Lessons from *Teaching in Action*: Developing, Implementing, and Sustaining a Teacher-Training Professional Development Program

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Introduction

International efforts to improve education in Africa have increased in the last two decades as a result of multinational commitments to Education for All forged in Jomtien, Thailand in 1990 and reaffirmed Dakar, Senegal in 2000. In addition, there has been a proliferation of non-governmental organizations (NGOs) dedicated to formal education in countries where it is most limited. Many of the educational programs initiated both by international development agencies and NGOs aim to increase access, improve quality, or introduce educational reform policies. Although most organizations have experienced some success in their programming, they also face challenges at some point in their work, including the design, implementation, or monitoring and evaluation stages. This article explores the successes and the challenges of an educational initiative in Tanzania—Teaching in Action funded by the U.S. NGO AfricAid, Inc. 1 The multiple programs supported by AfricAid all aim to improve education, especially for women and girls, with the specific focus of Teaching in Action (TIA) being to build capacity and improve teaching and learning at the secondary and tertiary levels in Tanzania. Following a description of the relevant national, cultural, and educational contexts in Tanzania, we provide a history of the TIA program and summarize the challenges and successes encountered by its facilitators and by the initiative at large. In the last section, a series of recommendations are included that aim to improve the Teaching in Action program, including its collaborations with the Ministry of Education and its impact on education in Tanzania. It is our hope that this chapter will be beneficial to other organizations that aim to build teacher education capacity and improve teaching and learning across the education sector in Tanzania.

Context and Conceptual Framework

Although access to secondary education in Tanzania has significantly improved in the last ten years, most scholars agree that educational quality has suffered (Wedgewood, 2007). At the end of the 2006 school year, 85,865 students in Form Four took the national exam and 64.3 percent—more than 55,000 students—failed or score in Division IV, the lowest 'passing' category (MOEVT, 2007). Therefore, only 39 percent of Four Four students were able to transition to Form Five, the first year in the A-level cycle. These exam results indicate that the majority of Form Four students are not learning the expected content and, as a result, cannot access higher levels of education. With only one percent of tertiary-age Tanzanians enrolled in tertiary education (UNESCO, 2005), increasing the quality of secondary—school education and

¹ AfricAid is a small U.S. non-profit organization that supports girls' education in Tanzania. Details about the organization can be found at http://africaid.com/.

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the number of students who perform well on the secondary national exams should be a primary concern for the government in order to increase knowledge production, economic development, and "greater social participation in democratization and development processes" (MOEC, 2004a, p. v).

Many complex educational challenges currently confront teachers, administrators, and educational policymakers in Tanzania. Some of these issues are outlined in the Secondary Education Development Programme (SEDP), a strategic policy initiative scheduled to conclude at the end of 2009. According the SEDP, the existing educational system is characterized by a "poor supply of textbooks and other teaching and learning materials," "low quality of schooling outcomes," and "poor teaching abilities" (MOEC, 2004a, p. vi). This document also notes that the secondary education system has an immense potential to effect national and economic development and, therefore, must produce highly educated and qualified graduates that are able to think critically (MOEC, 2004b; Sumra & Rajani, 2006).

In order to capitalize on this potential, the Tanzanian government recently instituted a pedagogical paradigm shift from teacher-centered to learner-centered instruction. This shift is in response to the government's recognition that "teaching and learning in secondary schools has remained traditional for a long time" and "most teachers have not been exposed to modern teaching and learning practices consistent with current theoretical developments in teaching and learning" (MOEC, 2004b, p. 15). Tanzania's move toward learner-centered teaching and learning is consistent with similar movements in other African countries as well as with recommendations by international development institutions. For example, the World Bank (1999) believes that, "since active learning is generally superior to learning by rote, countries that move strongly toward more participatory and individualized modes of learning will be at an advantage" (p. 8).

This pedagogical shift from teacher-centered to learner-centered education has pragmatically manifested itself in several forms in Tanzania. First, the Ministry of Education created and published a new curriculum in 2005 that utilizes and encourages learner-centered pedagogy. The classroom activities, modes of content delivery, and suggested instructional materials in the curricula differ significantly from the previous version. The civics curriculum, for example, states that teachers are "strongly advised to use only those participatory and learner-centred strategies in order to enhance the teaching/learning process" (MOEC, 2005, p. v). The pedagogical shift is also manifested in the competences expected and required of secondary school "leavers," or graduates. These competences are not necessarily content-specific; rather, they are crosscutting skills that are intended to enable students to become active and productive citizens in a modern and rapidly changing society. Central to the competences is a focus on the development of a new set of intellectual and academic skills. As a result of this pedagogical shift, it is hoped that students will be better able to:

- 1. Develop critical and creative thinking skills;
- 2. Develop an understanding of how knowledge is created, evaluated, refined and changed within subject areas;
- 3. Promote intuitive and imaginative thought and the ability to evaluate ideas, processes, experiences and objects in meaningful contexts;

- 4. Act on things learnt, to perform practical tasks, to use tools and equipment, to measure things, to see what action should be taken on the basis of knowledge and experience, and to act creatively, considerately and responsibly;
- 5. Think for themselves, to recognize the limits of individual reflections and the need to contribute to and build upon mutual understandings. (MOEC, 2004b, p. 3)

Given the complex and sophisticated nature of these competences and skills, the sole use of teacher-centered pedagogical methods, such as chalk-and-talk and rote memorization, will not yield the desired outcomes. Indeed, teachers must, sometimes significantly, adapt their instructional approaches and the extant pedagogical modus operandi, namely teacher-centered methods, in order to effect the degree of change expected by the government.

Paradoxically, a significant gap currently exists between the official pedagogical rhetoric of the government and the educational practices in most Tanzanian secondary school classrooms. Although a pedagogical shift has occurred in national educational policy and curricula, teacher education lags far behind in preparing teachers to use learner-centered methods and to understand why they are important. Ottevanger, Van Den Akker, and Feither (2007) perfectly captured the notion of conflicting policy and practice across Africa:

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.' (p. 46)

It is not surprising that numerous scholars have found pre- and in-service secondary school teachers struggling to implement learner-centered strategies (Brodie, Lelliot, & Davis, 2002; Dembélé & Lefoka, 2007, Hardman, Abd-Kadir, & Smith, 2008; Thomas, 2008; Vavrus, 2009). The instruction teachers receive from teacher educators in many African countries, including Tanzania, is predominately teacher-centered and reliant upon the lecture method. One effort to address this problem in Tanzania is a professional development workshop program based at Mwenge University College of Education (MWUCE)—Teaching in Action—which aims to provide tangible experiences teachers can use to in their classes to increase and cultivate the development of critical thinking skills necessary for students to succeed in the future.

Teaching in Action

The Teaching in Action program has developed a three-pronged approach to achieving these outcomes. First, it provides Tanzanian faculty members at MWUCE,² a relatively new but influential teacher training college with an opportunity to participate in professional development and learning communities designed to improve their teaching and scholarship. The TIA activities designed for and with MWUCE faculty offer them a venue in which to practice critical

² MWUCE began in 2001 in Moshi, Tanzania, as St. Joseph's Teachers College. It operates under the auspices of St. Augustine University of Tanzania, a Catholic university system whose colleges are open to students and faculty of all denominations.

teaching and learning strategies that they can implement in their classes with the future secondary school teachers of Tanzania. In this sense, TIA builds capacity among Tanzanian faculty in science, math, history, and other core teaching subjects to effect change across the curriculum. Second, the TIA program offers Tanzanian secondary school teachers an occasion to participate in an intensive, week-long experiential workshop during which they learn how to use participatory, inquiry-based methods designed to foster critical thinking now demanded by the national curriculum in Tanzania. The workshop is co-facilitated by members of the MWUCE faculty and a team of professors and graduate students, including the authors of this article, from various institutions in the United States. It brings together a diverse group of participants representing regions from across Tanzania and teachers from both public and private secondary schools. Third, TIA strives to improve the learning environment in secondary schools by providing in-service teachers with access to educational resources and instructional texts in the areas of critical thinking, pedagogical theory, and pedagogical practice that are often nonexistent in the country's schools. By contributing resources to the MWUCE library and facilitating the use of electronic and print resources during the workshop, the TIA program ensures that secondary school teachers have tangible resources to share with colleagues at their schools as they put into practice the inquiry-based teaching and learning strategies they experience at MWUCE. This three-part approach is consistent with an emphasis on the development of critical thinking skills for teachers and teacher educators to have maximum impact on the current and future teaching force in Tanzanian secondary schools.

Faculty Development

As stated above, one focus of the Teaching in Action program is building capacity at a Tanzanian college of education to enable its faculty members become models of and advocates for critical thinking pedagogies at the secondary and tertiary levels. In 2009, these goals were achieved through a series of "Faculty-to-Faculty" (F2F) sessions, each conducted by one of the American professors facilitating TIA.³ The content of these sessions, based primarily on suggestions from MWUCE faculty, concerned issues related to higher-order thinking skills, critical reflection and inquiry, and teacher-based action research. For example, the first F2F session engaged the faculty in discussing various conceptualizations of inquiry-based teaching and learning in recent research and how such research might inform pedagogy in Tanzania. This session also encouraged faculty members to reflect on the forms of intelligence typically emphasized in university-level courses, primarily logical-mathematical and linguistic intelligences, and outlined the importance of developing instructional practices and assessment forms that engender deeper, broader, and more critical thinking in the areas of analysis, evaluation, and problem solving.

A second F2F session focused on the importance of critical thinking about one's own teaching practice and whether common pedagogical practices foster or inhibit interpretation, making inference, and other skills. In this session, a clear distinction was made between "teaching" and "learning," as these terms are often used synonymously by teachers without the realization that sometimes teachers "teach," but the students do not learn (and do not learn how to think critically). Faculty members were asked to analyze, critique, and evaluate their teaching

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³ The two professors are Dr. Lesley Bartlett of Teachers College, Columbia University (New York) and Dr. Frances Vavrus of the University of Minnesota.

and then brainstorm ways they could increase active inquiry among their students. This exercise, and others during subsequent sessions, provided an opportunity for faculty members to develop their own critical thinking skills in a community of colleagues. MWUCE faculty members were also given a comprehensive resource packet of relevant readings from educational journals and books in an attempt to remove a major barrier to professional development among Tanzanian teacher educators, namely, access to current research.

As a direct result of the F2F sessions, MWUCE faculty members decided they wanted to establish three Professional Learning Communities (PLCs) with the expressed goals of promoting action research, enhancing teacher reflection, and supporting in-service secondary school teachers. The action research committee aims to serve as a research support group for faculty members engaging in action research on campus and in surrounding secondary schools. MWUCE has a well-established reputation as an institution that utilizes learner-centered pedagogies and fosters the development of critical thinking skills in its courses; consequently, several faculty members were interested in pursuing research on how these pedagogies might be infused into content area classes in the sciences and humanities at the secondary school level. This committee also recognized the dearth of culturally-relevant, low-cost, and locally-produced educational materials containing exemplars of best practices in the areas of critical thinking and inquiry-based learning; therefore, they have proposed to publish and distribute some of the educational materials and action research they have already completed and plan to complete during the upcoming year.

The PLC focusing on teacher reflection intends to provide a venue for faculty members to share ideas related to instructional practice, give feedback on one another's teaching in a non-evaluative context, and review resources such as syllabi and handouts to insure thorough use of critical thinking pedagogies. Conversations between the U.S. TIA team and MWUCE faculty revealed that analysis, critique, and evaluation of instructional practice were not common practices on campus. Consequently, the faculty decided they should visit each other's classrooms and provide non-evaluative feedback on how to align their teaching with the practices and principles promoted during the F2F sessions. This committee has already conducted several meetings where faculty members reflected on their instructional practices, evaluated and analyzed their colleagues' approaches, and brainstormed improvements and adjustments to existing syllabi and curricula.

The third PLC is designed to support secondary school teachers through a series of inservice workshops to be held at different secondary schools in the region. This committee, with support from TIA facilitators in the U.S., carried out its first 'mini-TIA workshop' in September 2009 at a secondary school in the Arusha Region. The workshop addressed crucial questions identified by the Tanzanian faculty at MWUCE, such as: 1) How can we facilitate student-centered and inquiry-based learning? 2) How are student-centered and inquiry-based learning related to multiple intelligences and multiple learning styles?; 3) How can locally-available materials be used to create teaching aids that develop students' critical thinking skills?; and 4) What teaching techniques will encourage students to think for themselves while simultaneously preventing the need for harsh discipline techniques such as caning? In addition to the positive outcomes and substantial educational contributions of such in-service programs, this workshop is

particularly exciting because it was conceived, organized, and facilitated solely by MWUCE faculty members, thus showing evidence of capacity building in its fullest sense.

Teacher Development

The second major component of the Teaching in Action program is a week-long workshop for in-service secondary school teachers, chosen in pairs to represent their school by the headmaster or headmistress on the basis of their receptivity to pedagogical innovation and change. The workshop, fully participatory in its design, features a series of whole-group sessions around a central theme in the mornings and smaller sessions organized for teachers teaching different subjects in the afternoon. Utilizing participatory activities that develop critical thinking skills, such as debates, case studies, and problem-solving exercises, the morning sessions focus on the development of teachers' abilities to understand the principles upon which critical, inquiry-based teaching and learning is based and to implement these new approaches through lesson planning and activity development congruent with the Ministry of Education's curricula. Although secondary school teachers are now supposed to use a broadly learner-centered approach, the reality is that the majority of them rely on a transmission model that is highly teacher-centered and utilizes rote memorization as the principal means of learning. These morning sessions play a vital role in filling the gap between recent government reforms in the education sector and teachers' previous experience and training.

During the afternoon sessions, teachers are divided into content-specific groups and matched with appropriate MWUCE faculty members and supporting members of the U.S. TIA team. These sessions provide Tanzanian teachers with an opportunity to apply the theories, concepts, and cases from the morning sessions to the specific topics and lessons they teach. As part of the afternoon breakout sessions, workshop participants develop and teach two model lessons that incorporate two or more critical thinking activities. As this approach to teaching is somewhat foreign in Tanzania and, consequently, difficult for the participants to fully grasp and implement, a dedicated time of reflection and "debriefing" is built into these afternoon session. After each participant teaches a model lesson, the faculty members with expertise in the subject (e.g., biology, physics, history, English) facilitate a period of discussion where teachers receive feedback on their lessons and suggestions on how to make them more inquiry-based and more focused on developing critical thinking skills, an opportunity that rarely, if ever, occurs in Tanzanian secondary schools or teacher education programs.

Throughout the professional development workshop, both U.S. and Tanzanian facilitators emphasize local solutions to local problems. For example, an entire morning session is devoted to discussing the creation and use of teaching aids that stimulate student inquisitiveness and can be made at little or no cost to teachers, with cost recognized as a major impediment to developing resource-rich learning environments in most schools. One activity on this day requires participants to brainstorm as many pedagogical uses as possible for common objects, such as plastic bottles, rocks, and string in their specific teaching subjects. They are then asked to share their ideas with a partner, thus building a body of knowledge across the curriculum through the workshop. This type of activity is vital for educational development in countries like Tanzania in that it demands critical thinking skills on the part of teachers and allows them to experience forms of learning to which most have not been exposed in their own schooling.

For most of the teachers at the TIA workshop, the use of case studies as a teaching method is also a new experience. Case studies are used in various ways during the week but serve in every instance as a tool to further develop participants' own critical thinking skills. Participants first experience the value of a teaching through case studies by reading, analyzing, and debating a particular case developed by the U.S. and MWUCE faculty and then synthesizing the various viewpoints and potential outcomes generated in group discussions. Participants are then presented with an outline of techniques to create a case study and given time to write their own case studies for use with their students (See Appendix B for sample handouts). The completed case studies are photocopied and provided to all workshop participants so that all teachers can benefit from this inquiry-based approach.

Student Development

The third component of the Teaching in Action workshop focuses on giving secondary school teachers access to educational resources, including faculty expertise, in the areas of critical thinking, pedagogical theory, and instructional practice. Each year that TIA has been conducted, textbooks, instructional activity books, scholarly journal articles, and curricula have been donated to the MWUCE library with support from AfricAid and U.S. faculty. Throughout the TIA workshop, participants are provided time to access and utilize the library and are given a tutorial on its resources when they arrive. This part of the workshop includes time to use the Internet to find relevant teaching materials, a luxury that few Tanzanian secondary school teachers have at their schools. Furthermore, through a collaboration with graduate students from Teachers College, Columbia University, a set of content-specific curricula utilizing learner-centered and inquiry-based approaches based on current Tanzanian national syllabi were developed and are currently held in the library. All of these resources, in addition to the expertise of MWUCE faculty members, are available throughout the academic year to TIA participants who return to campus.

Achievements and Challenges

Program evaluations conducted after each of the TIA workshops have recognized the primary achievements and challenges of the initiative. Participant evaluations as well as research using experimental and control groups of teachers have informed the development and refinement of TIA workshops and provide valuable insight into lessons that may be useful for similar programs by other organizations. The main achievements of TIA include the following: (1) creating a venue for collaboration and idea-sharing; (2) building capacity of Tanzanian teachers and faculty members; (3) generating cultural and educational learning among U.S. faculty and graduate students; and (4) increasing the use of learner-centered pedagogical methods. Each of these achievements will be considered in the next section, followed by a discussion of the program's primary challenges.

The opportunity provided through TIA for teachers to share ideas and collaborate together 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 2008 workshop noted that the best 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, & Thomas, 2008, p. 10). Interviews with teachers conducted months after the TIA

workshops revealed that teachers continued to engage in idea-sharing regarding learner-centered pedagogical methods and other related issues well after the workshop (Vavrus, Norton, Sams, & Shuyler, 2009). These opportunities for dialogue are vital if participatory and learner-centered approaches are going to be effective in Tanzania.

TIA has also built capacity among Tanzanian teachers and faculty members. The F2F sessions in 2009 generated significant discussion about professional activities, including faculty research, institutional outreach, and learning communities. For the Tanzanian teachers, TIA provides a forum to discuss, observe, and practice teaching methods that are often unfamiliar to them while receiving constructive feedback from their peers and from the MWUCE/U.S. faculty. The teachers also take advantage of instructional resources at MWUCE, such as faculty members' expertise 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, & Mvungi, 2007), the value of creating opportunities for teachers to utilize available resources at MWUCE that they can bring back to their schools cannot be overstated.

In addition to building capacity among Tanzanian teachers and faculty members, the TIA program has also provided a wonderful learning experience for U.S faculty and graduate students. Through the workshops, these facilitators have gained increased insights into the Tanzanian education system. Engaging with Tanzanian teachers and faculty members has contributed to the facilitators' own professional development, as they have learned about the prevailing educational theories, institutionalized cultural norms, and contextual factors influencing education and development in Tanzania.

Lastly and most importantly, TIA has achieved pronounced changes in many 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, & Shuyler, 2009). Additionally, classroom observations showed that TIA workshop participants cultivated healthier and more positive interactions with students, maintained more engaging classroom environments, and utilized more active, inquiry-based, and learner-centered activities that guide students to develop critical thinking skills. TIA teachers more frequently used pedagogical approaches that are consistent with the government's pedagogical paradigm shift—such as introducing the topic with key words, encouraging brainstorming, forming student discussion groups, and providing examples to increase understanding of the topic—than teachers that did not attend TIA. All of this evidence confirms that TIA has achieved one its primary goals – developing teachers' understanding and use inquiry-based and learner-centered methods.

Although the TIA program has been successful in the above achievements, several challenges have arisen during its three years of operation. First, the selection process for TIA participants remains a challenge. During the first and second year of TIA, graduates of MWUCE were invited at attend the workshop and asked to bring an interested colleague from their school. While this selection process increased the number of teachers in attendance, some of the teachers were not fully committed to the activities and goals of the workshops. In response to this issue and in preparation for the 2009 workshop, letters were mailed asking heads of schools to select

their two most motivated teachers to attend. In general, both U.S. and MWUCE facilitators agreed that this approach garnered a higher caliber of teachers. However, the number of teachers in attendance decreased from the previous year even though the heads of schools had committed to sending their teachers. It was not possible to discover what led to this discrepancy between commitment of teachers and the teachers' presence at the workshop, and it remains a concern because the goal of TIA is to impact as many teachers as funding allows.

Developing a mechanism to provide ongoing mentoring and support to faculty members at MWUCE as well as to the secondary school teachers who participate in TIA is also a challenge. The F2F sessions and professional development workshops provide excellent opportunities for mentoring when the U.S. facilitators are at MWUCE, but establishing a means for ongoing communication throughout the year has been difficult. Email access and electricity can be unpredictable in Tanzania, and it is sometimes difficult for facilitators, both U.S. and Tanzanian, to effectively communicate their needs in writing rather than in person. Additionally, the teaching and administrative loads of the MWUCE faculty make it difficult for them to also be involved in the TIA workshop and in the professional learning communities during the academic year. The U.S. facilitators do not want to increase the MWUCE faculty members' workload to the detriment of their duties at the college, but they do want to help create professional development activities, such as conducting and publishing research, for their Tanzanian counterparts. Further discussions with the MWUCE administration about short leaves of absence for faculty to conduct research or outreach to area high schools may help to alleviate some of these challenges.

Finally, the issue of sustainability is a perpetual challenge. AfricAid has generously funded the program for the last three years and with funding provided from winning the William and Flora Hewlett Foundation *Champions of Quality Education in Africa* award, TIA will likely continue for the upcoming year. At this point, however, TIA is largely reliant upon funding from the United States. MWUCE has recognized the value of the TIA program, and it provides tremendous staffing and institutional support for it. However, it does not have the funds to be its sole supporter. It would be ideal if the Ministry of Education could support the workshop for secondary school teachers and, in return, facilitate the expansion of the workshop model to other regions of Tanzania. In addition, it would be desirable if the Ministry of Science, Technology, and Higher Education could provide support for the Faculty to Faculty workshops at MWUCE and at other teacher training institutions across the country. The U.S. faculty and graduate students are committed to supporting TIA and the F2F workshops by donating their time to planning and coordinating them; however, they cannot scale up the workshops beyond MWUCE without the support of relevant government ministries and/or religious bodies that coordinate education in their diocese.

Future Directions and Summary

Exciting plans are currently underway as Teaching in Action continues to develop and grow. It is hoped that additional collaborations and connections will be made with U.S. universities and students, thus enabling a broader network of support for this key professional development program. For example, MWUCE and the University of Minnesota have recently signed a Memorandum of Understanding to facilitate joint teaching and research activities. U.S.

graduate students in education can offer the skills and services that are beneficial to Tanzanian teachers and faculty members, and these students will learn about pedagogical practices and educational development in Tanzania. Opportunities for joint coursework for master's level students at MWUCE, the University of Minnesota, and Columbia University are also being explored.

In addition, the professional learning communities that were initiated as part of the 2009 workshop will hopefully serve as a platform for future expansion of the TIA mission. Focus group discussions with MWUCE faculty members generated excitement around the potential creation and publication of educational and instructional materials related to critical thinking, inquiry-based approaches, child-friendly discipline techniques, and learner-centred methods that could be distributed to teachers across the country (personal communication, July 4, 2009). These publications would not only address critical issues in education across Tanzania; they would also create opportunities for faculty members to disseminate their research and for promoting MWUCE as one of the leading teacher education institutions in Tanzania.

Finally, it would be ideal if the TIA program could increase its impact and become a nationally recognized in-service teacher training program. In-service teacher training in Tanzania is "relatively rare for all teachers" (Lassibille, Tan, & Sumra, 2000, p. 14). A program like TIA has immense potential to drastically improve teaching and learning in Tanzania. Forming relationships with relevant government ministries, non-governmental organizations, and other higher education institutions will be a crucial step to TIA being institutionalized at the national level

In conclusion, Teaching in Action aims to empower teachers and faculty members to fill the gap between current national education policy and teaching methods and approaches used in Tanzanian schools today. The program has been shown to improve the learning environment and quality of teaching in classrooms where TIA participants are teaching. The contribution TIA is making is significant even though its impact has not been as great as it could be. The quality of education in Tanzania has been described as "so poor that many of the potential benefits of education have not been realized" (Wedgewood, 2007, p. 394). If Tanzania is to develop as a nation that is competitive in the global knowledge economy, it must create citizens that are able to think critically and innovatively. In spite of the challenges it has faced in its relatively brief existence, Teaching in Action is a promising in-service teacher training program that is striving to achieve these important national goals.

References

- Brodie, K., Lelliot, A., & Davis, H. (2002). Forms and substance in learner-centred teaching: Teachers' take-up from an in-service programme in South Africa. *Teaching and Teacher Education*, 18(5), 541-559.
- Dembélé, M. & Lefoka, P. (2007). Pedagogical renewal for quality Universal Primary Education: Overview of trends in sub-Saharan Africa. *International Review of Education*, 53(5-6), 531-553.
- Hardman, F., Abd-Kadir, J., & Smith, F. (2008). Pedagogical renewal: Improving the quality of classroom interaction in Nigerian primary schools. *International Journal of Educational Development*, 28(1), 55-69.
- Lassibille, G., Tan, J., & Sumra, S. (2000). Expansion of private secondary education: Lessons from recent experience in Tanzania. *Comparative Education Review*, 44(1), 1-28.
- Lujara, S., Kissaka, M. M., Trojer, L., & Mvungi, N. H. (2007). Introduction of open-source elearning environment and resources: A novel approach for secondary schools in Tanzania. *International Journal of Social Sciences*, 1(4), 237-241.
- Ministry of Education and Culture [MOEC]. (2004a). *Education Sector Development Programme (SEDP)*, 2004-2009. Dar es Salaam: United Republic of Tanzania.
- Ministry of Education and Culture [MOEC]. (2004b). Mechanisms for posting teachers to Ministry of Education and Culture [MOEC]. (2005). *Civics syllabus for secondary schools Form I-IV*. Dar es Salaam: Tanzania Institute of Education.
- Ministry of Education and Vocational Training [MOEVT]. (2007). *Basic education statistics in Tanzania (BEST): 1998-2007 national data*. Dar es Salaam: United Republic of Tanzania.
- Ottevanger, W., Van Den Akker, J., & Feither, L. (2007). *Developing Science, Mathematics and ICT Education in Sub-Saharan Africa: Patterns and Promising Practices*. Africa Region Human Development: Working Paper No. 101. Washington, DC: The World Bank.
- Sumra, S., & Rajani, R. (2006). *Secondary Education in Tanzania: Key Policy Challenges*. HakiElimu Working Paper 06.4.
- Thomas, M. (2008). *Learner-centered pedagogy in Africa: A critical reconsideration*. Unpublished thesis, Columbia University, New York, NY.
- UNESCO. (2005). *UIS statistics in brief: Tanzania*. Retrieved from http://stats.uis.unesco.org/unesco/TableViewer/document.aspx?ReportId=121&IF_Langu age=eng&BR_Country=7620&BR_Region=40540URL_ID=40987&URL_DO=DO_TO PIC&URL_SECTION=201.html
- Vavrus, F. (2009). The cultural politics of constructivist pedagogies: Teacher education reform in the United Republic of Tanzania. *International Journal of Educational Development*, 29(3), 303-311.
- Vavrus, F., Hinsch, B., & Thomas, M. (2008). *Teaching in Action: Participant Evaluation of June 2007 Program.* NY, NY: AfricAid, Inc.
- Vavrus, F., Norton, S., Sams, S., & Shuyler, A. (2009). *Teaching in Action: An Evaluation of the 2007 and 2008 Workshops*. Denver, CO: AfricAid, Inc.
- Wedgwood, R. (2007). Education and poverty reduction in Tanzania. *International Journal of Educational Development*, 27(4), 383-396.
- World Bank. (1999). Education Sector Strategy. Washington, DC: The World Bank.