

PITTSBURGH STUDIES IN COMPARATIVE AND INTERNATIONAL EDUCATION

Teaching in Tension

International Pedagogies,
National Policies, and Teachers'
Practices in Tanzania

Frances Vavrus and Lesley Bartlett (Eds.)



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TEACHING IN TENSION

PITTSBURGH STUDIES IN COMPARATIVE AND INTERNATIONAL EDUCATION

VOLUME 2

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The aim of the *Pittsburgh Studies in Comparative and International Education Series* is to produce edited and authored volumes on topics ranging from key international education issues, trends, and reforms to examinations of national education systems, social theories, and development education initiatives. Local, national, regional, and global volumes (single-authored and edited collections) constitute the breadth of the series and offer potential contributors a great deal of latitude based on interests and cutting edge research. The series is supported by a strong network of international scholars and development professionals who serve on the Advisory Board and participate in the selection and review process for manuscript development. The volumes are intended to provide not only useful contributions to comparative, international, and development education (CIDE) but also possible supplementary readings for advanced courses for undergraduate and graduate students in CIDE.

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Teaching in Tension

*International Pedagogies, National Policies,
and Teachers' Practices in Tanzania*

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DEDICATION

To the faculty, staff, and students at Mwenge University College of Education for their participation in this project and for their encouragement from beginning to end.

Penye nia, pana njia
Where there is a will, there is a way

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LIST OF ABBREVIATIONS AND ACRONYMS

A-level	advanced level (Forms 5-6)
ACSSE	Advanced Certificate of Secondary School Examination
BEMP	Basic Education Master Plan
BESO	British Executive Service Overseas
BS	Bachelor of Science
BTP	block teaching practice
COSTECH	Commission for Science and Technology
CSEE	Certificate of Secondary Education Examination
DRC	Democratic Republic of the Congo
EAEC	East African Examinations Council
EFA	Education for All
ESR	Education for Self-Reliance
GAD	Gender and Development
GDP	gross domestic product
ICT	Information and Communications Technology
IRF	initiation-response-feedback
LCP	learner-centered pedagogy
MHEST	Ministry of Higher Education, Science and Technology
MOEC	Ministry of Education and Culture
MOEVT	Ministry of Education and Vocational Training
MoU	memorandum of understanding
MUSTER	Multi-Site Teacher Education Research Project
MWUCE	Mwenge University College of Education
NBS	National Bureau of Statistics
NECTA	National Examinations Council of Tanzania
NGO	nongovernmental organization
NSE	norms and standards for educators
O-level	ordinary level (Forms 1-4)
OBA	outcomes-based education
OECD	Organisation for Economic Cooperation and Development
PEDP	Primary Education Development Programme
PI	principal investigator
PMO-RALG	Prime Minister's Office Regional Administration and Local Government
PSLE	Primary School Leaving Exam
SADC	Southern Africa Development Community
SEDP	Secondary Education Development Programme (2004-2009)
SEDP II	Secondary Education Development Programme II (2010-2015)
SSA	sub-Saharan Africa
TDMS	Teacher Development Management Strategy
TEMP	Teacher Education Master Plan
TEN/MET	Tanzania Education Network/Mtandao wa Elimu Tanzania

LIST OF ABBREVIATIONS AND ACRONYMS

TIA	Teaching in Action
TIE	Tanzania Institute of Education
TOD	teacher on duty
Tsh	Tanzanian shilling
TTC	teacher training college
UKWATA	Umoja wa Kikristo wa Wanafunzi Tanzania (Tanzanian Christian Student Fellowship)
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
URT	United Republic of Tanzania
VSO	Volunteer Service Overseas
WID	Women in Development

JOHN C. WEIDMAN AND W. JAMES JACOB

SERIES EDITORS INTRODUCTION

We are pleased to introduce the second book in our series—*Pittsburgh Studies in Comparative and International Education*—with the title *Teaching in Tension: International Pedagogies, National Policies, and Teachers' Practices in Tanzania*. The co-editors, Frances Vavrus (University of Minnesota) and Lesley Bartlett (Teachers College, Columbia University), both have significant experience studying teachers and their work in African schools. In this volume, the editors also include the work of nine other authors who have been engaged in related research. Their collective efforts represent the most rigorous and systematic investigation to date of efforts to build capacity of teachers to use learner centered pedagogy in African primary schools. Finally, it is the first of three studies focused on different aspects of primary and secondary education in Africa that are to be included in *PSCIE*.

PSCIE is sponsored by the University of Pittsburgh Institute for International Studies in Education (IISE) that manages review of submissions and provides editorial assistance in manuscript preparation. The series is supported by a strong network of international scholars and development professionals who serve on the International Advisory Board and participate in the selection and review process for manuscript development. The series is intended to be broad in scope, ranging from key international education issues, trends, and reforms to examinations of national education systems, social and educational theories, and development education initiatives. Local, national, regional, and global volumes (single-authored and edited collections) will be included in order to offer potential contributors a great deal of latitude based on interests and cutting edge research.

Working with our International Advisory Board to identify topics of particular interest, periodic calls will be issued for contributions to *PSCIE* from among the most influential associations and organizations in international studies in education, (including the Comparative and International Education Society, World Council of Comparative Education Societies, UNESCO, etc.) as well as individual researchers, policy makers, and practitioners from around the world. We also welcome unsolicited manuscript proposals from prospective authors and editors about their current research and project work.

FRANCES VAVRUS, LESLEY BARTLETT,
AND VICTORINI SALEMA

1. INTRODUCTION

TEACHING AND RESEARCHING IN TENSION

One of the central tensions in the lives of academics is the degree to which one's scholarship engages in the everyday world as a means to change it. The term *praxis* is often used to describe the interaction of the theoretical and the practical, the realization of theory in action. Some, like Karl Marx (1845/1998, 571), disparaged solely abstract scholarly thinking when he wrote that "philosophers have only interpreted the world, in various ways; the point is to change it." Others, such as Brazilian educator Paulo Freire (1970), considered theoretical reflection inextricably connected to acting in a transformational way in the world. Regardless of the particular way one characterizes the process of enacting theory in everyday life, there lies a tension between the theoretical and the practical, the abstract and the material, that scholars—especially those in applied fields like education—must address.

In this volume, we seek to magnify this tension for the purposes of exploring the multiple strains on teachers as they attempt to apply theory to the complex conditions in which they practice. We do so as teacher educators, educational researchers, and graduate students, roles that bring their own tensions and perspectives that have influenced the project in ways we explore in the following chapters. In addition to these professional identities, the research team was comprised of members from six countries (Ecuador, Ireland, Kenya, Malawi, Tanzania, and the US), with the contributors to this volume based either in the US or in Tanzania.¹ Our collective attention was focused on one country, the United Republic of Tanzania, and on the country's educational reforms aimed at improving teachers' understanding and application of learner-centered pedagogy (LCP). In particular, we focused on one teacher education program as a case study through which to explore the complex issues of pedagogical reform and international research collaborations.

The program, Teaching in Action (TIA), is described in greater detail in the next chapter, but, in brief, it is an annual week-long workshop for Tanzanian secondary school (the equivalent of high school) teachers who seek to improve their ability to incorporate LCP into their classes in biology, chemistry, English, mathematics, and other subjects. The program began in 2007 as a collaboration between the Tanzanian host institution, Mwenge University College of Education (MWUCE); a US nongovernmental organization (NGO), AfricAid; and the US faculty member who was, at the time, a visiting lecturer at MWUCE and Advisor

to the Board of AfricAid, Frances Vavrus. The curriculum and teaching materials have evolved since then, and the participating institutions have expanded to include faculty and doctoral students at Teachers College, Columbia University and the University of Minnesota and funding from the Open Society Foundations (US), the TAG Foundation (US), and the Planet Wheeler Foundation (Australia).

From this multi-year experience of co-facilitating the TIA workshop emerged the idea for a research project that would explore how the teachers who participate in it make sense of the central messages about learner-centered, participatory teaching and how they transform these ideas in practice when confronted with the cultural and material conditions in their schools. The primary goal, therefore, was to deepen our understanding of the professional lives of secondary school teachers as a way to inform teacher education and educational policymaking in Tanzania by governmental and non-governmental organizations. Yet an important secondary goal was the professional development of the US graduate students and Tanzanian faculty at MWUCE who had limited experience with qualitative, school-based research but sought an opportunity to learn about it.² Thus, the project had both training and research components coordinated by the two US professors, Frances Vavrus (University of Minnesota) and Lesley Bartlett (Teachers College), who had been involved with TIA since 2007 and 2008, respectively, and by Victorini Salema, the Director of Research and Outreach at MWUCE.³ The research project itself was carried out across six secondary schools in two regions of northern Tanzania, and it involved interviews, observations, and focus group discussions with 23 teachers who attended the TIA workshop in 2010.

Although the particular context may be unfamiliar to some readers of this volume, the challenges faced by Tanzanian teachers who are encouraged through national policy reforms to change their pedagogical practice will likely be quite familiar. Moreover, the conflicting feelings of the research team that espoused the philosophy of LCP while simultaneously critiquing its local applicability are undoubtedly shared by others engaged in critical scholarship and applied research. Finally, the challenges of international research collaborations that we encountered, especially those involving researchers from different countries and at different points in their professional careers, are common to endeavors that support the ideal of partnership but must nevertheless contend with numerous obstacles, such as unequal relations of power vis-à-vis funding, professional status, and authorial decision-making. As Melissa Anderson and Nicholas Steneck (2010), scholars of international research partnerships, have noted:

International collaboration may at first appear to be just a natural extension of the work of an individual or local group, but in practice it is much more. It is an activity that, of necessity, must move beyond the research itself and take into account differences in national regulations and their effectiveness, legal systems, personal and cultural styles, research environments, and, of course, all of the logistical problems that can arise when your colleague is not just down the hall or in another building. (243)

The participants in this research collaboration have, at various times, been challenged by these conditions of international research, and we address them in greater detail in the final chapter of the book.

Not only do the contributors to this volume pay close attention to the challenges of enacting theories of participatory pedagogy and research partnership, but they also recognize the productivity that such tensions can generate. Anna Lowenhaupt Tsing's (2005) metaphor of *friction* aptly describes this creative potential:

A wheel turns because of its encounter with the surface of the road; spinning in the air it goes nowhere. Rubbing two sticks together produces heat and light; one stick alone is just a stick. As a metaphorical image, friction reminds us that heterogeneous and unequal encounters can lead to new arrangements of culture and power. (5)

This metaphor encapsulates “the awkward, unequal, unstable, and creative qualities of interconnection across difference” (Tsing 2005, 6) that we encountered over the course of the research project and since the inception of the Teaching in Action program itself. Global encounters, when conceptualized as friction, often result in new and unanticipated insights into processes of teaching and research that exclude as well as enable. As the following chapters illustrate, friction in the field of education, particularly in international contexts, results from the “rubbing together” of discrete teaching methods, education policies, philosophies of knowledge, and approaches to research. For each of us involved in this particular educational project, our “heterogeneous encounters” with Tanzanian secondary school teachers and with researchers from different educational traditions sparked insights that we would not have had as lone researchers. Thus, the title of this volume, *Teaching in Tension*, reflects the challenges of putting theory into practice and the insights that working across difference can produce.

In the remainder of this introductory chapter, we lay out the conceptual framework for the study by explaining the concept of *contingent pedagogy* and our usage of the term *learner-centered pedagogy* throughout the volume. We then review the current state of LCP in sub-Saharan Africa before narrowing the focus to the specific context of Tanzania. The final section provides an overview of the cross-cutting themes in the chapters to follow and our suggestion for how to read them as separate but interconnected parts of a broader narrative about theory and practice in educational research.

CONCEPTUAL FRAMEWORK

Contingent Pedagogy

Despite the similar tensions faced by teachers, teacher educators, and educational researchers around the world, the authors in this volume share the view that the study of pedagogy and policy must emphasize the diversity in the social and material constraints within which teachers work. We recognize that there is considerable convergence around the view that LCP is synonymous with “good

teaching” and that similarities in educational systems, policies, and even textbooks suggest that schooling is becoming more similar, or isomorphic (e.g., Anderson-Levitt 2003; Baker and LeTendre 2005). However, the research that forms the basis of this book (detailed in Chapter 2) suggests that there is far more global convergence at the level of policy around LCP than in its instantiation in practice.

Learner-centered pedagogy has undoubtedly become a part of education policy reform in countries as diverse as Botswana (Tabulawa 1997, 1998, 2003), China (Carney 2009), Guinea (Anderson-Levitt and Diallo 2003), Mongolia (Steiner-Khamsi and Stolpe 2006), and Namibia (Ralaingita 2008). Nevertheless, the chapters that follow illustrate the diversity in policy implementation because policies are always “reassembled, connected, and disconnected” (Popkewitz 2005, 9) when they encounter alternative systems of knowledge production and educational practice. Similarly, researchers’ conceptual frameworks for making sense of the everyday lives of teachers are altered by the “friction” generated through encounters with teachers and teacher educators whose pedagogy is informed by educational histories, cultural contexts, and material conditions that are often quite dissimilar to one’s own.

Such encounters have, over the years, affected our understanding of pedagogy as a form of praxis profoundly shaped by the cultural, economic, and social contexts of teaching. We seek to draw attention to pedagogy—meaning both the practice of teaching and its attendant theories—as *contingent* upon the different material conditions in which teachers teach and the different perspectives on knowledge production and student-teacher relationships held by teachers and teacher educators in different social locations (Vavrus and Bartlett 2012). We contend that the material and social conditions of teaching ought to be more fully considered when examining how policies like LCP are implemented by teachers and teacher educators. These conditions have been grossly understudied by educational researchers and insufficiently examined in pre-service teacher education programs. This omission has led to certain pedagogical approaches, such as LCP, being taken up as “best practice” even in contexts where it is very difficult or culturally challenging to implement. In other words, we argue that LCP embodies particular understandings of teaching and learning that arose in specific cultural contexts and assume certain material conditions for teachers. Yet globally circulating ideas are always reconstituted in local contexts, such that, in this case, LCP becomes “localized” under the cultural, economic, and political conditions in Tanzania that affect classroom practice.

In sum, the authors in this volume have framed their analyses around a set of assumptions about pedagogy as both culturally and materially situated, and as a form of praxis that articulates, or links together, theory and practice. We find Alexander’s (2001) conceptualization of pedagogy particularly useful for this project:

Pedagogy, then, encompasses both the act of teaching and its contingent theories and debates about, for example, the character of culture and society, the purposes of education, the nature of childhood and learning and the structure of knowledge. Pedagogy is the domain of discourse with which one

needs to engage if one is to make sense of the act of teaching—for discourse and act are interdependent, and there can be no teaching without pedagogy or pedagogy without teaching. It is the aspect of education which most tellingly brings together macro and micro. (513)

With this framework in mind, we now turn to learner-centered pedagogy itself to understand its etiology and current popularity in sub-Saharan Africa before examining the Tanzanian educational system as the site for this research project.

Learner-Centered Pedagogy

Learner-centered pedagogy is an approach to teaching based on the assumption that people learn best when they are actively engaged in the curriculum and when their interests form the foundation for the building of the curriculum (Paris and Combs 2006). Moreover, it suggests that people—learners—are “constructing and assimilating knowledge” instead of merely absorbing “discrete facts [from] an existing store of knowledge” (Mtika and Gates 2010, 396). LCP places students at the center of the learning process, allowing their needs, abilities, backgrounds, and interests to shape teaching strategies. It is also premised on the following core views of learning and teaching:

[A]n appreciation of and respect for children’s interests and needs and the development of student autonomy, pedagogical decisions based on detailed knowledge of each student and the classroom community and an environmentally dependent view of learning and teaching in which students actively navigate the difficult terrain of the construction of personal meaning in a learning community. (Paris and Combs 2006, 573)

Learner-centered pedagogy draws on a theory of knowledge known as constructivism. Constructivism assumes that knowledge emerges through interactions and experiences among learners and through reflection on one’s own ideas. In other words, knowledge is not external to the learner and awaiting discovery by him or her; rather, knowledge “is created through a process of new information interacting with the prior knowledge and experiences of learners” (du Plessis and Muzaffar 2010, 45). From this perspective, knowledge must be engaged rather than “delivered” or “transmitted.”

This philosophy of knowledge suggests that teachers should create the conditions for students to discover and actively construct knowledge—to “learn to learn”—and to develop the higher-order thinking skills of analysis and synthesis through inquiry-oriented lessons in the classroom. From this perspective, lessons should encourage students to draw upon, connect, and analyze their prior knowledge and experiences through inquiry and interaction with other students and with the teacher. The primary role of the teacher is to engage students in inductive, hands-on activities, group work, and reflection to promote critical thinking, self-evaluation, and the integration of knowledge across traditional subject areas. For these reasons, some educators prefer to use the terms *active learning*, *participatory*

method, student-centered pedagogy, child-centered pedagogy, critical-thinking pedagogy, inquiry pedagogy, or discovery-based teaching to direct attention to the persons or processes of greatest concern in the teaching and learning environment.

Learner-centered pedagogy is often defined in opposition to teacher-centered pedagogy, where students take a more passive role as teachers transmit knowledge that students learn primarily through rote memorization. In reality, the approaches mark the extremes of a continuum that teachers move across with greater or lesser ease depending on their education, training, and experience, and depending upon the learning task at hand (Barrett and Tikly 2010).

Learner-centered pedagogy is rooted in the progressive paradigm of education, which is also informed by a constructivist view of knowledge. The progressive education movement emerged from the ideas of eighteenth and nineteenth century educational thinkers such as Rousseau, Pestalozzi, and Froebel, and it is perhaps most closely identified with the work of John Dewey (Cuban 1993; Chung and Walsh 2000). Dewey argued that progressive education should emanate from students' interests and active investigation, and he called for students to apply knowledge and skills learned in school to solve real-world problems. Psychologists Jean Piaget and Lev Vygotsky, and those who have built upon their work, also placed the student at the center of learning and viewed the production of knowledge as emanating from social interaction.

Although widely espoused today by teachers and teacher educators, the concern with learner-centered pedagogy developed gradually in the United States over the twentieth century (Cremin 1957, 1961; see also Kliebard 1987; Chung and Walsh 2000) and blossomed in the late 1960s and 1970s (Ravitch 1983).⁴ Yet this development has not been uncontested, as learner- or student-centered pedagogy has evolved in constant tension with content-centered emphases, such as the "back to basics" reform efforts of the 1980s and the more recent stress on standards initiated under the US education policy known as *No Child Left Behind* (Cuban 2008). This tension has produced what historian Larry Cuban (1993) calls "teacher-centered progressivism," a curious blend of both teacher-centered teaching and progressive education. Such a stance, according to Cuban, has resulted in teachers' choices that are "situationally constrained" by social and organizational influences and, therefore, are "hybrid practices" that incorporate some elements of LCP while maintaining teacher control over curriculum and pedagogy (261).

Learner-centered pedagogy, and inquiry-based learning more broadly, now forms the basis of key national standards in the United States, and the approach is also the foundation of most pre- and in-service professional development programs (Pierce and Kalkman 2003). The American Psychological Association has even adopted 14 research-based Learner-Centered Psychological Principles, which serve as a useful summary of learner-centered pedagogy as well (see Appendix).

Research on this approach to teaching and learning, however, suggests important challenges to its implementation. First, teachers' beliefs are hard to sway. One longitudinal study showed that teacher preparation programs in the US were able to shift only some pre-service teachers' beliefs about LCP; the culture of

the school in which the new teacher interns or practices also had an important effect on the teachers' beliefs about LCP (Kasten and Buckley Van-Hoek 2008). Additionally, Richard Prawat (1992) found that constructivism was contrary to the beliefs held by most of the teachers in his study for several reasons. First, he contends that teachers "think of both learner and content as relatively fixed entities—givens that somehow must be adjusted to in their present form ... [which] explains why so much time and attention is devoted to the delivery of content instead of more substantive issues relating to content selection and meaning making on the part of students" (357). Second, Prawat suggests that teachers tend to see "curriculum as a fixed agenda, a daily course to be run that consists of preset means (i.e., certain material to cover) and predetermined ends (i.e., a discrete set of skills or competencies)"; in contrast, a constructivist approach would view curriculum less like a "road map" and "more as a matrix of ideas to be explored over a period of time ... depending on where students are in their current understanding" (358). Finally, Prawat criticizes what he calls "naïve constructivism" in which teachers "equate activity with learning" (371). Each of these findings is relevant to the case of Tanzania discussed in the rest of this volume, and they are taken up in the *Questions for Discussion* at the end of Chapters 3-9.

Even when teachers view knowledge production from a constructivist perspective and espouse the principles of learner-centered pedagogy, their behaviors often lag behind their beliefs. Scholars focused on the US have documented a significant divergence between what teachers report they do (espoused practices) and what they actually do (enacted practices) (Polly and Hannafin 2011). They have shown that teachers' actions are influenced by both beliefs about teaching and affective concerns about students' learning (Ross, Cousins and Gadalla 1996; Deemer 2004); for instance, teachers who lack concern regarding learning outcomes are significantly less likely to implement LCP (Dunn and Rakes 2010). These findings suggest that research on how teachers understand and implement learner-centered pedagogy in sub-Saharan Africa should also investigate these issues while attending to pedagogical choices constrained by social and material conditions, teachers' hybrid practices, teachers' beliefs about knowledge and learning, and the ways that LCP is enacted in practice. This volume takes up these issues through the careful examination of one group of teachers' beliefs, practices, and conditions of teaching.

LEARNER-CENTERED PEDAGOGY IN SUB-SAHARAN AFRICA

Learner-centered pedagogy began to be widely adopted as part of education policy reform in Africa following the 1990 Education for All conference and the subsequent World Education Forum in 2000 that produced the Dakar Framework for Action to help countries reach the goal of primary education for all children. On its list of conditions for educational quality, the Dakar Framework specifically included "active learning techniques" and "a relevant curriculum ... that builds upon the knowledge and experience of the teachers and learners" (UNESCO 2000,

para. 44). From the 1990s onward, there has been a flourishing of educational reforms in sub-Saharan Africa with strong elements of learner-centered pedagogy. For example, LCP featured prominently in the 1995 reforms in Ghana entitled Free Compulsory and Universal Basic Education that restructured the curriculum of teacher-training colleges to make teacher education more practical and to include training in LCP (Akyeampong and Stephens 2000). In 1999, Mali embarked upon a general educational reform and decentralization process based on a ten-year plan that, among other things, aimed to expand enrollment in primary education, reform teacher training, scale up a competency-based curriculum for grades one through nine, and introduce active learning methodologies (USAID-Mali 2002). In 2004, South Africa's Outcomes Based Education reform linked a competency model with LCP approaches (Jansen 2004; Chisholm and Leyendecker 2008). In the same year, Mozambique's new curriculum for basic education emphasized LCP (Guro and Weber 2010). Similar reforms were underway in the Gambia and Guinea, with the latter country adopting a new pre-service primary teacher education project that featured student-centered approaches and active learning (Schweisfurth 2002; Dembélé and Miaro II 2003). Despite national differences among these policies, they share the aim of encouraging teachers at both primary and secondary levels to move away from teacher-centered methods toward inquiry-based learning, where greater emphasis is placed on outcomes that are broader than basic recall of factual information (O'Sullivan 2004; Hardman, Abd-Kadir and Smith, 2008; Vavrus 2009).

Learner-centered pedagogy has certainly become more popular in sub-Saharan Africa during the past few decades, but research shows that there are a number of common challenges facing countries implementing such reforms. According to a review of more than 70 studies of learner-centered pedagogy conducted globally, including in Africa, Michele Schweisfurth (2011) identified four key implementation challenges. The first concerns the nature and expectations of reform, particularly the timing granted the expected change. Material and human resources constitute a second key challenge, ranging from teacher training and preparation to the provision of sufficient textbooks, teaching materials, class space, number of teachers, and appropriate furniture (see, e.g., Urwick and Junaidu 1991; Jessop and Penny 1998). Supporting this point, Schweisfurth (428) argues that "even where initial or in-service teacher education is supportive of LCE [learner-centered education], if this later contrasts with classroom, local mentoring, and inspection regime realities, and the demands of centralized curricula and examinations, once teachers are in classrooms, the impact of training in LCE methods diminishes over time." A third key implementation challenge is what Schweisfurth refers to as "divergent cultures" (425), in which cultural assumptions embedded in LCP conflict with local understandings of authority structures, obedience, cultural distance, teacher-student relationships and forms of interaction, and individualism and competition versus collectivism and cooperation (e.g., Dyer et al. 2004; O'Sullivan 2004). The fourth key challenge of implementation concerns power relations. While Western learning theorists conceptualize LCP as emancipatory and democratic, other scholars have decried what they see as the

imposition of this pedagogical approach by foreign donor agencies (Tabulawa 1997; Chisholm and Leyendecker 2008). A further instance of relations of power that Schweisfurth notes comes in the form of national examinations and school inspections, which, as we will see in the case of Tanzania (especially Chapter 6), curtail teachers' willingness to use learner-centered methods:

Where pupils' life chances and the reputations of schools and teachers are determined by their examination results, and exams test learners' ability to reproduce fixed bodies of knowledge, this will drive teacher practice, and parental and pupil expectations. [In addition, LCP is undermined by] ... inspection regimes which do not evaluate LCE practice positively—inspectors in many contexts have considerable power to shape teachers' practice, whatever competing imperatives there might be within the system. (Schweisfurth 2011, 429)

As with research conducted in the US, studies on LCP in sub-Saharan Africa show that it is very difficult to shift teachers' beliefs and practices for philosophical and practical reasons. Research by various scholars in South Africa indicates that, despite the explicit promotion of LCP in the national curriculum, teachers generally continue to rely on teacher-centered approaches (Jansen 1999; Cross et al. 2002; Reed, Davis and Nyabanyaba 2002; Chisholm and Leyendecker 2008). In their study of an in-service program in South Africa, Karin Brodie, Anthony Lelliott, and Harriet Davis (2002) found that most teachers took up the *form* of LCP, such as group work and student tasks, without the *substance*. More specifically, they contend:

[T]eachers take-up the new ideas differently, in relation to their contexts, positioning and knowledge ... teacher characteristics, such as prior qualifications, reflective competence, grade level, subject knowledge and confidence, as well as access to resources and support structures [including support from school heads] in their schools, are all implicated in their take-up of learner-centred practices. (556)

Similarly, in Namibia, Margo O'Sullivan (2004, 585) documented that "teacher professional capacity ... limited resources, cultural factors and learner background" explained teachers' reluctance to implement LCP. Finally, in their study of LCP in Malawi, Peter Mtika and Peter Gates (2010) found that teachers explained their varying degrees of learner-centeredness by referencing their own training, their personal beliefs, the national curriculum, and school culture, including pedagogical culture, student culture, and the small size of classrooms with large numbers of students. In sum, the research on LCP in sub-Saharan Africa makes it clear that teachers' previous experiences as students and trainees, alongside the conditions of teaching in their schools, deeply influence the extent to which they embrace and employ learner-centered pedagogy.

OVERVIEW OF THE TANZANIAN EDUCATION SYSTEM

The shift toward learner-centered pedagogy has also deeply affected education policy—and, to a lesser extent, practice—in Tanzania. Chapter 4 presents a detailed discussion of how LCP has been taken up in Tanzania in recent decades; therefore, this section provides an overview of schooling in Tanzania and highlights salient features of the educational system to indicate some of the reasons why LCP has been introduced as a reform and where some of the challenges in its implementation lie. The most significant of these challenges are taken up in the remaining chapters in this volume.

Structure of the Education System

Before reviewing the history of pedagogy in Tanzania, it is important to understand the current structure of the educational system. The Ministry of Education and Vocational Training (MOEVT) oversees the departments most relevant to the research in this volume, namely, secondary education, teacher education, inspectors of schools, administration and personnel, and policy and planning. It also supervises basic (pre-primary and primary) education and vocational education (MOEVT, n.d., “Organization Structure”). In addition, the Prime Minister’s Office Regional Administration and Local Government (PMO-RALG), plays a role in the management of basic and secondary education (MOEVT Mainland and MOEVT Zanzibar 2008). A third institution, the Ministry of Higher Education, Science and Technology (MHEST), is responsible for the establishment of policies and supervision for the country’s universities, including the faculties (departments) of education that offer bachelor’s and master’s degrees in education. In sum, teacher education in the country’s teachers colleges and universities is managed by both the MOEVT and MHEST (MOEVT, n.d., “Teacher Education Division”).

The education system itself is organized into three general levels with vastly different enrollment rates. The first, *basic education*, is comprised of two years of pre-primary education (optional) and seven years of primary education (Standards 1-7). The second level, *secondary education*, consists of four years of Ordinary Level—called O-level—in Forms 1-4 and two years in Advanced Level (A-level) in Forms 5 and 6. Finally, *tertiary education* includes colleges, universities, and professional institutes, of which there were 45 in 2010 (Benjamin and Dunrong 2010). In terms of enrollment, Table 1.1 provides figures for 2010 that show how enrollment peaks in primary school and drops dramatically by the end of secondary school. It also illustrates the points where gender equality in enrollment does or does not yet exist.

Table 1.1. 2010 Enrollment Data for Pre-Primary to PhD Levels in Tanzania

Level	Male Students	Female Students	Total Number of Students
Pre-primary	461,628	463,837	925,465
Primary (Standard 1-7)	4,203,269	4,216,036	8,419,305
Secondary (completed Form 4)	177,176	149,639	326,815
Secondary (completed Form 6)	20,381	13,299	33,680
Teacher training colleges ⁵	20,051	16,597	36,648
Bachelor's degree (all fields of study)	61,796	34,442	96,238
Master's degree	6,399	2,609	9,008
Ph.D. degree	327	115	442

Source: MOEVT (2010).

History of the Education System

The United Republic of Tanzania has an unusual educational history that accounts for the skewed educational pyramid illustrated in the table above. This history also makes the introduction of learner-centered pedagogy more consistent with past policies than in some other countries. Although the previous president, Benjamin Mkapa (1995-2005), and the current president, Jakaya Kikwete, embraced LCP in the country's education and development policies, the principles of active learning and critical thinking that are now mandated in the national curriculum were popularized by the country's first president, Julius Nyerere (1961-1985), even though these principles have yet to be fully realized.

Tanzania was a British Trust Territory—similar to a colony—from the end of World War I until it gained independence in 1961. For approximately 30 years before World War I, Tanganyika, as it was known until 1964, had been under German rule, but educational development during this period was very limited. Nevertheless, in some regions, such as the northern region of Kilimanjaro where much of the research for this book took place, formal schooling through mission societies was beginning to gain popularity by the early 1900s (Vavrus 2003). When the British took over the administration of Tanganyika, they slowly began to institute government schools—mainly at the primary level—along with a few schools for young men that extended beyond Standard 4. Although opportunities for formal education expanded over the four decades of British rule, at independence there were only 525,000 children enrolled in primary school and less than 17,000 students at the secondary level in a country of some 9.5 million people (Bureau of Statistics 1995). Opportunities for university education were even more restricted such that, in 1961, there was only one Tanganyikan civil engineer, 16 physicians, and two lawyers (Coulson 1982). For this reason, President Nyerere initially focused on higher education so that Africans could fill professional posts being vacated by British and other ex-patriates.

The emphasis on tertiary education did not last long as Nyerere's commitment to socialism grew and so, too, his interest in developing policies to promote primary education for all children and adult education for the many illiterate men and women in the young nation (Buchert 1994). Thus, in 1967, the government instituted a development program known as *ujamaa*, meaning "familyhood," though it came to be synonymous with Nyerere's form of African socialism. The same year, a concomitant education policy was initiated entitled *Education for Self-Reliance* (ESR), and its goals included reducing regional, ethnic, and class inequalities through a revisioning of primary school education. Thus, the government nationalized private schools and developed a quota system to help address the inequalities based on geography—with regions like Kilimanjaro far better endowed than other rural areas—and on gender so that girls' enrollment approximated that for boys (Vavrus 2003). The government also declared Swahili to be the medium of instruction in primary schools (with the intention of expanding this policy to the secondary level where English was used) (Rubagumya 1990), and it centralized the training of teachers at government teachers colleges that combined education courses with socialist politics (Buchert 1994).

These policies were consistent with Nyerere's (1967, 61) philosophy that primary schooling should be the backbone of a rural, agricultural nation and should become "a complete education in itself" that teaches children practical skills and an appreciation for collective farming. Primary schooling was intended to instill a "former attitude of the mind" based on unity and community engagement at the local and national levels that supposedly existed before colonialism. In particular, schools at the primary and post-primary levels were to become economically viable through farm and workshop projects in an attempt to be self-reliant.

Self-reliance (*kujitegemea*) was an important concept in Nyerere's (1967) vision of development. Self-reliance, he believed, should extend from the level of the self to the level of the Tanzanian state, which advocated non-alignment and freedom from dependence on foreign donors:

If every individual is self-reliant the ten-house cell will be self-reliant; if all the cells are self-reliant the whole ward will be self-reliant; and if the wards are self-reliant the District will be self-reliant. If the Districts are self-reliant, then the Region is self-reliant, and if the Regions are self-reliant, then the whole nation is self-reliant and this is our aim. (34)

Thus, experiential learning in the form of school farms and workshops became part of the curriculum. This was accompanied by an "Africanization" of certain subjects, particularly geography, literature, and politics (now civics), to develop an appreciation for African scholarship and the ability to think critically about colonialism and the ongoing marginalization of Africa in the global capitalist system. In sum, Nyerere proposed several practices that share a common understanding of learning and student-teacher relations as found in most versions of LCP today even though this was not the terminology he used in 1967. Yussuf Kassam (1994, 5) laid out some of these key tenets of ESR:

- Teachers and students should engage together in productive activities and students should participate in the planning and decision-making process of organizing these activities.
- Productive work should become an integral part of the school curriculum and provide meaningful learning experience through the integration of theory and practice.
- The importance of examinations should be downgraded.
- Students should become self-confident and co-operative, and develop critical and inquiring minds.

Though education policy in Tanzania throughout the 1970s promoted learning through collaboration and experimentation, the political and economic conditions in the country by the mid-1980s did not support these aspirations. Internally, Tanzania changed some of the content of the curriculum and made exceptional progress toward achieving universal primary education and adult literacy in one of the world's poorest countries, with an increase in the literacy rate from about 33 percent in 1970 to 90 percent by 1984 (Brock-Utne 2000). However, "the emphasis on academic mastery and individual achievement in the schools" remained (Samoff 1990, 222). The examination system that assessed this "mastery" severely restricted admission to secondary schooling, and it has had long-lasting consequences: By the early 1980s, only 3 percent of primary school students matriculated to the secondary level; in 1996, the country's gross enrollment ratio for secondary school was a mere 5 percent; and, as of 2000, this ratio was still "among the lowest in the world today" (Lassibille and Tan 2001, 148; see also Woods 2007). Thus, there was a continuous tension between the socialist principles of the Nyerere government and the goals of modernization and economic development that necessitated engagement with capitalist countries and institutions. As Joel Samoff (1990, 268) noted in discussing Tanzania in the late 1980s:

Tanzania's transition is stymied. Its socialist vision is regularly obscured and often overwhelmed by its capitalist practice, both within and outside education. Frequently denounced, the modernization orientation is equally frequently reasserted, with both local and foreign support ... The Tanzanian experience points to the powerful obstacles, and perhaps the limits, of a nonrevolutionary transition.

In addition to these struggles, several serious global recessions as well as a short-lived but costly war with neighboring Uganda seriously affected Tanzania's economy in the 1970s and 1980s. The severe economic crisis in the country did not completely deter President Nyerere from following his socialist policies, and he remained strongly opposed to international financial institutions dictating economic policy in the country (Ibhawoh and Dibua 2003). Yet after his resignation in 1985, his successor, Ali Hassan Mwinyi, agreed to the terms of structural adjustment lending through the International Monetary Fund and the World Bank to address the problems the country was facing. These structural

adjustments had a number of consequences for the country's economic, political, and educational systems because of the changes they required, such as the reduction in the size of the civil service, the lowering of barriers to foreign trade, and the introduction of user fees for social services, including school fees from the primary level onward (Vavrus 2005). In particular, the economic downturn in the 1980s and the policy "adjustments" that followed significantly denigrated educational quality: Reliance on school fees left many schools without adequate financial resources as enrollment rates declined; school-based and national exams were redesigned so that less costly theory-based assessments took the place of practical, lab-based, assessments in the sciences; and the length of time spent in coursework and school-based training for pre-service teachers declined, leaving graduates with a diploma but little pedagogical content knowledge or practical experience of teaching (Lyimo 2010).

Since the 1990s, criticisms of structural adjustment lending and mounting international attention to universal primary education have prompted significant changes in Tanzania's educational approach. Reversing its policy on "cost sharing" through school fees implemented under structural adjustment, the government eliminated fees at the primary level in 2002. It has also launched major initiatives to improve access and quality in primary and secondary schooling through the Primary and Secondary Education Development Programmes financed largely through World Bank lending (Wedgwood 2007a). Moreover, the country's policies now call for pedagogical change in the direction of learner-centered pedagogy.

Despite recent policies designed to encourage the use of LCP in Tanzanian schools (discussed in Chapter 4), there are a number of challenges facing the country's educational system that restrict the viability of such reforms and that are taken up by the authors in this volume. We will address the five most pressing challenges that emerged from the research upon which this book is based.

The first challenge has to do with conceptualizations of knowledge and relations of authority that make the process of teachers and students engaging together in the co-construction of knowledge rather unrealistic. Tanzanian secondary school teachers are generally trained to teach two subjects, such as biology/chemistry or English/geography, even though there may be ten or more subjects taught at a school. Some have argued that this training limits the way teachers conceptualize their subjects and teach them: "The effect of specialisation on the part of secondary school teachers is that they lack diversity and flexibility in the practice of teaching given diverse subjects offered in secondary schools" (Mafuru 2011, 26). Moreover, as discussed in Chapter 3, pre-service teacher education tends to separate coursework in the subjects for which teachers are being trained and coursework about curriculum and pedagogy. In other words, future teachers are learning content knowledge and pedagogical knowledge but not pedagogical content knowledge that marries them together (Shulman 1986). In addition, pre-service teachers may learn about constructivist pedagogies in their pedagogy classes, but they generally do not experience or observe concomitant methods in their courses. This is also the case for in-service teachers, whose opportunities for professional development are extremely limited. If they have not delved into constructivism and

LCP in their pre-service programs, they are unlikely to receive the sort of consistent, extended, and experiential knowledge they need to challenge their pre-existing notions of how knowledge is produced. As a result, teachers in our study tended to express support for LCP while maintaining a theory of knowledge as fixed, factual, and to be transmitted. They often engaged in forms of LCP, such as group work and student presentations, without embracing the substance of the pedagogical approach (see Chapter 4). Teachers also expressed uncertainty about who has the authority to question the knowledge “conveyed” by faculty at teachers colleges and by teachers in schools even though the banking model of education in which knowledge is “deposited” into the heads of students is anathema to LCP (Freire 1970).

A second concern revolves around the policy that requires English to be used as the medium of instruction in secondary schools. Throughout the seven years of primary schooling, children in public schools are taught in Swahili, the national language that is spoken by nearly everyone in the country. As the vast majority of children in the country attend such schools, Swahili is the language that children are accustomed to using for their formal education. Although Nyerere envisioned Swahili eventually serving as the medium of instruction at the secondary level as well, this has never come to pass. Scholars tend to agree that the English proficiency among secondary school students, and teachers, shows a clear decline since the 1970s (Criper and Dodd 1984; Malekela 2004; Mbunda, Mbise and Komba 1991); however, this does not mean there is widespread agreement on how to resolve this problem. There continues to be a great deal of debate over the current policy, with some scholars viewing the use of English as a barrier to learning and to teachers’ use of LCP when they are not sufficiently proficient in the language (Brock-Utne and Holmarsdottir 2004; Roy-Campbell and Qorro 1997; Wedgwood 2007b). This is a view supported by the analysis in Chapters 6 and 9 of this volume, with the latter suggesting that English as the medium of instruction in secondary schools significantly limits the pedagogical strategies employed by teachers, encouraging them to rely upon closed questions rather than the sort of open-ended dialogue most conducive to inquiry-based, learner-centered pedagogy. To highlight teachers’ varied proficiency in English, the authors of the chapters that follow have opted *not* to edit the quotes from focus group discussions, interviews, and verbatim notes from classroom observations.

A third challenge for teachers centers on the national examination system and the lack of alignment between curricular reforms calling for learner-centered pedagogy and the national, high-stakes exams that continue to assess primarily fact-based knowledge. Chapter 6 suggests that the examination system constrains pedagogy in two key ways. First, because they are easier to grade in a standardized fashion, questions that purportedly have a single, correct answer are featured on the exam; however, our analysis of items on the Certificate of Secondary Education Examination (CSEE) taken at the end of Form 4 raises questions about the factuality and objectivity of some items. Second, the chapter contends that the exams are tests of English language proficiency, which disadvantage youth whose foreign language skills are limited but who may understand the concepts being

assessed. Thus, the structure and the language of the CSEE encourage teachers to use methods that aid memorization instead of learner-centered pedagogical strategies.

A fourth concern addressed in a number of chapters, and most directly in Chapter 5, has to do with the material conditions of teaching in Tanzanian schools that are vastly different from the conditions in countries where most of the literature on and materials for LCP are produced. The teachers in this study talked openly about the challenges they face in finding resources needed for more participatory teaching, from equipment in physics laboratories to construction paper and marking pens for making visual aids. In addition, they discussed the difficulties of limited staffing in most schools that leads to teachers serving in multiple administrative roles and takes away from their time to prepare new lessons and teaching aids. In Chapter 3, the teachers also linked the material conditions in Tanzanian schools to their own professional development during pre-service programs and infrequent in-service opportunities, which occur rarely due to financial and administrative limitations. The recognition of these circumstances under which Tanzanian teachers labor has reinforced our view that LCP must be understood as contingent upon the cultural, political, and material conditions surrounding its deployment.

Finally, the chapters to follow recognize the challenges of employing inclusive education in contexts where the concept is not fully understood by teachers, parents, and education officials. Taking a broad view of the term, we use *inclusion* to mean the creation of a learning environment in which all children and youth, especially those who have been traditionally excluded from and marginalized in school, can fully participate in the classroom. We have, however, separated into two chapters the data that deal with marginalized youth, with Chapter 7 examining teachers' conceptualizations of disability and Chapter 8 exploring girls' experiences in secondary school. Through an analysis of teachers' beliefs and practices regarding "slow" learners—the term often used by teachers to describe students with learning disabilities—and gender relations in several of the schools in this study, these two chapters serve as a reminder that understandings of putatively universal terms like *disability* and *gender equity* are, in fact, contingent upon teachers' education and experience.

SUMMARY AND PREVIEW

In this introductory chapter, we have laid out the conceptual framework for the study, the relevant history of Tanzanian education, and the major issues discussed in the chapters to follow. We have indicated how learner-centered pedagogy has grown in importance as it has become more widely accepted as "good teaching" by policymakers, researchers, and teachers themselves. However, we have also made clear that we view any definition of sound pedagogical practice as contingent upon the social and material conditions that shape how teachers are prepared for their profession and practice it in schools. The five themes discussed above highlight some of these conditions in the case of Tanzania, and these themes arise in multiple

chapters in this volume. In addition, the final chapter serves as a site of collective reflection on the process of international research collaboration and presents some of the lessons we have learned throughout the course of this project that we hope will be relevant for other researchers.

We recommend that readers approach the chapters in the volume in chronological order because they have been organized to flow from a consideration of broader structural issues to specific classroom practices. If, however, someone is interested in only a few of the issues addressed in the book, we still suggest that Chapters 1 and 2 be read prior to examining any of the subsequent chapters because the individual chapters do not repeat information about the Tanzanian education system, the Teaching in Action workshop, or the design of the research project.

Taken together, we hope the chapters that constitute this extended case study are relevant to students in teacher education programs, to teachers and teacher educators, and to policymakers across the globe who are trying to improve the quality of education through pedagogical reform. One way we have sought to expand the relevance of this study is by developing questions for discussion at the end of each chapter. In most countries, teacher education focuses almost exclusively on the home-country context without benefiting from a comparative perspective to see how issues that teachers, students, and policymakers grapple with in a domestic context are being addressed in other countries. Thus, this book fills a critical gap in the available resources for teacher education programs as they increasingly seek to develop a critical, global perspective among their students. We hope these questions for discussion will enable readers, particularly pre-service students, to reflect on the ways that their own educational philosophies and practices, often assumed to be shared universally, are shaped by multiple contextual factors.

We also intend for this volume to meet the needs of professionals working in international development and education organizations who seek to understand more thoroughly the tensions between policy as informed by international discourses and by local contexts of schooling, and the tensions surrounding international research collaborations. The questions for discussion are also intended to serve as a springboard for individual and collective reflection among professionals on proposals for reforms they are developing, implementing, and evaluating. We recognize that the circumstances in Tanzania are not universal; nevertheless, we believe this specific case is not unique and holds many lessons for individuals seeking to integrate theory and practice in more meaningful and informed ways.

NOTES

1. We would like to acknowledge the contributions of the other members of the original research team whose work greatly informed the chapters in this volume but who opted not to write a chapter for it: Audrey Bryan (Ireland) and Augustina Mtanga, Denis Mbilinyi, Edward Kileo, Robert Mossi, and Theresia Boniface (Tanzania). Several of these Tanzanian researchers, however, did contribute their responses to the questions that form the basis of the final chapter.

2. Throughout this volume, we use the term “US” to denote the entire group of graduate students and faculty who were based either at Teachers College or the University of Minnesota during the time of this project even though one of these students comes from Ecuador and another from Malawi. Similarly, we use “Tanzanian” to refer to the faculty based at MWUCE when they were part of the research team even though one of them is from Kenya.
3. We would like to recognize the MWUCE coordinators of TIA in 2007 and 2008, Fr. Eugene Lyamtani, and Ms. Martha Muraya in 2011, when Fr. Salema was in Kenya pursuing a PhD.
4. LCP also became popular in the UK during this period after the release of the Plowden report. In their study of primary classrooms in the UK, Derek Edwards and Neil Mercer (1987) described the dilemmas teachers faced at this time as they tried to “inculcate knowledge while apparently eliciting it” (p. 126).
5. Teacher training colleges include a number of different programs, such as the certificate in special education, pre-service and in-service diplomas, and the Grade A, B, and C programs through which some primary school teachers have been trained to meet minimum teaching requirements (MOEVT 2010; World Bank 1999).

APPENDIX: LEARNER-CENTERED PSYCHOLOGICAL PRINCIPLES

- The learning of complex subject matter is most effective when it is an intentional process of constructing meaning from information and experience.
- The successful learner, over time and with support and instructional guidance, can create meaningful, coherent representations of knowledge.
- The successful learner can link new information with existing knowledge in meaningful ways.
- The successful learner can create and use a repertoire of thinking and reasoning strategies to achieve complex learning goals.
- Higher-order strategies for selecting and monitoring mental operations facilitate creative and critical thinking.
- Learning is influenced by environmental factors, including culture, technology, and instructional practices.
- What and how much is learned is influenced by the learner’s motivation.
- The learner’s creativity, higher order thinking, and natural curiosity all contribute to motivation to learn.
- Acquisition of complex knowledge and skills requires extended learner effort and guided practice.
- Learning is most effective when differential development within and across physical, intellectual, emotional, and social domains is taken into account.
- Learning is influenced by social interactions, interpersonal relations, and communication with others.
- Learners have different strategies, approaches, and capabilities for learning that are a function of prior experience and heredity.
- Learning is most effective when differences in learners’ linguistic, cultural, and social backgrounds are taken into account.
- Setting appropriately high and challenging standards and assessing the learner and learning progress—including diagnostic, process, and outcome assessment—are integral parts of the learning process. (American Psychological Association 1997, 3-6)

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FRANCES VAVRUS¹

2. THE EMERGENCE OF AN INTERNATIONAL TEACHER EDUCATION AND RESEARCH COLLABORATION

INTRODUCTION

In the fields of international education and international development, the terms *partnership* and *collaboration* are often used interchangeably to mean cooperation between parties seeking a common goal. Although this colloquial usage is sufficient for most purposes, the editors of this volume have opted for the term *collaboration* because it allows us to problematize the multiple relations of power at play when international researchers and institutions are engaged in a common project. The etymology of the term indicates that it means “laboring together” and often laboring on scholarly endeavors such as joint research and writing projects. Moreover, there can be multiple dyadic relationships embedded within a research collaboration, or on a research team, which may contribute to or hinder the collective effort to attain a goal.

The term *partnership* could be used in a synonymous manner, but it frequently connotes a closer and more permanent relationship between two entities or individuals, as in *business partners* or *marital partners*. In the field of international development, *partnership* has taken on additional connotative significance since the 1990s as institutions, such as the World Bank, have sought to engage more directly with community-level actors and non-governmental organizations (NGOs) as a means of making its poverty reduction efforts more participatory and country-driven (Barrow and Jennings 2001; Gould 2005). However, scholars have questioned the presumptive egalitarianism in decision-making that the term *partnership* implies and have documented the ways in which top-down policymaking often continues at the national and international levels in spite of greater local involvement in articulating development goals and carrying out development programs (Cleaver 1999; Williams 2004; Taylor 2009; Vavrus and Seghers 2010). For these reasons, we have opted for the term *collaboration* or *research team* when referring to our laboring together in the development of the teacher education program and the research project explored in this volume. We recognize that these terms are not unproblematic as they imply a degree of common understanding and effort that was not always evident in this project, but they allow for an examination of the institutional and individual dyads and triads that collectively formed the basis of our work.

In this chapter, I, on behalf of the research team, explain the history of the Teaching in Action (TIA) teacher education program and the research project that grew out of it. I also describe the research design, research methods, data analysis, and outcomes of the research collaboration to date. This information is crucial for readers to understand before reading the chapters that follow because the authors do not repeat information about the research project and, instead, focus on the analysis and interpretation of the data relevant to the overarching themes in their chapters.

HISTORY OF TEACHING IN ACTION

The discursive shift in educational policy in Tanzania from teacher-centered to learner-centered pedagogy, as discussed in Chapter 1, has placed new demands on teachers to use methods and techniques grounded in philosophies of learning that they may have studied in their pre-service education but have only rarely seen implemented by teacher education faculty (see Chapter 3). Although national policy and syllabi have changed, teacher education lags behind in preparing teachers to use learner-centered methods and to understand the theories upon which they are based. As such, Tanzania, like many countries, appears to be strong on policy development and weaker on policy implementation. The following description from a teacher education program observed by Wout Ottevanger, Jan van den Akker, and Leo de Feiter (2007, 46) in their study of science, mathematics, and ICT teaching in sub-Saharan Africa captures the central dilemma in preparing pre- and in-service teachers to understand and *use* learner-centered pedagogy (LCP):

A teacher educator to his student teachers:

Please note—and you better write this down, because it is important in your examination—In the modern conception of education, so-called student-centered education, we do not lecture anymore to students, but students have to find out things for themselves.

Given the continued dominance of lecturing as the primary, if not the sole, method of instruction in teacher education programs in sub-Saharan Africa, it is not surprising that numerous scholars have found teachers struggling to implement learner-centered strategies (Brodie, Lelliott and Davis 2002; Dembélé and Lefoka 2007; Hardman, Abd-Kadir and Smith 2008; Thomas 2008; Vavrus 2009).

One effort to address the gap between Tanzanian teachers' knowledge about LCP and policy mandates to use it is the Teaching in Action program. It is an intensive one-week professional development workshop for secondary school teachers aimed at providing a theoretical foundation for learner-centered teaching as well as tangible experiences modeling the critical thinking skills in active, participatory classrooms that teachers could cultivate in their schools. The workshop is based at Mwenge University College of Education (MWUCE), which lies on the outskirts of Moshi, a city of approximately 150,000 residents and the capital of the Kilimanjaro Region in northern Tanzania.

MWUCE was founded in 2001 as St. Joseph's Teachers College and operates under the auspices of St. Augustine University of Tanzania, the Catholic university system in Tanzania.² At its inception, it offered the two-year diploma in education necessary for teachers to provide O-level (Forms 1-4) instruction. In 2006, St. Joseph's changed its name to Mwenge University College of Education because the government granted it university status as an institution authorized to offer the three-year bachelor's degree in education required to teach at the A-level (Forms 5-6). Since its inception, St. Joseph's/MWUCE has emphasized participatory teaching methods with a focus on science and mathematics subjects, and it has utilized professional development workshops as tools to initiate and institute pedagogical change among in-service teachers (Desforges and Desforges 2009). These workshops parallel the practical modules for students at MWUCE that demonstrate methods and techniques consistent with LCP, such as how to make and use teaching aids to engage students in the classroom and how to reinforce learning through field trips to local sites. While these may be skills explained in other teacher education programs or demonstrated on occasion during a degree or diploma course, MWUCE has striven to incorporate them into its curriculum throughout the three years that students are at the institution. Additionally, some members of the academic staff have been at MWUCE from the beginning or are graduates who have now become faculty members, and this continuity has contributed to the continued emphasis on active, participatory teaching. Although MWUCE has experienced challenges in maintaining this focus as it has rapidly expanded—from fewer than 100 students in 2006 to over 1,000 today—its graduates are generally held in high regard by secondary school heads for their more engaging teaching methods and stronger academic preparation than one finds among many new teachers.

MWUCE has also attempted to expose its students to a variety of teaching methods by welcoming visiting faculty from different countries. The institution has hosted Volunteer Service Overseas (VSO), British Executive Service Overseas (BESO), and Peace Corps (US) teachers along with teachers sponsored by Catholic organizations in Ireland, Germany, and other European countries. Additionally, Fulbright scholars from the US have contributed to the promotion of participatory teaching methods at MWUCE and to the development of institutional capacity for faculty research. As a Fulbright lecturer at MWUCE in 2006-2007, I was engaged in these two activities, and they served as the impetus for the development of the Teaching in Action program.

Prior to the year at MWUCE, I had been a teacher, and then a teacher-researcher, at a secondary school in another part of the Kilimanjaro Region but less than a 30-minute drive from the university campus (Vavrus 2003, 2005). I became curious about teacher education and particularly about the ways that Tanzanian teachers were making sense of the shift toward LCP in the country's policies and syllabi because my colleagues' own schooling had been conducted in environments where teachers had great authority over knowledge dissemination and students rarely asked questions in the classroom. These were still the conditions that prevailed in the mid-1990s, when I was teaching and conducting research in

secondary schools, and I wondered how faculty and students in teacher education programs a decade later could have altered their conceptions of knowledge, views on classroom authority, and methods of teaching when these are all deeply entrenched.

During the research seminar for MWUCE faculty that I facilitated in 2006-2007, we discussed this question and used it as an example of how one might develop a project using schools as research sites and qualitative methods to explore the interpretation of a phenomenon—such as an education reform—by local actors. The faculty who participated in the seminar hoped to pursue a master's or PhD degree as most faculty at MWUCE held only a bachelor's degree, a situation that is not uncommon in teacher-training institutions in SSA (Stuart 2002). Moreover, they wanted to learn more about qualitative research because their research methods courses had been grounded primarily in positivism and utilized quantitative research methods. Some of the faculty in the seminar were also intrigued by the concept of action research through which the real-life challenges of Tanzanian teachers and teacher educators could become the basis for inquiry aimed at addressing these problems through a process of collaboration and reflection between researchers and practitioners (Lather 1986; Fals-Borda 1987; Cammarota and Fine 2008). When an invitation arrived from AfricAid³ to submit a proposal for a small project, several of the faculty in the seminar proposed that we develop a “refresher workshop” on active, learner-centered teaching for recent MWUCE graduates and evaluate its impact. With the support of the MWUCE administration, the seed for the Teaching in Action program was planted.

A team of five MWUCE faculty and I worked together for several months in 2007 to develop the one-week workshop for approximately 30 teachers who had graduated from MWUCE within the past year. We discussed topics that were likely to be most relevant to the new teachers, such as how to teach large, diverse classes in a learner-centered manner and how to deal with disciplinary problems without resorting to corporal punishment, a common practice in Tanzanian schools but one discouraged in the pre-service program at MWUCE. We also felt it was important for the faculty facilitators to demonstrate, not merely discuss, methods for engaging “slow learners” and “shy” girls (see Chapters 7 and 8, respectively). Although I helped to develop the content of the workshop and the training manual for the MWUCE faculty facilitators, the first TIA workshop was conducted solely by the five MWUCE faculty engaged in its development, including Mr. Allen Rugambwa, co-author of the abovementioned chapters who has been a part of this project from its inception.

The 2007 TIA workshop was evaluated positively by the MWUCE graduates who attended and by the two representatives from AfricAid who happened to be in Tanzania at that time. However, there were areas for improvement identified by the participants and faculty facilitators. These areas included paying more attention to the ways that LCP can support the teaching of topics on the national syllabus rather than being a distraction from the “real” teaching that prepares students for the national exams. In addition, the MWUCE faculty conveyed their wish for more guidance on LCP because they did not feel they were fully prepared to serve as

experts on or models of these new ways of teaching and for more training in school-based, action research that might result in tangible improvements in classroom practice.

At the same time, my colleague at Teachers College, Dr. Lesley Bartlett, and two of our graduate students with teaching experience in Tanzania (Bethany Hinsch) and in Zambia (Matthew Thomas) told us that they would like to be involved in the TIA workshop. Thus, I proposed to AfricAid that we expand the project to include more facilitators, a mentoring component for the MWUCE faculty, and more teachers who, in the future, would include MWUCE graduates but would not be restricted to them. AfricAid agreed, and we have benefited from additional support from other NGOs and our universities (Teachers College and the University of Minnesota) to support faculty and/or US student travel.⁴

Beginning in 2008, the TIA program has included a week of activities for the facilitators prior to the workshop. These include a mentoring component in the form of “Faculty-to-Faculty” sessions and periods where the Tanzanian and US team members work together on lesson plans and materials for the workshop as they also divide responsibilities for each morning and afternoon session. During the workshop week itself, which typically runs from Sunday afternoon through Saturday morning, there are two facilitators, one from the Tanzanian team and one from the US team, who lead each of the sessions. Exceptions to this pattern include events that require the entire facilitation team, such as the “Activity Circus” where low-cost, locally-available teaching aids are demonstrated at tables spread out across a large lecture hall and then similar aids are made by the teachers to take back to their schools with them. In addition, the entire facilitation team meets before the lunch break each day for a debriefing session, in which we model reflective practice by discussing the strengths and the weaknesses of the morning session and ways to improve the sessions during the rest of the week. Notes are taken during these sessions to help the facilitators in revising the workshop from year to year, and they are also helpful for the more comprehensive debriefing session at the end of the week after the teachers have departed.

A typical day at the workshop involves a morning session divided into two 1.5 hour segments on topics related to the philosophy and methods associated with LCP as well as practical problems faced by teachers in large, under-resourced classes. These sessions involve a great deal of demonstration of learner-centered methods appropriate for large classes, such as Think-Pair-Share and interactive lecturing, and critical-thinking pedagogies like case studies of real-life situations related directly to the topics in the national syllabi for different subjects. The afternoon sessions generally have teachers working with colleagues who teach the same subject, such as biology, English, or physics, and are led by the MWUCE and US facilitators with expertise in these areas. On the first full day of the workshop (Monday), the teachers identify topics they find difficult to teach in the national syllabus and divide up these topics so that each person or pair of teachers will work throughout the week to develop a model lesson plan for teaching this topic using learner-centered approaches.⁵ On Tuesday and Wednesday afternoons, the teachers meet in these subject-specific groups to exchange ideas and discuss both the

substance of these difficult topics and strategies to teach them. On Thursday and Friday afternoons, the teachers teach a segment of their model lessons to their fellow teachers and facilitators, and they provide guided peer feedback to one another on the strengths of the lesson and on areas for improvement. For most of the teachers, this is the first time they have experienced peer feedback and, for some, the first non-evaluative input on their teaching they have received (see Chapter 3). The evaluations of the TIA program by participants consistently report that the mentoring provided on their lesson plan and micro-teaching is one of most beneficial parts of the workshop, and the faculty facilitators reinforce the point that teachers can create opportunities for peer feedback in their classrooms so that students learn to teach one another.

The five years of the TIA program have generated a large number of evaluations by the teachers, which are analyzed and discussed by the facilitators at the end of the workshop week. These written, and, occasionally oral, evaluations have informed the development and refinement of TIA program and generated questions that we sought to answer by conducting a research project with the 2010 TIA participants (discussed in the next section). The main achievements of TIA from the perspective of the participants and the faculty facilitators can be divided into four main categories and are elaborated below: (1) creating a venue for collaboration and idea-sharing; (2) building the capacity of Tanzanian teachers and faculty members; (3) building understanding by the US faculty and graduate students; and (4) increasing the use of learner-centered pedagogical methods in Tanzanian secondary schools.

First, the opportunity provided by the workshop for teachers to share ideas and collaborate together on the production of learner-centered lessons has been a highlight for many participants and has also enabled them to improve their teaching through discussions about best practices and approaches. One participant from the 2007 workshop noted that the most useful aspect of TIA was the opportunity to “exchange and share ideas, [because] every colleague has different views about the teaching and learning process” (Vavrus, Hinsch and Thomas 2008). Interviews with teachers conducted months after the 2008 TIA workshop revealed that teachers continued to engage in idea-sharing regarding LCP and other related issues well after the workshop (Vavrus, Norton, Sams and Shuyler 2009).

Second, the TIA program has also built capacity among Tanzanian teachers and faculty members. The Faculty-to-Faculty sessions, whose topics are proposed by both the MWUCE and US faculty, have generated significant discussion about relevant concepts and practices related to TIA. These include the concept of pedagogical content knowledge (see Chapter 3), institutional outreach to the schools near MWUCE, and professional learning communities. For the Tanzanian teachers at the workshop, TIA has provided a forum to discuss, observe, and practice teaching methods that are often unfamiliar to them while receiving constructive feedback from their peers and faculty facilitators. The teachers also take advantage of instructional resources at MWUCE, such as faculty members’ expertise on difficult topics in the national syllabus and the MWUCE library, a part of the workshop that participants have evaluated positively. Because textbook to

student ratios can be as high as 1:28 in secondary schools (Lujara, Kissaka, Trojer and Mvungi 2007), and resources like photocopying machines and the internet non-existent, the value of creating opportunities for teachers to copy tables from textbooks and print materials from the internet for use in their schools cannot be overstated.

Third, the TIA program has developed the capacity of the US faculty and graduate students to debate the merits of LCP and to appreciate the challenges of its implementation in very different cultural and socio-economic contexts. Moreover, the US facilitators have gained great insights into the Tanzanian education system that has enhanced their ability to teach from a comparative perspective and to reflect on the application of theory to practice in teacher education.

Lastly, and most importantly for the research project, TIA has led to changes in some teachers' behaviors in the classroom. The 2009 evaluation found that, compared with a control group of teachers that did not attend TIA, workshop participants were less likely to use corporal punishment and instead opted for more child-centered disciplinary methods (Vavrus, Norton, Sams and Shuyler 2009). Additionally, classroom observations in 2009 showed that TIA workshop participants cultivated more positive interactions with students, maintained more engaging classroom environments, and utilized more active, inquiry-based, and learner-centered activities than teachers at the same schools who had not attended the workshop. The evaluation data collected between 2007 and 2009 indicated that the TIA program was achieving its primary goal: developing teachers' understanding and use of inquiry-based and learner-centered methods.⁶ However, the TIA facilitators became increasingly interested in developing a more comprehensive understanding of LCP from the perspective of Tanzanian secondary school teachers, and we had the opportunity to pursue this line of inquiry in 2010.

THE RESEARCH PROJECT

The Teaching in Action program was the impetus for the research project that forms the foundation of the chapters in this volume. The project had two primary goals: First, to develop the research capacity of MWUCE faculty members and the US graduate students who participated in the TIA program in the area of qualitative, school-based research; second, to explore how the teachers who participated in the 2010 TIA workshop understood and then implemented learner-centered teaching methods once they were back in their schools, where they had to contend with cultural and material realities that often work against LCP.

To help achieve the first goal, Lesley Bartlett developed a two-week workshop on qualitative research in which the entire research team and additional interested MWUCE faculty participated. The members of the MWUCE research and TIA facilitation team were selected by Fr. Victorini Salema, the Director of Research and Outreach at MWUCE, and the members of the US team were selected by Dr. Bartlett and me from the students at our respective universities who wanted to participate in the project.

The workshop covered the characteristics of qualitative and quantitative research; qualitative research paradigms; research questions appropriate for qualitative inquiry; qualitative research design and methods; the analysis of interview and observational data; ethics; and the trustworthiness of qualitative data. There were opportunities for the faculty and students to practice interviewing and observing and to discuss these experiences afterwards as a means of clarifying the research process and of giving peer feedback on research techniques. The first week of the workshop was open to any MWUCE faculty member who wanted to participate, while the second week was limited to the nine MWUCE faculty and the seven members of the US team who were involved in the 2010 TIA workshop and research project so that we could revise the research questions and refine the design of the study.

Lesley Bartlett and I had solicited funding for the research project from our respective universities, and we had to submit our initial research questions, design, and instruments to our Institutional Review Boards for approval before engaging in research with human subjects. In addition, we had to submit our research proposal to the Tanzania Commission for Science and Technology (COSTECH), which approves research in the country by non-Tanzanians. Thus, of necessity, the research project had been conceptualized prior to this research workshop that brought together the entire research team for the first time. Although the project was designed with input from Victorini Salema and Allen Rugambwa via email, the process of designing the study was not as collaborative as desired (see Chapter 10 for reactions to this part of the project). However, during the qualitative research workshop, the team discussed the initial research questions and tweaked them to create two queries that guided our work: (1) How do teachers educated in teacher-centered pedagogy understand, interpret, and implement learner-centered approaches to teaching? (2) What are the material and ideological constraints teachers identify as obstacles to pedagogical change?

Another element of the project that had to be designed in advance was the site, or sites, for the research. Fr. Salema contacted the headmasters and headmistresses of seven secondary schools that met the following criteria: (1) they had a solid, ongoing relationship with MWUCE through its student teaching program (called Block Teaching Practice); (2) they had a reputation for good teaching and administration; and (3) they were in the Kilimanjaro or Arusha Regions so that they were close enough to the university to facilitate observations at the school during the months following the TIA workshop. Fr. Salema invited the school heads to a meeting at MWUCE in March 2010 to explain the purpose of the research project and to draft a Memorandum of Understanding with each school that agreed to be part of the project. The school heads agreed to participate, but, in the end, one school was not included in the study due to changes in its administration between March and June 2010. In the end, there were three schools in Arusha and three in Kilimanjaro that participated. We refer to these schools as the *focal schools* in this volume to distinguish them from the other schools from which participants at the 2010 TIA workshop came. Table 2.1 provides a summary

of these schools and the pseudonyms used when discussing them in the rest of the volume.

Table 2.1. Secondary Schools in the Research Project

Pseudonym	Region	Type of School • religion • co-ed*/single-sex • level(s)	Approximate Number of		2010 National Ranking (based on Form 4 exam)
			Students	Full-time Teachers	
Dunia	Arusha	• Catholic • co-ed • O-level	260	17	Top 3%
Mwanga	Arusha	• Lutheran • co-ed • O-level; A-level	600	25	Top 4%
Tanzania Prep	Arusha	• Lutheran • co-ed • O-level	210	16	NA ⁷
Kilimanjaro Girls ⁷	Kilimanjaro	• Catholic • single-sex • O-level; A-level	800	35	Top 1%
St. Anne's	Kilimanjaro	• Catholic • single-sex • O-level; A-level	420	17	Top 1%
Uhuru	Kilimanjaro	• Catholic • co-ed • O-level; A-level	615	21	Top 30%

*co-ed = co-educational.

At the end of the first day of the TIA workshop, the teachers from the six focal schools were invited to attend a meeting where Fr. Salema explained the research project, and Dr. Bartlett and I helped to answer their questions about it. There were three or four teachers from each of the focal schools at the workshop, with the exception of Tanzania Prep, which had arranged in advance for its entire teaching staff of 15 to attend. After discussing the project and the informed consent process, 23 of the approximately 35 teachers from the focal schools at the workshop agreed to participate.

The research project utilized three primary research methods, and we began the research itself during the TIA workshop. The first method, focus group discussion, was used to facilitate a conversation among the teachers from each of the focal schools who had agreed to be part of the study and two or three members of the Tanzanian-US research team. These discussions, which lasted between one and 1.5 hours, were intended as a way for the teachers to become acquainted with the researchers who would be working most closely with them at their schools. For this reason, we decided in advance not to audiotape these sessions but rather to take copious notes and transcribe/expand them after the discussions. The focus group

sessions were facilitated using a set of questions the team had developed in advance, although we viewed them as a guide rather than as a checklist of questions that had to be asked in every instance. The questions inquired into the organization of the school, the daily routines of teachers and students, and teachers' initial understandings of LCP. In May and June 2011, three to four members of the research team returned to five of the six focal schools and conducted another focus group discussion with the teachers who had participated in the study.⁸ We sought to understand their views on LCP a year after the TIA workshop and on the research project itself. These sessions were also not recorded but rather documented through the note-taking of the researchers and the transcription/expansion of these notes afterwards.

The second method used in the research project was observation, and the two-three members of the research team assigned to each school observed the three-six teachers therein on multiple occasions during their classes. There was a detailed observation guide that the team developed during the second week of the research workshop and revised after piloting in several focal schools (see Appendix). The guide includes many of the principles, topics, and activities introduced during the workshop, and it may not adhere to every interpretation of learner-centered pedagogy. The goal for the research teams was to observe each teacher on at least four occasions during the five weeks after the workshop, and, for the most part, this was achieved. However, there were scheduling issues at the schools and logistical difficulties for some research teams that led to fewer than four observations in a couple of cases. The classes observed lasted either 40 minutes if it was a single period or 80 minutes if it was a double period. In some cases, both members of the research team observed the same class, and this generated fruitful opportunities for the researchers to compare their notes and discuss their interpretations. At the end of each observation, there was also a mentoring period when the teacher was asked what went well during the lesson and what could have been improved to be consistent with the model of LCP used in the TIA workshop.

The third research method, interviewing, occurred on two occasions at the teachers' schools. One interview took place immediately after a classroom observation, and the questions for this interview focused on the specific pedagogical practices observed during the lesson and how they aligned, or did not align, with the teachers' understanding of LCP. The second interview was much more comprehensive, often lasting 1.5 hours, and it asked about the teachers' pre-service and in-service experiences, philosophy of teaching, responsibilities at the school, and views on LCP. When the teachers agreed to be recorded, the interviews were taped and transcribed by the research team at the teacher's school. In other cases, the researchers took notes during the interviews and transcribed them afterwards. In addition to interviews with the teachers, Fr. Salema interviewed each of the school heads about his/her philosophy of education, professional background, challenges at the school, and views on LCP. The members of the research team who visited the schools in 2011 also interviewed the school heads with a focus on ways to improve the TIA workshop and the research project.

The data collection at the schools took place during the five weeks after the TIA workshop, which we refer to as Phase I of the study. At the end of this period, the research teams reconvened at MWUCE for two days after having been spread out across the Kilimanjaro and Arusha Regions at their respective schools. They discussed the research process, initial findings, and ways to improve the research protocol before the Tanzanian team members launched Phase II of data collection following the departure of the US researchers in August 2010. During Phase II, the MWUCE research team members were scheduled to return to the schools every few weeks to continue observing and mentoring the focal teachers. However, this proved to be difficult to accomplish for several reasons. First, the government announced in June that universities across the country were going to be closed until after the presidential election at the end of October 2010. Thus, the MWUCE faculty found themselves with an unexpected two-month “holiday” that, for some, offered an opportunity to visit family members in other parts of the country; in other cases, it created extra work at the university to revise the 2010-2011 academic calendar to account for the long delay in the beginning of the new school year. Second, several members of the Tanzanian team received word of scholarships to enable them to pursue their master’s and PhD degrees at the University of Dar es Salaam in two cases and in Germany in another case. This led to their departure from the research project and from MWUCE for the duration of their studies. Third, some of the teachers in the study grew weary of being observed and found reasons not to be available when the MWUCE researchers had planned to visit. Thus, the follow-up visits to the schools were spotty, at best, and did not generate much valuable data; however, these problems taught us a lot about international research collaborations and school-based research as discussed further in Chapter 10.

The third phase of the study began in January 2011, when the team members began the analysis of the data. The original research design called for three US team members (Lesley Bartlett, Matthew Thomas, and me) to return to Tanzania in January for a data analysis workshop that would provide basic training for MWUCE faculty in data entry and an opportunity for collaborative data analysis. However, the closure of the university campus that delayed the beginning of the new academic year meant that the Christmas holiday, which typically extends into mid-January, was greatly reduced, and the MWUCE faculty had to begin teaching the week after the New Year, when we had planned to conduct the workshop.

To adapt to this exigency, we developed several strategies. First, Lesley Bartlett, Matthew Thomas, and I met at the University of Minnesota during our January holiday to review the data; determine the best way to organize the focus group, observation, and interview data; and identify major themes that we could use as a framework for categorizing the data. We worked intensively for most of a week to complete these preliminary tasks.

Second, we created an Excel database rather than using more sophisticated data analysis software that is unavailable at MWUCE, and we coded the data into eight relevant themes to form smaller, more manageable chunks of data. We then entered the data into the database with the assistance of two additional students, a process

that took several weeks to complete, and we wrote a document for the Tanzanian and US research team members who were not in Minnesota that explained the process we followed in organizing the data in this way.

Third, with the assistance of another University of Minnesota professor who teaches qualitative data analysis, Peter Demerath, we selected a few readings on coding and interpreting qualitative data and prepared a timeline of data analysis assignments that we sent to the researchers. We asked them to select from the eight identified themes the ones that interested them most for further analysis. Based on this information, we formed pairs or, in one case, a group of three that were comprised of members from the Tanzanian and US teams who would work together to analyze in greater detail the chunk of data from the Excel database that pertained to their central theme. These pairs/group worked together from February to May 2011 via email and Skype to develop inductive (emic) and deductive (etic) codes for their data and to write a preliminary report about their findings to present at a conference at the end of May at MWUCE.

In May, all but two of the contributors to this volume participated in the conference. The week before the conference was spent preparing and giving face-to-face peer feedback on the PowerPoint presentations designed to convey the most salient findings from the analysis of each pair/group of researchers. Nearly 200 people attended the one-day conference; it included an interactive session in which the guests were divided into groups, facilitated by the Tanzanian and US researchers, to discuss the findings. In this way, the team was able to share what we had learned with some of the most important stakeholders: the participating teachers and school heads, pre-service teachers at MWUCE, and teacher educators at the university. The week after the conference was spent revising the conference papers for publication in this volume, a process that continued across continents for several months thereafter as drafts were circulated and additional data added. In addition, one of the Tanzanian team members, Allen Rugambwa, was able to join Matthew Thomas and me in November 2011 at the annual meeting of the African Studies Association in Washington, DC, where we presented the chapters that we co-authored for this volume. Although Fr. Salema was slated to participate on the panel, he was selected for doctoral studies in Kenya several months before the meeting and could not make the trip.

In sum, the research project that grew out of the Teaching in Action workshop could be described as a multi-sited qualitative case study carried out through an international research collaboration that sought to explore how teachers educated in one form of pedagogy come to understand, interpret, and implement a new pedagogical approach within certain material and ideological constraints. The project was carried out in six schools in two regions of Tanzania and involved 23 teachers and six school heads as participants, and 16 researchers from different countries but affiliated with MWUCE, Teachers College, or the University of Minnesota. The data collection spanned an intensive five-week period followed by a sporadic four-month block and follow-up focus group discussions and interviews a year later. The data analysis was intended to occur primarily during a face-to-face workshop in Tanzania, but this did not happen due to political circumstances in the

country at the time of the national elections. Instead, the research pairs/group used other technologies to communicate about the analysis and draft their conference papers. They have continued to work across physical distances and cultural divides to revise their papers into the chapters that follow. The final chapter returns to some of the issues regarding international research collaboration and collaboration by researchers at different stages in their professional careers.

NOTES

1. This chapter is informed by a synopsis of the Teaching in Action program written by Matthew Thomas and Frances Vavrus (Thomas and Vavrus 2010). I would like to acknowledge and thank Matthew for his contributions to this chapter, to TIA, and to the research project discussed in this chapter because of his central role in managing the data collection and analysis.
2. Although MWUCE is a private, Catholic institution, its student body includes Protestants, Muslims, and others.
3. For more information about AfricAid, an NGO based in Colorado (USA) that sponsors a number of education programs in Tanzania, see the organization's website: <http://africaid.com/>.
4. Brent Ruter, a doctoral student at the University of Minnesota and an experienced science teacher, was not part of the research team but has played an integral role in the TIA workshop and in the professional development component of it for the past three years.
5. Whenever feasible, the facilitators have photocopied the lesson plans for the five to 15 teachers in their groups so that each teacher leaves with a collection of lesson ideas to help them teach challenging topics in a more learner-centered manner.
6. In 2009, the TIA program was one of three organizations to receive the Ashoka Changemakers' *Champions of Quality Education in Africa* award, a program co-sponsored by the William and Flora Hewlett Foundation.
7. Tanzania Prep, a new school, had not yet graduated any Form 4 students in 2010.
8. One school had lost two of the three teachers involved in the study, and the remaining teacher had shown limited interest in the project by the end of the research period. Therefore, this school was not included in the follow-up focus group discussion.

APPENDIX: CLASSROOM OBSERVATION GUIDE

<p>Here, type in your narrative notes from the observation of the class:</p> <p>On your first visit to each classroom, provide a description of the classroom (materials on the wall, quality of the chalkboard, seating, sufficient desks for students, are girls and boys seated in different sections, lighting, presence and distribution of books and other teaching aids during the lesson)</p>
<p>Observation Items:</p>
1. Describe the variety of teaching methods or activities in the lesson.
2. Describe how the teacher indicated to students where the activity was headed and why .
3. Describe how the lesson began. (Did the teacher use a hook or starter to get students' attention?)
4. Discuss how the teacher presented subject matter in a way that was accurate . (Observer should note any questions s/he has about accuracy.)
5. Describe how the teacher equipped students with the information or knowledge they needed to conduct any activities.

6. Describe how the lesson was organized to optimize learning .
7. Discuss whether the content was appropriate to the level of the class .
8. Explain how teacher used correct and appropriate language(s) . (Also, describe the amount of time speaking in English and in Swahili; give amounts of time and type of talk in each language, if possible.)
9. Describe how the teacher supported the development of students' English in his/her lesson.
10. Describe how teacher gave clear, audible instructions . (Consider volume and speed of teacher's speech; how teacher gives oral or also written instructions; how teacher gives clear steps for the activity; etc. Include evidence that students understood the instructions.)
11. Describe how teacher asked clear questions .
12. Describe how the teacher asked factual questions about the lesson (questions that had right or wrong answers).
13. Describe how the teacher asked open-ended questions about the lesson (questions that used higher order thinking, such as evaluation, synthesis, or analysis).
14. Describe how the lesson promoted conceptual understanding , not just factual learning.
15. Discuss how the lesson drew on and activated students' prior knowledge .
16. Describe how students asked relevant questions during the lesson. (use a tally system to note the number of times boys and girls ask questions)
17. Discuss how the lesson was relevant , drawing connections to real world phenomena.
18. Describe how the teacher used the chalkboard (writing was legible, proceeded from left to right, writing was organized and easy to copy)
19. Describe how the teacher used teaching aids (e.g. models, posters, worksheets, science equipment).
20. Describe teacher's methods to assess students' comprehension during class (e.g., questions that required oral answers, questions that required written answers, quizzes, quick writing tasks at the end of lesson, exit tickets, 2 things you understood/ 1 question you have, etc.)
21. Describe how lesson was tailored to multiple intelligences (linguistic, interpersonal, intrapersonal, bodily-kinesthetic, musical, spatial, naturalistic, logical-mathematical, existential).
22. Discuss how teacher differentiated tasks for learners of different ability levels.
23. Describe how teacher promoted critical analysis of real world issues or problems .
24. Describe how students actively engaged with the content of the lesson (e.g. by making predictions or estimations, by retelling or teaching the content, by representing concepts using various means, such as models, drawings, or notes, etc.)
25. Describe how students communicated their ideas to other students and to the teacher.
26. Discuss how teacher demonstrated strategies to promote gender equity (e.g., called on girls and boys equally, challenged stereotypes, addressed teasing, avoided negative or disparaging statements about girls/women)
27. Explain how students had an opportunity to rethink ideas or revise their work during the lesson (e.g., pair check, apply concept or rule to a new example, generate new

materials to illustrate a principle).
28. Discuss how students were asked to evaluate their own learning (2/1 strategy to review learning, exit ticket, question board, heads down/hands up, thumbs up/thumbs down, check answer themselves).
29. Describe how the teacher managed classroom behavior (mention any moments when teacher disciplined, punished, rewarded, or praised students.)
30. Describe teacher's demeanor or attitude (respectful, patient, dynamic, boring, etc.)
31. On a scale from 1 to 10, where 1 equals extremely teacher-centered and 10 equals extremely student-centered, overall, how student-centered do you think this lesson was?
32. On a scale from 1 to 10, where 1 equals extremely unsuccessful and 10 equals extremely successful, overall, how successful do you think this lesson was?
<p>DEBRIEF after lesson: Talk with the teacher and record your conversation:</p> <p>A) What do you think worked well in the lesson?</p> <p>B) What changes would you make to the lesson if you taught it again?</p> <p>C) What were the reasons you used Swahili during the lesson?</p> <p>Then provide constructive criticism: tell the teacher several things s/he did well and offer two pieces of advice for improving his/her pedagogy.</p>

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