A REVIEW ON COMPARING EXTENSION PROGRAMME STREAMS: WHEN AND HOW TO EXECUTE THEM

SITI AZIZAH
Study Program Social Economy
Fakulty of Animal Husbandry, Brawijaya University
Jl. Veteran Malang 65145

ABSTRACT

The article aims to compare some streams of extension by describing their aspects, objectives and how they work in practice. Streams of extension proposed by Fell (1997), Coutts and Roberts (2003) and Roling (1995) were compared to get some understanding about in what situation and how suppose to execute the right stream (s) in such condition. Extension officers and decision makers in the extension field should consider those comparisons since some streams might be more useful when they are combined together to fill some weaknesses with others' strengths. In the last section, a local example of the application of extension streams combination in Indonesia is demonstrated to give clear explanation for readers **(JIIPB 2008 Vol 18 No 1 : 1-10).**

Keywords: comparison, streams of extension, application

TINJAUAN TENTANG PERBANDINGAN ALIRAN PRORAM PENYULUHAN: KAPAN DAN BAGAIMANA MENGEKSEKUSINYA

SITI AZIZAH
Program Studi Sosial Ekonomi
Fakultas Peternakan, Universitas Brawijaya
Jl. Veteran Malang 65145

ABSTRAK

Artikel ini bertujuan untuk membandingkan beberapa aliran dalam penyuluhan dengan cara menggambarkan aspek-aspek, tujuan dan bagaimana aliran-aliran tersebut berlaku di lapangan. Aliran penyuluhan yang diajukan oleh Fell (1997), Coutts dan Roberts (2003) dan Roling (1995) diperbandingkan untuk mendapatkan pemahaman tentang kapan dan bagaimana mengaplikasikan aliran-aliran penyuluhan yang tepat dalam sebuah situasi tertentu. Penyuluh dan pengambil keputusan dalam bidang penyuluhan harus mempertimbangkan hal tersebut karena beberapa aliran penyuluhan akan lebih berguna jika dikombinasikan

untuk menutupi kekurangan sebuah aliran penyuluhan dengan kelebihan aliran penyuluhan yang lain. Pada bagian terakhir artikel ini, sebuah contoh lokal tentang aplikasi kombinasi aliran penyuluhan di Indonesia diberikan untuk memberikan gambaran yang lebih jelas pada pembaca **(JIIPB 2008 Vol 18 No 1 : 1-10)**.

Kata kunci: Perbandingan, aliran dalam penyuluhan, aplikasi

INTRODUCTION

For the sake of indigenous community that holds most of Indonesian farming activities, people who constantly contribute in extension programme frequently renew, revise and redevelop every detail in extension field. Streams of extension are repeatedly reviewed to find the most suitable way to deliver extension programme in such location and particular community attributes. Streams of extension are mainly established based on the objectives of the extension, linked to the way the extension executed.

This article aimed to describe some streams of extension and to compare the streams so it is possible to draw on some benefits when they come to the real situation. In the end of this article, the writer put Indonesian extension system short description and its problems. Hopefully, readers will be able to draw a general picture about what need and must do/s in our extension programme in the future.

As a figure considered able to give more comprehensible information to some people, writer then tries to pick up some general ideas and put them into a figure (Figure 1). It includes fives sub topics, they are: Four streams of Van Beek's model, Coutts and Roberts extension model, Rolling's streams of extension, Transfer of Technology concept from Rogers-Shoemaker and current extension system in Indonesia. Two ways arrow lines and two bulleted lines are used to show their correlations in the name of their features comparisons and their applications. Figure 1 provides prelude information about the comparison that writers explain later in this article.

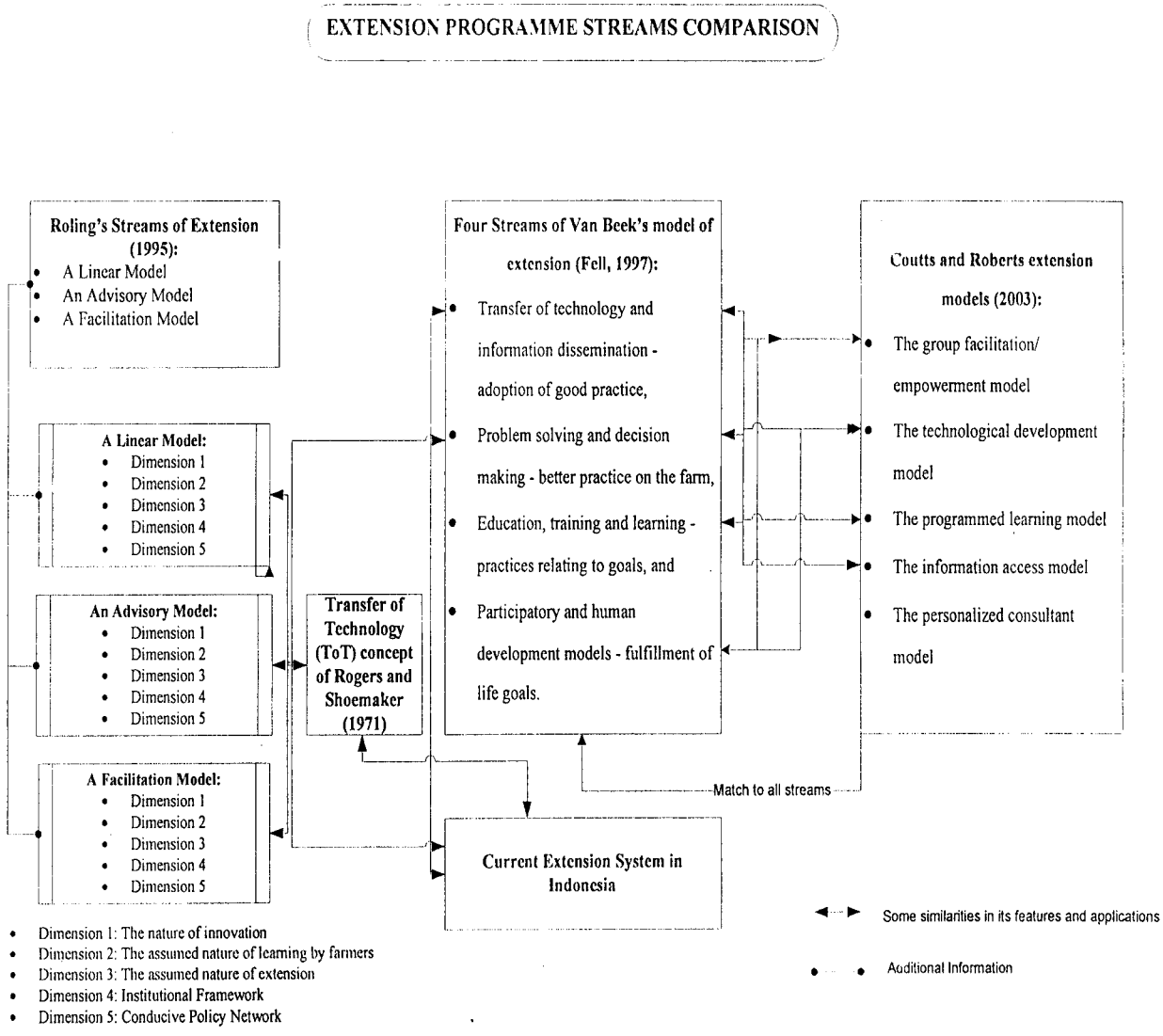

Figure 1. Extension Programme Streams Comparisons

FELL'S STREAMS OF EXTENSION IN COMPARISON TO COUTTS' AND ROBERTS

This paper initially presents four streams of extension that were proposed by Fell (1997) who modified Van Beek's model of extension. Those four streams of extension are:

1. Transfer of technology and information dissemination - adoption of good practice,
2. Problem solving and decision making - better practice on the farm,
3. Education, training and learning - practices relating to goals, and
4. Participatory and human development models - fulfillment of life goals.

These streams are basically classified by their application in the real situation. They are compared to Coutts and Roberts streams of extension to get deeper understanding from both ideas and to seek both strengths in order to improve them.

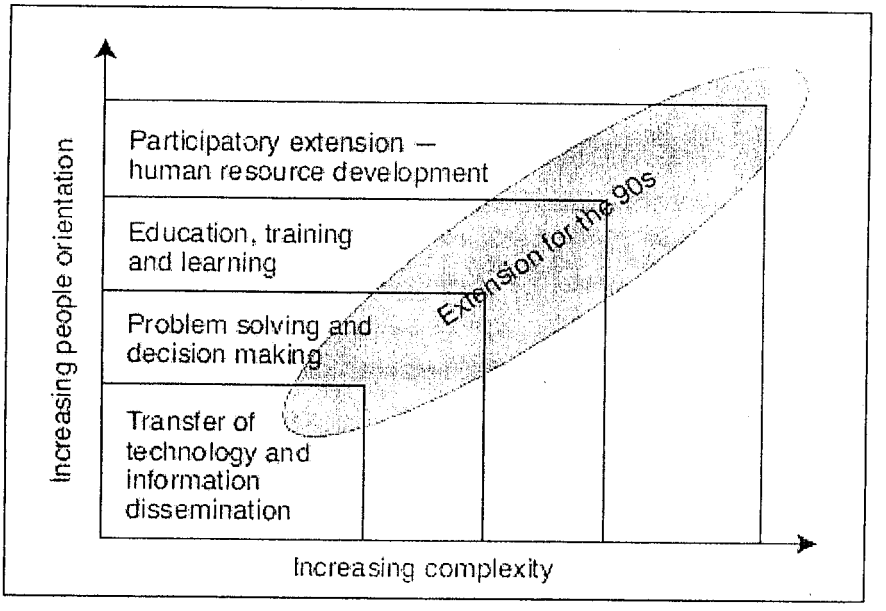

Figure 2. 1990s Extension for Complex Situation (Fell 1997)

Coutts and Roberts (2003) outline various extension models that were initially proposed by Coutts in his earlier work. These models seem to align with the four streams model outlined above.

The group facilitation/empowerment model: This model focuses on participants increasing their own capacity in planning and decision making and in seeking their own education/training needs based on their situation. Groups may undertake their own research. The project will often provide or fund a facilitator to assist groups to define their own goals and learning needs and to help them realize these.

This model is closely related to the Participatory extension – human resource development and the Education, training and learning streams of extension identified by Fell. Education needs based on the participants' situation and the facilitator's role in helping participants achieves their life goals are emphasized in this group facilitation/empowerment model.

The technological development model: This model is about individuals working together to develop specific technologies, management practices or decision support systems which will then be made available to the rest of the industry or community. It often

involves local trials, demonstrations, field days and on-site visits (Coutts and Roberts 2003).

The idea of this model is similar to that of better practice on the farm in the problem solving and decision making stream of extension (Fell 1997). However, the availability of the technology, management practices and decision support systems in community of the Technological Development Model implies the participatory extension – human resources development stream where participants are encouraged to fulfill their life objectives.

The programmed learning model (Coutts and Roberts 2003): This model focuses on delivering specifically designed training programs/workshops to targeted groups of landholders, community members, government personnel and others to increase understanding or skills in defined areas. These can be delivered in a variety of models and using various learning approaches.

It is clear that the education, learning and training stream of extension (Fell 1997) which focuses on developing practices relating to specific goals is well aligned with the Programmed Learning Model in which programs are designed to suit specific purposes.

The information access model: This model is about providing a range of blanket information that individuals and groups can access from a distance and at a time that suits them. It can be based on a website, information centre or other centralised locations (Coutts and Roberts 2003).

The nature of the transfer of technology and information dissemination stream (Fell 1997) underlies the idea of the Information Access Model in which "good practice" is distributed to participants.

The personalized consultant model: This model reflects the interaction between a mentor or consultant who works with an individual or community over time to improve their managerial, technological, social or environmental situation. It may also describe individuals from different backgrounds working on a 1:1 basis (Coutts and Roberts 2003).

This is a powerful model which matches all four of Fell's (1997) streams of evaluation in which consultants work with individuals. A combination of improving participants' performance in ways that are designed to meet their real needs and a balanced contribution between participants and facilitators in conducting extension programs encompass all streams of evaluation as described by Fell (1997).

COMPARISON IN ROLING'S STREAMS OF EXTENSION

Roling (1995) suggests three other models of extension: a linear model, an advisory model and a facilitation model. Each of these models draws on five dimensions of extension. These five dimensions provide a comparative framework for the three models.

The linear model: transfer of technology

This model is the most established and familiar model of extension as discussed above.

Dimension 1. The nature of innovation: Science is expected to provide a continuous flow of component technologies such as new varieties or inputs. Where land resources have run out, science-based agriculture is seen as the key to increasing productivity. There is little focus on whole farm development, resource development and regeneration, or organizational change.

Dimension 2. The assumed nature of learning about innovation by farmers: Learning occurs by adopting an idea that comes from outside. The possibility that farmers are active problem solvers on their own is not considered in this model.

Dimension 3. The assumed nature of extension: Extension transfers technologies by creating awareness, interest and know-how with respect to innovations which are being introduced through demonstrations, field days, mass media channels etc.

Dimension 4: Institutional framework: A sequence of institutions supports the flow of innovations from science (upstream) to farmers (downstream). The Agricultural Knowledge and Information System (AKIS) approach developed by Wageningen University (Roling, 1988) provides a useful tool for identifying the roles of different institutional actors in the innovation process. In the linear model the AKIS is comprised of research, extension and farmers.

Dimension 5: Conducive policy framework: The policy framework relates to the nature of regulations, investment flows, and subsidies which support the model's implementation. In the case of the linear model, conducive policies support large investments in research and T&V type extension (research-extension linkages, subject matter specialists, training) and subsidies on inputs and risk insurance for innovative farmers.

Basically the Linear Model is similar to the Transfer of Technology (ToT) concept of Rogers and Shoemaker (1971) that Fell (1997) outlines in the 5 step model of adoption process. In that model, Fell (1997) claims that farmers become aware of a problem, they seek out information on that problem from available research, they evaluate the information and then proceed to trial the solution and finally adopt the new practice.

According to Fell (1997), although this processes of this model are "usually statistically sound and therefore easier to "sell" to funding bodies and can show economic benefit to clients", he notes that "they generally operate on a narrow client base (the innovators and top farmers)" and "the process is output oriented". As a result, this model cannot reach all farmers particularly those who are not leaders in farming management or do not possess the attributes that would support them in practicing the message from extension officers. The categories of farmers (adopters) are illustrated by Rogers and Shoemaker below.

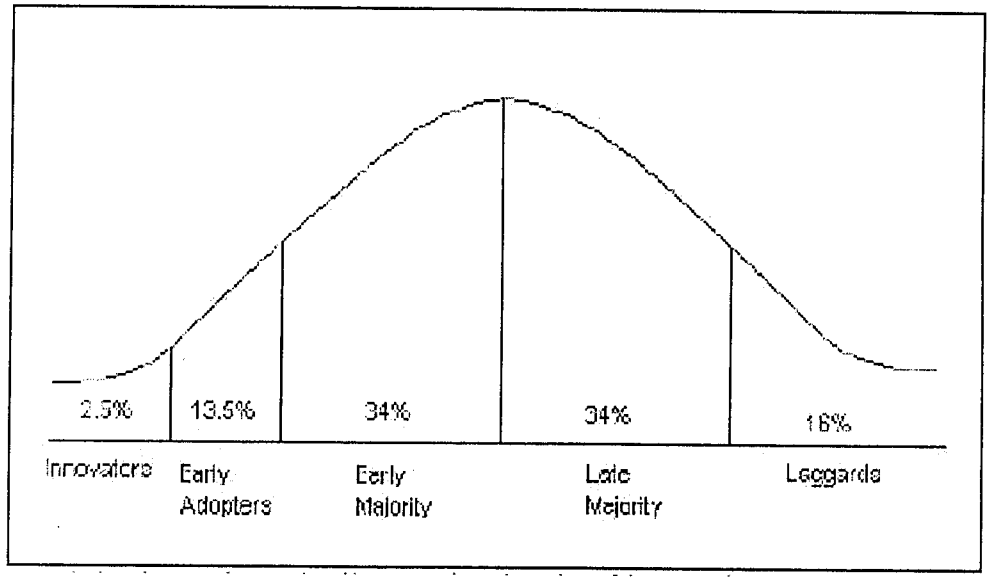

Figure 3. Adopter Categories by Rogers and Shoemaker (Mohan, McGregor & Strano 1992)

ADVISORY WORK IN COMPARISON TO TRANSFER OF TECHNOLOGY

Roling (1995) then goes on to propose an advisory work model, which focuses not only on raising productivity but also on improving the farm business as an enterprise. He claims this holistic model reflects an active problem solving farmer, who seeks advice from outside sources when a problem cannot be solved locally and will appeal to other sources, which are available and appear useful. In this model the 5 dimensions can be characterized as:

Dimension 1. The nature of innovation: Innovation in this model is driven by the entrepreneurship of the farm manager with innovations ranging from technical change to finding new markets. Innovation can take place at the strategic, management or operational level.

Dimension 2. The assumed nature of learning about innovation by farmers: Farmer learning by adoption of introduced technologies is but one of the many aspects of entrepreneurial learning. Farmer learning is more about improving the farmer's problem solving ability through problem/opportunity definition, diagnosis, identifying options, adopting and implementing solutions and evaluating results.

Dimension 3. The assumed nature of extension: Extension is advisory work and responds directly to farmer's needs. The extension adviser is an expert who has a wide repertoire of knowledge on which he can draw depending upon the farmer's need. Specialists will also be required to support extension workers who will

not be able to answer all the farmer's needs. Databases of information and networks of relevant specialists could also provide a useful supporting infrastructure to the advisory work of extension.

Dimension 4: Institutional framework: The AKIS in the advisory model is totally different from the linear model. The farmer needs access to a cadre of highly specialised and mobile advisors who are backstopped by various experts, on-line computer services, written information sources etc. These advisors are part of the network of specialised services which the farmer uses such as bookkeeping, banking, input supply, genetic material supply, insurance etc.

Dimension 5: Conducive policy framework: The conducive policy framework for the advisory model focuses on stimulating business and market development. It subsidises a network of highly specialised services and information sources, which in turn makes available market and other information.

FACILITATION AND EMPOWERMENT IN COMPARISON TO ToT

Finally, Roling (1995) describes the facilitation model that has emerged in situations where farmers need to apply general principles to their own conditions, where few external inputs are available or desirable, and where the farmer must be the expert instead of the extension worker. This approach appears to be of particular relevance to poor farmers who are often excluded from existing extension services and for the pursuit of low external input agriculture development (LEISA). The dimensions in this model are:

Dimension 1. The nature of innovation: Innovation in the facilitation model is basically the improvement of the management of the farm as an agro-ecosystem. This is achieved by applying ecological principles, using natural processes to their best effect, exploiting diversity and anticipating events based on informed observation.

Dimension 2. The assumed nature of learning about innovation by farmers: Farmer learning consists of discovery learning, group discussion and builds up a reliance on their own observations, knowledge and ability to make good decisions.

Dimension 3.The assumed nature of extension: The focus of facilitation is to help people learn to become exerts on their own farms. Facilitation of learning is promoted, for example, by the Farmer Field Schools for the IPM Indonesia Programme. This came about following the failure of the linear approach and Training and Visit type of extension.

Dimension 4: Institutional framework: The AKIS required for facilitation is a network of facilitators who are able to visit learner groups regularly. Networks of trained farmers also exchange experience and stimulate each other to continue to learn. Farmers must be able to meet regularly to exchange information.

Dimension 5: Conducive policy framework: This requires funding for farmer horizontal networking, removal of subsidies on inputs and appropriate accounting of environmental costs.

Overall it can be seen that extension systems need to be (and are) versatile so as to deal with the diversity and complexity of the context in which they operate.

CURRENT EXTENSION SYSTEM IN INDONESIA

Using Fell's descriptions of the four streams of extension (1997), it can be said that the extension system of Indonesia reflects the Transfer of Technology and information dissemination and Problem Solving and Decision Making streams. New technology and information are directly introduced to farmers on a frequent basis. New on farm practices that are considered better (by the extension department) than current methods are introduced in the extension program.

For years it was believed that these systems were applied due to farmers' low education levels and their low motivation levels in terms of bearing the risk associated with trying new technology. Some people believe that indigenous community in Indonesia has those characteristics. This is not entirely true and there are other reasons why the extension department in Indonesia has not applied education, training and learning and participatory and human development models. The quality of the extension officers is not currently adequate to manage more than these two streams. If all streams of extension were to be applied, the extension department would have to spend extra resources (in terms of funds, time and human resources) on assessing participants and their situations, and designing and evaluating extension programs to address these specific needs.

For example, one of applications of the Transfer of Technology and information dissemination and Problem Solving and Decision Making streams in Indonesia's extension system is the pasture planting program. This program has been repeatedly conducted on an annual basis but feedback on the program reports that farmers did not give the expected response. The report outlines that farmers could not fully understand the benefit of planting particular pasture for their cattle and they were either too poor or apathetic to try new technology. In fact, extension officers recognized that these farmers did not react positively to the program because they had other more important issues that needed to be addressed first. Financial problems and cattle diseases were their top priorities. Unfortunately, these problems were put aside and never addressed in the program report.

Considering that in some cases it is important to involve farmers from the beginning of the program, it would be better if the extension system in Indonesia also employed other extension system streams. In the pasture planting program, it was

possibly more appropriate to carry it out in the participatory and human development stream. Indeed, this kind of program requires more resource allocation, namely financial and time resources to collect initial important data about farmers' situations. Furthermore, the most important factor is the ability of extension workers to facilitate farmers to actively participate in the program, whereby extension officers can assist farmers to identify their real needs, to solve the problem together and empower farmers to help themselves address their problems in the future.

REFERENCES

Coutts, J & Roberts, K 2003, *Extension models and best practice in extension*, Presented at APEN National Forum, November 2003, Hobart, www.regional.org.au/au/apen Didownload 6 September 2006.

Coutts, J, Roberts, K, & Frost, F 2004, *What works and why in extension;* Cooperative Venture for Capacity Building Factsheet No.1.

Coutts, J, Roberts, K, & Frost, F 2004, *Best practice in extension*, Cooperative Venture for Capacity Building Factsheet No.2

Coutts, J 2005, 'Evaluating success in achieving adoption of new technologies', *In The Proceedings, NSW DPI and Beef CRC Conference "Moving From research To Adoption" Quality*, Nautilus Resort, Coffs Harbour NSW 3-5th May 2005.

Fell, R 1997, '*Goal setting*', REC, Gatton, unpublished paper.

Owen, J & Rogers, P 1999, *Program evaluation: form and approaches,* 2nd Ed, Allen & Unwin, St. Leonards, Australia, 39-54.

Roling, N 1995. *"What to think of extension?"*, Publisher: AERRD URL: http://www.odi.org.uk/RAPID/Projects/R0093/Abstracts/doc036abs.html. Didownload 21 Januari 2008.