

学位論文要旨

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題目: **Skill Development of Agricultural Extension Workers of the Department of Agricultural Extension in Bangladesh –At Four *Upazilas* in Kishoreganj District-**

Bangladeshにおける農業普及局農業普及員の技能の形成と発展
ーキシオルゴンジ県内の4郡を事例にしてー

Training wing of the Department of Agricultural Extension (DAE), the Government of Bangladesh, is responsible for training and equipping agricultural extension workers (AEWs) with necessary extension skills. With the objective being high quality agricultural extension services, the DAE has invested huge resources to trainings through the Government of Bangladesh as well as the international organizations or the donors over the years. Nevertheless, not a few farmers were beyond the influence of quality agricultural extension services due to several reasons. One of them can be attributed to lack of AEWs' agricultural extension skills. Nowadays, the agricultural extension work in Bangladesh has to go beyond the role of mere transfer of technology and further be involved in providing need-based agricultural extension services to farmers. It is said that the capacity building of AEWs is urgently demanded.

Thus, the study on “**Skill Development of Agricultural Extension Workers of the Department of Agricultural Extension in Bangladesh – At Four *Upazilas* in Kishoreganj District –**” was conducted with the following subjects: (1) system of the current trainings for agricultural extension workers; (2) agricultural extension workers' perceptions of off-the-job training (Off-JT) and on-the-job training (OJT); (3) agricultural extension workers' extension skill levels; (4) agricultural extension workers' general skills and specific skills; (5) relationships between agricultural extension workers' perceptions of off-the-job training/on-the-job training and their extension skill development; and (6) relationships between agricultural extension workers' off-the-job training attendance and on-the-job training practices and their agricultural extension skill development.

Data for this study were collected from 111 AEWs at four *upazilas* at Kishoreganj district. In order to collect valid and reliable information from the AEWs, a set of questionnaires was carefully designed, keeping the objectives of study in mind. However, data on agricultural extension skill levels of the AEWs were collected by way of the assessment by key informants. As to analyses, especially, multiple regression analysis and discriminant analysis were adopted to identify Off-JT/OJT perceptions or Off-JT/OJT practices affecting the skill development.

Hereinafter, the following are results in response to the above-mentioned 6 subjects:

- 1) Though the DAE arranges in-service trainings, it features more Off-JTs but less OJTs. What is the worse, such Off-JTs have nearly the same objectives as those in preceding years. Namely, more production-oriented trainings but less trainings on communication, quality development, pest and disease control etc. It follows that the current trainings for AEWs are not systematic due to the infrequent bilateral interaction between Off-JT and OJT.
- 2) AEWs perceive the effectiveness of in-service trainings in the wide range of “poor” to “satisfactory”, while

poorly perceiving the quality of training materials, transportation arrangement, and refreshments at training. There is found a contradiction in AEWs' perceptions of training like "Off-JT: not satisfactory" against "OJT: slightly favorable". Service tenure has a significantly negative relationship with the perception of OJT. By contrast, service tenure has a significantly positive relationship with the perception of Off-JT. "Class oriented training is less effective than learning by doing to form AEWs' skills" and "skill formation of AEWs through Off-JT need more time than skill formation through OJT" are determinants to whether the overall perception of Off-JT was high or low.

3) Out of the eight agricultural extension skills, AEWs have low levels of planning-related skill and monitoring/evaluation-related skill. Except planning skill, all the other seven skills show significant negative relationships with AEWs' service tenure. According to the measured growth curve of agricultural extension skill levels, along with the service tenure it shows a diminishingly increase up to 15 years of service tenure and turns to the accelerating decrease up to the retirement age.

4) Comparing with the low agricultural extension skill level AEWs with the high agricultural extension skill level AEWs, the latter have more specific skills in each of the eight agricultural extension skills than the former does.

5) OJT perceptions are significantly different between the low agricultural extension skill level AEWs and the high agricultural extension skill level AEWs, while being not significant difference in Off-JT perceptions. Merits of OJT such as "changing service delivery place is helpful to form new skills" and "OJT system creates a true workplace learning environment" are perceptions commonly contributing to the eight agricultural extension skill levels.

6) In most of the Off-JTs related to the eight agricultural extension skills, there is found the significant difference in attendance between the low skill level AEWs and the high skill level AEWs. Meanwhile, almost all of the high skill level AEWs practice OJT with intension to develop all of the eight agricultural extension skills, while OJT practiced by the low skill level AEWs is very limited. OJT without supervision of officer is found the most contributing factor to develop the skill on organizing and running demonstration, assessing farmers' problems, and monitoring/evaluation. Moreover, OJT by way of discussing with officers/skilled AEWs is found an important contributing factor to develop the skill on problem census, extension planning, and work planning.

Thus, based upon the findings in this study, the following can be recommended:

i) From the qualitative viewpoint, the DAE should pay much attention to training on communication and quality development, pest and disease control, planning extension strategies, and monitoring and evaluation in extension services.

ii) From the viewpoint of securing the effectiveness of current in-service training for AEWs, namely motivation of AEWs, the DAE should provide better transportation facilities and refreshments. In addition, the DAE should improve training materials and administrative arrangement for in-service training courses.

iii) As a training system, Off-JT and OJT must be properly and flexibly combined in accordance to the requirement of Off-JT and OJT perceptions. To identify such combinations, the skill and perception assessment must be regularly put into execution at the grass root level.

iv) To secure effective OJT, rather than "one agricultural extension worker is in charge of one block", an institutional amendment is required so that the plural AEWs can cooperatively work together with *union* being their territory. The plural AEWs must consist of junior and senior AEWs.

v) So that some senior AEWs can revitalize their lost specific skill or do not lose their acquired specific skill after a certain point of service tenure, the DAE must be aware of the significance of reshuffle of the personnel.