Nonformal Agricultural Education Reform in Uganda: The Impact on Extension Workers

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Keywords: agricultural extension reforms, Uganda, teacher development, transformative learning

Abstract: The purpose of this study was to explore the impact of agricultural extension nonformal education reforms (1998-2013) in Uganda among extension workers, who were required them to change from a top-down to more participatory educational approach with farmers.

Introduction

The East African countries have undergone significant reformist policy changes in the agricultural service delivery sector. The introduction of demand-driven advisory services, including strategies of privatization, decentralization, and the promotion of greater participation among farmers in decision-making has had a significant impact on the nonformal education of farmers (Friis-Hansen, Aben, Ameu, & Okoth, 2004). Soroti district in northeastern Uganda offers a good example of a progressive and multi-faceted continuous extension reform undertaken over the last decade and a half. Up to 1995, agricultural extension in Uganda was based on top-down transmission model of nonformal education (Training and Visit). The first extension reform, 1995-1998, continued the previous transfer-of technology approach, while enhancing farmer's voice by allowing them to evaluate the performance of extension workers. A second reform in 1998-2001 involved the introduction of Farmer Field Schools (FFS) where the role of the extension worker shifted from being teacher-centered to a facilitator role, including the promotion of more authentic problem-based learning experiences among farmers in collaborative group settings (Duveskog, 2013). This reform was followed by National Agricultural Advisory Services (NAADS) in 2001-2007, which organized farmer groups and farmer representatives for a demand-based procurement of goods and educational services. The extension workers role shifted radically, and public extension was dismantled, where some joined private companies, which now provided all extension services, while others remained in public service (supervisory functions only), all the while giving more control to the farmers. Meanwhile, the public extension professionals received little or training to prepare them for the transformation of roles and responsibilities that were the consequence of reform.

During these periods of reform there has been extensive research on the impact of these efforts on the well-being, productivity, and personal lives among farmers. This emphasis on farmers is particularly apparent when understanding the impact of participatory approaches in nonformal education (Duveskog, Friis-Hansen & Taylor, 2011; Praneetvatakul & Waibel, 2003; Van den Berg & Jiggins, 2007). However, there is little known about the impact of reforms and the development of participatory education on extension workers. Questions are raised, such as: What are the challenges educators face, in this case extension workers, as they take on a more learner-centered, participatory approach to teaching? What is the impact of this change on their personal and communal lives? What are the implications in terms of training and support needs

of professional staff in institutions that want to encourage a participatory approach among its extension workers? Therefore, the purpose of the study was to explore how agricultural extension reform in Uganda, particularly the development of participatory practices and impact on the personal and communal lives of extension workers.

Theoretical Frameworks

Two theoretical frameworks were used as a lens for this study to bring an understanding of the change among extension workers, that of transformative learning theory (Mezirow, 2000; Taylor & Cranton, 2012) and a developmental model of teaching (Robertson, 1999). Transformative learning theory was used to understand the change in perspective of extension workers, particularly in relationship to the emergence of a more participatory approach for farmer education and the impact this had on their communal life (Mezirow, 2000). Only recently has research started to explore the application of the theory of transformation in non-western settings (Mehiuni, 2012; Ntseane & Merriam, 2008; Olutoyin, 2012). A perspective that has direct application for this study is an Afro-centric conception of transformative learning (Asante, 1995; Williams, 2003) which gives attention to the context dependent nature of transformative learning, and, for example, foregrounding the local culture and the traditional African value systems (Netsane, 2012). The second theoretical framework is a developmental model of teaching, based on an extensive review of adult development literature describing the perspectives of educators at various developmental stages (Robertson, 1999). This model comprises of several interrelated stages that offer an understanding of educators, in this case extension workers, as they develop a more participatory approach to teaching. The stages include *egocentrism*, where the teacher is centered on his/her own needs; *aliocentrism*, where the teacher is predominantly focused on learner-needs, learning the facilitator role; and finally *systemocentrism* is where teachers "attend to the complex experience of themselves (as learning facilitators) and of the learners in interaction" (p. 288). Using these frameworks offers both an understanding of the nature of change and developmental process of change as extension workers learn to respond to the demands of their learners.

Methodology

The methodological design of this study involved an interpretive qualitative orientation—inductive mode of knowledge inquiry (Merriam & Associates, 2002). The participants in this study were purposely selected, with assistance of local district officials, to include staff with long employment record, extending from a pre-reform centrally governed extension approach based on a transfer of technology model, to the present-day down-wards accountable extension system that is based on participatory teaching methods. Data collection involved semi-structured in-depth individual interviews with fifteen extension workers, who all had experienced fundamental shift in the role they were expected to perform. The interview sample is purposely included those who were able to professionally survive during the decade of reform by acquiring needed skills and capacities to adapt to the shifting demands. Individual interviews were conducted predominantly in English on-site in Soroti district, Uganda. A cross-cultural team conducted the research, embodying both African and Western values, including two researchers one who had extensive experience with the local culture. All the interviews were recorded, transcribed and interpreted using a constant comparative approach (Lincoln & Guba, 1985). The transcripts were analyzed using computer-assisted qualitative data analysis software (Nvivo v.9)

Finding

The impact of reforms such as the implementation of FFS and NAADS from the perspective of extension workers was quite significant. Understanding this impact is revealed in four themes: a) shifting role of professional staff from authoritarian to accountable; b) change in teaching approach from transmission to co-production of knowledge; c) individual change from disorientation to harmonizing by establish trust, and d) benefits of reform for both extension workers and farmers.

Shifting role from authoritarian to accountable

Extension staff has experienced a dramatic shift as their role and actions became more accountable to farmers. Minimal guidance was, however, provided to staff on how to undertake the shift, leaving it much up to the extension workers to discover how to go about the new ways of teaching farmers. Looking back before reforms John Opole recalled:

> Despite the fact that I was in the district I was answering directly to the commissioner for cotton in the ministry…. It would be my responsibility to interact with farmers…[establishing] the acres they were able to grow, because there was a target that a government had set.

Similarly, Amos explained when they were unable to make the farmers meet the government targets:

> The old system involved some reasonable force [toward the farmers]. Having talked to them and probably they seem not to understand time and again, then we resort to some kind of coercion"…. They could cane farmers, especially when it came to cotton because the government needed foreign exchange.

Decisions were made by the extension worker and the training emphasis was on instructing about new practices and as mentioned by many, farmers were "hurried" to adopt advice. As the FFS and NAADS reforms were implemented the extension staff roles changed making them directly accountable to farmer groups. Moses, for example, explains how this changed the behaviour of extension staff:

> First you need to be technical sound and knowledgeable…. secondly you need to manage your time well in the field and not be late for meetings with the farmers… and thirdly you need to keep your promises to farmers.

During the NAADS reform, extension staff became accountable to so called Farmer Fora, a decision mechanism representing all farmer groups within a sub-county of Uganda. For instance, Peter Chelli explained how extension staff under NAADS worked based on directions from farmer institutions:

> The farmers prioritize and then you have to implement according to their priorities and the biggest challenge we extension staff have now is if you stray away from the farmers priorities you will have a lot of problems.

From disorientation to harmonization

On a personal level extension workers found the shift in roles quite disorienting in terms of being both accountable to and sharing decision-making with farmers. This was further compounded by the fact that most farmers were significantly less educated than the extension workers. For instance Charles stated:

> Some of these farmers were not educated but now having more powers than us [and] I …a diploma holder …. I would now say he is .. the boss but for me I am after giving knowledge

although he is now having powers with his little education." Similarly, Amos stated that "it brought some kind of inferiority.

However by time, most extension workers like Amos found much benefit in this new relationship. He stated,

> I am an officer, trained personnel, now how do I report to farmers most of whom are not educated? But later we harmonized ourselves and recognized that it is the farmers whom we want to develop, and we have allowed them to demand services, it's better to give them the extent of how we have implemented what they demanded, so that inferiority was sort of rubbed out.

Key to harmonizing involved workers identifying with farmers through empathy, trust, and respect as the result of ongoing and regular interaction. For example, John replied:

> It would … be an interaction. I would bring the information… It would be up to the farmer to make a decision whether he is willing to be an active player in the process or not. We would not force... The process of identification was very critical. Once we identify with the farmers, then our interaction becomes very intimate.

From transmission to co-production of knowledge

Before the reform extension, the dominant teaching approach was anchored in the transmission model This is where communication is seen as a linear process where the extension workers transmit a message formulated by an agricultural research station. For example, Peter Chelli recall his work as a livestock extension officer before reform:

> We go to the area to observe where their challenges are, then we do the planning in the district, and then we inform the farmers that we have this service and could you, please bring your animals.

During the FFS and NAADS reforms the role of the extension worker shifted to from teacher to facilitator, and the teaching approach became a process through which new knowledge is co-produced with the farmers. Joseph Epero describes the change in teaching:

> I used to think that I have more knowledge than them (the farmers). But with time I realized that we both can contribute… When you graduate from university, its all very theoretical…but when you get to the farmers, then using his knowledge together with using the knowledge that you have, is when you become a real extension worker.

Mutual benefits of reform for Extension Workers and Farmers

As a consequence of moving towards a more participatory approach to extension, there have been positive outcomes for both extension workers and farmers. For examples, Moses reflects on how he feels good about the reforms and how they have instilled a sense of ownership among farmers. "The changes, well I feel good because there is now ownership and farmers are now taking farming as a business…we have had a transformation of farmers." The new way of working in NAADS was welcomed and sometimes felt as a relief by extension workers, as expressed by Achibu Ekwilu: "It would relieve this pressure from you the extension worker where the farmer or the community would look at you as an oppressor." It also led to a stronger recognition for local and indigenous knowledge:

> They have a lot of knowledge about what is happening on the ground and how you can succeed, you find what is in the books may not succeed in the ground, so you will have to customize it to their knowledge and begin from there."

Discussion

The learning journey that extension workers in Uganda have undertaken over time in relation to the reformed extension system is complex and multifaceted. This study offers insights about the educational development and transformative learning among professional staff in response to how reform impacted their roles and relationships with their farmers. Based on the initial analysis of the data it is apparent that the extension workers who persisted through the various development reforms (FFS, NAADS) changed the way they thought about themselves, their educational roles as extension workers, about the nature of agricultural knowledge, and their relationship with farmers. Similar to Roberts (1999) teaching developmental model, the workers, educationally, moved from a teacher-centeredness (Egocentrism) to a teacher/learner-centeredness (Systemocentrism) approach to teaching. However, the issues they struggled with during this change were not centered exclusively on their relationship with content (e.g., farming knowledge), which is foreground in Roberts' model. Along with developing an appreciation for indigenous ways of knowing, the extension workers also struggled with the process of relinquishing power and control to farmers, who they initially believe to be less competent than themselves because of their lack of formal education.

Theoretically from a transformative learning, there seems to be a change in perspective, or possibly a change in meaning schemes, among extension workers in how they perceive their relationship with farmers and the importance local knowledge. New institutional structures and rules guiding nonformal education in NAADS and FFS leading to a shift from a more directive and top-down extension to a more demand driven system triggered significant change in the way educators views themselves and their learners. Furthermore, what seem to facilitate the change was through the development of more intimate relationships with farmers, which is consistent with previous research (Taylor, 2012). The study points at a symbiotic interrelation between the structural framework of extension and the human factor in terms of attitudes and perceptions, with one aspect clearly reinforcing the other. Much about this interrelation is still not known and requires further research.

Policy implications recognize the need to acknowledge and actively support staffs' personal development alongside structural reforms and system changes. For many the personal change experienced was profound and transformative in nature, directly related to the breaking of past rules, habits and norms, both a shift epistemologically and the way they act in their extension work and family life. Extension workers in this study were expected to deliver their duties in a new manner with very minimal training and preparation to do so. Training in participatory methods, training for transformation and improving extension staffs facilitation skills, would have greatly assist extension workers in changing their teaching and ways of working farmers and avoiding some of the disorientation experienced as well as maximizing the effectiveness of system changes.

The study shows that the extension worker is highly impacted in times of extension reform. The absence of attention to soft skills, attitudes and perception and on-job mentoring of staff during reforms is not unique for Uganda, but a common deficit of structural reforms in Africa. This paper indicates a need for increased attention to preparing extension staff when the role and needs of the systems shift.

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