S.Afr. Tydskr. Landbouvoorl./S. Afr. J. Agric. Ext.,
Vol. 43, No. 2, 2015: 52 – 65
DOI: http://dx.doi.org/10.17159/2413-3221/2015/v43n2a356

CHANGING DEMANDS OF CLIENTS OF EXTENSION: WHAT KIND OF COMPETENCY IS NEEDED TO MEET THE NEW DEMAND?

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ABSTRACT

Two studies were conducted in which the first one focused on thirty extension practitioners in Limpopo province. This study formed part of a bigger study which was initiated by Extension Africa, which is made up of African researchers from African countries and in the Diaspora. Extension Africa research organization has embarked on extension research in nine African countries focussing on problems that faced small holder farmers. One aspect of the study was to look at the competency of the extension staff in terms of delivering an efficient and effective service to satisfy the needs of farmers. This paper finds the study relevant for this purpose and it draws from its data. The findings suggest that an extension staff should be competent in the area of: development theory 93%, development policy, 93%, development practice 93%, training in development 90%, development process 80%, training in development 90%. There is also a need to be competent in communication from different facets e.g. communication for building linkages 90% , public speaking, 86%, facilitation 90%,Communication for integration 86.6 %, and for communication for coordination 87 %.

The second study report on the relevant technical competency needed to resolve the climatic challenges faced by farmers, climatic challenges form part of the new mandate that extension staff is supposed to consider when addressing farmer's needs. 194 farmers were interviewed from four local agricultural offices of Limpopo namely: Fetakgomo, Makhuduthamaga, Aganang and Blouberg. The information was collected through a questionnaire which was analysed through the SPSS system. The findings suggest that there are eight areas that farmers expect extension staff to be competent. These areas can be seen as strategies to mitigate against climate change and are summarized as good cultural practices. Some of these practices include the following: soil mulching skills, fertilizer recommendation, and zero tillage, knowledge of early maturity variety, early ploughing, drought resistant seed and water harvesting. The paper concludes with three recommendations namely, extension practitioners should acquire the necessary skills; they should be trained in both technical and in extension methods and they should be knowledgeable in terms of conflict resolution, negotiation, and persuasive communication skills. These skills are important in assisting farmers to cope with changes that they face due to forces of change that affect their productivities.

Key words: Extension, Extension Africa, climate study, and competency.

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1. INTRODUCTION

Two separate studies were used to identify one objective of the paper namely extension competencies. In 2012 Extension Africa, a newly formed research organization consisting of African researchers, conducted a study with three main specific objectives that had to do with the demography characteristics of extension, the level of job satisfaction and their perceptions of goals and their level of achievement, the assessment of communication and development of the training needs of extension practitioners in Africa. Nine countries including South Africa were identified. One aspect of the study was to look at the competency of the extension staff in delivering efficient and effective services to satisfy the needs of farmers (Zwane, Aguga & Igodan, 2014). This paper finds the study relevant and it uses its data in order to demonstrate the changing needs of extension and how such competencies are relevant to the extension staff. The second study is based on climate change which is also used to identify competency from the farmer's perspectives.

The objective of this paper is three fold. The first objective is to discuss the forces of change that drives extension staff to reconsider the competencies needed in their profession in order to assist their clients who are farmers. Farmers objectives do change but one primary goal remain the same that is to generate more income in order to improve their living standard and for their families. However the means to achieve this objective is affected by a number of forces which compel them to re-consider their strategies. The extension staff appointed by different governments department of Agriculture or by non- government organizations (NGO's) in certain cases should be in a better position to contribute through their advice which they offer to them. The second objective is to identify the areas of competency and to validate them through research that has been done in Limpopo Province of South Africa. The third objective is to make recommendations on how to improve the situation of extension competencies.

2. BACKGROUND

The job of extension which is also called Rural Advisory Services (Global Forum on Rural Advisory Services 2012) is seen to be dynamic and challenging. Much has been written about this subject although there is no one single understanding on what the role of extension is in terms of rural development (Garforth & Oakley, 1985). Many countries define extension differently as well as its application. Different scholars have agreed that it could focus on a number of areas such as technology dissemination or transfer (Rogers, 1982; Röling 1988, Rivera, 1989), Provision of information or Advice (Van den Ban, 1990; Bembridge 1990), problem solving (Gerster-Bentaya, & Hoffman, 2011).

Two studies were conducted in which one was focusing on thirty extension practitioners in Limpopo province. This study formed part of a bigger study which was initiated by Extension Africa, which is made up of African researchers from African countries and in the Diaspora Extension Africa research Organization has embarked on extension research in nine African countries focussing on problems that faced small holder farmers. One aspect of the study was to look at the competency of the extension staff in terms of delivering efficient and effective services to satisfy the needs of farmers.

3. THEORETICAL BACKGROUND

There has been no doubt that extension as a concept is grounded in the diffusion model of agricultural development, in which technologies are passed from research scientists via extensionists to farmers (Rogers, 1962). This paradigm has provided a narrow understanding of extension and most often been strongly criticised as top down leaving the majority of small holder producers not served. A recent review of the concept brings a new dimension in which extension is defined as systems that should facilitate the access of farmers, their organizations and other market actors to knowledge, information and technologies; facilitate their interaction with partners in research, education, agribusiness, and other relevant institutions; and assist them to develop their own technical, organizational and management skills and practices (Christoplos, 2010). It is encouraging to note that there is renewed attention on the importance of advisory services and extension in rural development processes as reflected in organizations such as Comprehensive Africa Agricultural Development Programme (CAADP), especially that the African Heads of States committed a 10 % annual public budget support to agriculture in the Maputo Declaration held on the 1-2 of July 2003, which was re-confirmed in the Malabo Declaration (CAADP, 2015) and the Global Forum on Rural Advisory Services, 2012).

In light of the definition, it suggests that the role of extension has widened to include issues that go beyond agriculture. Experience has shown that for extension job to be successful extension professionals must have a foundation of the appropriate core competencies and a blend of unique areas of expertise. This has been attested by a number of authors (Scheer, Cochran, & Place, 2011). However in order for one to fit well within the extension job there are forces that determine the kind of competency needed by the extension professional. The potential forces are discussed next.

3.1 Forces of change for extension

Scholars have identified some of the forces that made extension to become challenging, complex as well as vulnerable. Different challenges presented in governments budget made extension policy planners to consider different ways of providing an offering of extension hence different naming were adopted as approaches in different countries names for example; Outsourcing, Privatization(Umali,1996; Zijip, 1992; Kidd, Lammers, Ficarelli, & Hoffman, 1998), decentralization (Ameur, 1994). There are different areas that also compel extension to change and consequently dictate the type of competency needed by the extension practitioners.

a) Information Communication Technology (ICT)

ICT have shown potential to improve extension and advisory services. Recent research advances in information technology, biotechnology, and nanotechnology have put agriculture at the threshold of an exciting frontier of opportunities to advance economic growth, sustainability, and the building of human capabilities. This has been acknowledged by Chamala (1991) that extension practitioners in the Cooperative extension system will need to develop new educational curricula, programs, and delivery systems to facilitate adoption of these technologies.

There will be new staff competency in the Information communications, Web site development, direct customer assistance technologies (such as use of voice-over-IP), electronic management of science-based information, technical applications (such as geographical information system and nanotechnology), and delivery of research-based

extension information and educational programming through such means as e-Extension, distance learning, and Web-based. For extension to be effective there will be a need to educate the users including the managers and the general public on how to use technology and the World Wide Web (Hamernik, & Crosby, 2015).

b) Demand driven needs

The demand exerted by empowered clients of extension present a new area as opposed to where extension was used to be on the supply side. The supply side used to be simple because farmers were given the type of advice even when it could not make any sense to them. Whilst on the other hand the demand of extension by the clients was not so common in the past. These days it can become a problem especially when the extension practitioner is not fully prepared to handle it due to knowledge deficiency. The new demand of extension presents a new learning experience for the extension practitioner. The extension practitioner will need to be equipped with the relevant expertise to meet this need. One case in point is when farmers in Limpopo programme of Broadening Agricultural Service and Extension Delivery (BASED) demanded to be assisted in managing their soil fertility programme, fortunately the soil scientist was fully equipped with the soft skills to handle such demand by farmers in selected pilot sites (Ramaru, 2013).

A whole new set of soft skills became a new competent to a team of researchers in BASED programme in Limpopo. Such skills were used to analyse the institutional context and the respective power structures, formal and informal farming situations. The impact was realised when research scientists improve their negotiation capacities, which includes being capable of communicating (especially listening) and working with different people and institutions bringing about development. A similar experience was observed where new clients demanded facilitation in the area of natural resources, extension staff were given additional competency in which they developed mutual trust and built capacity to evaluate the programme and the programme was successfully implemented (FAO, 1997).

c) Broader planners' roles and new skills

Extension has been used to plan for the people especially during the era of betterment in the homelands of South Africa. However a major challenge that lie ahead is the recognition of the fact that extension work requires a definite move from "planning for" to "planning and creating with" the client. In other words there will be a need for integration of planning, implementation and evaluation stages and activities which will demand an attitude of cooperation from the concerned actors (FAO, 1997). In order to be successful in this regard extension planners will require to assume multiple roles, such as assembling and coordinating multidisciplinary teams of experts to address critical needs, collaborating and engaging with new and diverse audiences, finding new and multiple ways to communicate with stakeholders, and assuming strategic leadership roles (Dillard, 2014).

d) Food security needs of the clients

The future demands for food by extension clients play a role in changing the demands of extension. Poverty is one of the challenges of the growing populations in Africa and the rest of the world. According to FAO (2013), about 870 million people, (one-eighth of the world population) are suffering from chronic hunger. Statistically, the developing countries largely account for about 98% of the world hunger population. Bearing this in mind it is

important that extension staff should play a role in this regard. The human resource development approach empowers people and gives new meaning to all other roles. Development of technical capabilities must be combined with management capability. In another study it was indicated that food production is linked to gender mainstreaming in development programmes and environmental issues of which both call for extension professionals to have certain level of competency in handling them (Okwoche, Ejembi & Obinne, 2011).

e) Extension research towards poverty eradication

The need for socio economic research is one of the forces to be taken note of. It is argued that this kind of research is essential because it will provide new technological base for increasing the productivity of agricultural resources. The main concern in this regard is the welfare of the poorest farmers. A study mandated to International Food Policy Research Institute (IFPRI) and by the *International Fund for Agricultural Development* (*IFAD*) analysed the effects on income and nutrition later recognized the need to conduct research which will improve poverty alleviation and nutrition (Kessaba & Mathur, 1989). A new competency in research becomes handy to implement this programme successfully.

f) Climate change

Climate change is one of the driving forces which have to channel extension competency. It carries a negative force towards affecting food production systems. It therefore calls for extension to play a critical connecting role in food and agricultural innovation systems. This idea is supported (Global Forum on Rural Advisory Services, 2012). In other words extension will be expected to help local communities to meet their food needs as well as responding to climatic challenges.

3.2 Extension competencies

Competency is defined as a characteristic that underlines human performance (McClelland, 1973). For farming to be improved, we need a competent extension practitioner. In light of the forces that demand changes in extension competency it has become obvious that an extension staff are faced with a diverse and complex areas in which it is expected of him to be skilful and competent. There is no clear agreement as to which areas are prioritized. However, studies in different countries identified areas which seem to be important in their countries. A study in Nigeria identified areas of competencies that include communication skills, human skills, conceptual skills, emotional intelligence skills and industry knowledge skills (Okwoche, Ejembi & Obinne, 2011). Copper & Graham (2001) identified programme planning, implementation and evaluation, public relations, personal and professional development, staff relations, personal skills, management responsibility identified for competencies and work habits to be essential competencies for extension agents.

In this era of globalization, a knowledgeable and skilled individual can play a vital role in the extension agent of today, and must be competent not only in technical matters, but also in areas such as success of an organization. According to (Okwoche, Ejembi & Obinne, 2011), future extension professionals need to be more skilful and futuristic to serve the needs of diverse audience.

Not all the identified skills are able to address the forces for change, however an attempt has been made to classify these competencies which addressed the area of "force" with an exception of climate change. According to Scheer, Cochran, Harder, & Place, (2011), eight areas of expertise were identified that include the following; Extension teaching information technology, management and supervision, marketing, program planning development, and evaluation, research, subject matter expertise. On top of these areas a number of authors (Scheer, Cochran, Harder, & Place, 2011; Hamernik, & Crosby, 2015), also identified unique competencies and these are: knowledge of extension, flexibility and change, understanding stakeholders and communities, continuous learning, and customer service.

4. METHOD AND MATERIALS

The study area took place in Limpopo Province with slight changes in the municipalities and the district. The first study of competency coupled with the Information Communication Technology (ICT) and working background focused in the three districts of Limpopo namely Vhembe, Capricorn and Sekhukhune in which a purposive sample of thirty extension practitioners were nominated randomly. A questionnaire was developed and distributed randomly to the extension officers from the three districts. The managers for Extension based in the selected districts were responsible for the distribution of the questionnaire as well as for their collection back to the researcher.

The second study targeted 194 farmers in the four municipalities of Limpopo Province. Two municipalities were from Sekhukhune District namely Fetakgomo and Makhuduthamaga, whilst the other two municipalities were Aganang and Blouberg from Capricorn District. A detailed sample selection was followed in this second study. For example out of each municipality the total wards were identified and the names of each farmer written down with some numbers written correspondingly from those wards. A random sample was conducted by identifying 50 farmers using the random numbering. 50 farmers were identified per site but 6 were not found during the actual interview hence only 194 were finally interviewed. Four students were used to interview the farmers. In both instances of the study, data was captured, filtered and processed through Statistical Package for Social Sciences (SPSS) for frequencies and percentages.

5 RESULTS AND DISCUSSION

5.1 Extension Competency study

In 2012 Extension Africa conducted a study to determine the training needs of extension practitioners in nine countries of Africa including South Africa. The challenge faced by extension in Africa was diagnosed and among others pointed out the most common ones that included an inability to mobilize smallholder farmers for participatory extension programming; failure to ensure the success of integrated rural development programs, a new focus of extension; and an inability to use mass and or social media to help narrow the farmers to agent ratio (Zwane, Agunga, & Igodan, 2013). This paper draws data from such a study with an aim of highlighting the areas of competency.

5.1.1 Demography

The study featured 30 extension officers of which 70 % were male and 30 % were female, and furthermore 76.7 % were married, 20 percent single but not married and 3.3% indicated

being single parents (Zwane, 2014). This demography confirmed the fact that extension services are still dominated by male advisors, in a community where the majority of farmers are women.

5.1.2 Marital status

The respondents were asked to indicate their marital status, and it is indicated in Figure 5.1

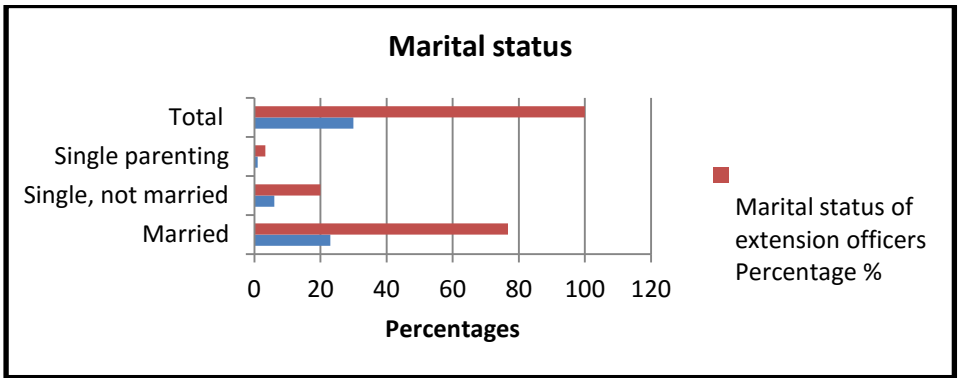

Figure 5.1: Marital status

According to Figure 5.1, the majority of respondents of 76.7 % were married, and 20 % were not married while only 3.3 % were single parenting. Experience has shown that there is stability in the workforce who are married as compared to single or people cohabiting.

5.1.3 Educational qualification

The qualifications of the respondents are indicated in Figure 5.2

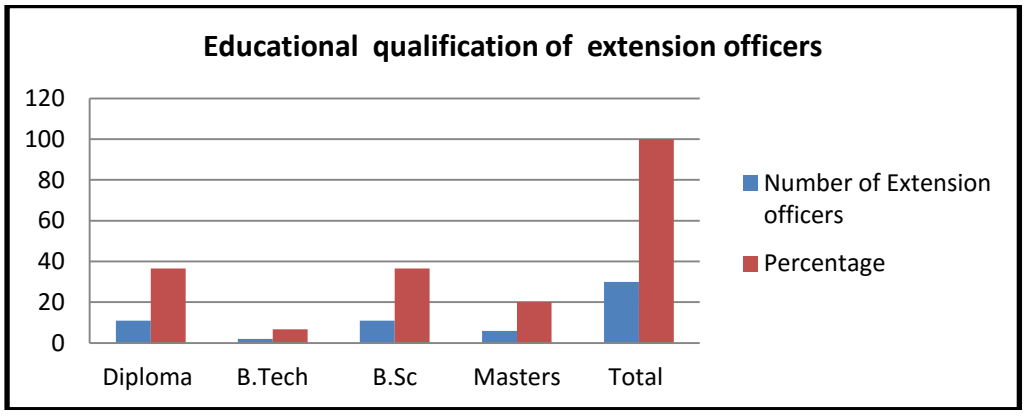

Figure 5.2: Educational qualification

Extension officers in Limpopo Province benefited from the Extension Recovery Plan (ERP) under the pillar of Re-skilling. According to Figure 5.2 extension officers have tertiary qualifications. The number is not satisfactory, for example out of 679 extension officers all were given equal opportunities to apply for bursaries to upgrade their qualifications from 2010 until 2013. Only 32 upgraded their qualifications. Some of the study sample has been beneficiaries to the bursary scheme. This should be seen as part of the drive to have them competent in their extension profession.

5.1.4. Areas of development competency determined by extension staff

The extension officers were asked to indicate their rating in terms of competency based on development issues and the findings are indicated in Table 1.

Table 1: Areas of competency based on development issues

AREA OF COMPETENCY	NUMBER OF RESPONDENTS	PERCENTAGE
1. Understanding development theory is essential for extension workers.	28	93.3%
2. Understanding development policy is essential for extension workers.	28	93.3%
3. Understanding development practice is essential for extension workers	28	93.3%
4. Extension workers need training in development.	27	90.0%
5. The development process is complex.	25	80.0%
6. Extension workers need training in development.	27	90.0%
7. Extension workers lack the training to cope with the complexity of the development process	25	80.0%

According to Table 1 there are 7 items that have been tested in terms of extension competency. Some of the aspects were merely checking whether extension practitioners were exposed or not. Most of the factors that were rated over 90 % showed that these factors are critical for improving the effectiveness of extension. Three areas namely knowledge of development theory, development practice and development policy were all rated 93 % each making them to be outstanding. This has been supported by other researchers (Zwane, Aguga, & Igodan, 2013).

Eighty percent of respondents agreed with Rondinelli (1993) that the development process is complex and 66.7% admitted that they lacked the training to cope with the complexity of rural development programming. Over 60% of respondents also admitted that they have not been trained in how to implement integrated rural development for poverty reduction strategy programs. Other area identified includes a new function of facilitating integrated rural development. The goal of integration is to ensure the timely and simultaneous delivery of information and material and financial inputs to farmers in a timely manner.

5.1.5 Areas of competency in communication as determined by extension staff

The extension officers were asked to indicate their rating in terms of competency based on a number of areas that are influenced by the existence of Information Communication Technology (ICT).The perceptions are indicated in Table 2.

Table 2: Communication and development training needs of extension workers

Area of competency	Number	Percentage
1. Virtually all development ministries have need for communication.	28	93.3%
2. Communication brings development partners together.	27	90.0%
5. Development facilitators need communication training.	27	90.0%
4. **Communication is necessary for building linkages**	27	90.0%
5. Community radio spreads information to rural areas not covered by extension.	27	90.0%
6.Communication is essential for decentralization	26	86%
7. I feel confident in my ability to speak in public.	26	86.6%
8. Communication is necessary for coordination.	26	86.6%
9. Communication is necessary for integration.	26	86.6%

The findings in Table 2, suggest that extension practitioners have good grasping of the nature of communication skills to bring different partners together to work towards a common cause. The area of concerned in communication revealed by the study was that communication is necessary for integration, participation, decentralization and for building linkages. There is a need to strengthen their competency along those identified areas. It can be indicated that a full summary of the precise areas of performance as perceived by the extension staff has been documented elsewhere (Zwane 2014).

5.1.6 Empowerment Role

This is one of the roles that will become important in future especially when it comes to farmer organizations. According to Chamala (1990), the empowerment role can be a cornerstone of the new approach to extension. The extension perceptions indicated that 67% showed a somewhat deficiency in this area especially when one looks at the training in integrated rural development. It can be argued that in future extension staff will need to be capacitated in this area. Mastering this philosophy will assist them in helping rural communities to take action and develop self-reliance rather than perpetuating dependence to external forces. The importance of empowerment has been supported by other researchers (Manabili, 1990).

5.2 Farmer competency derived from climate change study

The main purpose of the study was to check the contribution of public extension whether there is an improvement in the farmer's yields in light of climate change. A number of areas were identified in the study with regard to what could be the contribution of public extension such as food production, the effect of climate change and the farmers in the study areas, but this paper draws only what seems to be the critical areas of competency within the technical dimension on what can be seen as a recommended practices to by farmers bearing on their experience on what can mitigate against climate change. Eight areas were identified which farmers felt the extension practitioners should help them in terms of farming effectively.

5.2.1 Demography for climate change study

Both farmers and extension managers were interviewed in order to establish the extent of service delivery by public extension. However, Table 3 shows only the farmers that were interviewed. The report for managers is not included. The study sample of farmers is indicated in Table 3.

5.2.2 Study sample

Table 3: Climate study sample

Farmer sample for climate change study		
District	**Number of household**	**Percentage**
Capricorn	93	47.9
Sekhukhune	101	52.1
Local Municipality		
Blouberg	50	25.7
Aganang	43	22.1
Fetakgomo	55	28.4
Makhuduthamaga	46	23.7
Total	**194**	**100**

The majority of farmers 52 % were from Sekhukhune district with 47.9 % were from Capricorn districts. Sekhukhune was fairly represented and the local municipality well represented was Fetakgomo with the highest sample namely 28.4 %.

5.2.3 Gender of respondents

The gender composition of the respondents was as follows: 69.59% were female and 30.41 % were men. This trend is not surprising because the majority of food producers in rural areas consist of women. This has not been exceptional in Limpopo province especially that 80 % of its people are residing in rural areas (Burgers, 1995).

5.3 Areas of competency for climate study

The study has identified several areas that a farmer expects to be assisted in terms of strategies to mitigate climate change. The first area is technical – in which farmers need help in terms of conserving moisture, hence soil mulching was indicated as the priority, early maturity seed, crop rotation, zero tillage, application of fertilizers. Climate change related information. In order for the farmer to be effectively assisted extension staff needs to be competent with technical knowledge and other useful behavioural knowledge.

5.3.1 Technical subjects

Farmers have made a recommendation that technical aspects of farming are critical in mitigating climate change. The technical training of an extension staff at an undergraduate level should form the basis of his training. It can be argued that he should have a general insight in the type of farming practiced in the region or the area where he is expected to operate. According to Sulaiman & Van den Ban (2000) the training of an extension staff at an undergraduate require not only Agricultural Technology (or Technical), but also in extension methods.

The matter of whether an extension staff should be a specialist or a generalist has been in the spot light for many years. What follows is the writers experience in working with extension organizations in developing countries for many years. Depending on the type of extension practised in the area, there is room for both, a developing area may need a generalist while a more developed area may need a specialist, again depending on the type of dominant commodity in the area, that may dictate the kind of extension suitable in the area. In the following area; sugar growing, forestry, cotton and fishery a specialized extension staff might be suitable. There are scholars and practitioners who differ whether between a generalist versus a specialist extension person. Thompson & Gwyn (1989) supported a specialist approach in the Cooperative extension system. For other extension system including the developing countries such as South Africa it is the author's view that a generalist who has been trained in networking and facilitation may locate the correct extension specialist who can support him in the area where he is lacking.

5.3.2 Skills of organizing farmers

Apart from technical training one need to understand that climate change brings with it other dynamics. Farmers will need to be organized in the implementation of the mitigation strategies of climate change. It has been suggested that extension staff should need to be trained in order to prepare them for the present needs, some of the areas include, organizing farmers' groups, planning extension strategies to meet farmers' needs, Human Resource Development and the use of Information and Communication Technologies (Sulaiman and Van den Ban, 2000).

5.3.3. Problem-Solving and Education Role

Climate change present challenges of uncertainties because the environment of farming keeps on changing. It is important that extension staff should be equipped to assist farmers to cope with this situation, as result they need more training in participatory extension approaches and in human resource development and communication technologies (Sulaiman & Van den Ban, 2000). It is argued that problem solving is an important role, and it will assist the extension staff to adjust from prescription style into empowerment styles. According to (Chamala, 1991) farmers will be empowered to identify, and solve their own problems by seeking the right solutions, at times they combine their indigenous knowledge with improved knowledge as well as utilizing their resources appropriately.

6. CONCLUSION AND RECOMMENDATIONS

The paper has presented two studies of which both were targeting at the competency level required by the extension staff in order to assist farmers. The future of extension will require

extension staff to assume multiple roles, such as assembling and coordinating multidisciplinary teams of experts to address critical needs, collaborating and engaging with new and diverse audiences, finding new and multiple ways to communicate with stakeholders, and assuming strategic leadership roles. This will need to be strengthened in different ways.

The profession of extension is presently facing the greatest threats to its existence and growth because of a number of reasons, first because there are forces that compel the direction of extension to move towards. There are negative restructuring in Government Departments which undermines extension where it is supposed to play a bigger role for food security and nutrition. Secondly the extension staff cannot expect to do the same thing as it was done in the past, but a new direction has to be looked at critically. There is a need to take stock of the required competency which will make extension effective.

Based on these findings the following recommendations are made:

- Extension as a profession need to be taken very serious and policy makers should plan for the steps to be taken to ensure that the extension practitioners do acquire the necessary competency in line with the direction it wants to go due to different forces of change.

- Extension staff needs to be trained in both technical and other areas of the method of extension. It cannot be expected from them to empower the farmers without first being empowered to embrace change. It is obvious that they need to possess a whole new set of skills including skills to manage organisations, coaching and building confidence among farmers.

- Farmers will need help as dictated by forces of change such as climate change, information communication technology, and making their organizations effective in managing and leading. Other dominating skills include conflict resolution, negotiation, and persuasive communication. Those skills will be required either from private arrangements or from extension practitioners.

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