

# Maturity Level of Rural Leaders in Selected Paddy Farming Technologies in Muda Agricultural Development Authority (MADA) -Malaysia

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## Abstract

To provide good leadership it is necessary for individuals and groups to help bring a rural community to action. As the rural leaders play a function in important programs in agricultural extension. However, The study was conducted to determine the maturity of rural leaders based on maturity model theory towards agricultural technologies In Malaysia Paddy Farming, and explore the relationship between the selected characteristics of the respondents. Data were collected through personal interview from 260 randomly selected in muda agriculture development authority MADA area. A five point Likert scale was used to determine the maturity of rural leaders ranged from 1 = never to 5= always. The majority (63.1%) of the respondents had a moderate level of maturity. The correlation analysis between socio-demographic characteristics and maturity level show that there is a positive and significant relationship between variables age and years of experience in paddy farming, at 0.05 level of significance.

**Keywords:** rural leaders, maturity, agricultural technologies, paddy farming

## 1. Introduction

In the Tenth Malaysia development Plan (2011-2015), the specific rural community development objective is targeted to raise the income generation of the over 40% predominantly self employed rural dwellers. These rural poor are people having a mean monthly income of RM1,000–RM1,499. Hence they are the target group of various programs by the government, which aims to increase their income generation, through skill improvements, linking them to employers, loans for increase productivity and ultimately sustainability of the agro-based activities. This is to be done through the adoption of modern agricultural technology, therefore the leadership at the local level is seen as an important group that can be leveraged on to improve the poor rural dwellers income generation and overall quality of life (Ahmad, 2011). However, for leaders to carry their responsibilities effectively, they need to have certain competencies that can help them achieve success for their communities. He should be able to effectively perform his role, and has to have specific competencies to qualify him perform (Drsquo et al., 2013).

According to binti Ahmad and bin Silong (2011) discussed domains of of community leaders in neighborhood associations in Malaysia among that rural leaders can make a change and solving problems among farmers, besides that developing good values and leadership practices, and understand a vision and mission to make the leader practices very well.

To provide good leadership it is necessary for individuals and groups to help bring a rural community to action. People tend to participate voluntarily when they are giving good leadership and have confidence in the leadership. In order to accomplish the stated objectives, local leaders are seen as strong factors to approach for the rural community development to be effective and sustainable, this is because leaders are seen as effective in influencing and motivating their people to action (Williams & Lindsey, 2011).

For the rural community to buy in into any development program and ensure its success local leaders are

indispensable for the simple fact that the people trust them and can accept almost everything they recommend and also when they reject it is an automatic failure, therefore the non involvement of the local leaders may invoke their undermining the intervention right before it starts. It is therefore pertinent for any agency or organization coming up with a community development programme to first involve and get "clearance" with these influential set of people, a process otherwise referred to as legitimation (Udensi et al., 2012).

The method of mobilising and delivering rural development in local rural communities by rural leader, stands for 'Links between actions of rural development, rather than a fixed set of measures to be implemented (Williams & Lindsey 2011). Leader can make a real difference to the daily lives of people in rural areas this is seen through experience. They can play an important role in encouraging innovative responses to old and new rural problems, and becomes a sort of 'laboratory' for building local capabilities and for extension work. Using local leaders as a test medium for new ways of meeting the needs of rural communities has been Extension's long tradition (binti Ahmad & bin Silong 2011).

## 2. Literature Review

Leadership is basically a group phenomenon, and a group consists of two or more people who interact together in fulfillment of common goals. In any given group there is a pattern of all reactions and interaction among members. Relative strength of interpersonal relationship of the members of a group (Bhagat, 2008)

Leadership can be considered as a key dynamic in rural areas. A rural leader in rural areas must have a magnetic personality, for instance, people listen to him when he has message to them. Another key aspect of a leader's role is persuasion. A good leader is mostly the only one who can get people to change their minds or take acts they did not consider before. This effect is nearly synonymous with leadership (Bass & Stogdill, 1990). To add to that, Narayan (2008) stated that effective leadership could lead community organizations into initiating local level, but emphasized administrative leadership as being critical for the conversion of community based organizations into self-managing organizations.

Leadership it can be considered as a process of influencing others in order to achieve a community development goals. The leader influences subjects to perform such things as taking on more responsibility, achieving high quality standards and raising ethical standards. Unfortunately, have been found some leaders in rural areas have a negative influence to members to enter into negative, unethical acts that harm the community in the long run (Zaccaro et al., 2002). Leaders by virtue of their commonalities with the community members can transfer messages of development convincing manner more in the people's local language and can also help to get social sanction for defaulters in the development process (Smith et al., 2010).

Extension worker as an outsider may not have complete knowledge about different aspects of village community nor are they supposed to have similar perceptions and feelings about the village problems as local people may have. Thus, there are good reasons to use such people who belong to the community like the local leaders. Rural leaders can also serve as mouthpiece of people before extension workers, they can explain elaborately the needs and aspirations of people, this is the reality that most developing countries do not have adequate number of extension personnel as the extension workers ratio is proportionately far less than recommended (Bhagat, 2008).

Leaders are supposed to manage people to steer them on issues of concern to the community, telling them what to do, when, where, and how to do it. That means establishing objectives and defining roles to achieve the community objectives and goals (Balsanelli et al., 2008). In situational leadership four leadership styles are classified: determining, persuading, sharing and delegating, which all involve a behavior combination of task and relationship.

Leaders based on maturity theory classified into different level of maturity. This level are four levels: low, low to moderate, moderate to high, and high (Alimo-Metcalfe et al., 2007). To add to that, the leadership style can also be classified into three styles, the first style is Pattern mandate, the most of the leaders in this style are under level between moderate and high. The leader supports the team and both of the participants on the process and on decision making. This style includes high relationship between the leader and the team and low task behavior. The persuasion leadership style is suitable for leaders under low and moderate maturity level, the leader in this style tries to convince the team to determine the activity according to his/her orientations. This style includes high behavior and the relationship between the leaders and the team. The last leadership style is pattern of reporting, in this style the most leaders are under low of maturity level, the leader in this type of style is less about communication with members and in this style there is no relationship between the leader and the member (Astin & Astin, 2007).

Since there is no best way to influence people, the leadership style will depend on the maturity of the leaders. As

the leadership style, the leader may determine a low level of maturity to the subordinated team member, relating the specific task, using high behavior for task and low behavior for relationship, in other words, he defines what to do, how, when and where to do it. However, the rural leaders in the granary area are facing some problems, among that their knowledges and skills are low because of the lack of training from agencies to leaders, and lack of competence of rural leaders. As the result, they do not transfer the new information that they have about new technologies to farmers because the relation or the communication between the rural leaders and farmers is not well conducted. Therefore, this study seeking to determine the maturity level of rural leaders in selected paddy farming technologies in the study area, and to determine the pattern of rural leader style based on the maturity model theory.

### 3. Objective of Study

1. To identify the socio-demographic characteristics of the respondents
2. To identify the maturity level of rural leaders based on the theory of maturity model
3. To discover the type of pattern of respondents based on the theory of maturity model.
4. To Determine the relationship between socio-demographic factors and maturity level of paddy farming technologies for the respondents.

### 4. Methodology

The data collected was done from April to June 2015 in Agriculture Development Authority (MADA) in Malaysia. 260 respondents were selected by random Sampling. The instrument was for data collection was a questionnaire that consists of two sections. Section one had some socio demographic factors of respondents in the area of study like age, Religion, level of education, occupation and etc, and section two had 12 statements of the maturity model theory. Likert scale was used to determine the level of maturity of the respondents ranged from 1 = never to 5= always. Meanwhile, reliability test was estimated by calculating Cronbach's alpha, which was 0.771, used SPSS software to analyze the data, such as frequency, percentage, mean, standard deviation and correlation was used.

### 5. Results & Discussion

Table 1 indicates the descriptive analysis results. The majority of respondents at age between (43-48) years old follow with 25.8% between age (49 to 54) years old, and the remaining 19.6% were respondents in the age above (55) years old. The below table shows the respondents' level of education (30.4%) of respondents in MADA has secondary levels. Only few of them have further studied in certificate, diploma and degrees. Religious belief of the respondents was shown in Table below, it can be seen that MADA has (51.2) percent of respondents Muslims. More than half of respondents (76.7 percent) are full time farmers and (32.3) percent are part time farmers. For the farm profile of the respondent's table (2) below shows the years of experience of respondents ranged from 8 to above 20 years and the table shows majority of respondents have above 20 years' experience in agricultural. Average number of family size of farmers was 6-9 people. For Length of functional service as a rural leader most of the respondents 32.4 percent have (15-19 years) in functional service. Since the yield of paddy table (2) shows the majority of respondents, 25.4 % of the respondents have (3-5 tons) of the yield of paddy. 13.8% of the respondents have below (2 acres) of the size of land, is followed by 24.6% of the respondents have (3-5 acres) of the size of land. Data in the table also shows number of family size of the respondents, the data show (21.2) percent of the respondents have a small family (2-5 person), is followed by (53.5) percent have (6-9 person) and the remaining (25.4) percent of respondents have a big family (above 10 persons). The below table presents the total of the paddy income of the respondents, (31.5%) of the respondents they earn only about below (RM 1000) income of paddy income, then (32.3%) of respondents they earn between (1100-2000) income of paddy income and (36.2%) of the respondents they earn between (RM 2100-3000) income of paddy income.

Table 1. Profile of the respondents

Characteristics	n (260)	Percentage
Age	Frequency	Percent
31-36 years	66	25.4
37-42 years	53	20.4
43-48 years	67	25.8
49-54 years	51	19.6

Above 55 years	23	8.8
Religion	Frequency	Percent
Islam	133	51.2
Christian	44	16.9
Hindu	16	6.2
Buddha	67	25.8
Level of education	Frequency	Percent
no education	29	11.2
primary level	62	23.8
secondary level	79	30.4
foundation	35	13.5
diploma	14	5.4
degree	41	15.8
Occupation	Frequency	Percent
Full time farmers	176	67.7
Part time farmers	84	32.3
Experience in agricultural	Frequency	Percent
8-13 years	71	27.3
14-19 years	52	20.0
above 20 years	137	52.7
Family size	Frequency	Percent
2-5 person	55	21.2
6-9 person	139	53.5
Above 10 people	66	25.4
Length of functional as a rural leader	Frequency	Percent
5-9 years	61	23.3
10-14 years	70	26.6
15-19 years	85	32.4
above 20 years	44	16.7
Size of lands	Frequency	Percent
Below 2 acres	36	13.8
3-5 acres	64	24.6
6-8 acres	41	15.8
9-11 acres	60	23.1
Above 12 acres	59	22.7
Yield of paddy	Frequency	Percent
Below 2 tons	55	21.2
3-5 tons	66	25.4
6-8 tons	54	20.8
9-11 tons	44	16.9
Above 12 tons	41	15.8
Paddy income	Frequency	Percent
Below 1000 RM	82	31.5
1100-2000 RM	84	32.3
2100-3000 RM	94	36.2

### Perception Towards maturity level of respondents based on Maturity model Theory

Table (2) is shown the statements towards the maturity level of respondents of paddy farming technologies with

the highest mean based on a maturity model theory, table below showing the highest mean (4.12) is “You usually know how people will respond to a new information about using new technologies in paddy farming”. The results are also reported least mean (3.27) is “you usually read new books about new technology in paddy to promote my professional growth”.

Table 2. Perception toward the maturity of respondents on paddy farming technologies

Statements maturity (M4)	Frequency (%)						Mean	S.D
	1	2	3	4	5			
1. You usually know how people will respond to a new information about using new technologies in paddy farming	6.2	16.5	34.2	26.9	16.2	4.12	1.157	
2. You flexible about making changes in my farmers community	4.6	13.1	33.5	31.2	17.7	4.08	1.121	
3. You always involved in decision making	3.8	14.6	32.7	24.6	24.2	3.95	1.062	
4. You use emotional energy to motivate farmers to join in new training about paddy farming	5.8	18.1	25.0	30.0	21.2	3.75	1.452	
5. You always looking for the causes of the problems and try to resolve it.	2.7	7.7	19.6	31.9	38.1	3.74	1.149	
6. You obtain all the resources to support any new programs about paddy	4.6	11.2	20.8	32.3	31.2	3.72	1.289	
7. You are able to complete your task with great feedback from the PPK/MADA and the community	6.2	16.5	34.2	26.9	16.2	3.51	1.124	
8. You have enough knowledge and skills in selecting suitable modules of farming	4.6	13.1	33.5	31.2	17.7	3.44	1.069	
9. You will be in a high initiative to move on in the future putting more effort in improving the farmers	3.8	14.6	32.7	24.6	24.2	3.43	1.175	
10. You always make courses for my farmers if they don't know how they use new technology	5.8	18.1	25.0	30.0	21.2	3.40	1.218	
11. You always have high competence and commitment	2.7	7.7	19.6	31.9	38.1	3.30	1.113	
12. You usually read new books about new technology in paddy to promote my professional growth	4.6	11.2	20.8	32.3	31.2	3.27	1.233	
Total average mean						3.64	1.18	

(Source: Survey 2015)

Table 3 indicates the level of maturity of the respondents of paddy farming technologies. The table shows (23.8) percent of the respondents were in high level, and indicate that the majority of the respondents did well at maturity model theory, and in fact only (31.1) percent of the respondents was in a low level of maturity model. However, more than half of the respondents (63.1) percent were in the moderate level.

Table 3. Level of Maturity (M4) of the respondents on paddy farming technologies n=260

Level	Frequency	Percentage	Mean	SD
High (3.67-5.0)	62	23.8	3.64	1.18
Moderate (2.34-3.66)	164	63.1		
Low (1-2.33)	34	13.1		
Total	260	100.0		

To identify the pattern of respondents based on the maturity model theory, we can see from table below 23.8% of the respondents they are in pattern of maturity mandate, follow by 63.1% of the respondents they are in pattern of persuasion of maturity, and, 13.1% of the respondents they are in the pattern of reporting of maturity.

Table 4. Type of pattern of respondents based on the maturity model theory

Level	Type of maturity	Percentage %
High	Pattern of mandate	23.8
Moderate	Pattern of persuasion	63.1
Low	The pattern of reporting	13.1
Total		100.0

### Correlation Analysis between Independent Variables and perception towards level of maturity of respondents.

Table 4 shows the results of correlation analysis the table show there was a significant relationship between the level of maturity of respondents and variables consisting of age, years of experience in paddy farming towards agricultural technologies. A significant relationship between age and level of maturity of respondents towards agricultural technologies of paddy farming ( $p < 0.05$ ) shown in the table below, this indicates that the majority of rural leaders were between age (43-48 years) and had more positive perception towards agricultural technologies of paddy farming. Years of experience in paddy farming have a significant relationship with the level of maturity of the respondents towards agricultural technologies of paddy farming ( $p < 0.05$ ). The respondents have more awareness in the selection of good varieties of rice, especially agrochemicals for more production. However, for other socio-demographic factors, this study revealed there is no significance between religion, level of education, family size, length of functional service as a (rural leader). And size of lands, Paddy income, yield of paddy with the maturity level of rural leaders towards some agricultural technologies in paddy farming.

Table 5. Correlation coefficient between independent variables and level of maturity (M4) (n=260)

Independent variables	r	P (2-tailed)	Remark
Age	0.128*	0.040	Reject $H_0$
Religion	0.003	0.964	Fail to Reject $H_0$
Level of education	0.400	0.052	Fail to Reject $H_0$
Occupation	0.671	0.026	Fail to Reject $H_0$
Years of experience in paddy farming	0.611*	0.031	Reject $H_0$
Family size	0.018	0.771	Fail to Reject $H_0$
Paddy income	-.015-	.812	Fail to Reject $H_0$
Length of functional service as a (rural leader)	0.075	0.230	Fail to Reject $H_0$
Size of land	-0.069-	0.269	Fail to Reject $H_0$
Yield of paddy	0.046	0.458	Fail to Reject $H_0$

\*\**. Correlation is significant at the 0.01 level (1-tailed).*

\**. Correlation is significant at the 0.05 level (1-tailed).*

## 6. Conclusions

In brief, this empirical study was carried out to identify the maturity of respondents based on maturity model theory. The respondents had a moderate level of maturity based on maturity model theory. Then, most of the respondents they are in pattern of persuasion of maturity, that mean most of the respondents stated that they did not have adequate maturity regarding to the agricultural technologies in paddy farming, while on the other side, there was a significant relationship between the level of maturity of respondents with age and Years of experience in paddy farming. The respondent area, needs to know the capabilities and know the reasons 23% have low maturity. Therefore, it is recommended that Extension agents should give to them new training for those who are low in maturity will be able to improve their information, abilities and attitudes on paddy farming technologies.

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