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## PROFESSIONAL AND PERSONAL TRANSFORMATION OF EXTENSION WORKERS THROUGH NON-FORMAL AGRICULTURAL EDUCATION REFORMS IN UGANDA

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### ABSTRACT

The purpose of this study was to explore the impact of agricultural extension non-formal education reforms (1998-2013) in Uganda among extension workers, who were required to change from a top-down to more participatory educational approach with farmers. While extension reform has been subject to several studies, little is known about the professional and personal transformative effects of such reforms on staff. A major challenge for the extension staff to adapt to is the shift as their role and actions became more accountable to farmers. Extension workers were found to experience disorientating dilemma in terms of being both accountable to and sharing decision-making with farmers. At the personal level, the study found that the change in the relationship between extension workers and farmers also had an impact on the household gender relations of the extension workers.

**Keywords:** Agricultural extension reforms, Uganda, teacher development, transformative learning.

### 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 significant impact on the non-formal education of farmers (Friis-Hansen *et al.*, 2004). Soroti district in north-eastern Uganda offers a good example of the 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 a top-down transmission model of non-formal education (Training and Visit). The first extension reform, 1995-1998, continued the previous transfer-of technology approach, while enhancing farmers' voices 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 a teacher to a facilitator and the promotion of more authentic problem-based learning experiences among farmers in collaborative group settings (Duveskog, 2006). This reform was followed by the 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, public extension was dismantled, where some joined private companies, who 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 no 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 *et al.*, 2011; Praneetvatakul & Waibel, 2003; Van den Berg & Jiggins,

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2007). However, little is 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 in their approach to teaching with farmers in the Soroti district, 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). Transformative learning theory offers insight into a deep shift in perspective experienced by adults during which habits of mind become more open, more permeable, and better justified (Mezirow, 2000). It is based on several assumptions about learning such that adults are active, not passive participants in their lives who are instinctively driven to make meaning of their world. Two, adults have significant life experiences, based on the tenets of constructivism (e.g., Bruner, Habermas, Piaget, Vygotsky), which provide the bases for an established belief system and for constructing meaning of what happens in their lives. It is a re-interpretation of prior experiences that is explained by transformative learning theory. Generally, it occurs when a person, group, or larger social unit encounters a perspective that is at odds with the prevailing perspective (interpretation of a prior experience). The discrepant perspective can be ignored, or it can lead to an examination of previously held beliefs, values, and assumptions, leading to a perspective transformation. According to Mezirow (1990), the process of transformative learning centers on critical

reflection on prior experience and dialogue with self and others. However, other theorists (e.g., Dirkx, 2001; Cranton, 2006) place imagination, intuition, and emotion at the heart of transformative process. 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). This perspective ‘focuses on Africa as the cultural center for the study’ (Merriam & Ntseane 2008). Several African values that inform an Aforcentric learning paradigm include: spirituality that is shaped by the metaphysical world, a sense of interconnectedness beyond one self and with an “obligation to one’s ancestors and a physical obligation to take care of extended family”; collective empowerment where individual transformation rest on the support and confirmation of others, emphasis of communal awareness of others and dissemination of knowledge, cooperation, and shared knowledge construction; and with an expectation that change includes a deeper connection to his or her community.

The second theoretical framework that informs this study 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 first, and dominant state of most educators is the stage egocentrism, where the teacher is centered on her/her own needs. At this stage in almost every “aspect of the professors-as-teachers’ perspective—view of content, process, learners, self, and context—they operate from their own frame of reference.” (p. 276). This stage is followed by a transition, shaped both by internal resistance and external forces where faculty realize that this egocentric focus of teaching is often not successful, realizing that teaching is much more than disseminating knowledge and teachers looking after their own interest. The second phase is aliocentrism, where the teacher predominantly focuses on learner-needs, seeing “themselves primarily as facilitators of learning...they are

interested in the learning process and in the individual characteristics of the learners whom they are trying to help (e.g., learning style...biography in general...learning agendas) as well as in the pertinent contexts of those learners (e.g., work, family, and friendship networks, gender/race/class profile; spiritual community)". Despite the interest in the learners needs and interest, it is somewhat of a naïve development, whereby the learners are seen as central to the teaching learning process, however overlooking the needs/interest of the educator and their relationship to the teaching experience. Like the previous transition period experienced between the previous two phases, generally due to accumulation of unsuccessful teaching experiences, teachers begin to realize they must include themselves in the teaching equation. This insight leads to the system centrism stage (Teacher/Learner - Centeredness), also referred to as a relational perspective. A defining feature of this stage "is that professor-as-teachers not only attend to the inner experience of the learners and that experience's origins [biography]..., immediate social networks and so forth—professors-as-teacher also attend to similar dimensions of their own unique experience". Furthermore, teachers at this stage regularly reflect on their own personal and teaching experiences, how they interact with the inner experiences of the learners when fostering good learning, and not being mastered by course content. Using these frameworks offers both an understanding of the learning and developmental process of change as extension workers learn to respond to the demands of their learners.

#### **METHODOLOGY**

The study of professional and Personal Transformation aim to understand how individual extension workers are affected during continuous reform processes. It does not make sense to study such personal and professional transformative using quantitative methods, in part because the number of extension staff that stayed on throughout the reforms is relatively small in Soroti District in Uganda, where the study took place. Therefore, the methodological design of this study involved interpretive qualitative orientation, an inductive mode of knowledge inquiry, (Merriam & Associates, 2002). In line with the qualitative methodology, the participants in this study were purposely selected to include extension 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 downwards accountable extension system that is based on

participatory teaching methods. The 15 extension workers selected to be interviewed were those who managed who had capacity to successfully adapt to frequent reforms and dramatic changes in their job requirement. Those selected for interview were all mature extension workers who had experienced professional and personal transformation and who were able to reflect on their personal experience. This purposely selection method did deliberately exclude the group of extension staff that were made redundant as an effect of the reforms, either voluntary or because they were unable to adapt to the changing requirements dictated by reforms.

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 was purposeful so to include those who professionally survive during the decade of reform 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).

#### **FINDINGS**

The impact of reforms such as the implementation of FFS and NAADS from the perspective of extension workers was quite significant, having an impact on their professional and personal lives. Professionally they became more accountable to their clients (the farmers) leading to: a) a shift in their role from teachers to brokers of information; b) a more sophisticated understanding of the needs and aspirations of farmers and how to foster relations with farmers; acknowledgement of the inadequacy of their own capacity and increased critical reflection; and c) a shift away from instrumental technical teaching). Personally, the impact the reform was reflected their family and social relations including: a) the community in which they live; b) a change in gender relation with their spouse and children; c) and a change in self-efficacy. These changes are demonstrated in multiple themes below.

**Shifting role from authoritarian to accountable:**

Extension staff experienced a dramatic shift as their role and actions became more accountable to farmers. However, minimal guidance was provided to staff on how to undertake the shift and what were the related consequences, leaving the process of change much up to themselves to discover how to go about the new ways of working/teaching. 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 workers 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 worker 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, one of the respondents 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, a respondent stated that "it brought some kind of inferiority.

However, by time, most extension workers like the respondent 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, a respondent 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, a respondent recalled 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. A respondent 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, one of the respondents 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 a respondent: "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." Collaborative and Innovative household gender relations: The new participatory approaches between the extension workers and farmers also had an impact on the household relations of the extension workers. The learning outcomes through NAADS on collaboration and participation seemed to spark a reflection process on related aspects of their personal lives. These reflections had significantly impacted the decision-making process at household level, where men are now including their spouses when making decisions about family issues. This change is expressed by a respondent:

Even in the household you should be sharing issues. Household requires round table discussions, planning on how you people want your home to be and what plans you have. Somehow, we could copy what we learnt from outside including even what NAADS is having.

Similarly, one of the respondents, further elaborates on this new household gender relations stating that it is not only about joint decision-making and sharing, but it is about respect for one another. He is backed by another respondent that states "You need to be together, share ideas, respect one another, and then see how you can put your ideas together, if you have to run a family very well.

The collaboration and decision-making across gender at household level, has resulted in increased support since everyone in the family is now on board and is included and listened to throughout the process. A majority also report that they are experiencing less quarrels at home. A respondent describes it in the following way:

I have less quarrels at home, I share my views with her before I do anything, and she has to know what I am doing. From the dynamics, we can now resolve issues very well and I can have solutions to them without quarrelling like an ordinary person.

It is interesting to note the reference to ordinary person, where quarrelling in this case is perceived as being the 'normal'. The positive acknowledgements by all of the decrease in household quarrels would indicate that this is a positive change that gradually would challenge the perception of what is an ordinary person, by more integration of gender equity.

Other changes to the household level, although not expressed h all the participants, further demonstrate the impact of reform on a personal level. For example, a respondent describes how participatory approaches can lead to innovation:

What I learnt most from farmers is, you get down there, you get all kinds of funny things, which if you translate them into workable issues can end up solving a lot of problems. So even in the family I think I have picked on that trend. It is not good to take people for granted. Pick ideas from your children, your wife. How can you put those ideas together to be able to come up with a consensus position? And I think that to me is one of the greatest attributes I have learnt through this path.

Slowly, the outcomes from NAADS is changing the cultural structures, patriarchal relations in particular, as expressed by one of the respondents in the following quote:

"Because in NAADS we were exposed to all those areas of decision-making and planning in a family. We found that if you translate what NAADS taking it to your daily life, you can actually progress. Because, originally, you know for us here in Africa there is a culture that looks to be a man was superior. You find most decisions maybe a woman could not take and yes a woman is there to implement. But when NAADS came in we saw a sort of approach that makes this people decide together and sustainability comes in because everybody would now take this as our project. It influences the way I am living at home, NAADS influences it."

## DISCUSSION AND CONCLUSION

The discussion of the findings is organized in relationship to the two theoretical frameworks and the implications this study has for future research and the training of extension workers during institutional reforms.

### **Transformative learning and Extension Workers:**

Based on the findings it seems apparent that many of the extension workers experienced a change in perspective, particularly in relationship to how they saw their role as educator in relationship to the farmers and the knowledge/science of farming. Furthermore, this shift in perspective does not seem temporary or even arbitrary, but profound in nature in how they think about teaching and learning. Indicators of transformative learning are both relational and epistemological (Mezirow, 2000; Taylor, 2007)

Relationally both the process of change and the nature of the relationship between the extension workers and farmers are informed by transformative learning theory. Traditionally the extension workers had an authoritarian relationship with farmers, both based on their expertise (trained in the science of farming) and institutional power granted through the agricultural system in Uganda. In some instances they even engaged in force at time, using coercion with farmers in meeting government targets and/or making sure that farmers followed specific rules (e.g., catchment size of fish). However, due to agricultural reforms their roles shifted, whereby extension workers were required to move from an authoritarian role to a relationship where they were held accountable by and shared decision-making with farmers. This mandated shift likely became a disorienting dilemma (Mezirow, 2000), where workers felt initially dispirited and confused, even creating a sense of inferiority, particularly because many saw themselves more educated and qualified about the practice of farming. Despite the initial negative feelings this dilemma, for many workers, it acted as a catalyst for change in several ways. As the nature of their relationship changed with farmers through a period of “harmonization” workers developed more trusting relationships, even friendships with farmers, which did not exist in their previous authoritarian role. This repositioning of relationships further facilitated their change in perspective about farmers and the practice of farming. Furthermore, synergistically, as relationships were repositioned, the growth of more trusting and empathic relationships fostered transformative learning and provoked extension

workers to critically reflect about their role as educators, in turn encouraging a more participatory educational approach. The significance of relationships, particularly the development of trusting relationship and fostering transformative learning is consistent with related research, such that “through trustful relationships [it] allow individuals to have a questioning discussion, share information openly and achieve mutual and consensual understanding” (Taylor, 2007, p. 179).

A second significant transformation experienced by extension workers, likely as a result of a repositioning of relationships, was an epistemological shift. This shift is less about what an individual comes to know as a shift in their way of knowing (Kegan, 2000). For farmers who participated in Farmer Field Schools (FFS) research found that their transformation reflected a growing appreciation for the science (empiricism) of farming (Duveskog *et al.*, 2011). However, for extension workers in this study who were fairly well-educated and already appreciated the significance of the empirical and farming, their epistemological shift was a growing appreciation for local and indigenous forms of knowledge—farmer knowledge. This shift led to what the findings reveal as a co-production of knowledge about farming between the farmer and the extension worker. Furthermore, this co-productive relationship led to a greater sense of shared ownership about the teaching and learning in the practice of farming.

A third transformation experienced by extension workers is the transformation of their personal and communal lives because of agricultural reform. This finding is most significant, since there has been no research on how reform impacts their everyday life of reform agents. As extension workers change in relationship to farmers, they also potentially change their relationships outside of work, likely both out of choice and out of expectations of others. The shift in their personal lives is indicative of an ontological shift in worldview, a transformation “where participants experience a change in their being in the world including their forms of relatedness” (Lange, 2004). The participants in this study have a greater sense of meaning and direction in life due to a more collaborative relationship with farmers and significant others. Although, even more importantly this finding raises other questions about the impact of reform, such as what is the role of the personal lives of extension workers in hindering and facilitating change? What other relationships are changed for extension workers as result

of reform? How could agricultural reform be used as the primary agent for addressing gender relations among both participants and extension workers' families?

**Teacher Development and Extension Workers:**

Similar to transformative learning it is apparent that the extension workers also transformed their working/teaching relationship with the farmers, both in practice and how they saw themselves as educators. 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 as educators. Similar to Roberts (1999) teaching developmental model, the workers, educationally, moved from a teacher-centeredness (Egocentrism) to learner-centeredness (Aliocentrism) approach to teaching and possibly on to teacher/learner centeredness (Systemocentrism). From the review of the data it seems that the extension workers did give themselves entirely over to the learners, however, not out of choice as would be the process in a high education institution, but as a result of an institutional mandate. However, if it hadn't been for this mandate it is most likely that few of the extension workers would have ever changed their educational relationship with farmers. As Robertson points out: "At some point, the teachers [in this case extension workers] deeply internalize that they must focus on the learners' experience rather than on their own and must concentrate on facilitating learning not merely on disseminating knowledge".

It is the extension workers that began to accept the idea that it is important to recognize the farmer's experience that were more likely successful in their educational role. However, the issues they struggled with during this change were not centered exclusively on their relationship with content (e.g., farming knowledge) and student experience, 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. Also, due to the institutional reform and an overall limitation of the study it is difficult to ascertain where these extension workers fall within Robertson's model. If a selection had to be made, most workers seem to have established a teacher/learner relationship (Systemocentrism) with the farmers, "an

intersubjective relationship among the unique individuals who occupy the teacher and student roles....[treating] both the teacher and learners as unique persons, not roles, and puts them interaction" (p. 283). This is based on the assumption that the extension workers could identify and discuss farmers as individuals, some who became friends and their growing appreciation of indigenous knowledge. At the same time, it didn't seem that they totally relinquished themselves to the farmers, particularly in recognizing and sharing their own expertise. Although, this is an area that needs further research.

What is more significant, is not where these extension workers are along Robertson's continuum of teacher development, instead that the model further confirms that they were clearly impacted by the institutional reforms, both in how they saw themselves as educators and how they related and worked with farmers. This transformation in the role of the extension workers and the impact it has teaching raises important policy implications. Governments and NGO's need to acknowledge and actively support staffs' personal development alongside structural reforms and system changes. For many the personal change experienced by extension workers was profound and transformative in nature, directly related to the changing 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 strengthening of extension staff facilitation skills and relationship building skills, would have greatly assisted them in transitioning into a new way of working and avoiding some of the disorientation experienced as well as speeding up effectiveness of system changes.

The study shows that extension workers are 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.

**REFERENCES**

Asante, M. K. (1998a), *Afocentricity: A Theory of Social Change*. Revised edition. (Trenton, NJ): Africa World

- Press).
- Cranton, P. & Taylor, E. W. (2012). Transformative learning theory: Seeking a more unified theory. In E. W. Taylor & P. Cranton (Eds.) *Handbook of transformative learning theory: Theory, research and practice* (pp. 3-20). San Francisco: Jossey-Bass.
- Duveskog, D., Friis-Hansen, E. & Taylor, E. (2011). Farmer Field Schools in Kenya: A Transformative Experience. *Journal of Development Studies*, 47(10), 1529-1544.
- Friis-Hansen, Aben, Ameu, & Okoth (2004). Smallholder agricultural technology development in Soroti district: Synergy between NAADS and farmer field schools. *Uganda Journal of Agricultural Uganda Sciences*, 9, 250-256.
- Lincoln & Guba. (1985). *Naturalistic Inquiry*. New York: Sage.
- Merriam & Associates (2002). *Qualitative research in practice. Examples for discussion and analysis*. San Francisco, CA: Jossey Bass.
- Merriam, S. B. & Ntseane, G. P. (2008), *Transformational learning in Botswana: how culture shapes the process* *Adult Education Quarterly*, 58, 183-197.
- Mezirow, J. (2000). Learning to think like an adult: Core concepts of transformation theory. In J. Mezirow & Associates (Eds.). *Learning as transformation* (pp. 3-35). San Francisco: Jossey-Bass.
- Netsance, P. G. (2011), *Culturally sensitive transformational learning: incorporating the Afrocentric paradigm and African feminism*. *Adult Education Quarterly*, 61, 307- 323.
- Robertson, D. L. (1999). Professors' perspectives on their teaching: A new construct and developmental model. *Innovative Higher Education*, 23(4), 271-294.
- Taylor, E. W. & Cranton, P. (2012) (Eds). *Handbook of transformative learning: Theory, research and practice*. San Francisco: Jossey-Bass.
- Van den Berg & Jiggins (2007). Investing in farmers—the impacts of farmer field schools in relation to integrated pest management. *World Development*, 35, 4, 663–686
- Williams, S. H. (2003) *Black mama sauce: Integrating the theatre of the oppressed and afrocentricity in transformative learning*. In C. A. Wiessner, S. R. Meyer, N. L. Pfhal, & P. G. Neaman (Eds). *Proceedings of the Fifth International Conference on Transformative learning* (pp. 463-468), Albuquerque, New Mexico.