Preface

The purpose of this book is to introduce Cultural Historical Activity Theory (CHAT) and activity systems analysis to researchers and practitioners interested in studying complex learning environments. CHAT is a theoretical perspective within the field of psychology that originated in Lev Vygotsky’s work in Russia during the mid-1920s to mid-1930s. Since Vygotsky’s work there have been a growing number of European and North American scholars who became interested in this perspective when examining complex learning environments. Activity systems analysis is one method developed by Yrjö Engeström for analyzing human interactions with CHAT by identifying human activity as the unit of analysis.

For the purpose of this book, I define complex learning environment as situations in natural settings where multiple individuals are involved in shared activities within a single or multi-organizational context. My discussions in this book describe how to study these environments from a CHAT perspective specifically using activity systems analysis. I will include a brief theoretical overview on CHAT, the value of activity systems analysis in research and practice, examples of studies using this method, and methodological issues for readers to consider when designing and implementing future studies. It is my goal to provide readers with information that they can use as a guide when engaging in studies involving activity systems analysis.

The first goal of this book that is addressed in Chap. 1 is to highlight the benefits that activity systems analysis brings to studies involving complex learning environments. I will describe how activity systems analysis can enhance traditional qualitative investigations. This methodology can provide a means to systematically analyze human interaction while considering how an individual or group of individuals and their interactions with the environment affect their activities.

The second goal, which is addressed in Chap. 2, is to present background information on Vygotsky’s work and the work of post-Vygotskian CHAT scholars. This information will benefit readers when designing and engaging in investigations from this theoretical perspective. While what I present in this book will not provide an exhaustive detail of the theoretical discussions, I will present canonical works related to CHAT and activity systems analysis that readers can use as a starting point for identifying further readings. In this discussion, I will introduce ideas of authors who have contributed both to the theoretical and methodological developments in CHAT. The theoretical information will center on the works of Vygotsky
(1986, 1978), Leontiev (1974), and other contemporary CHAT scholars. The methodological information will focus primarily on Engeström’s (1987, 1993, 1996, 2001) work on activity systems analysis. I will explain how CHAT scholars approach complex learning situations and how activity systems analysis can be used for understanding human interactions.

The third goal, addressed in Chap. 3, is to address the criticisms against activity systems analysis while discussing the challenges related to conducting investigations from a non-dualist perspective. CHAT scholars identify themselves as non-dualist theorists; however, there are challenges in maintaining this position because the mainstream methods for studying human activity are entrenched with dualist language (Packer 2000) and CHAT researchers to date have not successfully identified a series of non-dualist analytical methods. This creates a common phenomenon in CHAT study reports where the theoretical framework may take a non-dualist ideal position, but when it comes to data analysis and data presentation researchers are unable to move away from dualistic analytical methods and language (Sawyer 2002). Thus, in several CHAT studies there is a dissonance between the theoretical framework, analysis, and discussion of findings. As a developing framework, this is unavoidable; however in order to contribute to further methodological developments in CHAT, researchers and practitioners need to discuss how they try to maintain their theoretical commitments when they confront methodological dissonance in their work (Yamagata-Lynch 2007).

The fourth goal is to provide in-depth examples of studies that relied on activity systems analysis to examine complex learning environments. Chapter 4 introduces seven studies and how the authors used activity systems analysis in their work. Chapter 6 provides a discussion surrounding an in-depth examination of one of my own studies with data collection instruments, sample data sets, analysis, and discussion of findings.

The fifth and final goal of this book, which is addressed in Chap. 5, is to provide an overview of general qualitative research methodologies that are critical for conducting a sound study using activity systems analysis. It is important to note that most research using activity systems analysis are qualitative in nature and do not necessarily provide generalizable findings. In order to use this method to document human activities that take place in natural settings, researchers need to be able to design and conduct trustworthy qualitative research. I will discuss the basic methodological issues for maintaining trustworthiness; however, a fair amount of resources exist on this topic. Therefore, I ask the reader to engage in further readings of well-established qualitative research methods handbooks and books for further information.

Why Discuss CHAT Methodologies?

In North America, educational researchers and practitioners since the late 1980s have become more interested in pursuing theoretical paradigms that capture complex learning environments. CHAT is one of several theoretical frameworks that
became popular because it provides a method for researchers to understand and describe the interaction between individuals and the environment in natural settings. Russian scholars initially developed CHAT in the 1920s to reformulate psychology as a science that studied human activity as an interaction-based holistic engagement between individuals and their environment.

After a couple of decades of books published on CHAT by prominent North American authors such as James Wertsch, Michael Cole, and Barbra Rogoff, reputable journals such as the American Psychologist, Educational Psychologist, and Educational Researcher that are targeted for a wide-range of audience have recently included articles on CHAT. In these articles, CHAT has been referred to as social constructivism, sociocultural theory, or activity theory. Many of these discussions have contributed to the theoretical development in understanding CHAT and have translated Russian theoretical concepts into English.

In these existing literatures, much of the discussion dwells on the theoretical background of CHAT and the description and interpretation of human interactions from this perspective; however, there is a lack of discussion on methodological guidance for researchers and practitioners on how to engage in investigations of complex learning environments from this perspective. This can be problematic because the lack of methodological discussions makes it difficult for CHAT newcomers to explore the possibilities of using this theoretical framework in their work. Furthermore, it makes it difficult for the existing CHAT community to develop a set of agreed-upon, trustworthy methodologies that can ensure that their investigations will help provide viable insights. Future theoretical developments for explaining complex human activity can be limited if CHAT scholars do not actively discuss methodological issues.

Understanding the methods involved in activity systems analysis can be a challenging task for many North Americans. There are several reasons for this difficulty. First the original texts of CHAT are in Russian. Numerous authors have reported on the difficulties of reconciling translation problems of the works of original authors such as Vygotsky and Leontiev. Second, in North America activity systems analysis has deviated from the Russian scholars’ and Engeström’s original works, using it to identify tensions to overcome and bring about sociopolitical change in participant practices. Therefore, there are different versions and intensities for engaging in activity systems analysis investigations. Third, there are currently numerous publications on the theoretical background of activity theory and studies reporting the results of using activity systems analysis for analyzing qualitative data sets, but there have been no publications on research methodologies and how researchers engage in activity systems analysis.

Why Activity Systems Analysis?

Activity systems analysis is a popular methodology among CHAT scholars who work with data from complex learning environments and map human interactions in natural settings. This method became well known after Engeström’s (1987)
original conception and the wide circulation of his work through the publication of Cole and Engeström (1993) and Engeström (1993). Since then, there have been several applications of activity systems analysis in qualitative research as a descriptive tool to (a) capture the processes involved in organizational change (Barab et al. 2004; Engeström 1993, 2000; Yamagata-Lynch and Smaldino 2007), (b) identify guidelines for designing constructivist learning environments (Jonassen and Rohrer-Murphy 1999), (c) identify systemic contradictions and tensions that shape developments in educational settings (Barab et al. 2002; Roth and Tobin 2002), and (d) demonstrate historical developments in organizational learning (Yamagata-Lynch 2003b). While the application of activity systems analysis in North America has, focused on descriptive applications, Engeström’s work has focused on using this method in work settings to bring about change in participant practices (Engeström 1993, 2001, 2008).

The advantage for using activity systems analysis is that it provides new methods for researchers and practitioners to extract the essence of complex data sets in a graphic model that they can communicate with others. Researchers and practitioners can compare one human activity based data set with another while drawing systematic implications. These methodological advantages for using activity systems analysis can help researchers organize their analysis with a valid framework while building reliable interpretation of their data and minimize the overwhelming task of analyzing and making sense of complex data sets from real world settings.

Who is this Book for?

I have written this book for researchers, practitioners, and graduate students who are interested in conducting investigations of complex learning environments using qualitative research methods and who are interested in conducting their investigations using activity systems analysis. I want to provide information that will help readers design and conduct investigations, and for graduate students to design, conduct, and complete their dissertations. Ultimately, the reader needs to decide how to design and conduct their work, but it is my hope that this book will provide a starting point for their work with CHAT.

This book is also for readers who are struggling to come to terms with how to work with complex learning environments whether they use activity systems analysis or not. There is a growing number of scholars who choose to investigate educational phenomenon in natural settings. At the same time, these scholars often find themselves paralyzed in the data analysis of naturally occurring complex phenomena and struggle to make meaningful interpretations. While, activity systems analysis alone cannot solve all of the complicated issues that real-world data presents, it can help investigators by brining a systematic framework in their iterative emergent data collection and analysis while they identify systemic implications.

For example, in a 3 year study, which I will discuss in-depth in Chap. 6, I used activity systems analysis in a qualitative study to follow interactions between selected teacher activities within a school district and a technology professional
development program. Over the duration of the study, I was able to conduct a
systematic analysis of how the activities of the professional development program,
participating teachers, and non-participating teachers affected changes in the teachers’
and school district’s technology integration activities. I presented these changes in
distinct activity systems with accompanying narratives that explained how the
interactions between the participants and the environment in which the activities
took place shaped the nature of their activities over time.

The ideas I introduce in this book are based on what I learned by reading works
of many authors before myself and through experiences from conducting educa-
tional studies from a CHAT perspective using activity systems analysis. I ask the
reader to take the information I offer as one source among works of many others.
It is my hope that this book will help readers use CHAT to design and conduct
research on real-world complex learning environments.

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