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Agricultural Extension Skills of Sub-Assistant Agriculture Officers of the Department of Agricultural Extension – a case of general skills and specific skills

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Abstract

This study was undertaken to clarify the state of general skill acquisition attributed to off-the-job training (Off-JT) and specific skill acquisition attributed to on-the-job training (OJT). Especially, the attention was paid to which general and /or specific skills can feature skillful Sub-Assistant Agriculture Officers (SAAOs). Four out of 13 *upazilas* in Kishoreganj district were selected randomly as study location. Data were collected from 102 SAAOs assigned to these 4 *upazilas*. A set of questionnaires was used for collecting data during a period from April to May 2006 through personal interview. Based on the annual competence assessment form for extension staff development (DAE, 1999), the present study adopted 8 extension skills such as (i) working with group, (ii) organizing and running a field day, (iii) organizing and running a demonstration, (iv) assessing farmers' problems, (v) problem census, (vi) extension planning, (vii) work planning, and (viii) monitoring and evaluation. In the detail of those extension skills, the skill levels were statistically tested between the two SAAOs groups divided based on the average skill level. It was overall found that in each of 8 extension skills there were significant differences between two SAAOs groups. Furthermore, it appears that the low skill level can be attributed to lack of some general skills as well as all of specific skills. Thus, the Department of Agricultural Extension (DAE) should ensure the rehabilitative Off-JT must be put in practice to re-acquire relevant general skills along monitoring and needs assessment, while the continual OJT can be secured to prevent the loss of specific skills.

Keywords: *Sub-Assistant Agriculture Officer, general skills and specific skill.*

Introduction

The Department of Agricultural Extension (DAE) is the largest government organization in Bangladesh, which provides unified agricultural extension services to farmer throughout the country. According to the organizational guidelines (DAE, 2003), each Sub-Assistant Agriculture Officer (SAAO) has to provide agricultural extension services to around 1,200 farm households in his/her service area (block level). In the context of such extensive coverage of an SAAO needless to say, the success in agricultural extension services largely depends on SAAOs' extension skills. As a matter of fact, only 13.93% of the SAAOs were credible as communicator of technical advice to the farmers (Kasehm *et al.*, 2001). In addition, 35% of farm information loss has been found to take place in the transit between SAAOs and farmers (Babu & Sinha, 1979). According to Ahmed (2002), due to lack of extension skills SAAOs were not able to provide satisfactory extension services to farmers. Lack of SAAOs' extension skills resulted in less adoption of improved rice variety by the farmers (Haider *et al.*, 2001). Besides, SAAOs do not get proper training due to i) absence of specific training plan, ii) inadequate training resources and facilities, and iii) less cooperation and coordination

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amongst extension providers (Ahmed, 2002). So, it is an inevitable task for the DAE to rethink the current training system from the viewpoint of skill development. In the current training policy under the financial reform in Bangladesh, rather than increasing off-the-job training (Off-JT), the DAE need to focus the concentration of skill development by "costless/less cost" or "cost effectiveness" training, that is, on-the-job training (OJT) (DAE, 1999).

Despite such shifting gears, namely encouraging SAAOs to develop skill through practicing OJT, the DAE has not enough materialized OJT along with attending Off-JT. It might be a reason that the DAE has not been aware of the component skills that determine the higher level of extension skill in accordance to training (attendance or practice). Therefore, the present paper aims at clarifying the state of general skill[1)] acquisition attributed to Off-JT and specific skill[2)] acquisition attributed to OJT. Especially, the attention is paid to which general and /or specific skills can feature skillful agricultural extension workers.

Methodology

Out of 13 *upazilas* (sub-district) in Kishoregonj district[3)], 4 *upazilas* (namely Hossainpur, Pakundia, Kotiadi, and Kishoregonj) were purposively selected for this study. All of the SAAOs (102) in the 4 *upazilas* were selected as a sample for this study. However, due to SAAOs' personal leave finally, data were collected from 90 SAAOs. Based on the annual competence assessment form for extension staff development (DAE, 1999), the present study adopted 8 extension skills such as (i) working with group, (ii) organizing and running a field day, (iii) organizing and running a demonstration, (iv) assessing farmers' problems, (v) problem census, (vi) extension planning, (vii) work planning, and (viii) monitoring and evaluation. The necessary survey was conducted by face-to-face interviews with the respondents by using structured questionnaire during April to May 2006. The questionnaire consisted of two parts. The first part was on measuring SAAOs' agricultural extension skill levels. SAAOs' agricultural extension skill levels were evaluated by three *Upazila* Agriculture Officers (UAO) who supervised his/her daily activities (supervisor's rating), three skillful SAAOs senior to him/her (Peer rating), and three farmers from the area in his/her charge (beneficiary's rating). Each UAO and SAAO were directly asked to evaluate the skill levels of all SAAOs in the assigned *upazila* from zero point to 100 point using the following criteria: SAAOs who can provide proper extension services to farmers will be given 100 point and who cannot provide satisfactory extension services at all will be given 0 point. Meanwhile, farmers are not aware of all SAAOs in a *upazila*, and so three farmers in a block were asked to evaluate the SAAO assigned to their block in accordance to the basic criteria: encouraging farmers to talk to about their problem; learning from farmers; building the confidence of farmers; discussing ideas and sharing options openly with farmers; assisting farmers to undertake their own planning; and providing solution to the farmers' problems. Thus, though an SAAO can be evaluated by nine persons separately, the level of an extension skill for analysis was calculated as an average of all scores of the three types of evaluators. The second part of the questionnaire consisted of SAAOs' general skills and specific skills structuring

each of their eight agricultural extension skills. Sixteen skillful SAAOs from the selected four *upazilas* were intensively interviewed for identifying the general skills and specific skills. These skillful SAAOs were identified by the *Upazila* Agriculture Officers.

To examine the qualitative relationship between general or specific skills and agricultural extension skill levels, first the SAAOs were grouped into Group 1 (whose skill level was less than the average) and Group 2 (whose skill level was higher than the average). Then, the averaged scores of those two groups were statistically tested. Descriptive statistics such as frequencies and percentages were used to analyze the data. Chi-square test was used to determine whether there were significant differences between the two groups of SAAOs with regard to their general skills and specific skills.

Findings and Discussion

Agricultural Extension Skill Levels of SAAOs

The score of the eight extension skills ranged from 36 to 86 (range of mean = 59 to 67), indicating large differences in skill levels among SAAOs. Mean value of extension skill levels of SAAOs with higher skill level than the average (SAAOs group 2) was very much higher than that of SAAOs with lower skill level than the average (SAAOs group 1) and the difference was statistically significant at 1% significance level (Table 1).

Table 1. Comparisons of agricultural extension skill levels of SAAOs group 1 and SAAOs group 2

Skills	SAAOs group 1 Mean	SAAOs group 2 Mean	t-statistic
Working with group	59.83	73.95	-12.306***
Organizing and running a field day	57.89	70.30	-10.012***
Organizing and running a demonstration	60.87	71.23	-8.312***
Assessing farmers' problem	56.83	70.48	-11.649***
Problem census	56.07	68.05	-9.656***
Extension planning	53.37	65.00	-9.766***
Work planning	53.74	65.84	-8.366***
Monitoring and evaluation	55.48	67.05	-7.660***

Notes: 1) SAAOs group 1: SAAOs group, of which the score is lower than the average;
2) SAAOs group 2: SAAOs group, of which the score is higher than the average; and
3) ***: Significant difference in the means between G1 and G2 at the level of 1%.

Components of General Skills & Specific Skills of the SAAOs

A Case of Skill on Working with Group

Table 2 presented the state of general skills and specific skills on working with group between the SAAOs group 1 and the SAAOs group 2. It indicated that almost all of the SAAOs group 2 had necessary general skills as well as specific skills for working with group. The SAAOs group 1 mentioned that almost all of them had sufficient skill on the

following general skills: "Skills in interacting effectively with a collection of individuals – a group of farmers as opposed to a farmers' group", "forming new groups only where existing group is insufficient", "forming new group, where staff use their skills in group dynamics" "provides a forum for farmers to take joint decisions and actions", and "not allowing dominant group members to undermine or " put down" others".

Table 2. State of general skills and specific skills of SAAOs groups on working with group

Skill areas	SAAOs group 1 (n = 46)	SAAOs group 2 (n = 44)	Chi-Squire Value
General Skills			
Interacting effectively with the group members	44 (96%)	44 (100%)	1.96
Restructuring the group where existing group is insufficient	43 (94%)	44 (100%)	2.97
Seeking help from skilful group members	45 (98%)	44 (100%)	0.97
Providing flow of information about group members' Problems	26 (56%)	44 (100%)	24.60***
Provides a forum for group members to take joint decisions and actions	16 (34%)	44 (100%)	43.04***
Access to resources	15 (33%)	44 (100%)	45.23***
Not allowing dominant group members to undermine or "put down" others	45 (98%)	44 (100%)	0.97
Encouraging group members to participate and creating an open environment for participation	25 (54%)	44 (100%)	26.20***
Specific Skills			
Deal diplomatically with dominant group members	0	40 (90%)	75.27***
Do not depend only on working with groups – use individual contact when necessary	3 (7%)	42 (95%)	71.15***
Give advise to the less dynamic group members through regular contact	0	40 (90%)	75.27***
Deliver message by using local language	9(20%)	40 (90%)	46.15***
Visit individual group members who have special problem but not to spend too much time with them	0	41 (93%)	78.73***
Facilitate, listen and ask questions, avoid giving long speeches	0	35 (80%)	54.47***
Adopt an open and friendly attitude	17 (37%)	40 (90%)	28.19***

Notes: 1) SAAOs group 1: SAAOs group, of which the score is lower than the average;
2) SAAOs group 2: SAAOs group, of which the score is higher than the average;
3) Values in the parenthesis are percent of SAAOs; and
4) ***: significant at the level of 1%.

On the other hand, only 33% of the SAAOs group 1 had maintained better access to the resources like officers, senior SAAOs, and contact farmers. However, almost all of the SAAOs group 1 indicated their lack of specific skills for working with group. Thus, it could be concluded that lack of ability to use resources and lack of specific skills on working with group, and that the SAAOs group 1 cannot provide necessary guidelines for effective group activities.

A Case of Skill on Organizing and Running a Field Day

The data presented in Table 3 indicated that almost all of the SAAOs group 2 had all necessary general skills regarding organizing and running a field day. However, some of the SAAOs group 1 indicated their lack of general skills regarding organizing and running a field day. Forty percent of the SAAOs group 1 showed lack of general skill on selecting farmers from the similar socio-economic background, 17% of them showed lack of skill on properly advertising the field day, 17% of them showed lack of skill on selecting host farmers, and 29% of them showed lack of skill on selecting suitable demonstration site. In the case of specific skills, almost all of the SAAOs group 2 indicated that they had all necessary specific skills regarding organizing and running a field day. However, all of the SAAOs group 1 showed lack of specific skills regarding organizing and running a field day.

Table 3. State of general skills and specific skills of SAAOs groups on organizing and running a field day

Skill Areas	SAAOs group 1 (n = 42)	SAAOs group 2 (n = 48)	Chi-Squire Value
General Skills			
Fixing an appropriate date and time in consultation with the host farmers	40 (95%)	48 (100%)	2.34
Checking the resource center for materials which could be useful during the field day	40 (95%)	47 (98%)	0.499
Advertising the field day to neighboring farmers who participated in earlier field days at the site	35 (83%)	48 (100%)	8.68**
Select farmers from similar socio-economic backgrounds	25 (60%)	48 (100%)	23.95***
Ensuring that the farmer hosting the demonstration can correctly explain the objectives of the demonstration	35 (83%)	48 (100%)	8.68**
Selecting demonstration site that ensure easy access and movement through the field	30 (71%)	48 (100%)	15.83***
Specific Skills			
Select early adopter farmers	0	45 94%)	78.75***
Select representative farmer in the case of absence of officers	5 (12%)	46 (96%)	64.26***
Ensure an informal atmosphere where farmers feel free to raise questions	0	40 (83%)	63***
Seeking help from local leader to motivate farmers	0	45 (94%)	72.05***
Extension staff to talk informally with the farmers to find out whether they understood the demonstration clearly	0	46 (96%)	74.84***

Notes: 1) SAAOs group 1: SAAOs group, of which the score is lower than the average;
2) SAAOs group 2: SAAOs group, of which the score is higher than the average;
3) Values in the parenthesis are percent of SAAOs;
4) **: significant at the level of 5% , and
5) ***: significant at the level of 1%.

A Case of Skill on Organizing and Running a Demonstration

Table 4 summarized the state of general skills and specific skills of SAAOs on organizing and running a demonstration. It was found that about all of the SAAOs group 2 indicated that they had all necessary general skills and specific skills on organizing and running a demonstration. On the other hand, about 80% of the SAAOs group 1 stated that they had the general skills like identifying the problems, task analysis and assessment of farmers' knowledge, managing required materials, and briefing hosting farmers for conducting a demonstration. However, only 56% of them had skill on practicing and demonstrating task for identifying relevant problems and 67% could identified appropriate venue for conducting a demonstration.

Table 4. State of general skills and specific skills of SAAOs groups on organizing and running a Demonstration.

Skill Areas	SAAOs group 1 (n = 45)	SAAOs group 2 (n = 45)	Chi-Squire Value
General Skills			
Identifying the need or problem, and defining a technology for demonstration	40 (89%)	44 (98%)	2.86
Conducting a task analysis in consultation with farmers, including an assessment of farmers' current knowledge	37 (82%)	40 (89%)	0.81
Selecting an appropriate venue (field or homestead), day and time	30 (67%)	44 (98%)	14.90***
Practicing the task and demonstrating the task for identifying problems	25 (56%)	40 (89%)	12.46***
Ensure required materials such as, flip chart, flash cards, tools, pen and paper	35 (78%)	42 (93%)	4.41**
Briefing and training farmers who will help in the demonstration	37 (82%)	44 (98%)	6.05**
Specific Skills			
Ensure an informal atmosphere where farmers feel free to raise questions	20 (44%)	44 (98%)	31.15***
Visiting the venue to make sure it is appropriate	0	40 (89%)	72***
Ensure real objectives and live samples as materials	5 (11%)	44 (98%)	68.14***
Seeking help from local leader to motivate farmers	0	40 (89%)	72***
Fixing time for farmers as well officers to participate the demonstration site	10 (22%)	40 (89%)	40.5***

Notes: 1) SAAOs group 1: SAAOs group, of which the score is lower than the average;
2) SAAOs group 2: SAAOs group, of which the score is higher than the average;
3) Values in the parenthesis are percent of SAAOs;
4) **: significant at the level of 5% and
5) ***: significant at the level of 1%.

Moreover, in the case of specific skills, most of the SAAOs group 1 had lack of all necessary specific skills on organizing and running a demonstration. Thus, lack of general skills such as selecting appropriate venue for demonstration and identifying relevant problems and specific skills the SAAOs group 1 could not conduct demonstration effectively.

A Case of Skill on Assessing Farmers' Problem

Data in Table 5 indicated that both the SAAOs group 2 and the SAAOs group 1 had necessary general skills like conducting problem census, day to day discussion with farmers, doing participatory appraisal, and performing survey regarding assessing farmers' problem. However, only 52% of the SAAOs group 1 had used secondary information for making effective assessing farmers' problems. In the case of specific skills, the SAAOs group 2 had all necessary skills regarding assessing farmers' problems. But most of the SAAOs group 1 had lack of relevant specific skills regarding problem census and made them unable to perform effective assessing farmers' problem.

Table 5. State of general skills and specific skills of SAAOs groups on assessing farmers' problems

Skill Areas	SAAOs group 1 (n = 48)	SAAOs group 2 (n = 42)	Chi-Squire Value
General Skills			
Conducting problem censuses	43 (90%)	42 (100%)	2.33
Day to day discussion with farmers	44 (92%)	40 (95%)	0.46
Conducting participatory rural appraisal	43 (90%)	42 (98%)	4.63**
Conducting formal surveys	45 (94%)	41 (100%)	0.79
Using secondary sources of information	25 (52%)	41 (100%)	23.75***
Specific Skills			
Regular discussion with officers, colleagues and model farmers about the unsolved problems	12 (25%)	40 (95%)	45.30***
Record problems in details in the diary	10 (21%)	41 (98%)	53.79***
Ensure an informal atmosphere where farmers feel free to raise questions	0	42 (100%)	90***
Facilitate, listen and ask questions, avoid giving long Speeches	0	40 (95%)	82.29***
Discuss with field staff from other organization	0	40 (95%)	82.29***

Notes: 1) SAAOs group 1: SAAOs group, of which the score is lower than the average;
2) SAAOs group 2: SAAOs group, of which the score is higher than the average;
3) Values in the parenthesis are percent of SAAOs;
4) **: significant at the level of 5% and
5) ***: significant at the level of 1%.

A Case of Skill on Problem Census

Table 6 summarized the state of general skills and specific skills on problem census. It was found that about all of the SAAOs group 2 indicated that they had all necessary general skills and specific skills on problem census. On the other hand, more than 85% of the

SAAOs group 1 stated that they had the general skills like selecting farmers operating similar farming system, selecting contemporary topic to discuss, dividing the farmers groups into similar groups of 5-6 farmers, and helping farmers to present their problem for conducting problem census. However, 65% of them had skill on recording the discussion in the SAAOs' diary. Moreover, in the case of specific skills, most of the SAAOs group 1 had lack of all necessary specific skills on problem census. Thus, due to lack of general skills such as keeping necessary records about problem census and specific skills the SAAOs group 1 could not able conduct demonstration effectively.

Table 6. State of general skills and specific skills of SAAOs groups on problem census

Skill Areas	SAAOs group 1 (n = 46)	SAAOs group 2 (n = 44)	Chi-Squire Value
General Skills			
Select farmers operating similar farming system	41 (89%)	43 (98%)	2.67
Select contemporary topic to discuss	40 (87%)	42 (95%)	2.01
Divide the farmers groups into similar groups of 5-6 farmers	41 (89%)	43 (98%)	2.67
Helping farmers to present their problem	39 (85%)	43 (98%)	4.65**
Record the discussion in the AEWs' diary	30 (65%)	42 (95%)	12.85***
Specific Skills			
Contact with farmers before conducting problem census	30 (65%)	43 (98%)	15.51***
Explain the topic to the farmers before conducting problem census	0	40 (91%)	75.27***
Allow farmers to speak freely about their problems	5 (11%)	44 (100%)	72.03***
Making good rapport with the farmers	0	40 (91%)	75.27***

Notes: 1) SAAOs group 1: SAAOs group, of which the score is lower than the average;
2) SAAOs group 2: SAAOs group, of which the score is higher than the average;
3) Values in the parenthesis are percent of SAAOs;
4) **: significant at the level of 5% and
5) ***: significant at the level of 1%.

A Case of Skill on Extension Planning

Table 7 presented the state of general skills and specific skills on extension planning between the SAAOs group 1 and the SAAOs group 2. Almost all of the SAAOs group 2 had necessary general skills as well as specific skills regarding extension planning. More than 90% of the SAAOs group 1 mentioned that they had sufficient skill on the following general skills: "Farmers' need assessments", "Planning for extension activities during *thana* planning workshop", "Perform Seasonal Extension Monitoring System (SEMS) to measure performance of the activities", and "Using evaluation data for the next year extension planning process".

On the other hand, 67% and 78% of them had skill on implementing the planned activities efficiently and effectively and keeping record about participants and place

for various events. However, almost all of the SAAOs group 1 indicated their lack of specific skills for extension planning. Thus, it could be concluded that lack of ability to implement the planned activities and specific skills regarding extension planning, the SAAOs group 1 cannot make effective extension planning.

Table 7. State of general skills and specific skills of SAAOs groups on extension planning

Skill Areas	SAAOs group 1 (n = 45)	SAAOs group 2 (n = 45)	Chi-Squire Value
General Skills			
Farmers' need assessments	43 (96%)	44 (98%)	0.345
Planning for extension activities during *thana* planning workshop	41 (91%)	40 (88%)	0.123
Implementing the planned activities efficiently and effectively	30 (67%)	44 (98%)	14.90***
Perform Seasonal Extension Monitoring System (SEMS) to measure performance of the activities	41 (91%)	45 (100%)	4.19**
Keeping record about participants and place for various events	35 (78%)	42 (93%)	4.41**
Using evaluation data for the next year extension planning process	44 (99%)	45 (100%)	1.01
Specific Skills			
Regular discussion with officers, colleagues and model farmers about a contemporary extension planning	6 (13%)	44 (98%)	64.98***
Ensure resources by spot visits to implement extension activities	0	40 (89%)	86.09***
Visit individual farmers who have special problem for performing extension activities	6 (13%)	44 (98%)	64.98***
Ensure farmers' skills for performing the extension activities through frequently visits to them	0	44 (98%)	86.09***

Notes: 1) SAAOs group 1: SAAOs group, of which the score is lower than the average;
2) SAAOs group 2: SAAOs group, of which the score is higher than the average;
3) Values in the parenthesis are percent of SAAOs;
4) **: significant at the level of 5% and
5) ***: significant at the level of 1%.

A Case of Skill on Work Planning

Table 8 presented the state of general skills and specific skills on working planning between the SAAOs group 1 and the SAAOs group 2. In the case of general skills, it was found that the SAAOs group 2 was more likely to analysis performance in constructive way and to follow previous experience for making effective work planning than the SAAOs group 1 on work planning. However, in the case of specific skills, when compared with the SAAOs group 1, the SAAOs group 2 was more likely to follow regular discussion with resource persons, to ensure available resources by spot visit, to contact with farmers before work plan, to ensure farmers' skills on relevant activities, and to make rapport with farmers. Thus, due to lack

of skill on analyzing performance, using previous experience, and specific skills the SAAOs group 1 cannot make appropriate work plan.

Table 8. State of general skills and specific skills of SAAOs groups on work planning

Skill Areas	SAAOs group 1 (n = 43)	SAAOs group 2 (n = 47)	Chi-Squire Value
General Skills			
List of tasks to be completed during the work period	43 (100%)	46 (99%)	0.925
Identify the verifiable indicators to show the expected output from the task	41 (95%)	46 (98%)	0.006
Implementing the work program	38 (88%)	45 (96%)	0.979
Record the actual outcome of the tasks	37 (86%)	45 (96%)	1.791
Find out the causes of failure or consequences arising from experience	38 (88%)	47 (100%)	32.705***
Constructive analysis of performance	40(94%)	46 (98%)	0.473
Agreement of a new work plan using experience from the successes and failures of previous work plans	25 (58%)	47 (100%)	24.59***
Specific Skills			
Regular discussion with officers, colleagues and model farmers about a contemporary work planning	2 (5%)	45 (96%)	74.68***
Ensure available resources by spot visits to implement work plan	0	45 (96%)	82.34***
Contact with farmers before conducting work plan to the farmers' field	5 (12%)	47 (100%)	71.89***
Ensure farmers' skills for performing the activities through frequently visits to them	0	47 (100%)	90***
Making good rapport with the farmers	4 (9%)	47 (100%)	75.23***

Notes: 1) SAAOs group 1: SAAOs group, of which the score is lower than the average;
2) SAAOs group 2: SAAOs group, of which the score is higher than the average;
3) Values in the parenthesis are percent of SAAOs;
4) **: significant at the level of 5% and
5) ***: significant at the level of 1%.

A Case of Skill on Monitoring and Evaluation

Table 9 summarized the state of general skills and specific skills on monitoring and evaluation between the SAAOs group 1 and the SAAOs group 2. When compared with the SAAOs group 1, the SAAOs group 2 was more capable to select suitable time and identify relevant problems regarding monitoring and evaluation. However, the SAAOs group 1 indicated that they lack specific skills on monitoring and evaluation and as a result they were less capable to conduct monitoring and evaluation than the SAAOs group 2.

Table 9. State of general skills and specific skills of SAAOs groups on monitoring and evaluation

Skill Areas	SAAOs group 1 (n = 44)	SAAOs group 2 (n = 46)	Chi-Squire Value
General Skills			
Determine specific objective of the monitoring and evaluation	41 (93%)	44 (96%)	0.262
Select appropriate methodology for monitoring and evaluation.	39 (87%)	45 (98%)	3.052
Select suitable time for monitoring and evaluation	30 (68%)	45 (98%)	14.23***
Identify and solve problems in monitoring process	30 (68%)	46 (100%)	17.33***
Specific Skills			
Conduct monitoring and evaluation time to time by own initiative	1 (1%)	46 (100%)	86.08***
Establish good relationship with farmers by appraise them	0	45 (98%)	86.09***
Keeping records of previous data on monitoring and evaluation	5 (11%)	44 (96%)	64.42***
Discuss with officers, colleagues and model farmers about problems in monitoring and evaluation	0	46 (100%)	90***

Notes: 1) SAAOs group 1: SAAOs group, of which the score is lower than the average;
2) SAAOs group 2: SAAOs group, of which the score is higher than the average;
3) Values in the parenthesis are percent of SAAOs;
4) **: significant at the level of 5% and
5) ***: significant at the level of 1%.

Conclusion

Comprehensively speaking but with exception, the low skill level can be attributed to "lack of some general skills and no specific skill". In other words, the skillfulness certainly exists and is an absolute necessity to the high skill level. Regarding "lack of some general skills", at least one for every 3 persons has not acquired it yet. Against the assumption, due to "at least one for every 3 persons has already acquired it, despite the low skill level group", some specific skills are no long specific in 3 extension skills. Those specific skills feature familiarity to farmers and arrangement in advance toward implementation of extension service.

Thus, the DAE should prepare necessary strategies where the rehabilitative Off-JT must be put in practice to re-acquire relevant general skills along monitoring and needs assessment, while the continual OJT can be secured to prevent the loss of specific skills. So as to identify the clue or perspective of training improvement, it is an important research subject to examine the quantitative relation between training (Off-JT and OJT) and skill development.

Notes: General skills referred skills on the usual operations those are performed by SAAOs at the time of extension service to the farmers. These are routine operations. General skills are gained by attending Off-JT

Specific skills referred skills on the unusual operations those are performed by the SAAOs at the time of facing problems during extension service to the farmers (Koike & Inoki, 1990). Total number of SAAO in Kishoreganj district is 236.

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