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Factors Influencing the Transfer of Learning in Training Smallholder Farmers by Agricultural Extensionist

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Introduction - Training is a tool used to empower people so that they are able to lead their own development, solve problems and to participate in meaningful debates of any field of learning. However, training transfer literature asserts that the successful transfer of learning to the workplace is often limited (Baldwin et al., 2009). This trend prevails despite heavy investments of finance, human resources, time and technology in employee training aimed at enhancing worker and organizational performance. There has been very low transfer of learning especially in the Agriculture where the adoption if moisture conservation innovations is very despite heavy investment in all capitals (Andersson and Giller, 2012, Twomlow et al, 2008, Zhou, 2008).This has posed a great challenge in the training of smallholder farmers on new innovations. There is need therefore to find ways of supporting the transfer and application of training for smallholder farmers as they depend mostly on agricultural extensionist trainings for their human resource development.

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Factors Influencing the Transfer of Learning in Training Smallholder Farmers by Agricultural Extensionist

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I. Introduction

Training is a tool used to empower people so that they are able to lead their own development, solve problems and to participate in meaningful debates of any field of learning. However, training transfer literature asserts that the successful transfer of learning to the workplace is often limited (Baldwin et al., 2009). This trend prevails despite heavy investments of finance, human resources, time and technology in employee training aimed at enhancing worker and organizational performance. There has been very low transfer of learning especially in the Agriculture where the adoption if moisture conservation innovations is very despite heavy investment in all capitals (Andersson and Giller, 2012, Twomlow et al, 2008, Zhou, 2008).This has posed a great challenge in the training of smallholder farmers on new innovations. There is need therefore to find ways of supporting the transfer and application of training for smallholder farmers as they depend mostly on agricultural extensionist trainings for their human resource development.

According to Mosel, (1957) there are three conditions which are essential if transfer of learning is to occur. The first one is the content of the training which has to be useable. Secondly, the trainee had to learn that content, and lastly, the trainee had to be motivated to change his or her behavior on the job in order to apply these new skills. This means that transfer of learning can vary depending on the types of training, trainees and organization, and the socio-cultural and economic contexts of the organizations (Awoniyi et al., 2002)

Effective transfer of learning for smallholder therefore, deepens on role of agricultural extensionist staff to follow up on factors that enhance and limit the application of training.

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II. Definitions and Models

a) Transfer of learning concepts

Transfer of learning is defined as 'the successful and ongoing application by trainees to their performance of jobs knowledge and skills gained by participating in training program. When transfer of learning occurs, it is in the form of meanings, expectations, generalizations, concepts, or insights that are developed in one learning situation being employed in others' (Merriam and Leahy, 2005).Caffarella (2002) defined transfer of learning as successful putting into practice by trainees of what they learned by participating in a training program. For transfer of learning to take place, trainees and all the stakeholders involved in the training process should have the skills of planning, translating, negotiating, adaptation and decision making. Transfer of learning is observed in behaviour changes that is, what is to be transferred can be seen in observable changes in knowledge, skills and attitudes. There is an assumption that when trainees knows what is to be transferred well in advance and how this will be accomplished, transfer will happen with little or no interventions. However, this assumption is not true in some instances as transfer of learning is more complex than simply knowing the learning needs to be applied and to plan about it. The application of the innovations is considered to be multidimensional and complex and needs knowledge, skill, endurance and artistic. Ford and Weissbein (1997) in Ruona, et al. (2002) defined transfer of learning as the application, generalization and maintenance of new knowledge and skills.

In the context of training smallholder farmers, the definition of Ford and Weissbein seems to be adapted and transfer of learning is taking learning out of the training room or trial plots to the actual farm or the home. The idea of Caffarella (2002) that application of innovations is complex requiring knowledge and skills is also important in transferring of learning in practical planting plots of smallholder farmers. However, the system has influences which can hinder or support transfer to happen.

b) Learning

Gieskes and Hyland (2003) defined learning as a continuous process resulting in the increase and

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improving knowledge through processing information and adapting to changes in the environment. It is the acquiring of new or modifying existing knowledge, skill, and behaviour and putting it into practice. The organisation is considered as the entities of processing, distributing, interpretation and storage of information and knowledge.

Learning is the change in behaviour or potential behaviour that comes from experience and it cannot be seen but can be observed from the practices of the trainee (Rollinson, 2008). According to Pretty, et al. (2002) learning can not only come from formal training but from the progression of developing oneself through experience. Training is therefore the creation of the learning environment where all participants are involved to share their ideas, views and experience. Pretty (2002) also suggested that for learning to be successful there is need to actively involve the trainees before, during and after training processes.

Race (2010) said that, 'it is the learners who learn'. He went on to say that it is the trainees who do the learning for themselves, but the trainer only creates the condition suitable for the learner to learn called the learning environment.

Leeuwis (2004) described social learning in the rural communities where farmers voluntarily learn and it is connected with human interests and changes in professional practice. These are also adults who are into farming and other livelihoods activities. The learning is different from the classroom situation of teachers and students.

Adult learning is defined by Pretty, et al. (2002) as learning which is mainly informal and is not done under the school curriculum. Adults are voluntary learners if the environment is unfavourable they stop from learning .This is mainly based on participation of the trainees. For adult learning to be successful trainees need to be actively involved in the learning process.

According to Merriam and Leahy (2005) the goal of all learning is to make information useful, so that learning travels with the learner to the working area. In the working area, the learning is transferred and applied in novel, interesting, and innovative ways and this is referred to as transfer of learning. The definitions show that where successful learning is happening transfer of learning is also happening. The two concepts cannot be easily separated in reality and what affects learning also affects the transfer of learning.

c) Theoretical Models

In training farmers there are many factors which influence learning and most of them are outside the actual training program itself and many researchers have come out with models on the transfer of learning. Baldwin and Ford (1988) in Merriam and Leahy (2005) developed a model composed three sets of factors influencing transfer of learning (a) professional /trainee characteristics including ability, personality and motivation (b) content and design of the training program and (c) the work environment which includes support and opportunity to use the new innovations. Geilen (1996) in Lim and Johnson (2002) came out with a model similar to that of Baldwin and Ford which are training design, trainee characteristics and work environment characteristics. Another model related to that of Baldwin and Ford was developed by Broad and Newstrom (1992) in Merriam and Leahy (2005).This model proposes the matrix to analyse transfer of learning and the partners in the process who are the managers, trainers and trainees. The partners can employ the strategies for transfer of learning before, during and after training.

Hucynski and Lewis (1980) in Lim and Johnson (2002) developed the transfer of learning model to show the relationship of the content of the training, individual motivation and work environment. The model has three phases which are the (a) Planning stage where training needs assessment done and motivation initiation are done (b) the learning phase where delivery of instruction are done and (c) post training phase where management of the work environment is done to promote transfer of learning.

This review focuses on the three factors of learning in Baldwin and Ford model which are training design, trainer & trainee characteristic and work environment. It also look at the three phases of training in Hucynski and Lewis model which are planning, learning and post training. The reason of considering the above factors is that even though learning can happen during the actual training the transfer of learning is influenced by what happens around the training such as the work environment, training planning and the character of the trainer and trainee. This therefore means that transfer of learning can be understood by looking at the whole systems beyond the actual training of the farmer and these are the main factors which influences transfer of learning.

III. Theoretical Model for an Ideal Transfer of Learning

This section describes a hypothetical situation where transfer of learning takes place in an optimal way. Training on moisture conservation innovations case will be described and comparison with other experiences of transfer of learning in other practical situations will be done.

Basing on the models of Baldwin and Ford, Hucynski and Lewis, a modified theoretical model has been used that depicts transfer of learning on moisture conservation innovations. The model shows the factors that influences transfer of learning in Agricultural Extensions organizations. The modification includes the change of the words so that they fit well with the

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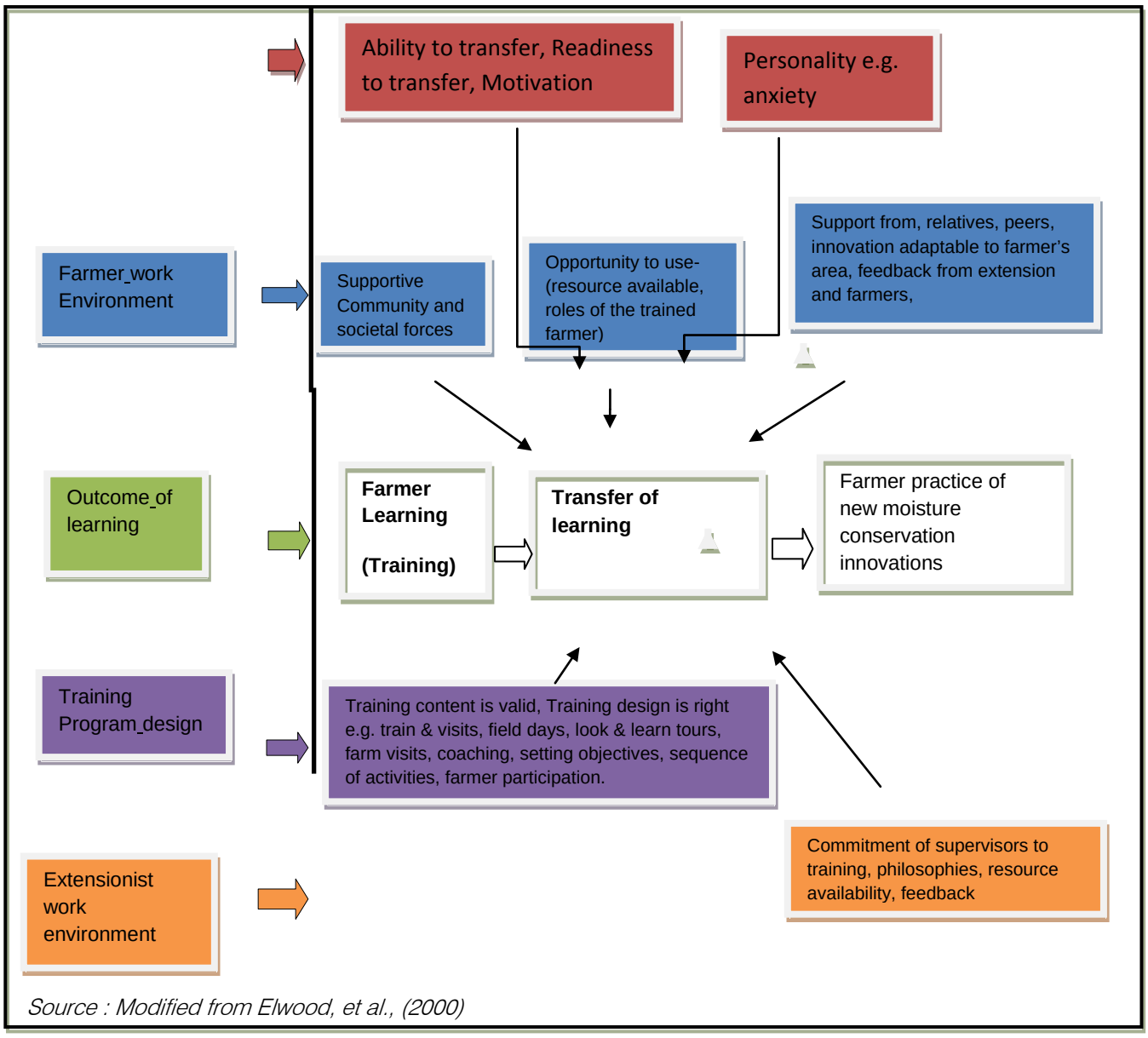
situation of extension organisation. Trainer and trainee characteristics were changed to agricultural Extensionist and farmer characteristic respectively. The work environment is categorized into extension work environment and farmer work environment. The model shows that, learning outcome (which in this case is the farmer practicing the moisture conservation innovation) is as a result of training the farmers who then transfer learning into their own farms. For this to take place the extension work environment, farmer work environment, extensionist and farmer characteristics and training program design influences transfer of learning. An extensionist and farmer characteristic that affects transfer of learning include motivation, ability to transfer and personality such as anxiety to learn. The farmer work environment includes supportive community and societal forces, opportunity to use, support from peers, and feedback from extensionist and farmers. Extensionist work environments also influence transfer of learning as well as commitment of supervisors to training, support of the supervisors and resource availability. Training program design which includes the validity of the content and transfer design which are the instructional methods also influences transfer of learning. These factors influence the learning outcome by impacting on the farmer learning or trainings thereby hinder or support the farmer to practice the new innovation of moisture conservation. This forms as a guideline to the transfer of learning. This is as shown in fig 1.1 below. The factors which influence transfer of learning are in the coloured boxes while the arrows show the linkage to transfer of learning in the training process of farmers.

Figure 1.1 : Modified model of Ideal transfer of learning.



Source : Modified from Elwood, et al., (2000)

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IV. Factors Influencing Transfer of Learning

In this review the focus is on the issues which deals with rural developmental and technology aspects of adult farmers in societal background rather than those at formal education settings. Learning has been looked at from many disciplines some of which are social psychology, adult education studies, innovation studies, policy science and complex systems thinking. This means the learning concepts covers different groups of people in societies.

V. Farm Work Environment and Extensionist Work Environment

Work environment is one of the main factors influencing transfer of learning for instance trainee opportunity to practice the new innovations, incentives to transfer learning, support from supervisors and social support all dependence on the climate of the organisation or the working area. The opportunity comes with the availability of resources at the working area (Merriam and Leahy, 2005). This means for the farmers to be able to transfer what they have learned there should be resources such as seed, fertilizers, labour and implements for them to use. Farmers also need support from extensionists to motivate them by visiting their farms and observing and giving them support. Farmers develop the desire to learn from extensionist initiatives or to practice what is to be learnt. An extensionist have to encourage farmers by providing conducive and friendly learning and working environment for effective learning to take place and farmers cannot get discouraged in doing the work. However, Race (2010) said that 'doing alone is not a guarantee that learning has happened'. For effective learning to take place there is a need to make sense or think about what one is doing. For effective learning to take place, farmers need to process information and turn it into their own knowledge. Brainstorming, problem solving and analysing situations techniques assist the farmers to process the information that will be transformed into useful knowledge. Extensionist plays an important role of transferring learning by encouraging the farmers to practice learned innovations provide their working environment is encouraging and is motivated. This can be done by giving the needed resources to the extensionist such as the training materials and stationery.

Lim and Johnson (2002) on their studies on the trainee perceptions found out that the primary reason for learning transfer to happen was the opportunity to use the new innovations at their jobs. This was found to occur through program planning discussions, program development, information system design and instruction. On the other hand the factors which were found to hinder transfer of learning were that of lack of opportunity to apply the trained practices on the job, the information not directly related to the job, lack of understanding, lack of equipment to use for the technology and difficult to use the technologies at work places (Lim and Johnson, 2002). Similarly farmers can fail to transfer learning for failure to understand the terminologies used during training by extensionist. Again, the innovation might not be related to the farm working conditions of the smallholder farmers. It is therefore imperative for extensionists to use terminologies which the farmers understand without some difficulties. However, at times extensionists find fails translate scientific terms into local languages which farmers understand.

According to Clarke (2002) transfer of learning is affected by information systems, rewards systems, human resource practices, leaders mandate, departmental structures and control systems. Clarke pointed out that management style has a profound influence on the transfer of learning .This has a bearing on the work load of the extensionist. This means overburdening the trainer affects the learning process of farmers unless they supported by the supervisors. The management has to show commitment for the whole process of training either by regularly visiting the training sessions or by supporting the innovations materially.

Gieskes and Hyland (2003) in their studies of learning barriers in continuous product innovation found out that, lack of resources that is time to meet deadlines, lack of budgets, lack of knowledge and capabilities hinder transfer of learning. Klein, et al. (2006) also found out that lack of resources such as time, materials and information affects learning as it reduces the efforts that results in motivation to learn. Farmers' motivation to learn can be reduced if they are not obtaining or purchasing agricultural input before the rain season starts. A shortage of other basic resources such as food, clothing and school fees for their children reduces their concentration to learning thereby reducing transfer. When farmers perceive barriers they become frustrated and lower motivation to learn thereby reducing the effort to transfer learning.

Caffarrela(2002) highlighted that social capital is also an important factor in the transfer of learning. Farmers need support to learn and transfer their learning on new innovation from their relatives, friends, community leaders and the extension organisation. In fact learners need assistance in reflecting changes they must make themselves, before what they have learned can be translated into concrete results (Caffarrela2002). This is supported by (Clarke 2002) who pointed out that social support in the work environment such as the trainee's beliefs about opportunities to use the knowledge, skills as a result of training and support from friends and supervisors have been found to have influence on transfer of learning. However, Facteau, et

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al. (1995) in Clarke (2002) in their studies found out that supervisor support was negatively related to transfer of learning.

VI. Training Program Design

Lim (2000) derived two variables from the studies on transfer of learning. These are instructional design and instructional methods. The two variables are called the transfer design of training and they maximized through instructional design, identical stimulus response elements in training and transfer settings when a variety of relevant training stimuli are employed in the training content Baldwin and Ford (1992) in Lim (2000).

On instructional methods Lim found out that teaching, explaining and coaching helps to support the transfer of learning. This help to deepens learning of the trainees. The trainees can explain what they have done to other students and it helps to process the information into their own knowledge.

There are two types of coaching which are, peer coaching and one to one coaching. Peer coaching is where colleagues who work together reflects on the current innovations refine and build new skills and share the ideas and teach one another. The colleagues first have a meeting and discus what is to be monitored and then observe. For instance at schools teachers can observe ones lecture and then discus it later. This was found to foster development among the peers committed to share their knowledge and encourages people to learn from each other hence improves on transfer (Beverly,1994; Sherman & Freas, 2004).This can be done by farmers when they are arranged into groups and observe what the other farmers are doing at their farms. They can record what to observe on the farm and discus it later. They can also explain to other farmers what can be improved in the trainings and on the innovations. This can be planned by farmers together with the extensionists. Observing other farmers can improve learning and keep the innovations in their minds and use it in their own fields hence improving transfer.

Another type of coaching is when the trainer coaches the trainee on one to one level. In a study conducted by (Merriam and Leahy, 2005), found out that training which is followed by one to one coaching improves transfer of learning. In a study of 31 managers who were trained in managerial skills it was found out that training alone increase the managers productivity by about 22%, while coaching which included feedback, setting of goals, involving supervisors and practical increase their productivity by about 88% .In this case the extensionists can discuss with the farmer after the training or on individual farm visits. This can be arranged by both the extensionists and the farmers. The extensionists can coach the farmers at their farms where they will involve their spouses giving feedback and practicing the innovations in their fields. However, extensionists have to know the individual farmer's abilities and limitations at hand and how they can help each other to solve the problem so the farmer can learn new innovations. Visiting farmer's fields by the extensionists can support transfer of learning especially if they give positive feedback and also considering their plights. This is where the extensionists can coach individual farmers to practice the new innovation at farm level and this supports transfer of learning.

Content is one of the factors that has an influence on transfer of learning at work places Lim and Johnson (2002).It has both hindering and facilitatory characteristics which influence transfer of learning. The hindering factor of training are lack of sufficient time to preview the training content, lack of thorough needs assessment for each trainee, not enough practice and exercise session, lack of clarification of technical terminology.

The supporting factors are participatory learning method and use of visual material during training. The ability to coordinate training activities especially in guiding the trainees with appropriate suggestions plays an important role in supporting transfer of learning. The extensionists have to find proper methods that facilities the transfer of learning. For instance assigning the work roles that are related to the training content and trainee work requirements before, during and after training.However, the extensionists have to understand the farmer work environment if effective transfer is to occur (Lim, 2000).

Farmers participation during training can be enhanced by use of visual aids like chalk boards, flip charts and handouts. The Extensionist has to use bright colours and write legibly so that the trainee can see clearly. Visual aids make learning lively and improve the attainment of the training objectives and support transfer. They also help to explain complex ideas and capture attention of the trainees. Lecturing without use of some visual aids can be minimised to make them participate.

Training involves creating an environment where knowledge, skills and experiences are shared. This is, in most cases meant to improve the skills, knowledge, performance and organisation results (Leeuwis, 2004; Pretty, et al., 2002).It is therefore imperative to use participatory methods in programme design and planning. Extensionists have to plan the training programme together with farmers. The farmers should be involved in the selection of the training date, venue and the topic to be trained as this encourages to select what is best of them hence supports transfer of learning. Farmers have very important local knowledge so they must be consulted and put their ideas into the programme. A study by (Elwood, et al., 2000) on training design showed that designed training should be similar

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to the transfer tasks and that the training content should be consistent with job requirements. However, farmers' needs to be supported on technical issues as they may lack the expertise on some detailed needed.

Giving feedback to trainees during training program improves transfer of learning. Positive feedback motivates the trainer and encouraged to do the work hence support transfer. Negative feedback affect negatively to transfer as it discourages the trainer and leads to less learning hence reduce transfer. Merriam and Leahy (2005) in a research of students in studying aircraft landing skills found out that those students who were given feedback during training were able to transfer their training to the real flying situation than those who were not given feedback. According to Agritex training manual (2006) feedback gives knowledge of the results and guides the farmer in his or her own efforts. This rewarding to farmers encourages further efforts and interests in practicing the new innovation. Farmers can also be given feedback during the training by the extensionists and from other farmers. This can be done by openly discussing with the extensionists during training and after training that is at individual farm visits.

One of the crucial factors that may hinder the transfer of learning is timing of the activities. Farmers are like to follow the sequence of activities in the field. For instance the digging of basins should be trained when it is time for digging basins. This avoids training farmers the technologies which farmers do not want to use in the near future as this discourages the participation of farmers during training. This may also avoids overloading farmers with too much information thus giving them time to take what they need at the right time (Farming for the future guide, 2009).It is necessary to train them on what they doing so that there is no loss of information due to memory loss.

VII. Extensionist and Farmer Characteristics

Frazis, et al., (2000) as cited in Merriam and Leahy (2005) said that the motivation of the trainer and trainee influence transfer of learning. Giving farmers the opportunity to provide input into the training decision will help improve the motivation of trainees.

Motivation to learn is the need or wish of the trainee to participate and learn the content of the training program. This is influenced by the farmers and the situational conditions of the training (Klein, 2006). This is the factor which influences the farmers to decide to attend or not to. Rollinson (2008) said that people chose a course of action which is influenced by one's expectations that results in profitable gains. There is a relationship between rewards and the effort one applies to the job. As farmers are adult they attend training voluntarily because of their expectation they will get from the training and this will influences transfer. Forcing farmers to attend trainings might not encourage the transfer of learning.

The decision to adopt new innovation or not to by farmers is entirely influenced by the innovation characteristics. Attitudes toward the innovations are influenced by its alleged usefulness, ease of use, and availability of technical and personal support by the trainee (Griffith, 1996; Martins & Kellermanns, 2004 in Klein, et al., 2006).Transfer of learning for the trained innovations to farmers depends on perceived difficult and its usefulness to the farmer. Extensionist can however enhance the transfer of learning of new innovation by proper training techniques like emphasizing on the benefits of the innovation.

VIII. Adult Experiential Learning Model

Studies of experiential learning together with the concept of reflective practitioner are important issues to consider with regard to transfer. One of the models of experiential learning is the Kolb's cycle explained in Leeuwis (2004). The four stages of the cycle are concrete experience, observation and reflection, abstract concepts and generalizations and then testing the learning in new situations. Experience takes place as first step learning opportunity and is then reflected upon and the new learning or behaviour is then applied in new situation with the cycle. This is a continuous process as shown in fig 1.2 below. Conclusions drawn from the people's own experiences have greater impact than results formulated by others. The model therefore shows that learning occurs from a continuous interaction and iteration between thinking and actions. The model also suggests that learning can be improved by actively supporting the basic steps and translations that take place during the learning process and giving new opportunities for learning.

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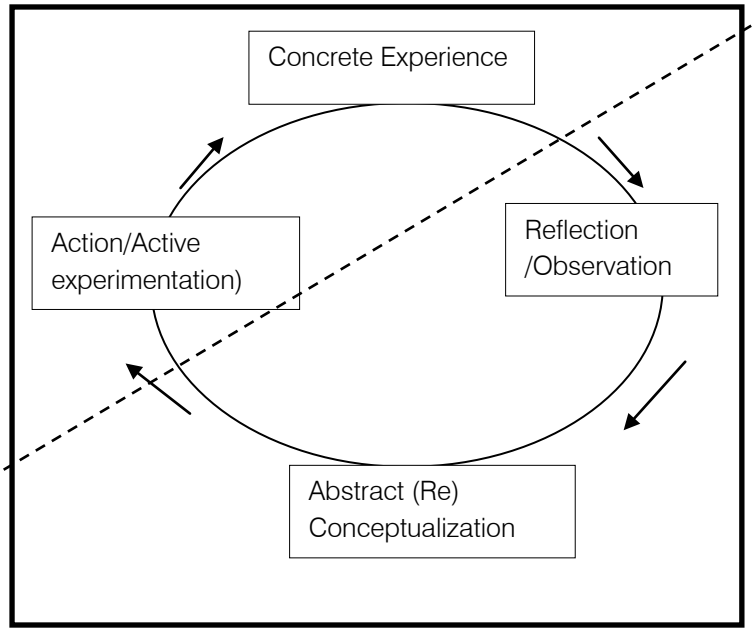
Figure 1.2 : Experiential learning cycle.



Source : Leeuwis, (2004)

IX. Operationalization Framework

The discussed factors affecting the transfer of learning can be categorized into four main dimensions which may serve as training analytical framework of new innovation for farmers. These are farmer work environment, extension work environment, farmer/ extensionist characteristic and training program design. The training program design is selected to represent the sub dimensions which are content and training design because it is the core of training .This is further categorized into the subdivisions which acts as indicators as shown in the fig 3 below.

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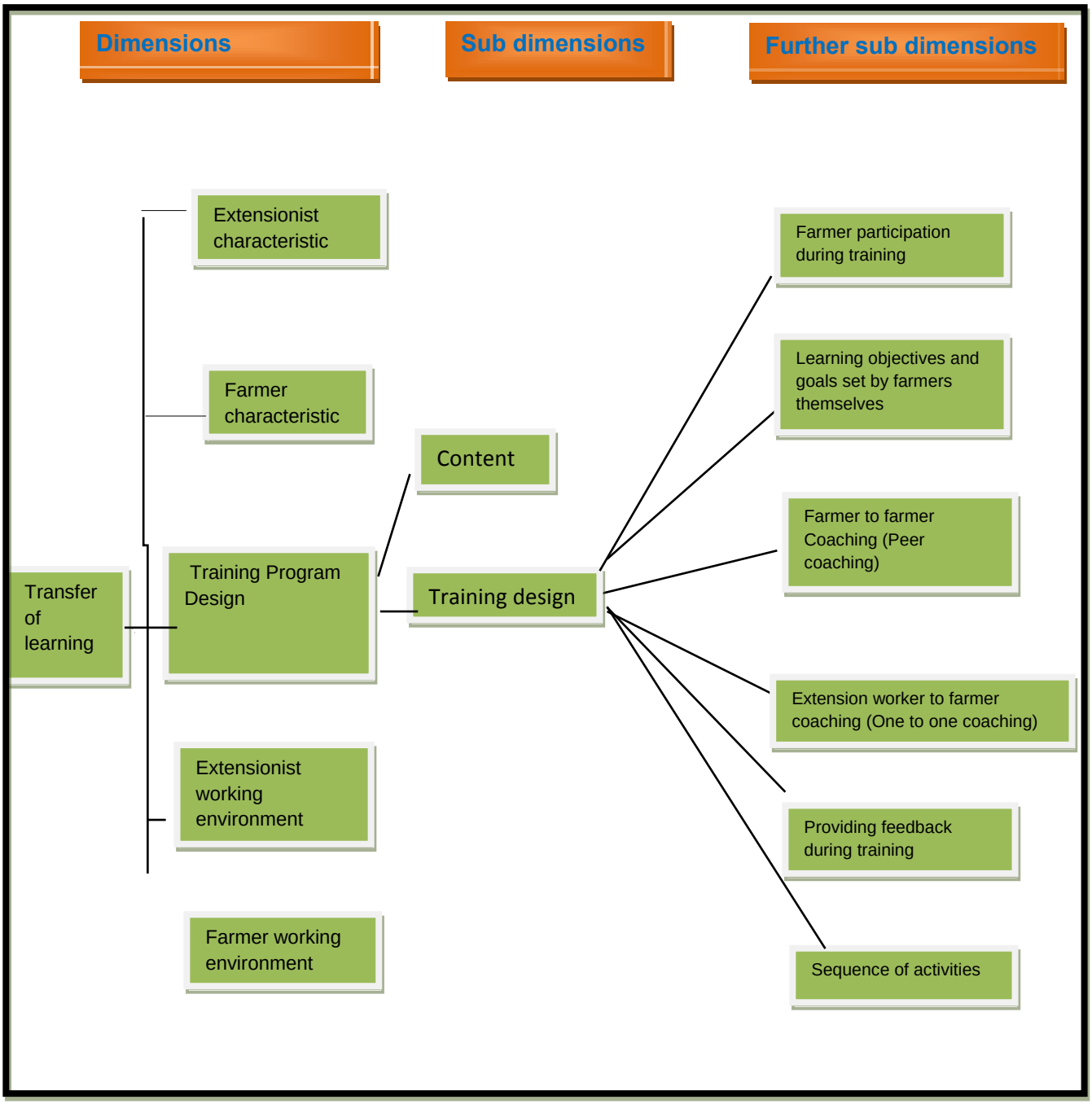
Figure 1.3 : Operationalization framework for training new innovation by extensionist.



References Références Referencias

1. Andersson , J.A and Giller, K.E (2012)`.On heretics' and God` s blanket salesmen :Contested claims for conservation Agriculture and the politics of its promotion in African smallholder *farming"* In Sumberg , J. and Thompson , J,(eds). Contested Agronomy: Agricultural Research in a changing world. London: Earthscan.
2. Agritex training manual, 2006. Extension training. Training of trainers used by staff in the Ministry of Agriculture. Agritex Training branch. Harare
3. Awoniyi, E.A., Griego, O.V. & Morgan, G.A. (2002) Person_Environment Fit and Transfer of Training. International Journal of Training and Development, 6(1), pp. 25_35.
4. Baldwin, T.T., Ford, K.J. & Blume, B.D. (2009) Transfer of Training 1988_2008: An Updated Review and Agenda for Future Research. International Review of Industrial and Organizational Psychology, 24, pp. 41_70.
5. Beverly S. 1994. Peer coaching: A strategy for facilitating transfer of training. Oregon University. USA.

© 2012 Global Journals Inc. (US)

6. Caffarella, R, 2002. Planning programs for adult learners: A practical guide for educators, trainers and staff developers.2nd ed. San Franciso: Jossey-Bass.
7. Clarke, N., 2002. Job/work environment factors influencing training within a human service agency: some indicative support for Baldwin and Ford's transfer climate construct. International journal of training and development 6 (3) Blackwell Ltd. Oxford. UK.
8. Elwood, F. et al., 2000. Development of a generalized learning transfer system inventory.
9. Farming for the future guide, 2009. A guide to moisture conservation Agriculture in Zimbabwe. Zimbabwe conservation task force. Harare.
10. Gieskes, J.F.B.; Hyland, P.W. (2003) Learning barriers in continuous product innovation , *Int. J. Technology Management*, Vol. 26, No. 8.
11. Klein, H. J., Noe, R. A. Wang, C. (2006). Motivation to learn and course outcomes: The impact of delivery mode, learning goal orientation, and perceived barriers and enablers. Personnel Psychology, 59:
12. Leeuwis C, 2004. Communication for Rural Innovation. Rethinking Agricultural Extension. 3rd ed. Blackwel.
13. Lim D.H. and Johnson S.D., 2002. Trainee perceptions of factors that influence learning transfer. International journal of training and development. Vol.6. issue 1.
14. Lim H.D., 2000. Training design factors influencing transfer of training to the work place within an International context. Journal of Vocational Education and Training, Vol, 52: Number 2.Routledge. London. UK.
15. Merriam B. S. and Leahy B., 2005. Learning transfer: A review of the research in adult education and training. (PAACE Journal of lifelong learning, vol. 14.
16. Mosel, J.N. (1957). Why training programs fail to carry over. *Personnel,* November-December, 56-64.
17. Pretty, N. J., et al., 2002. Participatory learning and action.
18. Race, P., 2010. Making learning happen. A guide for post compulsory education. 2nded. Sage. Ramamasy, S., 2007. Climate variability and change: Adaptation to drought in Bangladesh. FAO, Rome, Italy.
19. Rollingson, D., 2008.Organisational behaviour and analysis. An integrated approach. 4th ed. Pearson. Essex. England.
20. Twomlow S, Urolov JC, Jenrich M and Oldrieve B. (2008). Lessons from the field – Zimbabwe's Conservation Agriculture Task Force. Journal of SAT Agricultural Research 6.
21. Sherman, S. and Freas, A., 2004. Harvard Business Review. The Wild West of executive coaching.
22. Zhou, Y. (2008) Reinventing Agricultural Extension to Smallholders. Syngenta Foundation for Sustainable Agriculture.

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