings.

**Bourdieu on Reflexivity and Habitus**

Another critical component of authentic inquiry is reflexivity. Pierre Bourdieu (2003) argued that as researchers we cannot ignore the influence we have on the work we do, that our research is not value-neutral so it is therefore important for us to be self-reflexive and become aware of the values, rituals and professional and personal interests and biases that frame our research and make these public. Bourdieu (Bourdieu & Wacquant, 1992) contended that social action should be held accountable, that the research and the researcher should be held to the same critical analysis as the “object” of the research. Potential biases may arise due to the social origins of the researchers, their social positions (as academics, teachers, etc.) and from their personal intellectual biases, conscious and unconscious. Having a critical theoretical framework of doing social inquiry and being critical of what is imbedded in the research is thus necessary. Such critical analysis leads to transformative practices and becomes an integral component of the research (Bourdieu & Wacquant, 1992).

Habitus (Bourdieu, 2014) are systems of dispositions (such as values, attitudes, emotions) that are at once framed and mediated by the social and cultural worlds and, at the same time frame and mediate generated practices. These dispositions are embodied and formed implicitly, without explicit rules, through prior experiences, perceptions and dispositions (Roth, Lawless, & Tobin, 2000), like speaking a language without necessarily being aware of its rules. Because we often remain unaware of these dispositions, descriptions of teaching are often out of sync with actual practices (Roth et al., 2000).
CHAPTER 2

SOCIOCULTURAL RESEARCH IN TEACHER EDUCATION

The nature of knowledge construction is thought of as reflective of the axiology and ideology of the researchers (Kincheloe & Tobin, 2009). As such, research into the nature of the knowledge needs to be interrogated, described, and become unhidden. Positivistic research, on the other hand, is only interested in answering a priori questions and thus may miss other emerging questions or what may be important to the participants. Discovery for positivism is separate from inquiry, and claims a pseudo separation between the theoretical and the observational data, between the research and the researcher and what data was collected and meanings found (Guba & Lincoln, 1989).

Though they may appear as similar cultural beliefs, symbols and practices are understood differently across different sociocultural theories. Bringing many of the above theories together, Tobin applied them to research in education and further developed them (see for example (Tobin, 2014) and (Tobin, 2012b)). Tobin, too, views teaching, learning and research as culturally enacted and socially situated in a dialectical interplay between the I and the other (Tobin, 2014). Because of Sewel’s “thin coherence” of cultural practices, fields are seen at once as boundaryless, relative, and constantly shifting. Identities, in particular, so often treated as a constant, can be thought of instead as social constructs that are contingent and fluid (Stetsenko, 2007). Thus, concepts like “becoming” or “identity” are highly dialectical, as they are contingent on the social interaction. The implication may be that identity is not only fluid across context, but identity may not even be the property of the individual (Tobin, 2014) – that it is continually being invented within the context of the interaction and cannot be separated from the collective.

It is from Tobin’s work on doing educational research that I borrow the theoretical framework for authentic inquiry, and of event-oriented research that is emergent and contingent. Unlike positivistic research, where inquiry is predetermined and deterministic, within hermeneutics, authentic inquiry and discovery are dialectically dependent and feed off each other as the two intertwine and co-develop, intentionally and contingently. Thus, the question of transformation, as well as the process itself, are dependent on what we focus on in our views of knowledge and knowledge making, and all become interesting questions of study. Polysemia, polyphony, authentic inquiry, habitus, and reflexivity become central. Hermeneutic phenomenology emphasizes exploring lived experience through the interpretation and understanding of the participants. The research in turn is then refined and changed as new ideas emerge. Outcomes are not oversimplified but are nuanced and viewed as contingent.

While exploring the dialectical nature of knowledge and learning as a researcher and as a teacher, the adaptation of Tobin’s sociocultural framework for doing research has helped me frame the questions and issues I choose to focus on, what I think is important, and how to go about it. Rather than making positivistic assumptions such as – identity, equity and safe spaces are constants and independent of context, I also view these as culturally mediated and evolving. In addition to
agreeing that interactions take place over contested grounds, I argue that knowledge, ways of knowing, habitus, and the values and emotions of those involved are often misunderstood as being similar to our own or are missed because of historical or cultural biases. These can then become fertile areas for critical investigation.

Teaching and learning practices and assumptions provide ample opportunities for teachers to do research. We may think that our students are like us, though they may or may not be. The students themselves may each have different axiologies and ideas of what is “normal” and “proper.” Many of these differences and ways of knowing and thinking may not be apparent to the teacher | researcher until he or she looks for them and learns about them from his or her students. Their contributions as co-researchers are essential in creating a multi-ontological, multi-epistemological view of knowledge and of teaching and learning. At the same time, much of what happens in teaching, learning and research is not explicit. “Norms” become generative of their own culture, expectations, attitudes, emotions, and dispositions. In doing reflexive social inquiry we (researchers, students, teachers) critically question representations within teaching and learning, in the research and in research findings, recursively becoming aware of the unaware, such as the power dynamics in the classroom between the teachers and their students. Through such reflexivity, we create the framework to transform ourselves and to bring about positive change.

Doing sociocultural research does not mean searching for absolute truths or absolute recipes, but does require us to conduct such work through systematic, mindful, and kind inquiry. Self-study research has often been criticized (Zeichner, 2007) for not going beyond the self and because it needs to include a synthesis incorporating both theoretical understanding and improvement in teaching practice. If not systematic, the best intentions may result, not in quality research, but in shallow babble that masquerades as research. It is essential that research in teaching be theoretically rich, but also that it go beyond just advancing “theory” to also advance teacher practices and create and sustain high quality teaching environments (Tobin, 2015).

Authentic inquiry research is multi-ontological (inclusive of a plurality of truths and realities) and emphasizes the importance of our learning from difference. It is collaborative inquiry that embraces difference in worldviews, understandings (polysemia), and multiple voices and interpretations (polyphony) as key resources in investigating the complexities of emotions and the meanings found in interactions between ourselves and others. It is expected that such research will lead to improvement of practice and be transformative for all of those involved. Sometimes we may purposefully explore a question in our teaching. Often, though, unplanned and unexpected events draw our attention because of their incongruence or their high emotional content. The latter is but an everyday phenomenon when we are dealing with teaching a classroom full of students who are similar, yet not, to us and to each other. Such inquiry into a question or an event may last a lifetime, or it may take no longer than a quick reflection on some event in a classroom. As teacher | researchers, we have the unique opportunity to look deeper, beyond the seemingly neutral
treatment of knowledge, and to explore its often hidden biases and implications in teaching, learning, for our students and ourselves. Authentic social life interactions involve multiple voices and perspectives. Our research should consider and explore, as well as reflect, these complexities and nuances.

As teachers, we would like to see our students succeed. Even when we spend all of our time planning and teaching “the perfect lesson,” we don’t see that success. These kind of experiences can be very discouraging. Authentic inquiry research allows us to examine what these issues may be and how to best respond, manage, and, possibly, resolve them, whether they are in the teaching content, interactions with the students, the emotional climate of the class, or systemic issues that have remained unacknowledged or hidden.