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## PARTICIPATORY EXTENSION PROCESSES AS CATALYST FOR CHANGE IN SOCIAL DYNAMICS AMONG RURAL POOR

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**Abstract** — As agricultural education based on participatory approaches expand, knowledge is needed about the impact it has on the daily lives of participants beyond farming gains. The study explores how involvement in the participatory extension practice “Farmer Field Schools (FFS)” results in shifting world views among participants and to what extent it has an impact on peoples’ sense of well-being and agency in society. The paper discuss how transformative learning in participatory research and extension enables poor people to gain agency; generate more equitable spousal relations; improve relationships with community and adopt more productive and profitable farming and marketing practices that contribute to a sustainable society.

**Key words** : Kenya, participatory extension, Farmer Field Schools, empowerment, transformative learning, resource poor farmers

## **INTRODUCTION**

Farming among rural small landholders in sub-Saharan Africa is taking place under rapidly changing conditions and the current situation requires farmer to be innovative, make informed decisions and adjust to rapidly changing situations. However, traditional education approaches and methods have proven largely unsuccessful (Purcell and Anderson, 1997; Anderson and Feder, 2006) and efforts to provide farmers a voice are seldom an integrated part of agricultural programs. Rural educational support for community development has in the past predominantly relied on methods of transfer of technology that has not benefited resource-poor farmers. Meanwhile, globalization of markets further requires increased collective action and negotiation power of farmers (Friis-Hansen 2000). Despite the acknowledged need for participation of the world's poor in exerting greater influence over decisions that affect their lives, there is still a significant need for mechanisms that ensure genuine participation of the citizenry (Dill, 2009). Supporting empowerment and enhancing the voice of rural population in the development process has increasingly become a central element in poverty reduction strategies (World Bank, 2000; Bebbington, et.al. 2007, GCARD, 2010). However, our understanding of the impact of participatory extension programs on poor farmers ability to break with conservative traditions and norms and to engage with the many constraints facing them in an innovative manner is limited.

The Farmer Field Schools (FFS) in Kenya examined in this study represent a new paradigm in rural adult education that focuses on farmer driven innovation. FFS provides a platform where farmers meet regularly in groups to study the *how and why* of farming. There are currently a multitude of FFS initiatives in more than 27 countries in Africa (Braun, Jiggins et al., 2005) funded by various development agencies and the approach is gaining in popularity. It represents extension and research efforts that are transformative (e.g. Mezirow, 2000) in nature and enable poor and frequently illiterate farmers to engage in an agricultural innovation and market driven rural development process. Published research indicates substantial impact of FFS in terms of increase in farm productivity, improved farming knowledge (Rola, Jamias and Quizon, 2002; Praneetvatakul and Waibel, 2003; Mwagi et. al, 2003) and indications of empowerment and collective action (Züger, 2004; Mancini, van Bruggen and Jiggins, 2006; Van den Berg and Jiggins, 2007). However, outside of the economic and agrarian implications of FFS little is known about the effect of FFS as a catalyst of change in social dynamics among rural poor, and in particular on the personal, communal and gendered lives of the participants and to what extent FFS contributes to social equity and reduction of poor populations in terms of innovative agency and human relationships. In response to this concern the purpose of this study was to explore FFS and the impact it had on the lives of participants from the perspective of transformative learning. The paper begins with an introduction to the pedagogy of the FFS approach followed by a discussion of transformative learning as the theoretical framework of the study. Thereafter study methodology and findings are presented followed with a concluding discussion.

### **Farmer Field Schools**

The FFS approach was originally developed in Asia in the 1980s as a response to the commonly applied Training and Visit (T&V) extension model that proved ineffective in addressing problems of large pest infestations affecting the area. Within the framework of participatory and demand driven extension (Leeuwis, 2004), the hands-on practical learning in FFS emerged as a means for facilitating critical decision making skills among farmers to deal with complex farming problems (Gallagher, 2003). The FFS approach is based on a constructivist orientation to teaching (e.g. Piaget, 1950) and consistent with this educational philosophy FFS uses a learner-centred, problem-based approach to teaching involving field observations, relating observations to the ecosystem, and applying previous experience through group discussion with new information to make informed crop or livestock

*Participatory Extension Processes as Catalyst for Change in Social Dynamics  
Among Rural Poor  
(Friis-Hansen E., Duveskog D.)*

management decisions (Duveskog, 2006). A group of farmers who meet regularly (usually weekly) in the field form the field school while plants or animals at the learning site form the main study materials. The learning takes place under the **guidance** of a trained facilitator, who helps promote active participation, group dialogue and reflection. Critical reflection, questioning of deeply held beliefs and norms about farming, is promoted through the engagement of comparative experiments, the regular agro-ecological system analysis (AESA) exercise and discovery-based activities. Apart from the farming related content, small group activities and discussion sessions address “special topics” relating to non-agricultural issues (e.g., HIV-AIDS, domestic violence). In addition, to enhance learning song and dance is often used as a compliment to the problem based learning and to take advantage of local ways of knowing (Duveskog, 2006).

## **1. THEORETICAL FRAMEWORK**

To understand the change in the daily life of FFS participants, transformative learning (TL) theory (Mezirow, 2000, Taylor, 2008) provides a lens for shedding light on the constructivist context (e.g., Loveinsohn, Berdegue, Guijt, 2002; Piaget, 1950) of participatory extension. It is considered adult learning theory where ‘learning is understood as the process of using a prior interpretation to construct a new or revised interpretation of the meaning of one’s experience in order to guide future action’ (Mezirow, 1996: 162). TL is based on the assumption that an individual’s worldview is framed by structures (e.g., frame of reference) of assumptions that form the bases of individual’s beliefs, values and actions. This frame of reference both limits and shapes an individual’s perception and provides a filter of what experiences individuals choose to give meaning to and how they construct that meaning. Most learning reinforces and elaborates existing frames of references. For example, farmers in Kenya have a host of beliefs concerning the role of women in farming and daily life. These beliefs give meaning to their way of farming and are continually reinforced through shared cultural practices and traditions. However some individuals, as result of a significant experience (e.g., FFS) find their frame of reference inadequate in providing understanding to the experience, and are emotionally provoked to question deeply held assumptions leading to what Mezirow (2000: 19) refers to as a “perspective transformation.” In the likelihood of farmers’ transformation, they begin to relate to their world differently by demonstrating a ‘more inclusive, un-discriminating, permeable (open to other viewpoints), critically reflective of assumptions, emotionally capable of change and integrative of experience’ and as a result take on new roles in life.

Since the early 80’s transformative learning theory has been studied through extensive research, although predominantly within a western context. Only recently has research started to explore the application of this theory in non-western settings (Ntseane and Merriam, 2008). A view of transformative learning that both helps address these limitations as well has direct application for this study is an Afro-centric (e.g., Asante, 1995; Williams, 2003) conception of transformative learning which ‘focuses on Africa as the cultural centre for the study of African experiences’ (Ntseane and Merriam, 2008: 186). This non-Eurocentric perspective of transformative learning gives attention to the context dependent nature of transformative learning and foregrounding the local culture of the FFS farmers. For example, recognising values such as the collective responsibility of learning, the importance of understanding human existence in context to others (Avoseh, 2001, Ntseane, 2005) and recognizing that ‘most African worldviews emphasize belongingness, connectedness, community participation and people centeredness’ (Mkabela, 2005: 180). This Afro-centric perspective was used to inform this research design in the development of interview questions and the analysis of the data, ensuring tools applied being culturally relevant and appropriate.

## **2. METHODOLOGY**

### **2.1. Data Collection and Analysis**

Kakamega district in Western Kenya was chosen as study site because of the presence of a large and well functioning FFS programme that had been running over a longer period of time (more than eight years), ensuring a high number of FFS graduates in the area.

The study used a qualitative design (Merriam, 2002) where the researchers sought to interview both current and past FFS participants. Individuals were purposely sampled, and twenty individuals were interviewed, half of which were graduates of FFS from about year 2000, while the other half were made up of current FFS members or more recent graduates. Interviewees were between 30-55 years of age and mainly belonged to the Luhya ethnic group. The specific aims of the interviews were to understand (a) respondents perception of their experience in FFS both in terms of instrumental and personal gains, and (b) changes induced at personal (both skills and worldviews) and relationships at household/community level following FFS participation.

All the interviews were recorded, transcribed and analyzed, using a constant comparative approach where the two groups of respondents were treated the same. The data was separated from the original transcript using NVIVO-QSR (version 8) in order to identify its essential elements. The three researchers systematically reviewed each transcript and coded responses (Miles and Huberman, 1994) in an inductive manner where themes were developed based on emerging similarities of expressions.

In addition to the interviews, direct observations were made during regular meetings of the FFS groups that the interviewees belonged to. These meetings included group discussions, theatrical role-play, various group activities, performance of songs and dances and visits to group experimental fields. Along with individual and group interviews key informants were also interviewed.

## **3. FINDINGS**

Participants expressed a range of changes both in material status, perceptions and behaviors, mainly in connection to their farming activities but also in relation to personal beliefs, relationships with others and outlook on life in general.

### **3.1. Wellbeing prior to FFS**

Participants interviewed shared that they had experienced significant improvements in their wellbeing as a consequence of joining FFS. To fully appreciate this change and the nature of the transformation it is important to establish how they made sense of their life prior to FFS. Characterization of wellbeing prior to FFS was described in terms of quality of life, ability to sustain a livelihood, and overall self worth. For example many interviewees were food insecure before joining FFS. They were unable to adequately nourish and protect their families. For instance, Titus mentioned about the daily struggle for survival: 'I wasted a lot of time working for other people's farms to get immediate cash.'

Not only did they lack the basics necessary to maintain quality of life, they also lacked the power to rectify their situation. Further, their inability to improve their quality of life was inextricably linked to their self-perception. Most significant was a lack of confidence found among participants prior to joining FFS. Associated with this lack of confidence was an expressed sense of fatalism and overall lack of active engagement with the work of living productively. For example, Priscila's statement was shared by many participants: 'I was idle and sat around doing nothing for myself.' Fatalism was also common among participants as expressed by Stephen: 'I used to think that I was being bewitched by someone and that was the reason for poor performance of crops and livestock.' Frustration over their livelihood and aspiration for a better life ultimately became the key motivators for joining FFS.

### **3.2. From subsistence to farming as a business**

Participants clearly expressed gains from FFS in terms of instrumental learning and skills such as uptake of more effective agricultural techniques and applications of new skills on their farms. Participants explained that a shift had taken place in mentality from subsistence farming and providing for the day to a more planned and market oriented agriculture. Daniel explained how his thinking about farming had changed: 'Previously we were just farming, carelessly but now we are farming for business, when we plant we know we have put in so much, we want to know what will come out so we will compare...we are doing our farming as business.'

It is not only the attitude to farming that has changed, but also how farming is done. Priscila tell us about how she diversified her farm: 'I didn't diversify so I could not have various crops on the farm like I have today'. Another indicator of a stronger business orientation among FFS members was the greater emphasis placed on planning and analysis in farming.

### **3.3. Transformation of self**

Individual transformation (e.g. significant individual change) found among FFS participants was reflected in an increase of confidence, greater individual agency, a stronger work ethic and commitment to farming, improved outlook on life, and a greater emphasis on planning and analysis in farming.

An increase in confidence was also expressed among individuals who learned to participate in the presentation of the agro-ecosystem analysis (AESA) in FFS and as a result overcame shyness when relating to others in their community. For instance, Fegenia in a joint interview with her spouse Eliud, stated that: 'I used to be fearful but I have been empowered and [now] I can stand before people without fear.' Directly linked to the increase in confidence among participants was a greater sense of individual agency reflected in several ways, one involving taking initiative and being prepared and another in the questioning and challenging of authority.

A stronger work ethic and commitment to farming was observed among FFS members. For example, Dismas, FFS Chairman stated; 'a great change, most [members] are serious, when you visit them you find they have plan for this and that.' The change in work ethics experienced by FFS members is compatible with ideals preached by the church. Stephen explained that 'God demands a hard worker and the training in FFS encourages you to become a hard worker.' Several participants expressed that they had become more accepted by the church after joining FFS, giving them a feeling of being closer to god. Along with a significant increase in work ethic participants also expressed an improved outlook on life as a result of participating in FFS, manifested in a greater sense of optimism about farming and happiness and pride in their agricultural accomplishments.

### **3.4. Changed gender roles and relationships**

Many respondents expressed a significant change in relationship with their spouse in terms of increased collaboration and joint decision making. This change in spousal relations was often seen as something new and different from the traditional culture where the man makes most decisions.

It appeared that the group discussions taking place in FFS acted as a trigger for increased discussion and sharing at the household level. For example, Titus stated; 'I took the group discussion to be me, my wife and my family members. I realized '*kumbe*' [expression of surprise] in most sessions you have to sit down discuss aspects before you put them in plan and go to implement.'

FFS also appear to have contributed to changes in terms of gender roles and habits at household and community level. For example Simon, 32 years with a wife and three children explained that he is now able to do farming activities normally seen as a woman's work. Similarly, one respondent explained how he came to see the role and capacities of

*Participatory Extension Processes as Catalyst for Change in Social Dynamics  
Among Rural Poor  
(Friis-Hansen E., Duveskog D.)*

women differently after FFS and realise how the traditional gender roles form a limitation in life. He had not before realised the capacity of women to learn, discuss and make decisions. A change in roles and habits was found particularly among the women. For example, Consolata proudly explained how she had gone alone to Kapsabet a nearby town in the company of a veterinary doctor to buy a cow, something her husband would never have allowed her to do earlier. She said; 'Oh, yes it would have been not possible before, it would be bad, you would be sent away with that animal, "how can you bring it here, who has told you" [the husband would say]. It's a big change.' Similarly, Titus's wife, who is one of the few women in the community who rides a bicycle, explains that 'I am now playing both the role of a man as well as a woman, so as not to just sit and wait.'

Participants referred to how 'noise' (argues and quarrels between man and wife) in the household had reduced following FFS participation, and how there now was more peace in the home. This noise was often mentioned to be a consequence of financial stress and of conflicting priorities in the household. Many members expressed less stress and noise at home due to the increased income but also because of the more equal power balance created when both partners contribute to the upkeep of the family.

### **3.5. Changed customs and traditions**

Farming practices are often closely connected with traditional beliefs and local customs. Where this was most evident was in relation to gender roles. For example, some farming traditions specify that: men are not to grow vegetables, women are not to plant certain trees such as bananas, eat egg or chicken meat and only women can plant sweet potatoes. The breaking of some of these taboos is often associated with a high level of fear for death that keeps people from challenging local beliefs. By being able to try and experiment with certain practices in the FFS setting and realise that absence of consequences some of these beliefs were now starting to change.

There were also beliefs found among participants that witchcraft causes crop failures in agriculture, and these beliefs restricts some people from taking actions. Through FFS some members had come to understand that their poor performance was not due to witchcraft but simply a matter of crop management skills.

### **3.6. Change in community relationships**

All farmers interviewed agreed that their relationship with, and status in the community had dramatically changed as a result of their involvement in FFS. Several participants talked about a shift from providing casual labour for other farmers, often associated with low community status, to becoming a respected resource persons and leaders within the community.

Many participants had acquired leadership skills that they used either within the FFS group or within the wider community. Simon explained: 'Through FFF I have gained personality, I have input to the group and my family at large, I can stand and express myself. I have been elected secretary of the clan.'

FFS members had also become engaged as leaders for a variety of organizations or institutions. Ordinary FFS group members, who had no official leadership positions, were often informal leaders and served as community role models. Furthermore, several members explained how FFS had contributed to social inclusion, trust and a sense of togetherness among people in the community.

## **4. DISCUSSION**

This study indicates that FFS participants gain skills and knowledge stretching beyond the agricultural domain, including aspects of personal development and changes in relationships with others.

#### **4.1. The transformative learning experience among FFS participants**

The results indicate that the participants in this study experienced a change in perspective as a result of their participation in FFS, reflected by a significant shift in how they make meaning of farming practices and their life in general. An indicator of this shift was observed in what Kegan (2000) refers to as an epistemological shift, a shift in their way of knowing reflected in greater reliance on planning and analysis in their farming and daily activities. Also, further affirming this shift is the questioning of previously held assumptions by participants in terms of taboos and cultural beliefs for explaining farming successes and failures replaced by greater reliance on empiricism in informing farming practices. This questioning of assumptions is also indicative of critical reflection; a core element of transformative learning (Mezirow, 2000).

There also appear to be a shift in ways of knowing; indicative of what Lange (2004: 137) refers to as an ontological shift in worldviews. This relates to individuals' purposefulness, a sense of having greater meaning and direction in life. This was reflected in some of the FFS participants' change from idleness to individual agency and the development of a greater work ethic both in relationship to farming and their approach to life in general.

Furthermore, directly associated to the ontological shift was greater self-efficacy, confidence in themselves as farmers and as contributing members to their household and community, consistent with previous research in the field of transformative learning (e.g., Taylor, 1998, 2007). Instrumental gains (e.g., knowledge about farming) in combination with the gain in agency seems to lead to 'a change in meaning perspective and increase in self-confidence in new roles and relationships' (Taylor, 1998: 42). These shifts or changes appear interrelated, each contributing to the development of the other.

Changes in gender relations and familial roles comes out as the most significant result of change in perspective, expressed in terms of a greater shared power balance among men and women in the household setting and in terms of beliefs about what men and women's respective roles are in the practice of farming. In particular, indirectly FFS has had a liberating effect on women as they are provided greater opportunities to engage into decision making and economic activity.

#### **4.2. Implications for development practice**

The participants were, as a result of FFS, developing more meaning and purpose in their life, reflected by greater optimism, outlook and satisfaction in life. This sense of freedom have an instrumental role in development seen from the capability approach, the theoretical backbone of UNDPs perspective on poverty (UNDP, 2005) where well-being is achieved through a process of expanding the real freedoms that people enjoy (Sen, 1999). Further, the increased power and new opportunities for women shown to lead to an increase in household wellbeing and income provides valuable input into the global debate on poverty reduction and the role of women in development (World Bank, 2008). Also, it gives support to the notion that 'empowerment requires structural change and an enabling environment. In conjunction with women's ability to make transformative choices these affect not only women's individual lives but the very structures and institutions that have denied them agency in the past' (Hoodfar, 2007: 266).

As previously discussed, secondary or ripple effects in the community following FFS participation were also observed. Participants taking on leadership functions in the community demonstrate the wide variety of ways that FFS plays out in the daily lives of participants. Graduate FFS members were experiencing an increase in status among their peers as a result of their increased skills and leadership capacities and thereby came to serve as informal role models and mentors for others. This is particularly the case in terms of farming knowledge and practices. However, interestingly FFS members also seemed to serve as role models in terms of living up to ideals (formal or informal) about what makes a "good" man or woman, i.e. norms such as to work hard, help others, not depend on alcohol etc. This suggests that FFS potentially provides an important entry point for rural social



*Participatory Extension Processes as Catalyst for Change in Social Dynamics  
Among Rural Poor  
(Friis-Hansen E., Duveskog D.)*

changes, in terms of introducing new ideas, practices and behaviours beyond the technical scope often associated with development interventions.

Previous research on FFS has focused almost exclusively on the effectiveness of FFS as an approach to promote adoption of agricultural innovations. This study, however, indicates that it is the combination of instrumental knowledge (e.g. agricultural practices) and enhanced individual and collective agency acquired through the learning process that enables poor farmers to become innovators and to improve their wellbeing. The study further indicates a symbiotic relation between confidence and economic status. While an individual transformation provides the basis for economic development among FFS graduates, such economic development further reinforces the individual's self confidence and status in the community. This calls for further recognition of the close inter-linkages between material, psychological, and sociological aspects when addressing poverty concerns.

Enhanced agency and analytical skills gained through the FFS process may prove to be some of the most important outcomes of the FFS approach among poor farmers as such capabilities are highly beneficial when relating to market forces and local service providers. From the point of view of government and donor agencies, the fact that FFS appears to encourage active and engaged farmers, who base their opinions on empiricism rather than cultural beliefs may provide opportunities for improved effectiveness of demand-driven service provision and mechanisms for genuine participation of the citizenry in development interventions.

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*Participatory Extension Processes as Catalyst for Change in Social Dynamics  
Among Rural Poor  
(Friis-Hansen E., Duveskog D.)*

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