

KPTT SALATIGA'S ONE YEAR ADULT EDUCATION PROGRAM
IN AGRICULTURE AS PERCEIVED BY ITS TRAIN-
EES, EX-TRAINEES, AND INSTRUCTORS

By

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Submitted to the Faculty of the Graduate College
of the Oklahoma State University
in partial fulfillment of the requirements
for the Degree of
MASTER OF SCIENCE
July, 1983

Thesis
1983
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ACKNOWLEDGEMENTS

The author wishes to thank and express his gratitude to KPTT Salatiga's administration especially to Rev. J. Bentvelzen, S.J., as the Executive Director who contributed so much in multiplying the questionnaires, sending them to the respondents, receiving the answered questionnaires from the respondents, and mailing the collected questionnaires to Stillwater. Special thanks go to the instructors and trainees at KPTT Salatiga, Indonesia, and to the ex-trainees around the country who allowed themselves to be chosen as respondents.

Sincere appreciation is given to Rev. William T. Wood, S.J., who in the name of New York Province Society of Jesus provided support and especially financial assistance for completing this study, and to Dr. Allen D. Tillman through whom the author obtained the opportunity to complete this study at Oklahoma State University, Stillwater.

Gratitude is expressed to the Agricultural Education Department of Oklahoma State University for their continued guidance and support during the completion of this study. Special thanks go to Dr. Robert Terry, the author's major adviser and advisory committee chairman, for his encouragement, guidance, and advice throughout the graduate study and writing this thesis; to Dr. James P. Key for his assistance in finishing the first three chapters of this study and in making the author become more familiar with research design.

Special appreciation is given to Rev. Don. F. Smith from whom the author got facilities for the accomplishment of this study.

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CHAPTER I

INTRODUCTION

In June 1976, a basic concept of adult education was declared that adult education in developing countries is for Man, by Man, and from Man (Hall and Kidd, 1978). The declaration has been known as the Declaration of Dar es Salaam because it was declared by the International Conference on Adult Education and Development held in Dar es Salaam.

Man is defined by the conceptor of the declaration as he who has his own ability to make himself, to act deliberately for self determined purpose which distinguished him from other animals. And development must be defined as the expansion of Man's own consciousness, and therefore his power over himself, his environment, and his society. Change toward such development is considered as purposeful change with active participation of individual involved.

Kursus Pertanian Taman Tani (Agricultural Training Center "Taman Tani" or KPTT) was founded in 1965 in Salatiga, Central Java, Indonesia, as part of the Extension Department of the Institute for Teacher Training and Education "Sanata Dharma" in Yogyakarta. It has been organizing a one year adult education program in agriculture since its establishment. This program has a main objective: to train and educate highly motivated pioneer farmers, who have the courage to lead and direct the rural community in improvements and innovations in farming practices and animal husbandry, in accordance with the potential of the community.

No doubt, the program organized by KPTT Salatiga is an adult education program in agriculture intended really for development. Change toward development must occur firstly within the trainees. This change needs to be considered as a purposeful change with active participation of the individual trainees.

Adult trainees attending the one year program always become the main concern of the administration. The focus of concern has been put on this question: "How can these adults be helped in building their learning process toward achieving the main objective?" One possible answer is by improving continuously the program in a way that the achievement would be higher. This study was planned to prompt improvement without eliminating the existing program.

Statement of the Problem

To administer a continuous improvement without eliminating the existing program needs a specific strategy. One of the strategies which is available to be adopted is the "infusion strategy". This strategy is based upon the need of new emphases for the existing program.

The problem that the administration has to face is: "What kind of new emphasis need to be infused in the existing program to produce the necessary improvement?" New emphases coming from the perceptions of trainees, ex-trainees, and instructors would help to get an improvement which might be more acceptable in prompting the need. Hopefully, such an improvement would influence the learning process of the new trainees toward better achievement.

Purpose of the Study

In order that KPTT Salatiga's administration may be able to affect continuous program improvement to help the trainees' achievement of their learning process, this study was conducted to identify the perceptions of the trainees, the ex-trainees, and the instructors toward the learning activities of the one year program selected by the administration.

The Objectives

The objectives of this study were:

1. To identify the perceived importance of the selected learning activities toward achieving the main objective of the program.
2. To identify the perceived opportunity of using new skills, basic knowledge, and other innovative capabilities toward further development of local communities.

Assumptions

The following assumptions were made in order to conduct the study:

1. The ranking scales of perceived importance of the three groups (trainees, ex-trainees, and instructors) in average indicate that one unit of learning activity is more important or less important than the other one.
2. The ranking scales of perceived opportunity of the three groups (trainees, ex-trainees, and instructors) in average indicate that one unit of learning activity has more prospective usefulness or less prospective usefulness than the other one.

3. The learning activity unit which has higher or lower ranking indicates that it will be more acceptable or less acceptable to be emphasized.

4. The trainees can discover more meaning from the more important learning activity unit which will be more acceptable to be emphasized.

5. The trainees can discover more meaning from the learning activity unit which has more prospective usefulness which will be more acceptable to be emphasized.

Limitations of the Study

The limitations of the study were:

1. Implications of this study may not be applicable to other programs that are administered by KPTT Salatiga beside the one year adult education program.

2. Implications of this study may not be applicable to any other Institutes' program which is administered as a one year adult education program.

Scope of the Study

The study, in dealing with perceptions, chose only two values to be measured: 1) the importance of the learning activity units toward achieving the main objective, and 2) the opportunity for use of the new knowledge, skills, and other innovative abilities as the results of attending the program for further development of the local communities.

The learning activity units were limited only to those which were required to be accomplished by individual trainees attending the program.

Trainees, ex-trainees, and instructors were considered as those who still have involvement in the one year adult education program in agriculture or those who still have communication with the administration.

Definition of Terms

Trainee is an adult person between 20 and 30 years of age, still attending the one year adult education program in agriculture administered by KPTT Salatiga after passing through the selection process.

Ex-trainee is a trainee who has completed the whole program, having a kind of certificate from the administration.

Instructor is a full-time or a part-time teaching staff who is responsible to providing supervision, personal guidance, assistance, information to the trainees and to the ex-trainees toward achieving the objective of the program.

Learning activity unit or unit of learning activity is a unit of practical experience, or theoretical instruction, or personal guidance selected by the administration to be accomplished by each individual trainee attending the program.

Importance value is the value of a learning activity unit in terms of its importance to achieve the main objective.

Opportunity for use value is the value of a learning activity unit in terms of the opportunity to use its outcomes: the new knowledge, skills, and other innovative abilities.

Administration are those who are responsible to administer and develop the program consisting of one executive director assisted by five persons as assistants.

CHAPTER II

REVIEW OF LITERATURE

The purpose of this chapter is to present a brief descriptions of KPTT Salatiga: its one year adult education program in agriculture (main objective, structure, facilities, and requirements for admission), and the result of the program, and to recommend an alternative for improvement of the program. Rationale is presented in order to help the administration to know how far the recommended alternative for improvement is reasonable. The prospect for improvement is also discussed.

KPTT Salatiga: One Year Adult Education Program in Agriculture

KPTT Salatiga by its nature is an agricultural training center. It was founded in 1965 at Salatiga, Central Java, Indonesia, as part of the Extension Department of the Institute for Teacher Training and Education "Sanata Dharma" in Yogyakarta. This institute has provided one year training program named by this study as "one year adult education program in agriculture" since its establishment. The one year adult education program has a main objective stated by its founders as:

. to train and educate highly motivated pioneer farmers, who have the courage to lead and direct the rural community in improvement and innovations in farming practices and animal husbandry, in accordance with the potential of that community (Yayasan Purba Danarta, 1979, p. 14).

For organizing the program toward achieving the main objective a simple structure was established. This structure consists of a board of directors: 6 people, and 1 executive director who is assisted by 5 full-time teaching staff. Between 1965 and 1971 KPTT Salatiga was under the legal umbrella of the Institute for Teacher Training and Education "Sanata Dharma"'s Extension Department. But since 1971 it has been an independent organization under the name of Yayasan Taman Tani.

Facilities are provided in the forms of land, livestock, building, library, and many kinds of equipment. Land available for practical work consists of: wet rice field = 5,000 m², dry land = 60,000 m², vegetable and flower gardens = 30,000 m², and pond = 500 m². Livestock available are: 4 cows, 200 pigs, 5 goats, 200 chickens, 30 ducks, 20 rabbits, and fish. Other facilities consist of: boarding accomodation for 30 people, dining and recreation equipment, and 2 Land Rover cars.

The one year adult education program in agriculture provides a training program consisting of practical experiences, theoretical instructions, and intensive personal guidances. Courses are organized for one year in length from which every six months a new group of trainees starts an enrollment. Two weeks of every course are spent in practical assignment in the farm.

Some requirements are asked for admission:

1. Minimum of junior high school education.
2. Between 20 and 30 years of age.
3. Capable of thinking for themselves, and enthusiastic about farming and social problems.
4. Healthy enough to practice farming.
5. Sent by an organization/individual who is responsible for the

course fees, and guarantees, if not a future job, a continuing agricultural commitment for the trainee on completion of the course.

6. All candidates are selected by KPTT but a selection is expected by the sending agency, particularly in the case of trainees from outside Java.

7. A deposit of 10,000 rupiah = \$ 20.00 (1979: \$ 1.00 = 500 rupiah).

A survey made by Yayasan Purba Danarta mentioned some excellent results of the one year adult education program in agriculture. Between 1965 and 1979 there had been approximately 28 groups with a total number of 339 ex-trainees. These alumni had been spread around the country. The earlier groups of these trainees proved to have very effective results as being pioneer farmers, instructors, or trainers at a slightly lower educational level particularly outside Java. In many areas outside Java it was ex-trainees who were the first trained people, who helped to set up systematic training programs which, having close connection to KPTT Salatiga, created an excellent cooperative "network" around the country.

A Recommended Alternative for Improvement

Trainees attending the program always become the main concern of the administrator. They come to KPTT Salatiga after having passed through a selection. During attending the program, they are expected not only to have enough perseverance and commitment to the whole program but also to be able to achieve as high as possible the main objective.

Based upon the survey made by YPD, there was evidence that the

existing program worked very well. So if an alternative for improvement is recommended, it will deal with the continuous improvement that has been done by the administration. There is no reason to rebuild the existing program. The alternative for improvement as recommended by this study is intended to help the administration in dealing with the achievement of the trainees attending the program. What is recommended to be improved is the learning activities through which the trainees build their learning processes.

There are a couple of improvement strategies available to be used to affect the learning process of adult people without eliminating the existing structure of program. Reinhart (1979) mentioned at least three different strategies available to be used: 1) Infusion Strategy, 2) Interlocking Strategy, and 3) Unifying Strategy. Infusion Strategy might be the most frequently used in program improvement. In dealing with the career education field, Reinhart (1979) explained further that the infusion strategy introduces selected elements into the existing curriculum, continues to fulfill its intended purpose, but with new emphasis and hopefully new meaning for the student.

The infusion strategy is recommended by this study to be adopted by KPTT Salatiga's administration for their program improvement, that will be introduced by this strategy is the selection of learning activities based upon their importance and opportunity for use values as perceived by the trainees, ex-trainees, and instructors toward achieving the main objective. Learning activities perceived by the trainees, ex-trainees, and instructors as more important and having more opportunity for use, need to be emphasized in order to help the learners get more meaning from what they learn. So infusion strategy promotes

all at once the active participation and involvement of the trainees, ex-trainees, and instructors in decision making process in dealing with selecting the learning activities for the coming programs.

Rationale

Individual Learner's Personal Discovery

In relation to the problem of learning, Combs (1967) stated:

The problem of learning, modern psychologists tell us, always involves two aspects. One is the provision of new information or experience; the other has to do with the individual's personal discovery of the meaning of information for him. The provision of information can be controlled by an outsider with or without the cooperation of the learner. It can even be done, when necessary, by mechanical means which do not require a person at all. The discovery of meaning, however, is a quite different matter. This only takes place in people and cannot occur without the involvement of persons in the process. This is the human side of learning (p. 73).

Problems of learning in the case of trainees attending the one year training program at KPTT Salatiga should be traced through the involvement of the two aspects as described by Combs above. From both aspects, the human aspect might be the one which always requires more attention from the administration. At least there are two reasons that need to be considered. One is that the achievement made by an individual trainee depends totally on how far he is able to work in his "self discovery process". The other is that the main objective expected to be achieved assumes that each trainee has potential to be trainer, instructor, or informal leader for the community; and the quality of leader is determined by the innovativeness and the creativeness of the trainee. Innovativeness and creativeness might come more from self-discovery process within the individual person rather than from the provision of enough

information.

One consideration might be that each trainee needs to be accepted and treated as an adult. An adult will learn more from what he discovers as more meaningful. More specifically, the consideration might be referred to the characteristics of adult learners. For such considerations, a statement by Knowles (1973) might be valuable:

I speculate, with support from research that as an individual matures, his need and capacity to be self-directing, to utilize his experience in learning, to identify his own readiness to learn, and to organize his learning around life problems, increases steadily from infancy to pre-adolescence, and then increasingly rapidly during adolescence (p. 43).

It can be said that "the need and capacity to be self-directing" as mentioned by Knowles (1973, p. 43) above, assumes the existence of self-personal discovery process an adult learner.

Selection of Learning Activities

For an adult learner, the learning activities selected by the adult learner himself might be different than those chosen by other people. Hopefully, learning activities selected by trainees, ex-trainees, and instructors would produce more appropriateness, effectiveness, and satisfaction. And they would provide more motivation to the new trainees. A result is expected that the achievement of the new trainees should be higher.

But, the problem now is: "How can the trainees, ex-trainees, and instructors select the learning activities?" Some criteria for selection must be chosen. Szczypkowski (1980) mentioned that there are five criteria for selecting learning activities in adult education programs including:

1. Appropriateness of the activity for the objectives and content of the program.
2. Suitability of the activity for the intended learner group.
3. Effectiveness of the activity in relation to the stage of the adult education program.
4. Satisfactory pacing and variety of learning activities for each session or learning episode.
5. Compatibility with the resource person's teaching or facilitating style.

These five criteria are available to be used for planning a new adult education program. For the purpose of this study, choosing two or three criteria from those five and modifying them as necessary might be prompted. Or, formulating new criteria by using some elements that Szczypkowski developed in his five criteria should be a good alternative.

Two criteria were chosen by this study: 1) the importance of learning activities toward achieving the main objective, and 2) the opportunity for use of the new knowledge, skills, and other innovative abilities as the result of the achievement for further development of communities. The first criteria might have some similarities with the first criteria of Szczypkowski. The second criteria hasn't any similarity at all.

Feeling of Importance and Opportunity

How far does the feeling of importance determine the learning process of adult learner? Combs (1967) expressed his opinion as such:

What we think, what we hear, whom we listen to, even what we see is determined by what we feel is important . . . There is

nothing more desperate than a person who has not decided what is truly important. For when we do not know what is important we climb aboard a dizzy merry-go-round that gets us nowhere (pp. 76-77).

It might be reasonable enough to say that the feeling of importance determines the learning process of an adult learner.

It is a necessity that an adult learner knows what is important to be learned, in order to prevent himself from doing a desperate thing.

How far does the feeling of opportunity for use determine the learning process of adult learner? The feeling of prospective opportunity determines the learning process of the adult learner in the sense that the learning process will go beyond the limitations of the most basic needs toward what Maslow (1971, p. 162) called "self-actualization", toward full functioning of all skills, knowledges, and all other capacities and potentials.

The Interdependent Relation Between Outcomes and Learning Experiences

Evidently, there is a relation between the use of outcomes expected from the program and the value of learning experiences produced by the program. The use of program outcomes and the value of program learning experiences are "interdependent" (Forest, 1976). The more useful the outcomes, the more valuable the program learning experiences. And there is no question that the value of program outcomes varies according to the individual's learning experiences related to the program.

Education provided by KPTT Salatiga is expected to create a kind of lifelong education which should be continued and developed by the

trainees themselves after they finish the program. Such expectation will be real only if the improvement process reflects not only on the real needs of the trainees, but also on the living of the society. Society in Indonesia has been changed quite rapidly. Knowledge and skills known as relevant for living in the past might be not relevant any more.

A slowness of reaction by KPTT Salatiga as an institution involved in adult education programs to the rapid change of the Indonesian society might affect the quality and effectiveness of their program. But, an appropriate reaction can be done only if they can find the link where the program can meet the needs of the society. Hopefully, the link could be found by the trainees in the forms of new abilities and skills they want to have. The administrator may see the link in the form of an interdependent relation between the new abilities and skills and the learning activities through which the new abilities and skills are produced.

As mentioned before, each trainee needs to be accepted and treated as an adult who has need and capacity to be a self-directing learner. It can be assumed that a self-directing learner will direct his learning activities not only for a change within himself but also for a change within his environment and society. Tough (1979, p. 31) stated that "changes in adults are a necessary part of social change: the major problems of society cannot be solved without certain changes in people". On one side, it is clear that the changing society influences the adult learners in choosing their learning activities toward achieving new knowledge and skills. On the other side, it can be said that the changes made by the adult learners within themselves

determine the type and the quality of change within the society.

What Gardner (1964) expressed as his conviction, in dealing with the interrelationship between self-directing learners and the changing society, might be valuable:

Education at its best will develop the individual's inner resources to the point where he can learn (and will want to learn) on his own. It will equip him to cope with unforeseen challenges and to survive as a versatile individual in an unpredictable world. Individuals so educated will keep the society itself flexible, adaptive and innovative (p. 26).

So, there is no doubt that the interdependent relation between outcomes and learning experiences as found within the adult's learning process has deep and far implications within the society. Such implications need to be known quite considerably by the administration in conducting their education for adult learners.

The Prospect of Improvement

Verduin (1967, p. 24) differentiated two kinds of curriculum improvement approaches: "cooperative approach" and "expert approach".

Furthermore, Verduin tried to describe the differences as such:

The differences in approaches to educational change stem from the basic interpretations and orientations to education of the two extremes. The cooperative, advocating cooperative change by professional educators, is oriented towards more modern methods of educating young people, while the more vociferous experts are generally more traditional and subject matter oriented. Since the expert in many cases is a subject matter oriented, the terms 'expert' and 'subject matter expert' are considered synonymous (p. 24).

Based upon the assumption that learning activities organized by KPTT Salatiga, in some particular sense, have been working similarly as a curriculum in public school, it can be said that two different approaches mentioned by Verduin can be applied also in the context

of KPTT Salatiga. The improvement involving trainees, ex-trainees, and instructors might be considered as one of cooperative approach.

What Verduin (1967, p. 24) called "modern method of educating young people" will be the orientation of the cooperative approach as developed by this study. The prospect of the improvement recommended by this study is also toward the application of modern methods of educating the adult learners in the context of KPTT Salatiga. This prospect is attempted to be identified specifically in dealing with the learning activities as such:

1. The learning activities which will produce learning experiences as integrated within the program should be subject to the needs, capacities, and interests of the individual learners and to the demands and requirements that the Indonesian society places on them.

2. Based upon the recognition of individual differences, there is no real need of using strictly standardized learning experiences.

3. The learning experiences must be developed by involving more psychological factors. Internalization of the learning experiences into the individual learners is considered as more proper toward total development of the whole individual personality.

4. "Learning occurs when new concepts, values, and ideas are discovered about experiences which have personal meaning" for the adult learners (Verduin, 1967, p. 27). So, for the adult learners trained at KPTT Salatiga, learning can take place in many various ways. But the effectiveness of such a learning process depends more on the self-discovery of the individual.

Summary

Since the survey conducted by YPD indicated that ex-trainees had done excellent jobs congruent with the main objective, there is no doubt any more that the main objective was formulated adequately to meet people's needs for development. So an improvement was recommended merely focused on how to increase the achievement of the main objective by the trainees through their learning activities.

There is no need for readjustment of the main objective. But there is a real need for a reorganization or reselection of the learning activities by introducing new emphases. To meet this need the "infusion strategy" was chosen.

Rationale was provided especially in dealing with the question of how far the improvement recommended by this study is reasonable enough to be adopted. Such rationale might be emphasized more on exploring the human aspect of the learning problem. Trainees will proceed more if they are treated as adults who have specific characteristics in identifying themselves as learners. Only by being treated as adults will they be more able to make achievement as high as possible toward the main objective.

The fact that "outcomes" and "learning experiences" are related interdependently, will affect the result of the program improvement. A good result can be expected only if the link of these two variables is found within the individual learner's real needs of new knowledge and skills to match the requirements of the changing society.

The prospect of improvement is placed upon developing adult education programs in agriculture which will be more individual oriented.

The learning activities will be subject to the needs, capacities, and interests of the individual learners and to the demands and requirements that the society places on them. Internalization of the learning experiences through active self-discovery process of the individual learner will bring the learner toward total development of his whole personality.

CHAPTER III

METHODOLOGY

The purpose of this chapter is to illustrate the methods used, the procedure followed, the materials selected, the instruments developed, and the sample chosen as required for conducting this study toward meeting its objective.

The methodology of this study was established in a such way that the administration to whom this study was offered would be able to manage certain parts of the accomplishment of this study without any help from the researcher. The selection of respondents, the modification of the questionnaire in order to be formulated clearly, the distribution of the questionnaires, and the acceptance of the answered questionnaires from the respondents had to accomplished by the administration.

What in this study was called administration in reality was KPTT Salatiga's staff consisting of one executive director assisted by five persons as his assistants. The main office of the administration and their apartments for living were located in one area within KPTT Salatiga's complex. Those who were in charge as administrator and had been involved in this study were J. Bentvelzen, S. J. as the executive director, Ir. Pracaya as the coordinator of training in the area of crop farming, G. Soedarso as the coordinator of training in the area of livestock production, Drs. Soedarso and C. Wibowo as the coordinators of curriculum, and M. Sugiyono, S. J. as the supervisor of trainees

living in the complex. Administration and trainees lived together in one area within the complex. The administration had responsibility especially for administering and developing the program.

The Procedure

In general, the basic stages of the research effort can be presented as follows:

1. First information and data about KPTT Salatiga and their one year adult education program in agriculture were requested by the researcher from the administration for the purpose of writing a proposal. The first information and data were sent by the administration on January 15, 1983, and received by the researcher on January 31, 1983.

2. The researcher had the responsibility of writing a proposal, discussing the proposal with the adviser, making refinement until a reasonable proposal was produced.

3. The proposal included the prototype of a questionnaire which was to be translated into Indonesian language before being sent to Indonesia.

4. The prototype of the questionnaire was developed by utilizing the first information and data sent by the administration consisted of two basic concerns. The first was related to the importance value of learning activities as perceived by trainees, ex-trainees, and instructors toward achieving the main objective. The second was related to the opportunity of using new knowledge, skills, and other innovative abilities for developing local community as perceived by trainees, ex-trainees, and instructors.

5. The administration reviewed the questionnaire for its

appropriateness and its clarity before sending to the respondents.

6. In order to make the instrument more appropriate and clear, the administration was allowed to make necessary modifications.

7. The researcher was responsible for conducting the main parts of the study: constructing the proposal, forming the prototype of questionnaire, collecting data, analysing data, and sending the final report to the administration.

Activities Rated

Learning activities experienced by trainees attending the program were chosen as the materials to be rated. These learning activities were divided into groups as used by the administration: 1) Group of learning activities providing practical experiences, 2) Group of learning activities providing theoretical knowledge, 3) Group of learning activities involving personal guidance.

Ratings by the three groups of respondents indicated the value of importance and the opportunity of prospective usefulness of the learning activity.

The Rating System

Rating, according to Grotelueschen (1976, p. 77) "refers to the assignment of a value to an object, idea, perception or event, using some kind of scale based on some set of standard, which is either explicit or implicit to the rater". Standards used by this study in developing the rating instrument might be more implicit rather than explicit to the respondents as the raters. In order that the raters would be helped in making their judgments, a statement was offered as

an introduction for each question to indicate the type of judgment asked from a rater.

Van Dalen (1979, p. 144) stated that "no established rule governs the number of units that should be placed on a scale". So the number of units could be three or eleven. But, Van Dalen (p. 144) reminded that "having too few categories tends to produce crude measures that have little meaning, and having too many categories makes it difficult for the rater to discriminate between one step and the next on the scale".

This study used seven numbers in its rating scale. Hopefully, by providing seven numbers of choice, the rater would be more able to make his judgment in a relatively accurate way.

For rating importance value, number 1 means "less important", while number 7 means "very important". For rating opportunity for use value, number 1 means "less opportunity", while number 7 means "much more opportunity".

As a descriptive research this study tends to be developed as a case study rather than as a survey study. A case study is "narrower in scope" but "more exhaustive and more qualitative nature" than a survey (Van Dalen, 1979, p. 295). Consequently, a case study must provide more insight than a survey. In order to get more insight from this study in an easier way, it was decided that the findings would be displayed in a form which would permit comparison of ratings on each learning activity for both importance and opportunity.

There might be a condition that a significance of difference would be found among the perceptions of the three different groups of respondent: trainees, ex-trainees, and instructors. To find whether there was a significance of difference, Analysis of Variances (ANOVA) Test was

considered as the most appropriate statistical test to be used. Such condition needs to be shown in the presentation of the findings.

Groups of Respondents

A survey made by YPD showed that a cooperative "network" de-facto had been established throughout the country. Through this network KPTT Salatiga had a great chance to keep contact with the ex-trainees. Furthermore, the survey mentioned that "this network has encouraged substantial amounts of creativity, dynamism, openness to new possibilities", (YPD, 1979, p. 25). Since a network was established, more effort is needed to strengthen the network, in order to be more influential and powerful.

This study did choose the perceptions of ex-trainees, trainees, and instructors, to introduce new emphases into the existing program. Involving the ex-trainees in this program improvement will strengthen the network of cooperation which exists. There is no doubt that the ex-trainees have capabilities enough for helping KPTT Salatiga to improve their program. These ex-trainees have had a lot of experiences. They are ready to give contribution to their former "alma mater".

In order to know why the three groups of respondent: trainees, ex-trainees, and instructors were chosen to give their perceptions, these considerations need to be recognized:

1. New emphases supported by trainees, ex-trainees, and instructors would be more acceptable than those supported by one group for example the trainees. These new emphases would be easier to be infused into the existing program.

2. Leadership at administration level must be concerned also with

the expansion of the network and the expansion of the whole group. Involving trainees as well as ex-trainees and instructors manifests the involvement of the whole group into a broader network.

3. In reality the administration needs also to enjoy "some freedom to decide what will the emphases be and how will they be decided" (Grotelueschen, 1976, p. 71). Having perceptions of trainees, ex-trainees, and instructors the administration will enjoy more freedom as provided by the more sources of information.

4. Infusing new emphases in the existing program in a "deliberate and continuous process" (Reinhart, 1979, p. 79). In such kind of resource persons and groups involved, if the program improvement is intended to go in the expected direction.

5. The main objective, as far as it functions to express the type of contribution that could be expected from KPTT Salatiga, still has strong influence, only if it is supported by the whole group. In dealing with the mission of KPTT Salatiga, the trainees, ex-trainees, and instructors are expected to give their support. Consequently, new emphases which will produce new strategy toward achieving the main objective and toward accomplishing the mission, will require the same support from the trainees, ex-trainees, and instructors.

These three groups of respondents had to be chosen by the administration. Recommendations were given by the researcher. Trainee respondents would be consisted of all trainees who are currently attending the program. Instructor respondents would be consisted of those who are currently functioning as instructors.

A sample had to be chosen representing the ex-trainee group.

How to determine the size of sample in order that it would be adequate enough to be accepted as a representative sample? In general, three factors determine the size of an adequate sample: the nature of populations, the type of investigation, and the degree of precision desired. In descriptive research, a sample of 10 to 20 percent of the population is often used (Van Dalen, 1979). Considering the limitations that the researcher had, especially in selecting the sample design that would provide the desired precision, the researcher decided to follow just what is often used. He took 10 percent of ex-trainee population as the size of sample in hope that this size would be adequate enough to be a representative sample.

In the case of this study, of which purpose was to help KPTT Salatiga's administration in conducting a program improvement by utilizing the perceptions of trainees, ex-trainees, and instructors, the administration might need a kind of freedom to choose from ex-trainee population those who would be representative enough as sample. So, instead of using "probability sample", it would be more proper for the administration to use "non probability sample" in the form of purposive sampling. According to Kerlinger (1973, p. 129) purposive sampling is "characterized by the use of judgment and a deliberate effort to obtain representative samples by including presumably typical areas or groups in the sample".

In using purposive sampling, it was available for the administration to choose the ex-trainee sample including the size of the sample based upon their own judgment. But, it would be more safe, if the administration took 10 percent of the ex-trainee population as the size of sample. For such purpose, the researcher recommended to use data

collected by the survey made by YPD as a base for dividing the ex-trainee population into typical groups. The typical groups would consist of ex-trainees who were teachers (44 %), ex-trainees who were farmers or agricultural extension workers (30 %), ex-trainees who were members of religious orders (12 %), ex-trainees who were civil servants (8 %), and ex-trainees who developed other careers (6 %). In fact, the purposive sample in this study was taken proportionally according to the typical groups as existing now.

The whole group of respondents recommended by the researcher were 99 persons consisting of 32 trainees, 50 ex-trainees, and 17 instructors. The ex-trainee population was estimated by the researcher about 500 persons. A sample of 50 ex-trainees was considered adequate enough to represent the whole population of ex-trainees. The 99 respondents can be divided as follows:

I. TRAINEES:

- A. Training group July 1982 - June 1983 : 19 persons
- B. Training group January 1983 - December 1983 : 13 persons

II. EX-TRAINEES:

- A. Teachers (44 %) : 22 persons
- B. Farmers or extension workers (30 %) : 15 persons
- C. Members of religious orders (12 %) : 6 persons
- D. Civil servants (8 %) : 4 persons
- E. Other careers (6 %) : 3 persons

III. INSTRUCTORS:

- A. Full-time instructors : 7 persons
- B. Part-time instructors : 10 persons

Total : 99 persons

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

Introduction

The purpose of this chapter is to describe the perceptions of trainees, ex-trainees, and instructors concerning the learning activities provided at KPTT Salatiga. The first value is the importance value of the learning activities providing practical experiences, those providing theoretical knowledge, and those involving personal guidance, as three groups of learning activity toward achieving the main objective. The second value is the opportunity of using new knowledge, skills, and abilities from the three groups of learning activity mentioned above for the need of developing local community.

The first section of this chapter describes the background and general characteristics of the three groups of respondents. The second section describes the responses as given by the respondents. The third section presents the data collected from the respondents.

Background and General Characteristics of the Respondents

Respondents were chosen by the administrator using a purposive sampling technique. It was recommended by this study to choose 99 persons in the following pattern: trainees = 32 persons; ex-trainees = 50

persons; and instructors = 17 persons. The administrator chose 90 respondents consisting of 32 trainees, 50 ex-trainees, and 8 instructors. Table I illustrates the number and composition of respondents.

TABLE I
THE NUMBER AND COMPOSITION OF RESPONDENTS

Groups of Respondent	Recommen- ded by researcher N	Chosen by the admi- nistrator N	Those who returned the questionnaires N	%
I. TRAINEES:				
A. Training Group 1982/1983	19	19	18	95.00
B. Training Group 1983	13	13	13	100.00
II. EX-TRAINEES:				
A. Teachers	22	22	11	50.00
B. Farmers or Agricultural Extension Workers	15	15	11	73.33
C. Members of Religious Orders	6	6	4	66.67
D. Civil Servants	4	4	3	75.00
E. Others	3	3	3	100.00
III. INSTRUCTORS:				
A. Full-Time Instructors	7	6	6	100.00
B. Part-Time Instructors	10	2	2	100.00
T o t a l	99	90	71	78.89

Table I shows that 78.89 percent of the chosen respondents returned the completed questionnaires. Most of those who didn't return the questionnaires were respondents from ex-trainee group. Ex-trainee

respondents who were teachers were represented only by a 50 percent response rate. Members of religious orders were represented by a 66.67 percent response rate. Farmers or agricultural extension workers were represented by a 73.33 percent response rate. The other group were better represented by a 75.00 percent and more response rate.

The questionnaire was designed to obtain personal information from each individual respondent concerning age, present occupation, connection with KPTT Salatiga, and perceptions toward learning activities experienced by each trainee during attending the program. Unfortunately, not all respondents who returned the questionnaires gave complete answers. Some learning activities were omitted.

Table II shows the distribution of trainee and ex-trainee respondents by age. Most of the trainees attending the program this year were from 20 to 24 year group. The fact that there were also 9 trainees who were less than 20 years old and more than 30 years old indicates that the requirement of age between 20 and 30 years for admission had a kind of flexibility. The ages of ex-trainee respondents as shown by Table II range from 20 years to over 50 years.

Table III shows the distribution of ex-trainee respondents by the year of their attending the program. Most of them attended the program as trainees between 1970 and 1980. Two respondents didn't give information concerning the year they attended the program.

Eight instructors were chosen as respondents. Their experiences as instructors ranged from 1.50 years to 16 years. As shown by Table IV, most of them had experiences as instructors at KPTT Salatiga for less than 10 years.

TABLE II
DISTRIBUTION OF TRAINEE AND EX-TRAINEE RESPONDENTS
BY AGE

Age (years)	Trainees		Ex-Trainees	
	N	%	N	%
15 - 19	5	16.13	0	0.00
20 - 24	15	48.39	5	15.62
25 - 29	7	22.58	7	21.87
30 - 34	3	9.67	6	18.75
35 - 39	1	3.23	4	12.50
40 - 44	0	0.00	6	18.75
45 - 49	0	0.00	2	6.25
50 and over	0	0.00	1	3.12
No response	0	0.00	1	3.12
T o t a l	31	100.00	32	100.00

TABLE III
DISTRIBUTION OF EX-TRAINEE RESPONDENTS BY YEAR OF
THEIR ATTENDING KPTT SALATIGA'S ONE YEAR PRO-
GRAM

Year of attending the program	Ex-Trainee Respondents	
	N	%
After 1980	10	31.25
1970 - 1980	13	40.62
Before 1970	7	21.87
No response	2	6.25
T o t a l	32	100.00

TABLE IV
DISTRIBUTION OF INSTRUCTOR RESPONDENTS BY LENGTH
OF EXPERIENCE AS INSTRUCTORS

Length of experience as instructors in years	Instructor Respondents	
	N	%
1 - 4	3	37.50
5 - 9	3	37.50
10 - 14	1	12.50
15 and over	1	12.50
T o t a l	8	100.00

Rating as Made by the Respondents

Each respondent was asked to rate every learning activity as to its importance and opportunity values. There were 61 items representing units of learning activity which had to be rated. Not all items were rated completely. There were a number of items which were not rated by the respondents. Table V summarizes. The 61 items were relatively better rated in dealing with their importance value than in dealing with their opportunity value. It can be reported that there was one trainee respondent who failed to rate the whole 61 items in dealing with the opportunity value. In the other part, there was one item which was not rated by 12 respondents in terms of its opportunity value. This item concerns the learning activity providing practical experience in the form of village exposure experience. The 12 respondents who failed

to rate the item were trainees.

TABLE V
NUMBER OF ITEMS NOT RATED BY THE RESPONDENTS

Items not rated	Importance Value		Opportunity Value	
	N	%	N	%
None	49	80.33	0	0.00
1	11	18.03	15	24.59
2	1	1.64	19	31.14
3	0	0.00	20	32.79
4	0	0.00	4	6.56
5	0	0.00	2	3.26
More than 5	0	0.00	1	1.64
T o t a l	61	100.00	61	100.00

Perceptions of Respondents as to Importance Value
and Opportunity Value of Learning Activities

In the following section, data collected about the perceptions of trainees, ex-trainees, and instructors toward the learning activities are presented in such a way that attention can be focused on each individual learning activity as well as on each group of the learning activities. The 61 units of learning activity are divided into 3 different groups: 1) the group providing practical experiences, 2) the group providing theoretical knowledge, and 3) the group involving personal

guidance. The first group consisted of 23 units. The second group consisted of 28 units. The third group consisted of 10 units.

The first group and the second group were divided into subgroups. The subgrouping was made by the researcher to systematize the unit within each group.

Learning Activities Providing Practical Experiences

The importance value of each learning activity within this group is presented in Table VI in the form of mean rating by each group of respondents and then these are compared to combined group means. The rank as shown in this table is based on the calculated mean of the combined group.

The ranking has a special purpose to indicate which of the learning activities needs to be emphasized more than the others. The top rank or rank 1 was "Making Compost". Rank 2 was "Planting Rice", followed by "Raising Chickens", "Planting Vegetables", and "Village Exposure Experience" in that order. The following others can be seen from the table. The lowest ranked item was "Planting Cacao Trees".

It seems that the subgroup associated with village exposure rated higher in terms of importance value than any other subgroup included in this group. Those learning activities related to planting specific commodities with the exception of the learning activity "Planting Cacao Trees" were rated next highest, then followed by those related to raising livestock, poultry and fish, and those related to specific experiences.

As far as the rating scales range from 1 to 7, the rating 3.50

TABLE VI

THE IMPORTANCE VALUE OF LEARNING ACTIVITIES PROVIDING PRACTICAL EXPERIENCES AS
PERCEIVED BY TRAINEES, EX-TRAINEES, AND INSTRUCTORS

Learning Activities	Trainees	Mean Response By Ex-Trainees	Mean Response By Instructors	Group Combined	Rank
1. Planting Specific Commodities:					
A. Vegetables	5.81	6.00	6.25	5.94	4
B. Fruit Plants	5.74	5.34	5.62	5.55	8
C. Second Crops Planted After Rice	5.52	5.62	6.25	5.65	6
D. Rice	6.16	6.25	6.75	6.27	2
E. Coffee	5.23	5.09	5.25	5.17	11
F. Citrus	5.32	5.06	5.25	5.20	10
G. Clove	5.10	5.39	5.37	5.23	9
H. Cacao	2.35	2.93	3.50	2.74	23
I. Ornamental Plants	3.93	4.16	3.50	3.98	18
J. Coconut	5.23	5.03	5.37	5.15	12
2. Raising Livestock, Poultry & Fish:					
K. Chicken	6.35	6.12	6.25	6.24	3
L. Duck	3.13	4.53	4.25	3.89	21
M. Swine	4.81	4.50	4.62	4.65	15
N. Sheep	3.51	4.00	4.62	3.86	22
O. Rabbit	3.58	4.69	5.37	4.28	17
P. Cattle	5.07	4.78	5.87	5.03	13
Q. Fish	3.90	4.66	4.50	4.31	16
3. Specific Experiences:					
R. Seedling	5.32	5.81	5.87	5.60	7
S. Making "Bordeaux" Partridge	3.39	4.28	4.62	3.93	19
T. Making "California" Partridge	3.42	4.34	4.12	3.91	20
U. PH Soil Test	4.00	5.56	3.75	4.68	14
V. Making Compost	6.32	6.47	6.25	6.38	1
4. Village Exposure:					
W. Village Exposure Experience	5.70	6.09	6.00	5.91	5

can be utilized as a kind of "balance point" based upon which the perceptions of respondents can be specified. It means that a learning activity having point less than 3.50 can be specified as having perception tending toward "less important", while the other one having point more than 3.50 can be specified as having perception tending toward "very important". From 23 learning activities providing practical experiences there was only 1 learning activity which was rated less than 3.50. The "Planting Cacao Trees" learning activity had only 2.74 which can be specified as having perception tending toward "less important". The 22 other learning activities had ratings of more than 3.50. They can be specified as having perceptions tending toward "very important". These units' ratings ranged from 3.86 to 6.38.

The instructor group tended to rate higher than the combined group. From 23 units of learning activity, 19 units were rated higher by the instructor group as shown by their rating means compared to those of the combined group. The trainee group rated lower than the combined group. For them, of 23 units, 14 units were rated lower by the trainee group as compared to those rated by the combined group.

The opportunity for use value of each learning activity providing practical experiences is presented in Table VII. As in the previous table, the rank as shown in this table is based on the calculated mean of the combined groups.

Table VII shows that the combined group of respondents felt they had the greatest opportunity to use the new knowledge, skills, and abilities from the "Raising Chicken" learning activity. Ranked second through fifth respectively were "Planting Rice", "Planting Vegetables", "Making Compost", and "Planting Fruit Plants". The lowest rank

TABLE VII

THE OPPORTUNITY FOR USE VALUE OF LEARNING ACTIVITIES PROVIDING PRACTICAL EXPERIENCES AS
PERCEIVED BY TRAINEES, EX-TRAINEES, AND INSTRUCTORS

Learning Activities	Trainees	Mean Response By Group			Rank
		Ex-Trainees	Instructors	Combined	
1. In Planting Specific Commodities:					
A. Vegetables	5.83	5.34	5.25	5.54	3
B. Fruit Plants	5.97	4.84	4.75	5.31	5
C. Second Crops Planted After Rice	5.33	5.16	5.50	5.27	6
D. Rice	5.63	5.97	5.50	5.77	2
E. Coffee	3.93	4.78	4.25	4.36	13
F. Citrus	5.27	4.77	4.37	4.94	9
G. Clove	4.40	4.57	4.50	4.48	11
H. Cacao	2.07	2.61	3.12	2.43	23
I. Ornamental Plants	4.60	3.75	3.00	4.03	15
J. Coconut	5.60	4.50	4.87	5.01	7
2. Raising Livestock, Poultry & Fish:					
K. Chicken	6.20	5.53	5.87	5.85	1
L. Duck	3.07	3.91	4.12	3.57	19
M. Swine	4.67	3.91	4.12	4.26	14
N. Sheep	3.90	4.00	4.37	4.00	17
O. Rabbit	3.30	4.56	4.62	4.03	15
P. Cattle	4.38	4.59	4.37	4.48	11
Q. Fish	3.07	3.93	3.87	3.57	19
3. Specific Experiences:					
R. Seedling	4.57	4.97	4.87	4.78	10
S. Making "Bordeaux" Partridge	3.20	4.06	3.62	3.64	18
T. Making "California" Partridge	3.03	3.84	3.50	3.46	22
U. PH Soil Test	3.29	4.12	2.25	3.51	21
V. Making Compost	4.40	6.22	5.75	5.38	4
4. Village Exposure:					
W. Village Exposure Experience	4.15	5.35	5.37	4.95	8

was "Planting Cacao Trees".

With the exception of the learning activity "Planting Cacao Trees", the subgroup of learning activity units associated with planting specific commodities, beside the smallest subgroup village exposure, was rated higher in terms of opportunity for use value than any other subgroup of learning activities included in this group. Those learning activities related to raising livestock, poultry and fish as a subgroup were rated next highest in terms of opportunity for use value.

Table VII shows that there were 2 learning activities which had combined mean responses of less than 3.50: "Planting Cacao Trees" and "Making 'California' Partridge". These two kinds of learning activity were perceived by the respondents as being in use categories which were below the mid-point of the scale. The 21 other learning activities having means of more than 3.50, can be specified as tending toward opportunity for use.

Variability of perceptions within this group was considered quite great as the perceptions ranged from 2.43 to 5.85.

In dealing with the opportunity for use value, the ex-trainee group tended to perceive higher than the combined groups. From the 23 units of learning activity, there were 14 units which were rated higher by the ex-trainee group compared to those rated by the combined groups. The trainee group tended to perceive lower than the combined groups as it was shown by the fact that from 23 units there were 15 units which were rated lower by the trainee group compared to those rated by the combined groups.

In dealing with both values: importance value and opportunity for use value, there is no significance of difference among the perceptions

of the three different groups of respondent. This statement is based on statistical analysis of the calculated means of the three groups of respondent by using an Analysis of Variance (= ANOVA) Test. As shown by Table VIII, F calculated from the two value measurements of the 23 learning activities are less than F table.

TABLE VIII

TEST OF SIGNIFICANCE OF DIFFERENCE AMONG PERCEPTIONS OF THE
THREE GROUPS OF RESPONDENT TOWARD LEARNING ACTIVITIES
PROVIDING PRACTICAL EXPERIENCES

Values as perceived by the respondents	Average Mean Response by Group of Respondent			Test of F calcu- lated
	Train- ees	Ex-Train- ees	Instruc- tors	
Importance Value	4.739	5.074	5.183	1.241 N.S. *)
Opportunity Value	4.342	4.577	4.426	0.353 N.S. *)

*) N.S. = No Significance in using F .99 and F .95

Learning Activities Providing Theoretical Know- ledge

Data collected related to this group were presented in a similar way as done for the previous group. Table IX shows the data in dealing with the importance value.

From the rank shown in Table IX, it can be said that respondents

TABLE IX

THE IMPORTANCE VALUE OF LEARNING ACTIVITIES PROVIDING THEORETICAL KNOWLEDGE
AS PERCEIVED BY TRAINEES, EX-TRAINEES, AND INSTRUCTORS

	Mean Response By Group					
	Trainees	Ex-Trainees	Instructors	Combined		Rank
1. Agriculture in General:						
A. Botany	4.55	5.53	4.87	5.03		21
B. Pest & Disease	6.63	6.72	6.00	6.60		2
C. Irrigation	5.77	5.87	5.50	5.84		11
D. Climate	5.68	5.31	5.50	5.42		17
E. Soil & Fertility	6.19	6.22	6.12	6.28		4
F. Farming in General	5.90	6.25	6.12	6.08		9
2. Specific Commodities:						
G. Staple Crops	6.58	6.69	6.62	6.63		1
H. Vegetables	5.77	6.06	6.50	5.98		10
I. Fruit Plants	5.71	5.50	6.12	5.66		14
J. Commercial Commodities	4.03	5.09	5.25	4.65		22
K. Tobacco	3.13	4.19	4.87	3.81		27
L. Sugar Cane	2.74	3.87	4.25	3.42		28
M. Spices	3.84	4.34	4.50	4.08		24
N. Fibrous Plants Producing Oil	4.10	3.59	4.12	3.87		26
O. Ornamental Plants	3.97	4.31	3.62	4.08		25
3. Livestock, Poultry & Fish:						
P. Large Livestock	5.10	5.84	5.87	5.52		16
Q. Small Livestock	5.00	5.72	5.25	5.35		19
R. Poultry	5.45	5.97	5.25	5.75		13
S. Fish	3.73	4.84	4.75	4.35		23
4. Agricultural Development:						
T. Agricultural Laws	4.81	5.59	4.62	5.14		20
U. Civics	6.38	6.03	5.50	6.11		8
V. Rural Development	6.39	6.34	6.25	6.35		3
W. Agricultural Extension	6.13	6.28	5.75	6.15		6
X. Organization	5.81	5.41	5.37	5.58		15
Y. Communication	5.93	5.87	5.12	5.82		12
Z. Agricultural Economics	6.13	6.12	6.12	6.13		7
AA. Book Keeping	5.26	5.34	5.12	5.36		18
5. Person Development:						
BB. Personality & Character Building	6.16	6.25	6.62	6.25		5

perceived the learning activity dealing with "Staple Crops" as the most important learning activity within this group. Then it was followed by other learning activities such as: "Pest & Disease", "Rural Development", "Soil & Fertility", and "Personality & Character Building" which ranked from two to five in that order. From the 28 learning activities included in this group, the least important one as perceived by the respondents was "Sugar Cane".

Subgroup 5 dealing with personal development and consisting of only one learning activity can be said as having been rated higher than any other subgroup within this group. About the four other subgroups, it can be said that by giving exception to "Staple Crops", the subgroup of learning activities in dealing with specific commodities was rated relatively lower than any other subgroup within this group.

Table IX shows another evidence that the learning activity perceived as the least important within this group is the only one which had combined mean response of less than 3.50. The 27 other learning activities having means of more than 3.50, can be specified as being perceived as more important.

In dealing with the importance value, the ex-trainee group tended to perceive higher than the two other groups. From the 28 learning activity units, 15 units were rated higher by the ex-trainee group than by the combined groups. The trainee group indicated lower perceptions than those of the two other groups. From the 28 learning activity units, 20 units were rated lower by the trainee group than by the combined groups.

The opportunity for use value of each learning activity providing theoretical knowledge is presented in Table X. Data in this table were arranged similarly to those in the previous table.

TABLE X

THE OPPORTUNITY FOR USE VALUE OF LEARNING ACTIVITIES PROVIDING THEORETICAL KNOWLEDGE AS PERCEIVED BY TRAINEES, EX-TRAINEES, AND INSTRUCTORS

Learning Activities	Mean Response By Group				Rank
	Trainees	Ex-Trainees	Instructors	Combined	
1. Agriculture in General:					
A. Botany	3.93	4.22	3.62	4.03	21
B. Pest & Disease	5.57	5.64	5.12	5.55	5
C. Irrigation	4.51	4.93	4.50	4.78	17
D. Climate	4.86	4.45	3.87	4.55	19
E. Soil & Fertility	5.62	5.64	4.75	5.53	6
F. Farming in General	5.90	5.42	5.50	5.63	4
2. Specific Commodities:					
G. Staple Crops	6.27	6.16	5.87	6.17	1
H. Vegetables	5.67	5.19	5.87	5.48	7
I. Fruit Plants	5.00	4.77	5.12	4.91	16
J. Commercial Commodities	3.38	4.19	4.25	3.85	22
K. Tobacco	2.57	3.26	3.37	2.97	27
L. Sugar Cane	2.30	3.26	3.12	2.83	28
M. Spices	3.60	3.58	3.62	3.59	25
N. Fibrous Plants Producing Oil	3.34	3.13	3.25	3.23	26
O. Ornamental Plants	3.70	4.97	3.75	3.83	23
3. Livestock, Poultry & Fish:					
P. Large Livestock	5.90	5.00	4.37	5.32	9
Q. Small Livestock	4.93	5.32	5.25	5.15	12
R. Poultry	5.10	5.13	5.00	5.10	14
S. Fish	3.24	4.21	4.00	3.76	24
4. Agricultural Development					
T. Agricultural Laws	4.07	4.29	3.87	4.14	20
U. Civics	5.11	5.22	4.12	4.97	15
V. Rural Development	5.87	5.71	5.37	5.74	3
W. Agricultural Extension	5.40	5.55	5.12	5.43	8
X. Organization	5.00	5.42	5.12	5.20	11
Y. Communication	5.00	5.26	5.00	5.11	13
Z. Agricultural Economics	5.24	5.22	5.12	5.22	10
AA. Book Keeping	4.79	4.77	4.50	4.75	18
5. Person Development:					
BB. Personality & Character Building	5.96	5.68	6.12	5.85	2

Variability of perceptions within this group ranged from 3.42 to 6.63.

From the rank shown in Table X, it can be indicated that the respondents perceived the learning activity "Staple Crops" as having the most opportunity for use within this group. It was followed by "Personality & Character Building", "Rural Development", "Farming in General", and "Pest & Disease" which ranked from two to five respectively. From the 28 learning activity units, "Sugar Cane" was the one perceived lowest by the respondents in dealing with its opportunity for use value.

The subgroup relating to personal development can be categorized as having been rated higher than any other subgroup. It is evident that with the exception of "Staple Crops", the subgroup of learning activities dealing with specific commodities was rated lower than any other subgroup within this group.

There were three learning activities which had combined mean responses of less than 3.50; those dealing with specific commodities like "Sugar Cane", "Tobacco", and "Fibrous Plants Producing Oil". These three learning activities can be specified as having less opportunity for use. The 25 others can be specified as having more opportunity as far as they had combined mean responses of more than 3.50.

It is interesting to notice that in dealing with the opportunity for use value, the instructor group indicated lower perceptions compared to the two other groups. From the 28 learning activity units, 18 units were rated lower by the instructor group than by the combined groups. The ex-trainee group tended to perceive higher than the two other groups. From 28 units, 17 units were rated higher by the ex-trainee group than

by the combined groups.

Variability of perceptions within this group ranged from 2.83 to 6.17.

As shown by Table XI, there was no significance of difference among the perceptions of the three groups of respondents, as far as the perceptions were related to learning activities within this group. ANOVA Test shows that F values calculated from two value measurements of the 28 learning activities are less than F table.

TABLE XI

TEST OF SIGNIFICANCE OF DIFFERENCE AMONG PERCEPTIONS OF THREE
GROUPS OF RESPONDENTS TOWARD LEARNING ACTIVITIES
PROVIDING THEORETICAL KNOWLEDGE

Values as perceived by the respondents	Average Mean Response by Group of Respondent			Test of F calcu- lated
	Train- ees	Ex-Train- ees	Instruc- tors	
Importance Value	5.246	5.541	5.412	0.727 N.S. *)
Opportunity Value	4.708	4.842	4.591	0.523 N.S. *)

*) N.S. = No Significance in using F .99 and F .95

Learning Activities Involving Personal Guidance

As shown by Table XII, this group had only 10 learning activity units. All units were rated highly by the respondents. Most of these

TABLE XII

THE IMPORTANCE VALUE OF LEARNING ACTIVITIES INVOLVING PERSONAL GUIDANCE AS PER-
CEIVED BY TRAINEES, EX-TRAINEES, AND INSTRUCTORS

Learning Activities	Mean Response By Group				Rank
	Trainees	Ex-Trainees	Instructors	Combined	
A. Cooperation in Work	6.58	6.12	6.25	6.34	2
B. Control & Discipline in Using Time	6.45	6.53	6.50	6.49	1
C. Creativeness in Work	6.06	6.12	6.12	6.10	5
D. Increasing Abilities Continually	6.29	6.06	6.25	6.18	4
E. Getting Broader Knowledge in Agriculture Through Reading Activities	6.10	5.75	6.00	5.93	8
F. Leadership in Agriculture	6.23	6.03	5.87	6.10	5
G. Active Participation & Involvement	6.10	5.69	5.75	5.87	10
H. Courage in Inquiring	6.13	6.75	5.37	6.32	3
I. Courage in Trying	6.13	6.03	5.62	6.03	6
J. Courage in Speaking, in Making Choice and Self Decision	6.03	5.94	5.87	5.97	7

units were rated higher than 6.00 by all groups of respondents.

As a matter of fact, this group shows quite different picture of perception compared to the two previous groups. All learning activities within this group were perceived "very important" by the respondents.

Among the 10 learning activity units, the one titled "Control & Discipline in Using Time" was the most important unit. It was followed closely by "Cooperation in Work", "Courage in Inquiring", "Increasing Abilities Continually", and "Creativeness in Work". The lowest rank was occupied by the learning activity "Active Participation & Involvement".

It is interesting to notice that the trainee group rated the learning activities within this group higher compared to the two other groups. Such thing can be indicated from the fact that seven units from the whole 10 units were rated higher by the trainee group compared to those rated by the combined group. The two other groups: the instructor group and the ex-trainee group rated the learning activities within this group almost at the same level.

Variability among the perceptions within this group was considered small, as far as the perceptions by the combined group ranged from 5.87 to 6.49.

Table XIII shows that no learning activity was rated by the combined groups as well as by each group higher than 6.00. And yet, almost all learning activities were rated higher than 5.00 in terms of opportunity for use.

As a result, the variability among the perceptions within this group in terms of opportunity for use, was considered very small for

TABLE XIII

THE OPPORTUNITY FOR USE VALUE OF LEARNING ACTIVITIES INVOLVING PERSONAL GUIDANCE AS PER-
CEIVED BY TRAINEES, EX-TRAINEES, AND INSTRUCTORS

Learning Activities	Mean Response By Group				Rank
	Trainees	Ex-Trainees	Instructors	Combined	
A. Cooperation in Work	5.89	5.50	5.87	5.62	6
B. Control & Discipline in Using Time	5.61	5.87	5.62	5.73	2
C. Creativeness in Work	5.68	5.66	5.62	5.66	5
D. Increasing Abilities Continually	5.68	5.81	5.12	5.68	4
E. Getting Broader Knowledge in Agriculture Through Reading Activities	5.21	5.16	4.75	5.13	10
F. Leadership in Agriculture	5.43	5.42	5.37	5.42	9
G. Active Participation & Involvement	5.25	5.59	5.62	5.45	8
H. Courage in Inquiring	5.50	5.59	4.87	5.47	7
I. Courage in Trying	5.71	5.93	5.12	5.75	1
J. Courage in Speaking, in Making Choice and Self Decision	5.71	5.75	5.50	5.70	3

the perceptions ranged only from 5.13 to 5.75.

The learning activity "Courage in Trying" was perceived by the respondents as having the most opportunity within this group. Then, it was followed closely by "Control & Discipline in Using Time", "Courage in Speaking, in Making Choice and Self Decision", "Increasing Abilities Continually", and "Creativeness in Work". "Getting Broader Knowledge in Agriculture Through Reading Activities" was perceived by the respondents as having the least opportunity within this group.

The ex-trainee group rated the learning activities within this group relatively higher than the two other groups. At least, there were seven learning activities which were rated higher by the ex-trainee group than by the combined groups. The instructor group rated the learning activities within this group lower than the two other groups. From 10 learning activity units, 8 units were rated lower by the instructor group as compared to those rated by the combined groups.

TABLE XIV

TEST OF SIGNIFICANCE OF DIFFERENCE AMONG PERCEPTIONS OF
THREE GROUPS OF RESPONDENTS TOWARD LEARNING AC-
TIVITIES INVOLVING PERSONAL GUIDANCE

Values as perceived by the respondents	Average Mean Response by Group of Respondent			Test of F calcu- lated
	Train- ees	Ex-Train- ees	Instruc- tor	
Importance Value	6.210	6.102	5.960	1.889 N.S. *)
Opportunity Value	5.567	5.628	5.346	2.817 N.S. *)

*) N.S. = No Significance in using F .99 and F .95

ANOVA Test applied related to the two values: importance value and opportunity for use value within this group, indicated that there was no significance of difference among the perceptions of the three groups of respondents. As shown by Table XIV, F value calculated from the two value measurements of the 10 learning activity units are less than F table.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of this chapter is to present summaries of the following topics: the purpose of the study, the basic rationale for the study, the design of the study, and the major findings of the study. Through a detailed exploration of these topics, conclusions and recommendations will be presented based upon the analysis of the data.

Purpose of the Study

The primary purpose of this study was to identify the perceptions of the trainees, the ex-trainees, and the instructors toward learning activities as provided by KPTT Salatiga in their one year adult education program in agriculture. Knowing such perceptions the administrators would be served in their effort to administer a continuous improvement to help the trainees in increasing the achievement of their learning processes.

Rationale of the Study

Trainees attending the one year program are expected not only to have enough perseverance and commitment to the program but also to be able to achieve the expected outcomes formulated in the main objective. Improvement recommended by this study refers to the learning activities

through which the trainees build their learning processes to achieve the main objective.

Learning activities to which were accorded higher values by the respondents need to be emphasized in order for the learners to obtain more meaning from what they learn. Through a "self-discovery process" the learners would be able to get more meaning from what is learned.

Two variables were explored for improvement purposes: 1) the importance of the learning activities, and 2) the opportunity of using the new knowledge, skills, and other innovative abilities as a result of attending the program for developing the local community.

So the research was conducted to determine how the respondents, consisting of three different groups (trainees, ex-trainees, and instructors) perceived the two variables mentioned above. Three groups of respondents were chosen in order to fulfill the need of strengthening the network, the availability of the ex-trainees' experiences, the required flexibility and freedom for the administrator, and the support needed for carrying KPTT Salatiga's mission to develop agriculture in Indonesia.

Design of the Study

This study was designed in a such way that the KPTT Salatiga's administration would be able to manage certain parts of this study without help from the researcher. These parts included the selection of respondents, the modification of questionnaire for clarity, the distribution of the questionnaires, the acceptance of the completed questionnaires from the respondents, and the return of the completed questionnaires.

Trainee respondents consisted of the trainees who were still attending the program. Ex-trainee respondents consisted of those chosen by the administration using a purposive sampling method. Instructor respondents consisted of those who were still active as instructors.

To obtain a representative sample from ex-trainee population, the administration had to divide these into typical groups. Such groups were from those who were teachers (44 %), those who were farmers or agricultural extension workers (30 %), those who were members of religious orders (12 %), those who were civil servants (8 %), and those in other careers (6 %).

A rating technique was used to evaluate answers to the questions. Rating in this study was used to indicate the importance value and the opportunity for use value as perceived by the respondents from each learning activity. Seven numbers or points were given in the rating scale. Answering each item within the questionnaire was done by circling one of the seven possible numbers.

ANOVA Test was used to test whether there is a significance of difference among the perceptions given by three different groups of respondents. The sixty-one learning activities were divided into three groups and the ANOVA Test was made on the groups. If there was a significance of difference among the perceptions of the three different groups of respondents, it was necessary to compare the perceptions of each group to the combined group. But, if the differences were not significant, no further comparisons were necessary.

Major Findings of the Study

It was considered to be necessary to present the findings so that

the data and insight gained in this study will aid in identifying further problems. Based upon this consideration, the major findings of this study were divided into four sections as follows:

1. Background and general characteristics of the respondents.
2. Perceptions of the respondents:
 - a. Perceptions within the group of learning activities providing practical experiences.
 - b. Perceptions within the group of learning activities providing theoretical knowledge.
 - c. Perceptions within the group of learning activities involving personal guidance.

Background and General Characteristics of the Respondents

About 79 percent of the respondents returned their completed questionnaires. Most of the respondents who failed to return the completed questionnaires were from the ex-trainee group. Only 50 percent of ex-trainee group who were teachers returned the questionnaires; about 67 percent of those who were members of religious orders; and about 73 percent of those who were farmers or agricultural extension workers, completed and returned the questionnaires, while about 75 percent of the civil servants returned theirs. The other group returned about 95 percent of the questionnaires.

An explanation that might help to explain the poor response of the ex-trainee group concerned the lack of follow up activities (telephone, mailing, etc). Since communication facilities around the country are

limited, it was difficult to follow up on this group.

The ages of respondents from the trainee group varied from less than 20 years to more than 30. However, most were in the 20 to 30 group. The fact that the rest came from ages less than 20 years and more than 30 years indicated that the requirement of age between 20 and 30 years for the admission was given with some flexibility.

The ages of respondents from ex-trainee group varied in wider range of ages from 20 years to more than 50 years. Most were those attended KPTT Salatiga's one year program between 1970 and 1980. The rest, other than two ex-trainee respondents who failed to give information concerning the year of their attending program, were in the program before 1970 and after 1980.

The respondents from the instructor group had experiences of being instructors in the range of 1.50 to 16 years; however, most had experiences of less than 10 years.

The 61 items that had to be completed by each respondent were relatively better completed by the respondents in dealing with their importance value than in dealing with their opportunity value. One trainee respondent failed to complete the whole 61 items dealing with the opportunity value. One item which had 12 non rated answers, was not rated in terms of its opportunity value.

Most of the missing responses were from the trainee group. Respondents gave no explanation about the why of these missings. However, a possible explanation might concern the fact that some trainees had not completed yet the whole 61 learning activities.

How far did the different background and characteristics of the respondents affect their perceptions? The fact that there is no

significance of difference among the perceptions of the three different groups of respondents, indicates that the different background and characteristics of the respondents didn't affect their perceptions. Their perceptions show one similar attitude instead of various kinds of attitude. It means that the program did change their various attitudes that especially the trainees and the ~~ex~~-trainees were able to have new attitudes after attending the program. These new attitudes might be characterized by the same understanding, the same experiences, and the same commitment build during attending the program under the strong influences of the instructors as well as the administration.

Perceptions of Learning Activities by the Three
Groups of Respondents

The overall summary of findings which follows was organized by following a pattern in which the learning activities were divided into three groups: 1) those providing practical experiences, 2) those providing theoretical knowledge, and 3) those involving personal guidance.

Perceptions of Learning Activities Providing Practical Experiences. ANOVA Test applied to the calculated means of perceptions given by the three different groups of respondents indicated no significance of difference in terms of importance value and opportunity value. Because of this finding, there was no need to make comparison of ratings by individual groups. Instead, on overall comparison of the findings related to both values is presented in Table XV. This table displays the findings in a form of the combined group of respondents' preference without being compared to other group responses.

TABLE XV

COMPARISON OF MEAN RATINGS OF LEARNING ACTIVITIES DESIGNED TO
PROVIDE PRACTICAL EXPERIENCES BY COMBINED GROUP
OF RESPONDENTS

Learning Activities	Mean Rating of Impor- tance	Rank	Mean Rating of Opportu- nity to Use	Rank
1. In Planting Specific Commo- dities:				
A. Rice	6.27	2	5.77	2
B. Vegetables	5.94	4	5.54	3
C. Second Crops	5.65	6	5.27	6
D. Fruit Plants	5.55	8	5.31	5
E. Citrus	5.20	10	4.94	9
F. Coconut	5.15	12	5.01	7
G. Clove	5.23	9	4.48	11
H. Coffee	5.17	11	4.36	13
I. Ornamental Plants	3.98	18	4.03	15
J. Cacao Plants	2.74	23	2.43	23
2. In Raising Livestock, Poul- try & Fish:				
A. Chicken	6.24	3	5.85	11
B. Cattle	5.03	13	4.48	11
C. Swine	4.65	15	4.26	14
D. Rabbit	4.28	17	4.03	15
E. Fish	4.31	16	3.57	19
F. Sheep	3.86	22	4.00	17
G. Duck	3.89	21	3.57	19
3. Specific Experiences:				
A. Making Compost	6.38	1	5.38	4
B. Seedling	5.60	7	4.78	10
C. PH Soil Test	4.68	14	3.51	14
D. Making "Bordeaux" Partridge	3.93	19	3.64	18
E. Making "California" Partridge	3.91	20	3.46	22
4. Village Exposure:				
A. Village Exposure Experience	5.91	5	4.95	8

Table XV shows more clearly the variability of perceptions in the whole group as well as in each subgroup. In the whole group the variability of perceptions ranged from 2.74 (importance value) and 2.43 (opportunity value) to 6.38 (importance value) and 5.85 (opportunity value). While it can be said that the variability within each subgroup appeared almost in similar shape compared to each other, the variability within subgroup 1 seems to be longer in range as far as this subgroup had more learning activity units compared to the three others.

Table XV functions especially to display the respondents' preference. Three learning activities were at the highest preference within each subgroup: "Planting Rice", "Raising Chickens", and "Making Compost". As far as subgroup 4 had only one learning activity unit, it has to be treated more specially. "Village Exposure Experience" unit was rated higher than the average in this group.

From Table XV it can be seen that rating of the two values (importance value & opportunity value) created two similar and congruent patterns of perceptions throughout the whole series of learning activities perceived. Similarity and congruency of the two patterns were caused by the fact that the high or low importance value rating was always followed by the high or low opportunity value rating, and yet, the importance value rating was never surpassed by the opportunity value rating in each learning activity perceived, except in dealing with "Ornamental Plants" and "Sheep".

Perceptions of Learning Activities Providing Theoretical Knowledge. ANOVA Test applied in this group indicated that there is no significance of difference among the perceptions of the three different

groups of respondents in terms of importance value and opportunity value. Table XVI displays the findings related to both values in a form of the combined group of respondents' preference without being compared to other group responses.

From the 28 learning activity units, 3 units: "Sugar Cane", "Tobacco", and "Fibrous Plants Producing Oil" were rated less than 3.50. These three kinds of commodities seem less important and having less opportunity for use compared to other commodities. It might be caused by the fact that most of the respondents were from regions where sugar cane, tobacco, and fibrous plants producing oil are not commonly planted by the farmers.

Four learning activities were at the highest preference in each subgroup: "Pest & Disease", "Staple Crops", "Large Livestock", and "Rural Development". Subgroup 5 had only one learning activity unit. But this unit: "Personality & Character Building" was rated higher than average.

The variability of perceptions within this group ranged from rating point 3.42 (importance value) and 2.83 (opportunity value) to rating point 6.63 (importance value) and 6.17 (opportunity value). The variability within each subgroup appears in almost similar shape compared to each other, unless that one subgroup having smaller number of learning activities provides shorter range of variability.

Like Table XV, Table XVI provides two patterns of perception with some kind of similarity and congruency. This similarity and congruency refers to the fact that importance value rating was always followed by opportunity value rating in such a way that the importance value rating was never surpassed by the opportunity value rating in

TABLE XVI
COMPARISON OF MEAN RATINGS OF LEARNING ACTIVITIES DESIGNED TO
PROVIDE THEORETICAL KNOWLEDGE BY COMBINED GROUP
OF RESPONDENTS

Learning Activities	Mean Rating of Import- tance	Rank	Mean Rating of Opportu- nity to Use	Rank
1. Agriculture In General:				
A. Pest & Disease	6.60	2	5.55	5
B. Soil & Fertility	6.28	4	5.53	6
C. Farming In General	6.08	9	5.63	4
D. Irrigation	5.84	11	4.78	17
E. Climate	5.42	17	4.55	19
F. Botany	5.03	21	4.03	21
2. Specific Commodities:				
A. Staple Crops	6.63	1	6.17	1
B. Vegetables	5.98	10	5.48	7
C. Fruit Plants	5.66	14	4.91	16
D. Commercial Commodities	4.65	22	3.85	22
E. Ornamental Plants	4.08	24	3.83	23
F. Spices	4.08	24	3.59	25
G. Fibrous Plants Producing Oil	3.87	26	3.23	26
H. Tobacco	3.81	27	2.97	27
I. Sugar Cane	3.42	28	2.83	28
3. Livestock, Poultry, and Fish:				
A. Large Livestock	5.52	16	5.32	9
B. Poultry	5.75	13	5.10	14
C. Small Livestock	5.35	19	5.15	12
D. Fish	4.35	23	3.76	24
4. Agricultural Development:				
A. Rural Development	6.35	3	5.74	3
B. Agricultural Extension	6.15	6	5.43	8
C. Agricultural Economics	6.13	7	5.22	10
D. Civics	6.11	8	4.97	15
E. Communication	5.82	12	5.11	13
F. Organization	5.58	15	5.20	11
G. Book Keeping	5.36	18	4.75	18
H. Agricultural Laws	5.14	20	4.14	20
5. Person Development:				
A. Personality & Character Building	6.25	5	5.85	2

each learning activity perceived.

Perceptions of Learning Activities Involving Personal Guidance.

ANOVA Test applied in this group indicated also that there is no significance of difference among the three different groups of respondents' perceptions. Table XVII displays the findings related to importance value and opportunity value which show the preference of the combined group of respondents without being compared to other group responses.

All learning activities within this group were rated highly in terms of importance value and opportunity value. It is evident also that this group was perceived relatively higher by all respondents compared to the two other groups.

There is only short range of variability within this group: from 5.87 (importance value) and 5.13 (opportunity value) to 6.49 (importance value) and 5.75 (opportunity value). Almost all learning activity units within this group were perceived as mere important and tending toward high opportunity for use.

It is interesting to notice that also in this group opportunity value rating never surpassed the importance value rating. Why did such a thing happen not only in this group but also in the two previous groups? The two values: importance value and opportunity value might have different values within themselves. Importance value was more general, more acceptable, and more proper to be used for measuring the program. The opportunity value might be more specific, less acceptance, and less proper to be used to measure the program.

TABLE XVII
COMPARISON OF MEAN RATINGS OF LEARNING ACTIVITIES INVOLVING
PERSONAL GUIDANCE

Learning Activities	Mean Rating of Importance	Rank	Mean Rating of Opportunity to Use	Rank
A. Control & Discipline in Using Time	6.49	1	5.73	2
B. Courage in Trying	6.03	6	5.75	1
C. Cooperation in Work	6.34	2	5.62	6
D. Increasing Abilities Continually	6.18	4	5.68	4
E. Courage in Inquiring	6.32	3	5.47	7
F. Creativeness in Work	6.10	5	5.66	5
G. Courage in Speaking, in Making Choice & Self Decision	5.97	7	5.70	3
H. Leadership in Agriculture	6.10	5	5.42	9
I. Getting Broader Knowledge in Agriculture Through Reading Activities	5.93	8	5.13	10
J. Active Participation & Involvement	5.87	10	5.45	8

Conclusions

The analysis of data and subsequent findings were the basis for the following conclusions:

1. The 61 learning activity units, perceived by trainees,

ex-trainees, and instructors, in terms of importance value and opportunity value, indicated different value ratings. Most were rated more than 3.50 that it was evident that trainees, ex-trainee, and instructors valued highly these learning activities.

2. The fact that there was no significance of difference among perceptions given by the three different groups of respondents, indicated that the different background, regions, and characteristics, didn't affect the perceptions. The appearance of similar attitudes in the terms of perceptions indicated that the program had been successful in providing change of attitude, as far as it can be assumed that each trainee coming from different background, regions, and characteristics, had various kinds of attitude before attending the program.

3. It was evident that with exception of "Sheep" and "Ornamental Plants", all learning activities were perceived higher in terms of importance value than in terms of opportunity value.

4. Perceptions of learning activities providing practical experiences and learning activities providing theoretical knowledge were more varying and having greater ranges compared to those of learning activities involving personal guidance.

5. "Planting Rice", "Raising Chicken", "Making Compost", and "Village Exposure Experience" were considered as the most important and having most opportunity to be used as far as they were at the top of respondents' preference within each subgroup of learning activities providing practical experiences.

6. "Pest & Disease", "Staple Crops", "Large Livestock", "Rural Development", and "Personality & Character Building" were at the top of

respondents' preference within each subgroup of learning activities providing theoretical knowledge. These five learning activities were perceived as most important and having most opportunity to be used compared to other learning activities from the same subgroup.

7. All learning activities involving personal guidance were considered as very highly perceived. At least, these ten learning activities were rated higher than the average, in range of 5.87 to 6.49 in terms of importance value and 5.13 to 5.75 in terms of opportunity for use value.

8. "Planting Cacao" and "Making 'California' Partridge" were two learning activities providing practical experiences with ratings less than 3.50 in terms of importance value and opportunity for use value. Cacao was perceived less because it is a commercial plant found usually in large plantation managed by the government and not by local farmers. "California" partridge was perceived less because it might be still uncommon for local farmers.

9. "Sugar Cane", "Tobacco" and "Fibrous Plants Producing Oil" were rated less than 3.50 in terms of importance value and opportunity value. If the respondents perceived knowledge about these three commodities as less important and having less opportunity to be used, it must be related to the fact that most of the respondents came from regions where sugar cane, tobacco, and fibrous plants producing oil are not common to be planted by the local farmers.

Recommendations

As a result of the conclusion drawn from the analysis and interpretation of data, the following recommendations are made:

1. The program should be continued with more confidence since the learning activities, through which individual trainees established their learning processes, were valued highly by the trainee group, ex-trainee group, and instructor group in terms of importance value and opportunity for use value.

2. Among learning activities providing practical experiences, "Planting Rice", "Raising Chicken", "Making Compost", and "Village Exposure Experience", needed to be considered as the most important and having most opportunity to be used compared to the others.

3. "Pest & Disease", "Staple Crops", "Large Livestock", "Rural Development", and "Personality & Character Building" should be considered as the most important and having most opportunity to be used compared to the other units which were designed to provide theoretical knowledge.

4. The lowly ranked learning activity units like "Planting Cacao", "Making 'California' Partridge", "Sugar Cane", "Tobacco", and "Fibrous Plants Producing Oil", should be eliminated or at least reduced in terms of time, money, effort, and attention provided, if the administration felt it necessary to make adjustments in the curriculum.

5. The types of new knowledge, skills, and other innovative abilities, produced especially by the highly ranked learning activity units, should be formulated in such a way that they would be easier to be achieved. Procedures to achieve such types of new knowledge, skills, and innovative abilities, should be **stated as clearly as possible** that they would be **more manageable**.

6. As far as the highly ranked subject areas providing practical experiences have interrelationships with the highly ranked subject areas

providing theoretical knowledge, theoretical knowledge and practical experiences related to these subject areas should be more strongly integrated to each other. Theoretical knowledge areas should be chosen from among those which obviously support practical experiences related to the subject areas concerned. For example: theoretical instruction about "Staple Crops" should obviously support the trainees in getting practical experiences in such areas as "Planting Rice". Or, theoretical instruction about "Rural Development" should be such that it will support the trainees in practical experiences such as securing "Village Exposure Experience". By doing that, theoretical knowledge should be put always in proper relationship to practical experiences. Such a policy, adjusted to the specific character of KPTT Salatiga's one year training program which stresses practice, field-work, and field experience, should provide not **only** more time, money, and effort, but also more real support to the learners.

7. Trainees should be given more opportunity to establish and develop learning activities related to the priorities and desirable outcomes within the personal guidance area. Success in this area should allow the learners to become more independent.

Recommendations for Future Program Emphases

For greater future effectiveness the preferences discovered in this study should be used as one means to establish emphases for the program. In particular the future emphases should be concerned with providing more practical experiences to the learning activity units highly ranked within the subgroup of learning activities providing practical experiences. In the cases of learning activities for

providing theoretical knowledge and those involving personal guidance, more emphases should be placed upon the learning activities most highly ranked.

Overall the new emphases recommended should be more than providing more practical experiences, theoretical knowledge, or personal guidance. They should include the possibilities of using more than one approach in order to make the learning activities more effective. This should include providing more favorable environment, more complete facilities, and more expertise in order to make the highly ranked learning activities more achievable. Consequently, they should include investing more time, effort, and money to make the highly ranked learning activities more successful potentially.

One pattern for emphasis upon various learning activities, as indicated by findings of the study, could be as follows:

1. New emphases for learning activities providing practical experiences, should follow the order as such: subgroup 1, Rice > Vegetables > Second Crops > Fruit Plants > Citrus > Coconut > Clove > Coffee > Ornamental Plants > Cacao. New emphases arranged for subgroup 2 in this area should follow this order: Chicken > Cattle > Swine > Rabbit > Fish > Sheep > Duck. New emphases for subgroup 3 should follow this order: Making Compost > Seedling > PH Soil Test > Making "Bordeaux" Parridge > Making "California" Parridge. For subgroup 4 there was only one learning activity unit which should be emphasized: Village Exposure Experience.

2. New emphases arranged for subgroup 1 of learning activities providing theoretical knowledge should follow this order: Pest & Disease > Soil & Fertility > Farming in General > Irrigation > Climate >

Botany. Arrangement of new emphases for the second subgroup should be: Staple Crops > Vegetables > Fruit Plants > Commercial Commodities > Ornamental Plants > Spices > Fibrous Plants Producing Oil > Tobacco > Sugar Cane. For the livestock, poultry, and fish subgroup the new emphases should be arranged such as: Large Livestock > Poultry > Small Livestock > Fish. For the fourth subgroup concerning agricultural development the arrangement should be: Rural Development > Agricultural Extension > Agricultural Economics > Civics > Communication > Organization > Book Keeping > Agricultural Laws. Emphases should be given at a high level for the only learning activity in subgroup 5: Personality & Character Building.

3. New emphases for the group of learning activities involving personal guidance should follow this order: Control & Discipline in Using Time > Courage in Trying > Cooperation in Work > Increasing Abilities Continually > Courage in Inquiring > Creativeness in Work > Courage in Speaking, in Making Choice & Self Decision > Leadership in Agriculture > Getting Broader Knowledge in Agriculture Through Reading Activities > Active Participation & Involvement.

5. Some new elements that should be proper enough to be infused into the existing program are as follows:

a. Using more learning materials drawn from the trainee life and from real problems found in community life rather than from the textbooks.

b. Involving trainees in new kinds of learning experiences such as visiting local farmers, making field trips, writing articles for the local newspaper, agricultural magazines, or bulletins and newsletters related to agriculture.

c. Providing current information about recent problems in agriculture that could be obtained from carrying on more extensive correspondence with similar programs in other parts of the world

d. Encouraging trainees' activities like discussing problems with instructors outside the class, asking questions during class instruction, self-inquiring in order to get more clarification, and involving more actively in every group discussion.

e. Providing more opportunity to individual trainees attending the program to learn how to identify their own communities' problems and needs, how to plan strategies to solve such real problems, and how to get support from the whole community to solve their own problems.

A SELECTED BIBLIOGRAPHY

Combs, Arthur W.

- 1967 "Humanizing Education: The Person in the Process." R. R. Leeper: Humanizing Education. Ed. ASCD, NEA. N. W., pp. 73-88.

Doll, Ronald C.

- 1982 Curriculum Improvement: Decision Making and Process. Boston: Ally and Bacon, Inc.

Forest, Laverne B.

- 1976 "Program Evaluation: for Reality." Adult Education, 26 (Spring), pp. 167-177.

Gardner, J. W.

- 1964 Self-Renewal: the Individual and the Innovative Society. New York: Harper & Row.

Grotelueschen, A. D., D. D. Gooler, and A. B. Knox

- 1976 Evaluation in Adult Basic Education: How and Why. Danville: The Interstate Printers & Publishers Inc.

Hall, Budd L. and J. R. Kidd

- 1978 Adult Learning: A Design of Action. New York: Pergamon Press.

Kerlinger, Fred N.

- 1973 Foundations of Behavioral Research. New York: Holt, Rinehart and Winston.

Knowles, Malcolm

- 1973 The Adult Learner: A Neglected Species. Houston: Gulf Publishing Company.

Leeper, R. R.

1967 Humanizing Education. N. W.: ASCD. NEA.

Maslow, Abraham H.

1971 The Farther Reaches of Human Nature. USA: Penguin Book.

Reinhart, B.

1979 Career Education, from Concept to Reality. USA: McGraw-Hill Book Company.

Szczyrkowski, R.

1980 "Objective and Activities." Alan B. Knox and Associates: Developing, Administering, and Evaluating Adult Education. Ed. Josey-Bass Publishers. Washington, pp. 37-74.

Tough, Allen

1979 The Adult's Learning Project. Toronto: The Ontario Institute for Studies in Education.

Van Dalen, Deobold B.

1979 Understanding Education Research, An Introduction. USA: McGraw-Hill Book Company.

Verduin, John R.

1967 Cooperative Curriculum Improvement. Englewood Cliff, N. J.: Prentice-Hall, Inc.

Yayasan Purba Danarta

1979 Evaluation of Scholarship Programs in Four Institutes: KPTT, KUPERDA, KSED, and Kursus Wiraswasta. Semarang, Indonesia: YPD.

APPENDIXES

APPENDIX A

REGIONS FROM WHERE TRAINEES ORIGINATED

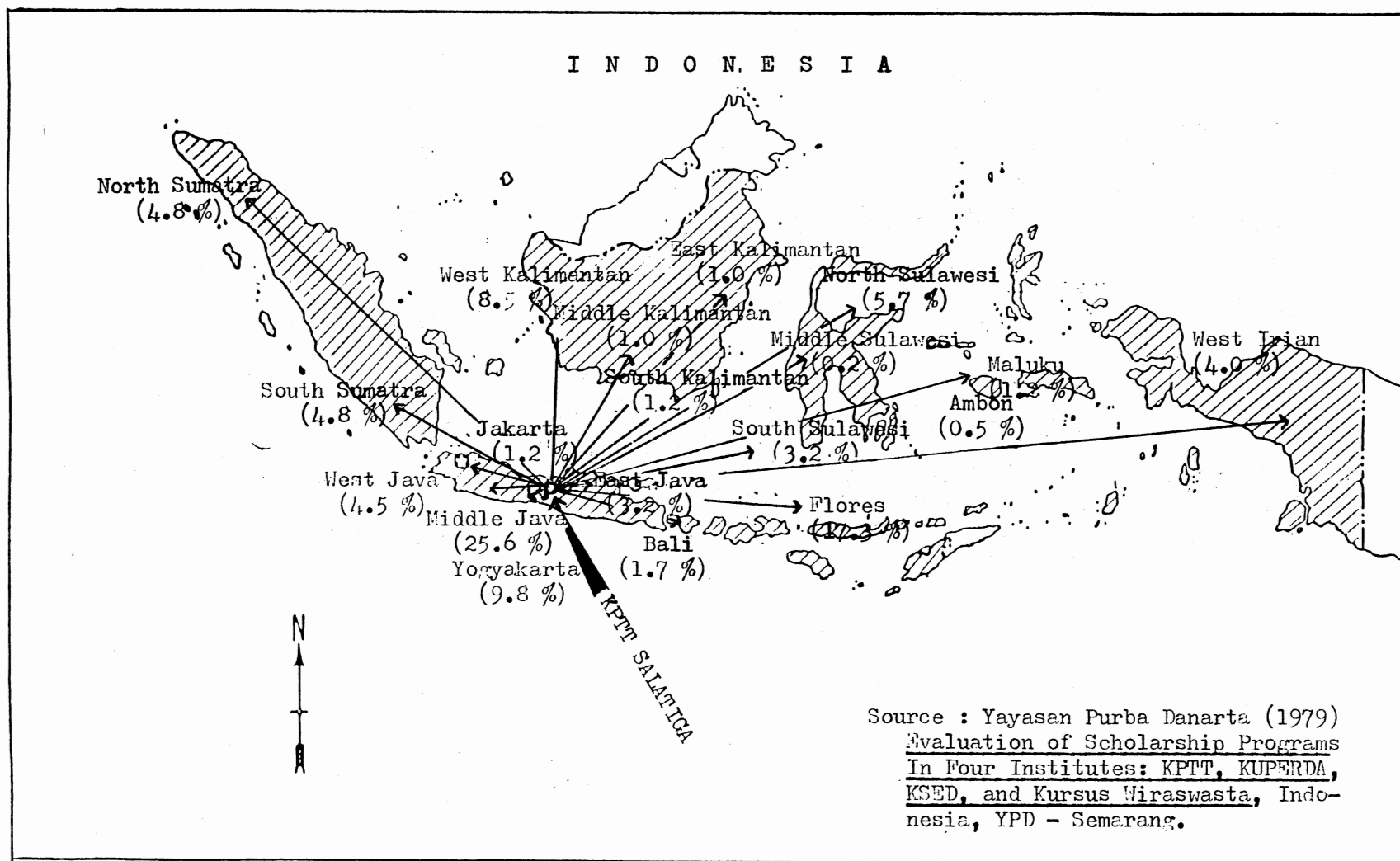


Figure 1. Regions From Where Trainees Originated

APPENDIX B

KPTT SALATIGA'S ADULT LEARNING PROCESS

ADULT LEARNING PROCESS

- * Adult Education = For Development *
- * Adult Learning = Lifelong Learning*

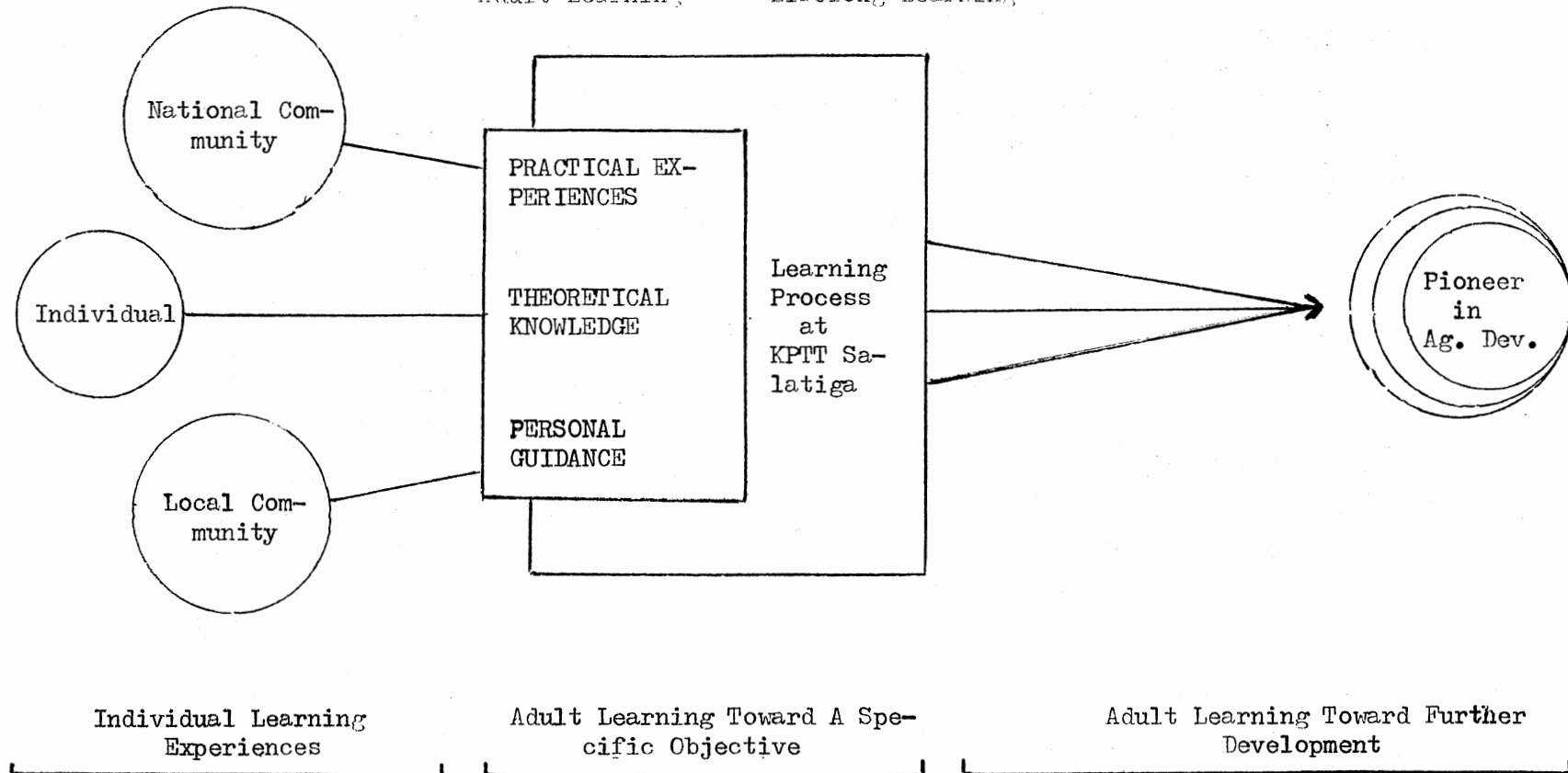


Figure 2. KPTT Salatiga's Adult Learning Process

APPENDIX C

PROTOTYPE OF QUESTIONNAIRE

QUESTIONNAIRE

Question 1 (one)

The one year adult education program in agriculture provided by KPTT Salatiga has one main objective: to train and educate highly motivated pioneer farmers, who have the courage to lead and direct the rural community in improvements and innovations in farming practice and animal husbandry, in accordance with the potential of that community. Learning activities to gain this main objective consist of those providing practical experiences, those providing theoretical knowledge, and those involving personal guidance.

How high is the importance value you perceive of each learning activity described as follows toward the achievement of the main objective?

The Way to Answer

Circle one number as your choice answer from the scale rating from number 1 to number 7. Your answer must be personal and authentic.

Learning Activities	Scale of Importance						
	1	2	3	4	5	6	7
	(1 = Less important)						
	(7 = Very important)						

I. THOSE PROVIDING PRACTICAL EXPERIENCES:

1. Planting Specific Commodities:

A. Vegetables	1	2	3	4	5	6	7
B. Fruit Plants	1	2	3	4	5	6	7
C. Second Crops Planted After Rice	1	2	3	4	5	6	7
D. Rice	1	2	3	4	5	6	7
E. Coffee	1	2	3	4	5	6	7
F. Citrus	1	2	3	4	5	6	7
G. Clove	1	2	3	4	5	6	7
H. Cacao	1	2	3	4	5	6	7
I. Ornamental Plants	1	2	3	4	5	6	7

Learning Activities	Scale of Importance						
	1	2	3	4	5	6	7
	(1 = Less important)						
	(7 = Very important)						
J. Coconut	1	2	3	4	5	6	7
2. <u>Raising Livestock, Poultry & Fish:</u>							
K. Chicken	1	2	3	4	5	6	7
L. Duck	1	2	3	4	5	6	7
M. Swine	1	2	3	4	5	6	7
N. Sheep	1	2	3	4	5	6	7
O. Rabbit	1	2	3	4	5	6	7
P. Cattle	1	2	3	4	5	6	7
Q. Fish	1	2	3	4	5	6	7
3. <u>Specific Experiences:</u>							
R. Seedling	1	2	3	4	5	6	7
S. Making "Bordeaux" Partridge	1	2	3	4	5	6	7
T. Making "California" Partridge	1	2	3	4	5	6	7
U. PH Soil Test	1	2	3	4	5	6	7
V. Making Compost	1	2	3	4	5	6	7
4. <u>Village Exposure:</u>							
W. Village Exposure Experience	1	2	3	4	5	6	7
II. THOSE PROVIDING THEORETICAL KNOWLEDGE:							
1. <u>Agriculture in General:</u>							
A. Botany	1	2	3	4	5	6	7
B. Pest & Disease	1	2	3	4	5	6	7
C. Irrigation	1	2	3	4	5	6	7
D. Climate	1	2	3	4	5	6	7
E. Soil & Fertility	1	2	3	4	5	6	7
F. Farming in General	1	2	3	4	5	6	7
2. <u>Specific Commodities:</u>							
G. Staple Crops	1	2	3	4	5	6	7
H. Vegetables	1	2	3	4	5	6	7
I. Fruit Plants	1	2	3	4	5	6	7
J. Commercial Commodities	1	2	3	4	5	6	7
K. Tobacco	1	2	3	4	5	6	7
L. Sugar Cane	1	2	3	4	5	6	7

Learning Activities	Scale of Importance						
	1	2	3	4	5	6	7
	(1 = Less important)						
	(7 = Very important)						
M. Spices	1	2	3	4	5	6	7
N. Fibrous Plants Producing Oil	1	2	3	4	5	6	7
O. Ornamental Plants	1	2	3	4	5	6	7
3. <u>Livestock, Poultry & Fish:</u>							
P. Large Livestock	1	2	3	4	5	6	7
Q. Small Livestock	1	2	3	4	5	6	7
R. Poultry	1	2	3	4	5	6	7
S. Fish	1	2	3	4	5	6	7
4. <u>Agricultural Development:</u>							
T. Agriculture Laws	1	2	3	4	5	6	7
U. Civics	1	2	3	4	5	6	7
V. Rural Development	1	2	3	4	5	6	7
W. Agricultural Extension	1	2	3	4	5	6	7
X. Organization	1	2	3	4	5	6	7
Y. Communication	1	2	3	4	5	6	7
Z. Agricultural Economics	1	2	3	4	5	6	7
AA. Book Keeping	1	2	3	4	5	6	7
5. <u>Person Development:</u>							
BB. Personality & Character Building	1	2	3	4	5	6	7
III. <u>THOSE INVOLVING PERSONAL GUIDANCE</u>							
A. Cooperation in Work	1	2	3	4	5	6	7
B. Control & Discipline in Using Time	1	2	3	4	5	6	7
C. Creativeness in Work	1	2	3	4	5	6	7
D. Increasing Abilities Continually	1	2	3	4	5	6	7
E. Getting Broader Knowledge in Agriculture Through Reading Activities	1	2	3	4	5	6	7
F. Leadership in Agriculture	1	2	3	4	5	6	7
G. Active Participation & Involvement	1	2	3	4	5	6	7
H. Courage in Inquiring	1	2	3	4	5	6	7
I. Courage in Trying	1	2	3	4	5	6	7
J. Courage in Speaking, Making Choice Self Decision	1	2	3	4	5	6	7

Question 2 (two)

Having new knowledge, skills, and other innovative abilities achieved from attending the program, an ex-trainee should be more able to promote his own and his local community's further development. How far he is able to promote, depends on how much the opportunity is available. The new knowledge, skills, and other innovative abilities vary according to the learning activities provided by the program.

The Way to Answer

Circle one number as your choice answer from the scale rating from number 1 to number 7. Your answer must be personal and authentic.

Learning Activities	Scale of Opportunity						
	1	2	3	4	5	6	7

(1 = Less opportunity)
(7 = Much more opportunity)

I. THOSE PROVIDING PRACTICAL EXPERIENCES:

1. Planting Specific Commodities:

A. Vegetables	1	2	3	4	5	6	7
B. Fruit Plants	1	2	3	4	5	6	7
C. Second Crops Planted After Rice	1	2	3	4	5	6	7
D. Rice	1	2	3	4	5	6	7
E. Coffee	1	2	3	4	5	6	7
F. Citrus	1	2	3	4	5	6	7
G. Clove	1	2	3	4	5	6	7
H. Cacao	1	2	3	4	5	6	7
I. Ornamental Plants	1	2	3	4	5	6	7
J. Coconut	1	2	3	4	5	6	7

2. Raising Livestock, Poultry & Fish:

K. Chicken	1	2	3	4	5	6	7
L. Duck	1	2	3	4	5	6	7
M. Swine	1	2	3	4	5	6	7
N. Sheep	1	2	3	4	5	6	7
O. Rabbit	1	2	3	4	5	6	7
P. Cattle	1	2	3	4	5	6	7
Q. Fish	1	2	3	4	5	6	7

Learning Activities	Scale of Opportunity						
	1	2	3	4	5	6	7
	(1 = Less opportunity)						
	(7 = Much more opportunity)						
3. <u>Specific Experiences:</u>							
R. Seedling	1	2	3	4	5	6	7
S. Making "Bordeaux" Parrdige	1	2	3	4	5	6	7
T. Making "California" Parridge	1	2	3	4	5	6	7
U. PH Soil Test	1	2	3	4	5	6	7
V. Making Compost	1	2	3	4	5	6	7
4. <u>Village Exposure:</u>							
W. Village Exposure Experience	1	2	3	4	5	6	7
II. THOSE PROVIDING THEORETICAL KNOWLEDGE							
1. <u>Agriculture in General:</u>							
A. Botany	1	2	3	4	5	6	7
B. Pest & Disease	1	2	3	4	5	6	7
C. Irrigation	1	2	3	4	5	6	7
D. Climate	1	2	3	4	5	6	7
E. Soil & Fertility	1	2	3	4	5	6	7
F. Farming in General	1	2	3	4	5	6	7
2. <u>Specific Commodities:</u>							
G. Staple Crops	1	2	3	4	5	6	7
H. Vegetables	1	2	3	4	5	6	7
I. Fruit Plants	1	2	3	4	5	6	7
J. Commercial Commodities	1	2	3	4	5	6	7
K. Tobacco	1	2	3	4	5	6	7
L. Sugar Cane	1	2	3	4	5	6	7
M. Spices	1	2	3	4	5	6	7
N. Fibrous Plants Producing Oil	1	2	3	4	5	6	7
O. Ornamental Plants	1	2	3	4	5	6	7
3. <u>Livestock, Poultry & Fish:</u>							
P. Large Livestock	1	2	3	4	5	6	7
Q. Small Livestock	1	2	3	4	5	6	7
R. Poultry	1	2	3	4	5	6	7
S. Fish	1	2	3	4	5	6	7

Learning Activities	Scale of Opportunity						
	1	2	3	4	5	6	7
	(1 = Less opportunity)						
	(7 = Much more opportunity)						
4. <u>Agricultural Development:</u>							
T. Agriculture Laws	1	2	3	4	5	6	7
U. Civics	1	2	3	4	5	6	7
V. Rural Development	1	2	3	4	5	6	7
W. Agricultural Extension	1	2	3	4	5	6	7
X. Organization	1	2	3	4	5	6	7
Y. Communication	1	2	3	4	5	6	7
Z. Agricultural Economics	1	2	3	4	5	6	7
AA. Book Keeping	1	2	3	4	5	6	7
5. <u>Person Development:</u>							
BB. Personality & Character Building	1	2	3	4	5	6	7
III. THOSE INVOLVING PERSONAL GUIDANCE							
A. Cooperation in Work	1	2	3	4	5	6	7
B. Control & Discipline in Using Time	1	2	3	4	5	6	7
C. Creativeness in Work	1	2	3	4	5	6	7
D. Increasing Abilities Continually	1	2	3	4	5	6	7
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F. Leadership in Agriculture	1	2	3	4	5	6	7
G. Active Participation & Involvement	1	2	3	4	5	6	7
H. Courage in Inquiring	1	2	3	4	5	6	7
I. Courage in Trying	1	2	3	4	5	6	7
J. Courage in Speaking, Making Choice and Self Decision	1	2	3	4	5	6	7

Question 3 (three)

Question 3 (three) is asked to you in order to get information that will be kept in strictest confidence. The question is asked about you.

1. May I know your name?

My name: _____

2. What position do you have in dealing with adult education program in agriculture as administered by KPTT Salatiga?

- My position: 1. _____ As Full-Time Instructor.
2. _____ As Part-Time Instructor.
3. _____ As Ex-Trainee.

3. If you are a full-time or part-time instructor, how long you have been in your position until now?

I have been: _____ years in my position as now.

4. If you are an ex-trainee, what kind of occupation you possess now?

- My occupation: 1. _____ As Teacher/Educator.
2. _____ As Farmer.
3. _____ As Agricultural Extension Worker.
4. _____ As Member of a Religious Order.
5. _____ As Civil Servant.
6. _____ As _____.

5. If you are a trainee, when you started your training program at KPTT Salatiga?

Date of starting: _____

VITA²

Paulus Wiryono Priyotamtama

Candidate for the Degree of

Master of Science

Thesis: KPTT SALATIGA'S ONE YEAR ADULT EDUCATION PROGRAM IN AGRICULTURE AS PERCEIVED BY ITS TRAINEES, EX-TRAINEES, AND INSTRUCTORS

Major Field: Agricultural Education

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