Principles of Teaching and Knowledge Transfer

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ECHO Summary of MEAS Technical Note:
Principles of Teaching and Learning

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Introduction

Most extension workers serving small-scale farmers in developing countries have been equipped with at least some level of agriculture-related training and field experience. Many, however, lack training in how to teach and facilitate learning, a skill that is equally important as technical know-how in helping farming communities to adopt new agriculture methods and technologies.

Orchard owners in Tajikistan attending a training on orchard management (Source: Brian Flanagan)

This document, drawn from the MEAS Technical Note on **Principles of Teaching and Learning**, focuses on various principles and teacher behaviors that promote learning. These concepts can help extension workers and trainers to more effectively advise and instruct the farmers they serve.

Organization and Structure of Subject Matter

Participants of a training event are more likely to learn and remember information when they know how the program will proceed and what content will be covered. Extension workers should plan and structure the program clearly and in a way that helps participating farmers to readily learn the material.

Farmers come from different backgrounds, so it is necessary that the extension worker be aware of such contexts so that trainings can be tailored to the audience's experiences and needs. This ensures that the information being shared is important to the farmers and that learned practices can be applied.

Motivation

People who are motivated to learn are more apt to retain the information taught. Content based on the participant's wants, needs, interests and future goals raises motivation to learn and apply the material. Thus, participating farmers should be consulted before setting goals and planning learning activities. Using farmer feedback to design and improve extension programming makes trainings more useful to farmers and helps them reach their learning goals. Farmers who succeed with newly learned methods are motivated to continue to learn more and participate in other trainings.

Reward and Reinforcement

Farmers who receive feedback on their learning progress tend to perform better, in terms of successful application of the material, than those who do not benefit from any kind of assessment. It is important for extension workers to provide feedback, as it has shown to reinforce learning and encourage farmers to continue to participate in learning activities.

Behaviors that are rewarded are more likely to be learned. During trainings, behaviors can be rewarded in various ways. For example, a participant who has responded correctly in a discussion can be acknowledged. Sharing a farmer's success story amongst other village farmers can also reinforce the message that has been taught. Positive reinforcement should happen as soon as possible and be clearly connected to the desired behavior, thereby encouraging participants to learn and try new techniques. Wrong answers should be corrected but not in a punishing manner, as this can have an inconsistent and uncertain effect upon learning.

Techniques of Instruction

Learning should be a non-passive process, as people retain more when actively involved in their own learning. Instructors can use various participatory strategies to make learning an active process. Instead of simply articulating knowledge, the extension worker should provide direction as farmers participate together in the learning process. Directed learning is more effective than the undirected learning that occurs when farmers are asked to study and investigate on their own. Participants are also interested in solving problems that affect them, so instructors need to be familiar with the local context and tailor teaching lessons to address local concerns. Teaching people how to solve problems allows learners to discover solutions rather than simply be told the answers. This enables participants to learn about a problematic situation, gather information and find the solutions.

People also learn when they practice what they are taught, so it is important to encourage farmers to immediately put into practice what they have learned, whether on demonstration sites or individual farms. This allows for supervised application whereby farmers can continue to improve techniques and receive feedback from extension workers. Teaching both in classroom and field settings provides extension workers an array of opportunities and ways to reinforce learning.

Conclusion

Agriculture extension workers should not only have the required technical knowledge but they must also be able to effectively transfer learning to the farmers they work with. The principles of instruction are important for extension workers to put into practice as they plan, deliver and evaluate their teaching and the farmers' learning. Implementing such principles in extension trainings enhances learning and the transfer of knowledge that farmers need to improve their livelihoods.

References

Barrick, Kirby. 2011. "Technical Note on Principles of Teaching and Learning." Modernizing Extension and Advisory Services.

Further Reading

Barrick, Kirby, ed. 2012. "Methods and Techniques for Effective Teaching in Extension and Advisory Services - A MEAS Training Module." Modernizing Extension and Advisory Services.