The Effectiveness of Group Discussion towards Enhancing Knowledge, Attitude and Practice of Paddy Farmers in Kerian, Perak Malaysia

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ABSTRACT

Rice is a staple food in Malaysia. The Government has introduced a new variety (MR219) in 2001 with a potential yield of 10 Mt/ha. The average production yield for granaries in 2011 was 4.80 mt/ha 50% below the potential yield. According to Rogers, production of yield is influenced by knowledge, attitude and practice (KAP). Since group discussion is one of the best method to increase KAP will be the approach of this study. This study aims to explore the effectiveness of focus group discussion towards enhancing knowledge, attitude and practice of paddy farmers in Kerian, Perak, Malaysia. The research design for this study is a qualitative method using focus group discussions as the main instrument. A total of 8 paddy farmers from Kerian District will be selected as respondents in this study. One focus group discussions that will consist of one progressive farmers and seven non-progressive farmers. Data will be collected through qualitative methods using focus interview, observation, and documentaries and manual data analysis will be implemented. The expected results in this study is group discussion as an effective method in enhance the level of knowledge, attitude and practice. There will hopefully be an increment in rice production in granary area in Malaysia.

Keywords: Effectiveness, Group Discussion, Knowledge, Attitude, Practice, Paddy Farmers

1. INTRODUCTION

Rice has been a staple food and commodity in the country and is always relevant to the nation's economic activity. In Malaysia, the rice production areasare 300,500 hectares and 190,000 hectares in Borneo (Sabah and Sarawak). The country's rice industry is experiencing a phase of transformation from traditional to conventional cultivation system using technologies and described as a good agricultural practice aimed to increase productivity in the rice production sector. These technologiesare developed by researcheson the paddy farmers for implementation through the agriculture extension service. According to the Malaysia Agricultural Research and Development Institute (MARDI), the total paddy production area is 670,000 ha, of which 386,000 ha are granaries, 218,000 ha are low lands and about 70000 ha represent the upland. Statistic from 2013 showed an increased trend in the sector to 2,615,845 mt, which gave an average yield of 3879 kg/ha (Rice Statistics Malaysia, 2013). Due to the increase in population in 2014, the domestic rice production had met only 70% of the natural demand, which led to importation of the deficit (30% from India, Thailand and Vietnam).

In order to boost the country's rice production to accommodate the growing population, the government has developed eight granary areas as permanent and recognized in the National Agricultural Policy (NDP). According to Paddy Statistic Malaysia (2013), granaries paddy is a large irrigation scheme with areas of more than 4000 hectares. There are 8 granary areas in Malaysia, namely (i) Muda Agricultural Development Authority (MADA), (ii) Kemubu Agricultural Development Authority (KADA), (iii) Kerian Integrated Agricultural Development Area, (iv) Barat Laut Selangor Integrated Agriculture Development Area, (v) North Terengganu Integrated Agriculture Development (KETARA), (vi) Penang Integrated Agriculture Development Area, (vii) Seberang Perak Integrated Agriculture Development Area, and; (viii) Integrated Agriculture Development Kemasin Semarak.

1.1 Statement of Problem

The rice industry in Malaysia is one of the most important sectorsthat provide food security for the country's industry. Rice consumption is expected to increase to 2.69 million tonnes in the year 2020, which is as a result of the 1.6% growth rate of the population (MOA, 2010a). Therefore, rice production is expected to increase to 2.91 million metric tons

by 2020 to meet the consumption demand. The government has made efforts to increase rice production by introducing new varieties (MR 219) which havethe potential yield of 10.0 mt/ha. However, the average production in granary areas is still low (4.80 mt/ha), which creates a gap of 57% under productivity. Besides, the sector has also been allocated a sum of 839.9 million to improve and strengthen the country's rice production (MOA, 2010 a). The characteristics of farmer play an important role to acquire and use technology. However, the characteristics of the farmers how to affect the level of acceptance of a particular technology? Farmers who have a right knowledge of related technology, practicing good paddy cultivation (Abdul Rahman, Mohammad Isa and Mohammad Zulfikar, 2005) can affect yield productivity and Seline et al (2015) stated that positive attitude towards technology can likelihood of adoption. According to Lacy et. al (2000) and Afolami et. al (2012), several factors including group discussion among farmers can increase knowledge, attitude and practice of paddy farmers.The research questions in this study is whether the focus group discussions effective to enhancethe knowledge, attitudes and practices of paddy farmers in Kerian, Perak Malaysia? Therefore, a study on the impact of focus group discussion among paddy farmers in Kerian, Perak must be implemented.

1.2 Objectives of the Study

This study is aimed to explore effectiveness of group discussion towards enhancing knowledge, attitude and practice of paddy farmers in Kerian, Perak Malaysia. The specific objectives of this study are as follows:
a. Determine the level of paddy farmer's knowledge, attitude and practice without group discussion in Kerian, Perak Malaysia.
b. Determine the level of paddy farmer's knowledge, attitude and practice through group discussion in Kerian, Perak, Malaysia.

1.3 Significance of Research

The findings of this study will provide a new approach to increase paddy production. This study will also serve as a reference paper for researchersdoing studies in rice production and also as a manual to agriculture extension agents.

1.4 Limitations of Research

The limitations of this study include the respondents, the locations of the study, the methodology and other parameters. In terms of respondents, this study only involves progressive farmers and non-progressive farmers. Meanwhile, in terms of location, it is limited on the Kerian Integrated Agricultural Development Area (IADA) as one of the granary areas in Malaysia.

2. LITERATURE REVIEW

2.1 Group Discussion

Today, more than ever, a wide range of information sources on new or innovative farming practices is available to farmers; one of that is the discussion group method. A group discussion can be defined as several individuals who come together to accomplish a particular task or goal. It is a collection of people (minimum of five), who come together on a free and voluntary basis, and with a spirit of co-operation to work together for social and economic benefitsfor all (Afolami et al., 2012). According to Barham and Chitemi (2009), farmers' groups are social structures and the successful collective action initiatives are influenced by group assets configurations, composition and characteristic.

In agriculture, group discussions are a proven as one of the methodsof knowledge transfer. They provide an ideal conduit for the provision of advice, sharing of information, learning, sharing new ideas and technologies between/among facilitators and farmers. Group discussion allows farmers to share ideas and debate issues in a constructive and supportive environment (Bogue, 2014). The Food Harvest 2020 report (DAFF, 2010) identified that 'group discussion plays a critical role in the achievement of improved technical and financial know-how'. At the group meetings, farmers are encouraged to collaborate and learn from each other and give feedback on the check recommendations (Lacy et al., 2000).

The strength of a group is therefore a function of the individuals in the group, with the interactions of the group members and the influence of the group on the community (Afolami et al., 2012). The primary purpose of the group is to provide a forum suitable for learning to take place. Farmers learn from seeing, listening and most importantly, by doing. By providing a place for farmers to openly discuss farming issues, it is more conducive for farmers to think and gain ideas on a particular issue. Long term or ongoing groups will also provide a great social network.

This network is valuable for sounding out ideas and enables farmers to get off their own farm and explore (Dairy Australia, 2015).Based on the evaluation report of a beef group discussion by Bogue (2014), it is clearly evident that group discussion

focuses on productivity. Higher costs on these farms are countered by the higher output to deliver an overall higher margin. Farmers not involved in group discussions are more likely to have lower margins per hectare. In addition, overall, there is a higher level of knowledge among discussion group members. The overall high level of practice adoption for farmers involved in discussion groups indicates the potential for improvement that exists for these farmers.

Another study from Lacy et al (2000) showed that discussion groups have provided an ideal learning environment for extension delivery. With the rating of the extension components, discussion groups rated highly at 76%. Moran (2013) found that discussion group members havemore knowledge on breeding, grassland and financial analysis than non-discussion group members. According to Rogers (2003), the productivity of a yield is influenced by the acceptance of technology's farmer.

Knowledge refers to factual information and understanding of how the new technology works and what it can achieve, perceptions relate to the views farmers hold about it based on their felt needs and prior experiences; and these do not necessarily align with reality. The knowledge and perceptions about an innovation then together determine the attitude towards it (Seline et al., 2015). The information farmers have about a new technology then forms the basis of their perception and attitude towards that particular technology. Attitude can be a positive or negative predisposition to behave in a certain way (Fishbein and Ajzen, 1975).

Attitude is determined by beliefs that are important to a person; it is the product of a person's evaluation of how good or bad the outcomes (Jason & Tahir, 2000). Truong (2008) emphasized on factors such as negative perceptions as the main drivers that led to low technology adoption. Practice refers to the farmer's degree of good agricultural practices in paddy cultivation. In the context of this study, the researcher will focus on the practices of paddy farmers towards paddy productivity. A positive attitude towards riceheck will facilitate paddy farmers to adopt and implement technology that can increase production.

2.2 Homan Theory

There are several theories as to why groups develop. A classic theory, developed by Homans (1950), suggests that groups develop based on activities, interactions, and sentiments (Figure 1). The more activities that persons share, the more numerous the interactions they will have and the more activities and sentiments that they will share, and the more sentiments people have for one another, the higher shared activities and interactions they will have."As regards to sentiments, they are the feelings or attitudes of a person towards others, i.e., his likes or dislikes, approval or disapproval.

In this study, since progressive farmers share the experience about rice check in paddy cultivation, non-progressive farmers will have more interaction and will develop sentiments (attitudes, either positive or negative) toward each other. The major element in this theory is the interaction of the individuals involved.

2.3 Rogers Theory

This theory explains how the majority of farmers decided to accept the use of technology for paddy production. By changing the decision-making process, the group of pioneers can thus increase the country's paddy yield. Rogers (1995) suggested that

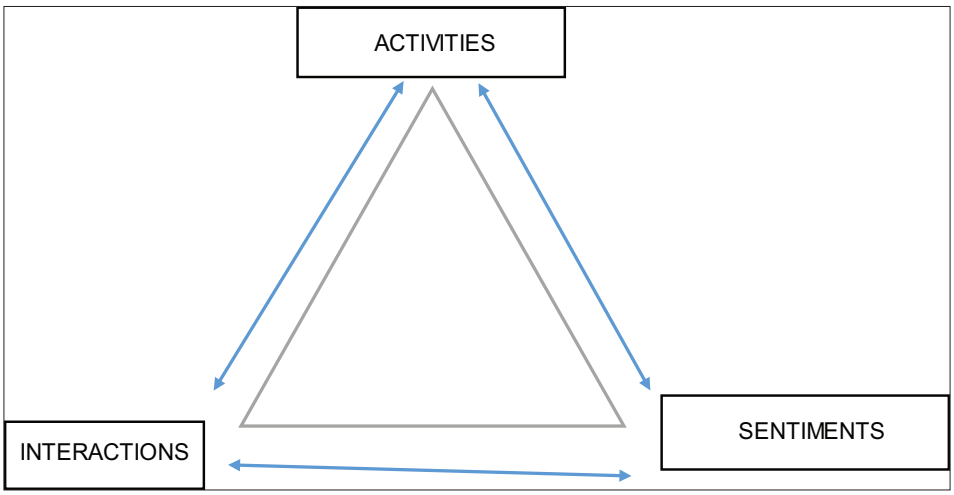

Figure 1: "Theory of Homan"

the innovativeness of an individual determines when the individual adopts the innovation. Rogers recognized five successive adopter categories: innovators, early adopters, early majority, late majority and laggards. In this study, early adopters (innovator and early adopter) are considered as the progressive farmer group and the late adopters (early majority and late majority) are considered as the non-progressive farmer group. However, the laggard's category is not selected in group discussion because it will give negative impacts on the group.

2.4 Diffusion of Innovation Theory Definition

According to the Diffusion of Innovation Theory (Rogers, 1983), the acceptance or rejection of an innovation affects the community. The Diffusion of Innovation Theory discusses how something new, either in the form of ideas, technology, or technique, is gradually spread (diffuses) and accepted in a society. This theory has been used in this study to identify the level of farmer's knowledge, attitude and practice towards rice check and its relationship to productivity whichis the focus ofthe farmers' group discussions.

2.5 Research Conceptual Framework

Based on the review of the literature, a conceptual framework is developed to guide the researcher in data collection. The discussion groups in this studycomprise of one progressive farmer, seven non-progressive farmers, oneextension agent and the researcher meeting each other. The discussion topic to be discussed is based on ricecheck. The discussion groups have impacts to the level of knowledge, attitude and practice (Bogue, 2014) and directly to the productivity of paddy farming (Lacy, 2000; Bogue, 2014). According to Rogers (2007), there are five stages before acceptance and/or rejection of an innovation i.e. knowledge, convince, decision, implementation and confirmation. In the context of this study, the innovation taken into account is a paddy cultivation technology (rice check) that can affect the rate of paddy production.

3. METHODOLOGY

3.1 Research Design

The design of the study will allow the researcher to conduct the study (Chua Yan Piau, 2006). The design chosen by the researchers is qualitative through focus group interview, observation and document analysis.

3.2 Population and Sampling Technique

The sampling will used in this study is purposive sampling technique. This sampling method is selected because researchers want to get accurate information from the respondent based on the question of the study. The sample of respondents consists of progressive farmer and non-progressive farmers in Kerian, Perak Malaysia. One focus group discussions that will consist of one progressive farmers and seven non-progressive farmers from the granary area in Kerian, Perak, Malaysia.

Table 1: The five categories of Adopters based on the Innovation Diffusion Theory

Adopter categories	(%)	Definition
Innovators	2.5	The first individuals to introduce an innovation to the social system
Early adopters	13.5	The second fastest category to accept/adopt an innovation
Early majority	34.0	Tend to be slower in the process of accepting an innovation
Late majority	34.0	Approaches a new innovation very hesitantly, curious about an innovation before accepting and adopting it
Laggards	16.0	The last category of adopters to accept an innovation, very reluctant to change

Table 2: Research Conceptual Framework

Group discussion		
Paddy technology (rice check)		
Knowledge of paddy farmer	Attitude of paddy farmers	Practice of paddy farmers
High level of knowledge	Positive attitude	Good agricultural practice
Production of yield		

3.3 Researchers as Instruments

Researcher in this study as the main instrument to get a deep and detailed information from paddy farmers. Researchers directly involved with the respondent during the process of data collection through interviews and observation. Researcher may change data collection techniques and strategies used to get information that is clear and precise. In addition to the improved proficiency in qualitative approach, researcher will follow the lecture of basic qualitative and advance qualitative advanced at the University Putra Malaysia.

3.4 Data Collection

In this study, the data collection process will use the focus group interviewas method used to obtain in-depth qualitative information from a group of farmers. Ideally, the focus group is conducted by a team consisting of a moderator and assistant moderator. The moderator facilitates the discussion; the assistant takes notes and runs the tape recorder. Data collection will be implemented without group discussion (control group) and through group discussion (experiment group). In addition, observation and document analysis from others sources such as journals, the internet, Farmer's Organization Authority, MARDI, books from libraries, the Department of Agriculture and the Ministry of Agriculture also implemented.

3.5 Data Analysis

The data will be analysed manually through the transcription process, namely, the researcher will hear the recording of interviews and writing every word issued by the respondent. Researchers will also ask for help from a friend to check the data that transcript to ensure that there are no data that add. Transcription results will stored in hardcopy form and softcopy for investigators. Researcher will establish a coding and themes from the transcription in tune with the issues of the study. Cod is describing part of theme or idea of unified data (Johny Saldona, 2009).

3.6 Pilot Study

To ensure that the process of this research goes well and the instruments built are able to achieve the objectives, a pilot study will be conducted at the Seberang Perak, Malaysia.

4. EXPECTED RESULTS

The expectationsgained for this study will be an improvement in knowledge, attitude, and practice of the paddy farmers throughconducting the group discussions. There should also be a positive increment in rice productivity.

5. CONCLUSIONS

Due to the overall positive impacts of group discussion as mentioned above, it may be important for the farmers and the extension agent to prepare themselves for the use of this approach to enhance rice production in Malaysia. This is to ensure the effectiveness of any knowledge or technology transfer in paddy cultivation.

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