KNOWLEDGE AND SKILLS FOR THE ADULT EDUCATOR IN THAILAND

DISSERTATION

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By

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The purpose of this study was to identify and specify knowledge and skills needed by adult educators in Thailand. This study provided information for establishing a guide to be used in professional training and in graduate programs in adult education.

A three round Delphi technique was used to develop the consensus of findings. The first round solicited open-ended responses from twenty panelists. One hundred and twenty-five knowledge and skill statements, the responses from the first round, were developed into a five-point rating scale questionnaire. This questionnaire was utilized in both Round II and III. Median, mode and interquartile ranges were applied to specify the consensus of the panel of experts. The one hundred and twenty-five knowledge and skill statements, seventy-five knowledge statements and fifty skill statements, were classified into four major categories: teaching, administration, research and general experience.

The experts for the study consisted of eleven non-formal education officers and nine university professors in adult/continuing education and non-formal education.
From seventy-five knowledge statements, sixteen were rated at the highest priority of importance. Forty-nine statements were rated at above average priority of importance and two statements were rated at average. Eight statements did not meet the interquartile range criterion as a consensus of the panelists.

From fifty skill statements, fifteen statements were rated at the highest priority of importance; thirty statements were rated at above average; one statement was rated at average; and four statements failed to meet the interquartile range criterion.
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CHAPTER I

INTRODUCTION

Adult education in Thailand first appeared in 1940 in response to the need to decrease the problem of illiteracy. In 1937, the first Thai national census revealed that 68.8 percent of the population over ten years old were illiterate. This high illiteracy rate was alarming. It also posed an obstacle to the democratization of the country (Thailand had been transformed from an absolute into a limited or constitutional monarchy in 1932). To remedy this situation, the government launched a nation-wide campaign to eradicate illiteracy. The Adult Education Division was created in 1940 within the Ministry of Education to provide individuals over 15 years of age with literacy skills and to increase their understanding of democratic principles (A Project for the Development of Non-formal Education in Thailand, 1975). Over the years the goals of adult education activities, in addition to literacy, were occupational training, and the promotion of national development goals.

The Non-Formal Education Department emerged in 1979 (formerly the Adult Education Division which was upgraded to departmental status) to play the most significant role in
providing adult and non-formal education activities since its establishment in 1940. Consequently, adult education has become a division within the Non-formal Education Department. This Department has created a national network which includes (1) Provincial (Changwat) Non-formal Education Centers—which provide various programs in response to community needs and which train existing community groups to identify their needs and plan programs; (2) Regional Non-formal Education Centers--there are five centers which undertake program-related research, development and training; and (3) a national unit within the Ministry of Education which develops and monitors broad policies and plans and coordinates the efforts of the regional centers (Department of Non-formal Education, 1979).

The dominant role of non-formal education began to proliferate during the Fourth National Development Plan (1977-1981). This plan sought to use non-formal education strategies to reach people who were never or were no longer involved in regular school programs. The effect of the productive activities and programs from this department was strongly supported by the government. Therefore, in the Fifth National Educational Development Plan (1982-1986), the role of the Non-Formal Education Department was expanded to bring more educational opportunities to youth and adults not receiving formal education. More emphasis on the operation

The number of people engaged in non-formal education has increased each year until a considerable proportion of the adult population is now part of this latest movement in mass education. The variety of agencies providing programs in adult education continues to grow too: government agencies, educational institutes, private agencies, religious organizations, vocational groups, professional societies, voluntary associations and many special groups who may make some educational activities a part of their total program. Adult education has become an important part of the social organization in present day Thailand. Moreover, it is one of the strategies for the national development of the whole society.

Today the educational activities of non-formal education have become more and more acceptable as a means of developing and creating better opportunities for Thai citizens. Because Thailand is in a period of economic and social development, education is deemed to be one of the basic factors and means to improve the quality of life especially for the people in rural areas. Non-formal
education has turned out to be a useful accelerator of the
development plans of the country. Lowe (1975) confirms that "Developing countries see adult education as a national
instrument for promoting and regulating social change and
economic growth rather than something for private
combustion" (p. 20). To date, the Thai government
realizes the impact of adult education's prominent role in ameliorating the current situation. For example, the total budget of the Non-Formal Education Department in the Fifth National Development Plan (1982-1986) was increased 74.80 percent when compared with the Fourth National Development Plan (1977-1981). This evidence shows that the government accepts the significance of adult education in enhancing national growth (Education Sector Survey, 1983).

In 1981, about 1,550 non-formal education projects were operated by different agencies in Thailand: 380 projects by 50 government agencies, 20 projects belonging to 10 government enterprise agencies, 230 projects by 150 private agencies, associations, foundations, and 920 projects by private institutions (Policies and Youth Developmental Plans: 1979, 1981). Accordingly, adult educators are needed by many government and private agencies, and the universities will play an important role in preparing these leaders.
According to the major change in the upgrading of the Non-Formal Department in 1979, this change affects the wider perspective in utilizing education as a tool in developing the country. Currently, non-formal education activities and programs have gained the interest of the public as well as other government and private developmental agencies. Obviously, the adult educator must perform a variety of tasks and possess more skills and knowledge to meet effectively the needs of the current learner constituency. Before the advent of the Non-Formal Education Department, the adult educator was mainly trained to serve only the adult learners. Since the role of the Non-Formal Education Department has been expanded to serve all kinds of citizens from the young to the old, the new role of the adult educator should be adjusted according to the present situation required.

Nikamanon (1982) emphasized the crucial role of adult education:

In a developing country, adult education needs to be taken seriously to achieve rapid development--social, economic as well as political. The country must form a skilled and informed adult population. Given the technological, social, economic and political situation in Thai society, the learning acquired from school, even up to the university level, seems to be inadequate for the effective
performance of most jobs unless there is a conscious effort to undertake further study, formal or informal (p. 57).

This changing situation calls for some adjustment or modification in adult education programs and curriculums. Thus, programs of training for professional adult educators should concentrate on the preparation of practitioners for boundary-spanning roles. This should be done because adult educators have to become familiar with different organizational cultures, client groups, community members and institutional expectations (Robbins, 1981). Therefore, professional training in adult education should be changed or transformed in accordance with the adult or learner's needs.

In Thailand, the university has been playing an important part in preparing manpower. Adult education needs specialists to work as researchers, administrators, teachers and program organizers. Normally, an academic university department of adult education is responsible for teaching and training personnel for adult education work. In fact, government institutions control professional training of adult educators. The bachelor's degree program in adult education is available in three universities: Chiangmai, Chulalongkorn, and Srinakarinwirot. Three universities, Kasetsart, Silpakorn and Srinakarinwirot, offer master's
degree programs in adult education. Chulalongkorn University is offering both a bachelor's degree and a master's degree in non-formal education. Still, the curriculum at each of these universities varies from one another according to the goals and objectives of each institution. Normally, most adult educators trained by these four universities will finally work for the Non-Formal Education Department. However, the four universities have not specified a common core of knowledge and skills needed by adult educators as the basis for professional training and graduate program developing in adult education.

In order to react to the change and the complex roles of the Non-Formal Education Department, the urgent needs of qualified manpower of the country, the current learner's needs, and the traditional training situation of adult educators in a changing world, training for the adult educator in Thailand may also have to change. Therefore, research of knowledge and skills needed by the adult educator may directly enhance professional training in this field and indirectly aid the development of the country.
Statement of the Problem

The problem of this study was the identification and specification of knowledge and skills needed by the adult educator in Thailand.

Purpose of the Study

The purpose of this study was to determine knowledge and skills needed by the adult educator in order to perform his or her job adequately.

Research Questions

Specific questions for which answers were determined are as follows:

1. In the opinion of experts on adult education in Thailand, what knowledge and skills are needed by the Thai adult educator?
2. In the opinion of experts on adult education in Thailand, what knowledge and skills should be given the highest priority?

Significance of the Study

The major impact of upgrading the Adult Education Division to the Non-Formal Education Department in 1979 was to broaden the functions and responsibilities of this new department. The Non-Formal Education Department is responsible for providing education for the out-of-school and the underprivileged population in order to give people
of all ages opportunities to study and improve their occupations and living conditions (Introduction to the Non-formal Education Department, 1984). The influence of the wider responsibilities forces adult educators to adjust themselves to this change in the educational policy of the country. Many adult educators have sought knowledge and skills appropriate for the current practical situation; however, it is difficult to justify that most government education officials are qualified for their current roles. To help these government officials identify knowledge and skills to serve their new educational roles, this study will:

1. Determine the extent of a consensus of the experts in adult education in Thailand concerning knowledge and skills needed by the adult educator;

2. Provide a reaction by the experts to the relevancy of their statements supplied in the first questionnaire; and

3. Be used as a guide in adult education professional training and graduate program developing.

Definition of Terms

For the purpose of this study, the following terms are defined:

Adult graduate program is an educational program which is prepared or designed for master's degree candidates or students in adult and continuing education and non-formal education in Thailand.
Adult educator is one who has received a master's degree in adult and continuing education or non-formal education, and whose professional responsibilities include planning, teaching, administering and coordinating adult education programs.

Non-formal education refers to all organized systematic educational activities carried on outside the formal educational system which are designed to serve specific learning needs of subgroups in the population, either as a supplement or follow-up to formal schooling, or in some instances as an alternative or substitute (Non-formal Education for Rural Development, 1972).

Limitations

This study was subject to all the limitations of a traditional Delphi survey. The Delphi study does not utilize random sampling. Thus, there was no effort to assume that a panel of experts in this study represents all of Thai adult educators. Furthermore, no effort was required for the experts to reside and work in any geographic areas or to represent geographically all of Thailand.

Basic Assumption

The basic assumption made in this study is that the panel for this study can be considered "expert" according to the following process of expert selection:
1. A group of five experts in adult education was chosen to identify a list of experts in adult education using the following criteria:

1.1. experience in adult education.
1.2. publications in adult education.
1.3. academic practitioners in adult education.

2. From the list of each expert, a total of twenty-two experts was selected based on the appearance of his name three or more times.
CHAPTER BIBLIOGRAPHY


Introduction to The Non-formal Education Department. (1984). Bangkok: Non-formal Education Department, Ministry of Education.


CHAPTER II

REVIEW OF THE RELATED LITERATURE

Adult education is perceived as a young and emerging field of study, as a marginal education enterprise and as an occupation moving toward the status of a profession (Jensen, Liveright, & Hallenbeck, 1964). However, there is no consensus among adult educators about the professional status of adult education. Generally, it is acceptable that adequate preparation is required for professional and leadership responsibilities. Verner (1970) suggests that it seems quite possible to develop an adequate and appropriate educational program for all leaders in this field. Hence, universities play an important role in preparing adult educators and generating new knowledge for improving professional practice (Darkenwald, 1982).

Adult education in Thailand is also a young field of study. Formal adult education was begun as a mass literacy campaign in 1940. That year, the Adult Education Division was created within the Ministry of Education.

Since the Adult Education Division has been upgraded to the Non-Formal Education Department in 1979 to serve people of all ages, this impact created a new perception of professional training in adult and continuing education in
Thailand. Adult educators must perform a variety of roles and possess various skills and knowledge to be in harmony with the changing needs of the entire population. Thus, training of adult educators may require modification to be congruent with present demands. In fact, in the United States' educational goals, curriculum, and orientation to the field of adult education vary among graduate programs (Darkenwald, 1982). In analyzing the variation among practitioners and the lack of shared common goals, Jensen et al. (1964) stated, "The field of adult education was unable to specify the exact desirable content and organization of a program of graduate study" (p. 85). There should, however, be some common and necessary competencies for the adult educator. As a matter of fact, when adult educators discuss professional preparation, they usually focus on the competencies (knowledge, skills, and attitudes) of professional adult educators.

According to William McGlothlin, in Jensen et al. (1964), the importance of competencies in professional education is emphasized as follows:

Basically, professional education has two related aims: one, to supply enough professional people; and two, to assure the society that they are competent to practice their professions. The first is the aim of quantity; the second is the aim of quality (p. 95).
Kadir (1976) identified the kinds of information, knowledge, skills, attitudes and understandings needed by adult education practitioners in Thailand and developed a package of self-study materials for adult education practitioners. The three highest ranking competencies were the criteria in the selection and organization of content in this package. He developed a questionnaire based on the work of Aker (1962), Fenn (1972), and Mocker (1974). Twenty academically-trained Thai staff members in adult education and twenty practitioners without academic training selected important items as the objectives for staff development programs.

Nikamanon (1982) made interviews in connection with the role of universities in preparing adult education personnel, and some of the competencies recommended by certain government officials from the Non-Formal Education Department and several university faculty are as follows:

- the ability to work and get along well with other people;
- skills in working with rural people;
- the ability to integrate school activities (formal education) and non-formal education;
- knowledge in organizing adult education activities;
- knowledge and skills in research;
- knowledge and skills in evaluation and project analysis;
- skills in community work;
- knowledge in national and local
cultures, values, and the know-how to apply and integrate them with adult education activities; knowledge of Buddhist philosophy or other religions of the clientele and the know-how to apply it in adult education work; skills in critical and creative thinking; skills in practical work (pp. 242-243).

Another study of adult and continuing education graduates was conducted by Suvanajata (1982). She used a survey method to determine the career achievement of forty-one masters of adult and continuing education graduates from the Department of Foundations of Education, Silapakorn University, during the academic years 1976-1980. According to this study, the graduates suggested that the present curriculum was too flexible and broad in the foundations of education and required depth in content in the field of adult education. The curriculum should be improved and adapted to the changing conditions of Thailand. The opinion of graduates, their superiors and instructors indicated that the objectives of graduate training should be the guidelines of the curriculum and that course descriptions should be revised.

Tanawutho (1983) utilized the Delphi technique to develop a fifty-two role statement questionnaire to study the role of adult vocational educators in Thailand. One
hundred and four adult vocational educators selected by a stratified disproportional sampling technique were asked to check each role statement from the questionnaire according to (a) lowest importance; (b) very low importance; (c) low importance; (d) high importance; (e) very high importance; or (f) highest importance. He found that: (1) the role clusters of adult vocational educators were program management and public relations; educational programming; curriculum development; providing educational systems related to population needs; personal development; occupational skills training; conducting research; instructional development; and interagency coordination, and that (2), in general, the adult vocational educators considered the role statements as more important in the areas of curriculum development, providing educational systems related to population needs, personal development, and interagency coordination.

In the United States, White (1951) investigated similarities of training interests in course topics for the in-service training of adult educators by developing a list of topics. One hundred leaders were asked to rate these topics in terms of interest. The outcome was nine essential topics identified as a common interest to their adult education programs.
In another interesting study conducted in 1960 by Chamberlain (1976), he sought to identify the professional competencies of adult educators. Professional adult educators, graduate students and institutional administrators were then asked to rank the competencies in order of importance. Forty-five behavioral objectives were identified in order of importance.

Two years later, Knowles (1962) suggested that doctoral programs in adult education must produce graduates with common competencies. In addition to these competencies, each graduate must possess specialized skills in the role he or she plans to assume upon graduation. He recommended that graduate curriculum be developed by the following steps:

1. analyze the function required by the student in performing as an adult educator;
2. determine the competencies required to perform each function;
3. diagnose the knowledge, understanding, skills, attitudes; values and interests that make up each competency;
4. formulate objectives in terms of behavior changes to be sought in these; and
5. plan a program of activities that will achieve these objectives (pp. 136-141).
Aker (1962) conducted research in the area of evaluating the effectiveness of graduate programs in adult education. His purpose was to establish criteria for evaluating graduate study. He then identified 233 behavioral objectives of graduate study. Sixteen professors of adult education were asked to select from 233 objectives those which were most useful, observable and measurable. The group agreed on twenty-three behavioral objectives as the criteria for measuring educational objectives of graduate programs in adult education. The twenty-three behavioral objectives were:

1. helps people control and adjust to change rather than to maintain the status-quo;
2. intelligently observes and listens to what is being said or done and uses this information in guiding his response;
3. selects and uses teaching methods, materials, and resources that are appropriate in terms of what is to be learned and in terms of the needs and abilities of the individual learners;
4. helps his clientele acquire the ability for critical thinking;
5. provides an atmosphere where adults are free to search through trial-and-error without fear institutional or inter-personal threat;
6. identifies potential leaders and helps them
to develop their potential and capacities;
7. makes use of existing values, beliefs, customs, and attitudes as a starting point for educational activities;
8. is actively involved in continuing study that will increase his professional competencies;
9. understands the role of adult education in society and is aware of the factors and forces that give rise to his function;
10. actively shares, participates, and learns with the learners in the learning experiences;
11. helps adults to actively set their own goals, and provides a variety of means and opportunities for intensive self-evaluation;
12. identifies and interprets trends that have implications for adult education;
13. has clearly defined his unique role as an adult educator and understands his responsibility in performing it;
14. arranges learning experiences so that the learners can integrate theory and practice;
15. is effective in building a teaching team among lay leaders and group members;
16. uses the process of appraisal to evaluate programs and to help clarify and change objectives;
17. is creative and imaginative in developing new
programs, and believes that innovation and experiment are necessary for the expansion of adult education;

18. makes use of the contributions of all group members through the utilization of individual talents and abilities;

19. works with schools, teachers, parents, and pre-adults to assist them in developing the motivation attitudes, understanding, and skills necessary for life-long learning;

20. objectively presents contrasting points of view;

21. assumes the initiative in developing a strong national perception of the importance and essentiality of continuing education;

22. recognizes when the communication process is not functioning adequately or when it breaks down; and

23. identifies, critically evaluates, and discusses scholarly work by investigations in adult education and related fields (pp. 360 - 361).

Another research study was administered by Veri (1969). His purpose was to design a doctoral program of studies based on the expressed needs of professional practitioners. He developed a list of sixty learning experiences and asked one hundred adult educators to rate these learning experiences in terms of how relevant they would be in the
performance of their professional responsibilities. The following subject areas were recommended for inclusion in the program of studies:

(1) Core Experience: history and philosophy of adult education, designing and evaluating adult education programs, psychology of adult education, sociology of adult education, social change, special problems in adult education, and motivation.

(2) Generalist Producing Experiences: organization and administration of adult education agencies, methods and media in adult education, educational psychology, general survey, cultural change, fundamental research techniques, utilization and evaluation of audio-visual aids, interpreting research, and social psychology.

(3) Administration Specialist Producing Experiences: public relations, personnel administration, internship in adult education, budget development and control in education, public speaking, community planning and organization.

(4) Teaching Specialist Producing Experiences: integrating seminar in adult education, contemporary education trends, philosophies of education.

(5) Research Specialist Producing Experiences: statistical methods, sociology of small groups
While there appears to be agreement that identification of knowledge and skills is a primary requirement in the development of effective graduate preparation programs in adult education, Mocker (1974) raises an interesting question about the people who develop training programs.

Persons responsible for developing individual courses and total degree programs have little basis for making decisions concerning content. Colleges and universities concerned with the training of professionals who will assume leadership positions in adult education must have some base other than tradition to make curriculum selection decisions (p. vi).

From observation of the field and by reviewing the literature, Campbell (1977) suggested that the model of curriculum in training for adult education should consist of six constituent elements:

the adult learner: the psychological context; the adult learner: the sociological context; adult education: the philosophical-historical context; adult education: methods and resources; adult education systems: organization and administration; adult education: provision to a particular clientele/environment (pp. 80-89).
Bunning (1976) studied competencies by employing a Delphi study to assess the knowledge and skills which would be needed by future adult educators in successfully fulfilling their roles. The sample population included university professors of adult education from the United States and Canada who completed a series of four questionnaires. Higher rated skills and knowledge were found to fall into six general categories: the adult educator, the field of adult education, the adult learner, the adult educational environment, programming and process.

Apps (1979) stated a basic issue in continuing education when he noted:

Continuing educators tend to spend their time putting out brush fires as they erupt. By expending all of their energy on practical problems, they are left without sufficient time, energy or resources to attack the basic problems. Included in the basic problems are those dealing with "the adult as a learner, the field of adult education and what it is, the purpose of continuing education, the content and curriculum of continuing education and research." Only by developing and understanding of basic problems in the field of continuing education can we be successful in working with everyday problems (p. 19).
Daniel and Rose (1982) carried out a study to compare practitioners' opinions concerning knowledge and skills needed by the future adult educators with those of professors. The sample population of practitioners was seventy-eight National University Continuing Education Association members who were deans or directors of continuing education. Practitioners, through two rounds of questionnaires, priority ranked thirty knowledge and thirty-seven skill statements which had been identified and priority ranked by professors of adult education in Bunning's (1976) Delphi study. Kendall Tau coefficients computed for both knowledge and skill-statement ranking between the two samples indicated that professors and practitioners tended to agree more on skill-statement relative rank than on knowledge-statement relative ranking. It was concluded, from examination of means and rank order, that differences, as well as convergence of opinion, exist between the two study populations regarding the sampled knowledge and skill areas required by future adult educators.

Anifowoshe (1982) conducted a study to identify the perceptions of the international participants in the graduate programs of adult education regarding the appropriateness and adequacy of their graduate programs related to their needs. Data were sought from 120
international students in graduate programs of adult education in selected the United States institutions. Two groups, one with prior work experience in adult education in their native countries and one without, rated knowledge and skills in the competencies very similarly. From the results of rating, development of knowledge and skills were perceived as appropriate and adequate.

SUMMARY

The importance of competencies in professional training in education is clearly stated in the beginning of this chapter. Research studies of adult education competencies in The United States were conducted mainly in the area of program development. A few research studies related to adult education competencies in Thailand were found. These initial studies, however, serve to stimulate adult education institutions in Thailand to refine the future appropriate common core competencies.


CHAPTER III

DESIGN OF THE STUDY

Introduction

This chapter discusses the structural components of the study: (1) the Delphi technique as a research device used to gather consensus data, (2) the population from which the panel was drawn, (3) the procedure by which the study was implemented, (4) the instrumentation used in this study, (5) the analysis of data and (6) the reporting of the data. The aim of this study was to develop a consensus of opinion of the adult education experts in Thailand concerning knowledge and skills needed by the adult educator. The opinions were to supply a guide to professional training of adult educators and adult graduate program development in Thailand.

Research Design

The methodology applied in this study was the Delphi technique. The Delphi concept may be viewed as one of the spinoffs of defense research. "Project Delphi" was the name given to an Air Force-sponsored Rand Corporation study, starting in the early 1950s, concerning the use of expert opinion (Dalkey, 1963). Delphi methodology has been used
frequently during the past decade for a variety of similar purposes which tend to relate to future forecasting and/or refinement of group opinions and predictions on priority issues (Weaver, 1971).

Several variations of the Delphi techniques have been utilized. Generally, the Delphi uses a series of four questionnaires. The first asks each respondent to provide some initial input on the topic under investigation. The second consists of items developed from the first-round responses, and it requests individual judgements in the form of priority ratings on each item. The third provides the respondent with some average of second-round responses for each item, usually in form of a median or mode. He is asked to reconsider his own second-round response in light of this information and either move to the group judgment or state a reason why he feels a minority position is in order. The final questionnaire provides each participant with new consensus data, a summary of minority opinions, and requests a final revision of responses (Rasp, 1973).

The goals of the procedure typically related to data gathering from "informed" sources, exploring sources of decision alternatives, attempting to achieve consentual agreement from respondents, relating "informed" judgments on a variety of topics, and providing information to the respondent group (Strauss, 1975). Typically, two or three
Delphi rounds are utilized. Data analysis procedures concentrate on item variances around relatively stable measures of central tendency, for example; means (Barnette, 1978).

The Delphi attempts to engage respondents in an anonymous, moderately interactive debate, to arrive at a consensus on issues and predictions of future events. It is thought to be more advantageous than face-to-face conferences with regard to expense and reliability. The opinions of relatively large numbers of respondents can be sampled via a mailed questionnaire much more economically than having those same attitudes expressed and agreed upon at a conference. Reliability of the results is thought to be less systematically influenced by "bandwagon" effects when the respondents are not subject to lengthy, persuasive orations, typical of more traditional group consensus techniques, for example, conferences (Helmer, 1966).

A series of three questionnaires were employed in this study. The first round questionnaire solicited open-ended responses from a panel of experts to the question, What knowledge and skills are needed by the adult educator in order to perform his or her job adequately? In the second round, the experts were asked to rate the statements generated from the first round. The panelists were asked to rate each statement as to its importance to the adult educator according to the following scale:
1 = lowest priority of importance
2 = below priority of importance
3 = average priority of importance
4 = above average priority of importance
5 = highest priority of importance

The median and interquartile range of each statement in this questionnaire were calculated by a computer using the SPSS package. In the third round, the same second-round questionnaire was used again. The report of each expert's positions of medians and interquartile ranges of the statements from the second round gave an opportunity for each expert to reconsider his or her own answers. If they disagreed with any statements, they were asked to write their reasons for each statement. Finally, they were asked to rate the question again.

Selection of the Panel

The researcher selected five Thai experts in adult education. Two of them are university professors and the rest are from the Non-formal Education Department. The following criteria were applied in this selection process:

1. experience in adult education
2. publications in adult education
3. academic practitioners in adult education

These five experts were asked to generate a list of experts for this study according to the above three
criteria. Twenty-two experts were selected to join the first-round questionnaire on the basis of the appearance of their name three or more times.

Procedure for Collection of Data

The data collecting aspect of this study covered a period of four months, beginning on August 2, 1986 and ending on December 2, 1986. From August 2 to August 10, 1986, the researcher met five experts who generated a list of experts for this study (Appendix F, p. 112). The letter of introduction with the criteria for the panelist selection of this study and an envelope with the researcher's address were personally brought to each expert. They were then asked to return the list. On August 17, 1987, a complete list of the experts was produced. Twenty-two experts were chosen according to the aforementioned criteria to react to two open-ended questions: (1) What knowledge do you think is necessary and appropriate for the adult educator? (2) What skills do you consider are necessary and appropriate for the adult educator? (Appendix B, pp. 85-89). The researcher personally met seventeen experts who lived in Bangkok to ask for their cooperation in this study. At the same time, a letter of introduction from Associate Professor Dr. Ron Newsom, the researcher's major professor, a Round 1 questionnaire, and an envelope with a stamp and the researcher's address were given to each of them. The five
experts who worked in the rural areas also received the same materials as the seventeen experts. Round 1 was begun on August 18 and ended August 31, 1986. During this period, the Round 1 questionnaire and the materials were sent out. On September 8, 1986, a follow up letter and a second mailing questionnaire were delivered again. All Round 1 questionnaires were returned to the researcher by September 15, 1986. During September 16 to 25, 1986, 125 statements were developed by removing repeated items. These statements were made into a Round 2 questionnaire with a five-point rating scale. Instructions which explained the value of the five numbers were included (Appendix C, pp. 90-97).

Demographic information on Round 2 was also requested from the panelists. The demographic information asked for included: (1) work place, (2) years of experience in adult education, (3) classification of the panelist's practice area, (4) age (5) gender and (6) highest educational level.

Round 2 questionnaires were sent to twenty-two panelists on September 26, 1986. A follow-up letter and a second mailing questionnaire were released on October 6, 1986. This round the panelists were asked to rate each item on a five-point rating scale. By October 15, 1986, only twenty questionnaires had been received. During October 16 and 17, 1986, Round 2 data were analyzed by an SPSS computer package to present the value of medians and interquartile ranges in Round 3.
Round 3 was mailed on October 20, 1986. Only twenty participants were sent Round 3 questionnaires since the Delphi process compares Round 2 and Round 3 responses. Panelists were instructed to review the items along with the panelist's Round 2 rating. Further, they were asked to review the supplied group response as indicated by the interquartile average--Q1, Q2, and Q3. Panelists then were asked to make any desired changes on individual items by rating the items, as before, on a five-point rating scale. Panelists were specifically instructed to make no markings on items for which there were no changes intended. A follow-up letter and a second mailing for Round 3 were sent on November 10, 1986. Twenty questionnaires were received on November 25, 1986. Four major categories, teaching, administration, research, and general experience, were used in grouping of 125 statements. The data on Round 3 were analyzed by an SPSS computer package on December 2, 1986.

Analysis of the Data

Two kinds of data were received in this study; demographic and consensual. Demographic information was inspected for frequency count and percentage representation in each demographic category.

Round 3 of the Delphi process was employed to verify the consensus of the experts. Median, mode, and interquartile ranges were utilized to identify the priority
of importance of the statements and the consensus of a panel of experts in this study.

To be accepted as the consensus of the panel each statement had to meet two criteria. The value of the difference between the median and mode (Mdn-Mode) had to be between 0 and 1. If a statement was in this range (0 to 1), it also had to have an interquartile range (the difference between the first quartile and the third quartile 'Q3-Q1'), of 0 to 1.50.

The value of the median from a five-point rating scale questionnaire was used to indicate the priority of importance of each statement in the questionnaire. It was interpreted according to these criteria:

- 0.00-1.49 = lowest priority of importance
- 1.50-2.49 = below average priority of importance
- 2.50-3.49 = average priority of importance
- 3.50-4.49 = above average priority of importance
- 4.50-5.00 = highest priority of importance

Reporting of the Data

The data were reported by tables showing the following:
(1) demographic information for the panel, (2) ranking of all items with medians, modes and interquartile ranges, and (3) ranking of top category items. The data were also reported in narrative form to provide a basis for the summary, conclusions, and recommendations.
CHAPTER BIBLIOGRAPHY


CHAPTER IV

TREATMENT OF DATA

Introduction

This chapter contains an analysis of the data gathered from twenty adult education experts in Thailand by the Delphi technique. The data are presented in two major sections:

1. Demographic information, the characteristics of the adult education panelists who participated in this study;

2. The consensus of the panelists on knowledge and skills for the adult educators in Thailand. This verification was based on a three-round-Delphi process and it was presented as follows:

   (a) Round 1 The open-ended questionnaire on "What knowledge and skills are needed by the adult educator to perform his or her job adequately?" was used to solicit responses from the panelists. The completed list of Round 1 Delphi items was shown in this stage.

   (b) Round 3 The rating results of the panelists on a 125 item questionnaire.
Characteristics of the Delphi Panel

Data on the characteristics of the panelists are provided solely for demographic purposes and also to provide assistance to future researchers who may wish to conduct a follow-up inquiry similar to this study. In this study, twenty panelists were asked to supply six categories of demographic information: (1) work place, (2) classification of the panelists’ practice areas, (3) age, (4) gender, (5) highest educational level, and (6) years of experience in adult education.

The reported work place of the panelists showed that eleven persons (55 percent) persons were working in the Non-formal Education Department. Nine persons (45 percent) were instructors in four universities in Bangkok.

Table 1
The Work Place

<table>
<thead>
<tr>
<th>Work Place</th>
<th>Panelists (n=20)</th>
<th>Percent (n=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-formal Education</td>
<td>11</td>
<td>55.00</td>
</tr>
<tr>
<td>Universities</td>
<td>9</td>
<td>45.00</td>
</tr>
</tbody>
</table>

It can be observed in Table 2 that the majority of the panelists were in urban areas. Sixteen panelists (80
percent) reported working in urban areas and four panelists (20 percent) reported working in rural areas.

Table 2

Practice Areas

<table>
<thead>
<tr>
<th>Practice Areas</th>
<th>Panelists (N=20)</th>
<th>Percent (N=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>urban area</td>
<td>16</td>
<td>80.00</td>
</tr>
<tr>
<td>rural area</td>
<td>4</td>
<td>20.00</td>
</tr>
</tbody>
</table>

The reported age of the panelists showed that the majority of the panelists (65 percent) were over forty years of age. Only one person (5 percent) was between twenty-five to thirty years of age; one person (5 percent) was between thirty-one to thirty-five years of age; and five persons (25 percent) reported ages between thirty-six to forty years of age.

Table 3

Age

<table>
<thead>
<tr>
<th>Years</th>
<th>Panelists (N=20)</th>
<th>Percent (N=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 - 30</td>
<td>1</td>
<td>5.00</td>
</tr>
<tr>
<td>31 - 35</td>
<td>1</td>
<td>5.00</td>
</tr>
<tr>
<td>36 - 40</td>
<td>5</td>
<td>25.00</td>
</tr>
<tr>
<td>41 - over</td>
<td>13</td>
<td>65.00</td>
</tr>
</tbody>
</table>
The reported gender of panelists showed that the majority of the panelists were male; fifteen persons (75 percent) reported male and five persons (25 percent) reported female.

Table 4
Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Panelists (N=20)</th>
<th>Percent (N=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>15</td>
<td>75.00</td>
</tr>
<tr>
<td>Female</td>
<td>5</td>
<td>25.00</td>
</tr>
</tbody>
</table>

It can be observed in Table 5 that the majority of the panelists held doctoral degrees; fifteen panelists (75 percent) reported a doctoral degree; and only five panelists (25 percent) reported having a master’s degree.

Table 5
Highest Educational Level

<table>
<thead>
<tr>
<th>Educational Level</th>
<th>Panelists (N=20)</th>
<th>Percent (N=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master’s degree</td>
<td>5</td>
<td>25.00</td>
</tr>
<tr>
<td>Doctoral degree</td>
<td>15</td>
<td>75.00</td>
</tr>
</tbody>
</table>
The reported years of experience in adult education showed that the majority of the panelists had over 10 years of experience in adult education. One person (5 percent) had one to three years of experience in adult education; three persons (15 percent) reported having four to six years of experience in adult education; six persons (30 percent) reported having seven to ten years of experience in adult education; and ten persons (50 percent) reported their experience in adult education was over ten years.

Table 6

Years of Experience in Adult Education

<table>
<thead>
<tr>
<th>Years</th>
<th>Panelists (N=20)</th>
<th>Percent (N=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – 3</td>
<td>1</td>
<td>5.00</td>
</tr>
<tr>
<td>4 – 6</td>
<td>3</td>
<td>15.00</td>
</tr>
<tr>
<td>7 – 10</td>
<td>6</td>
<td>30.00</td>
</tr>
<tr>
<td>11 – over</td>
<td>10</td>
<td>50.00</td>
</tr>
</tbody>
</table>

Identification of Relevant Items

The Delphi panel generated items on Round 1 that, after consolidation of similar items and elimination of duplications, resulted in 125 items. After Round 3 was over, the adult education competencies of this study were categorized into four broad areas as follows: (1) Teaching; statements included in this category were those which
related to the use and application of methods, techniques, and devices in teaching; planning and supervision; philosophy; and psychology. (2) Research: this category included statements which related to research and its application. (3) Administration: this category were those dealing with the components or factors that related to administration. (4) General Experiences: statements were not conducive categorization into Teaching, Research, and Administration. The complete listing of items generated by the panelists is shown in the following list:

Complete Listing of Round 1 Delphi Items

Knowledge statements

I. Teaching

Knowledge of:

1. educational philosophy of Thailand and other countries
2. adult education philosophy of Thailand and other countries
3. adult learning theories
4. comparative adult education
5. a comparison of adult and child education
6. adult teaching methods and techniques
7. specific courses and practicum
8. group dynamics
9. activity preparation
10. adult centered learning
11. principles and models of distance education
12. educational media usage and development
13. measurement and evaluation
14. guidance and counseling
15. modern technology and innovations
16. implication and application of knowledge, technology, and innovation
17. learning objectives and curriculum in general
18. adult education goals and objectives
19. educational planning
20. adult education supervision
21. roles of the adult educator
22. adult learning psychology
23. local natural resource application
24. role of mass media in educational provision

II. Research

Knowledge of:
25. general research
26. qualitative research
27. mathematics and statistics
28. adult educational research in Thailand and other countries

III. Administration

Knowledge of:
29. public relations
30. general planning
31. decision making
32. reporting
33. budgeting
34. educational administration and management
35. business and marketing
36. adult educational personnel, functions and organizations
37. human relationships
38. leadership

IV. General Experience

Knowledge of:
39. adult education history of Thailand and other countries
40. adult education, continuing education, non-formal education and life-long education
41. general education
42. definitions related to adult education
43. self improvement
44. social development
45. adult education extension
46. urban and rural development
47. social cooperation
48. activities and projects in adult education
49. project follow-up
50. survey and analysis of adult problems and needs
51. human evolution
52. local and country problems
53. politics and administration of the country
54. society, culture, custom and dialects
55. adult education and non-formal education target groups
56. social institutions and organizations
57. adult education professional associations
58. rules, regulations, acts and laws in adult education
59. health and nutrition
60. self-knowledge
61. knowing others
62. societies, countries and the world
63. human equality
64. the nature of life and environment
65. individual differences: problems and limitations
66. basic education in society, economy and politics
67. educational needs of the citizens
68. humanity and sociology
69. the nature of adult education in Thailand
70. virtue and morality of the adult educator
71. the interrelationship among formal, non-formal education and educational development
72. specific problems and situations of particular working areas
73. attitude and the process of attitude change
74. problems, barriers and forms of non-formal education
75. the preservation of national uniqueness

Skill Statements

I. Teaching

Skill of:

1. the use of various teaching methods and techniques
2. the use of teaching aids
3. creating and adapting teaching aids from local materials
4. program and curriculum designing and development
5. arrangement of learning environment
6. guidance and counseling
7. creating local media
8. the use of local educational resources
9. dissemination of knowledge in adult education
10. follow-up techniques
11. application of theories into practice
12. educational planning
13. program and project evaluation
14. training in how to think critically

II. Research

Skill of:

15. general research
16. the application of research reports
17. the use of research in planning

III. Administration

Skill of:
18. leadership
19. being a follower
20. developing human relationships
21. public relations
22. assistance and support
23. acceptance of other opinions
24. human motivation
25. moral and virtue role modeling
26. development of activities and models in adult education administration for target groups
27. administration and management
28. money and accounting
29. coordination
30. decision making
31. developing interpersonal relationships
32. participation and cooperation enhancement

IV. General Experience

Skill of:
33. social adjustment
34. some necessary dialects
35. basic first aid
36. pursuading target groups to accept the projects or plans
37. self-improvement
38. the process of meetings and seminars
39. motivational speaking
40. creative thinking development
41. observance of surroundings
42. professional situation endurance
43. having great tact in working
44. harmonizing western values with Thai values
45. problem solving and analysis
46. maintaining a sense of humor
47. offering opinions and suggestions
48. brainstorming with co-workers
49. training processes
50. traveling and living in rural areas

The Consensus of the Panelists

In Round 3, the report was presented according to four broad categories: teaching, research, administration and general experience. The values of medians, modes and interquartile ranges (See Chapter III, p.36) were employed as criteria for identifying the consensus of the panelists and selecting the item priority of importance.

In Table 7, nineteen knowledge statements were identified as the consensus of the panelists as appropriate
knowledge for the adult educator. Seven statements were rated at the highest priority of importance; twelve statements were above average; and five statements failed to meet the interquartile range criterion (some disagreement existed among the panel of experts).

The seven statements were rated at the highest priority of importance: item 3, knowledge of adult learning theories; item 6, knowledge of adult teaching methods and techniques; item 22, knowledge of adult learning psychology; item 2, knowledge of the adult education philosophy of Thailand and other countries; item 18, knowledge of adult education goals and objectives; and item 21, knowledge of roles of the adult educator.

The twelve statements were rated at above average priority of importance: item 9, knowledge of activity preparation; item 19, knowledge of educational planning; item 1, knowledge of the educational philosophy of Thailand and other countries; item 5, knowledge of a comparison between adult and child education; item 10, knowledge of adult centered learning; item 13, knowledge of measurement and evaluation; item 14, knowledge of guidance and counseling; item 15, knowledge of modern technology and innovation; item 17, knowledge of learning objectives and curriculum in general; item 23, knowledge of local natural resource application; item 24, knowledge of roles of mass
media in educational provision; and item 20, knowledge of adult education supervision.

The five statements which failed to meet the interquartile range criterion were: item 4, knowledge of comparative adult education; item 12, knowledge of educational media usage and development; item 8, knowledge of group dynamics; item 11, knowledge of the principles and models of distance education; and item 7, knowledge of specific courses and practicum.

Table 7

<table>
<thead>
<tr>
<th>Rank</th>
<th>Item No.</th>
<th>Knowledge of</th>
<th>Mdn</th>
<th>Mode</th>
<th>Mdn-Mode</th>
<th>InterQ Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
<td>adult learning theories</td>
<td>5.00</td>
<td>5.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>1</td>
<td>12</td>
<td>adult teaching methods and techniques</td>
<td>5.00</td>
<td>5.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>3</td>
<td>22</td>
<td>adult learning psychology</td>
<td>5.00</td>
<td>5.00</td>
<td>0.00</td>
<td>0.75</td>
</tr>
<tr>
<td>4</td>
<td>11</td>
<td>adult education philosophy of Thailand and other countries</td>
<td>5.00</td>
<td>5.00</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>4</td>
<td>16</td>
<td>implication and application of knowledge, technology and innovation</td>
<td>5.00</td>
<td>5.00</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>4</td>
<td>18</td>
<td>adult education goals and objectives</td>
<td>5.00</td>
<td>5.00</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>7</td>
<td>21</td>
<td>roles of the adult educator</td>
<td>4.50</td>
<td>5.00</td>
<td>0.50</td>
<td>1.00</td>
</tr>
<tr>
<td>8</td>
<td>9</td>
<td>activity preparation</td>
<td>4.00</td>
<td>4.00</td>
<td>0.00</td>
<td>0.75</td>
</tr>
<tr>
<td>8</td>
<td>19</td>
<td>educational planning</td>
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<td>4.00</td>
<td>0.00</td>
<td>0.75</td>
</tr>
<tr>
<td>10</td>
<td>1</td>
<td>educational philosophy of Thailand and other countries</td>
<td>4.00</td>
<td>4.00</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>10</td>
<td>5</td>
<td>a comparison of adult and child education</td>
<td>4.00</td>
<td>4.00</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>adult centered learning</td>
<td>4.00</td>
<td>4.00</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>10</td>
<td>13</td>
<td>measurement and evaluation</td>
<td>4.00</td>
<td>4.00</td>
<td>0.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>
In Table 8, three out of four knowledge statements were identified by the panelists as appropriate knowledge for the adult educator. Three statements were rated at above average priority of importance: item 25, knowledge of general research; item 27, knowledge of mathematics and statistics; and item 28, knowledge of adult educational research in Thailand and other countries. One statement, (item 26) knowledge of qualitative research, did not meet the interquartile range criterion as a consensus of the panelists.

Table 8

<table>
<thead>
<tr>
<th>Rank</th>
<th>Item Description</th>
<th>Mdn</th>
<th>Mode</th>
<th>Mdn-Mode</th>
<th>InterQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>guidance and counseling</td>
<td>4.00</td>
<td>4.00</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>10</td>
<td>modern technology and innovation</td>
<td>4.00</td>
<td>4.00</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>10</td>
<td>learning objectives and curriculum in general</td>
<td>4.00</td>
<td>4.00</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>10</td>
<td>local natural resource application</td>
<td>4.00</td>
<td>4.00</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>10</td>
<td>roles of mass media in educational provision</td>
<td>4.00</td>
<td>4.00</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>19</td>
<td>adult education supervision</td>
<td>4.00</td>
<td>5.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>20</td>
<td>comparative adult education</td>
<td>4.00</td>
<td>4.00</td>
<td>0.00</td>
<td>1.75</td>
</tr>
<tr>
<td>21</td>
<td>educational media usage and development</td>
<td>4.00</td>
<td>5.00</td>
<td>1.00</td>
<td>1.75</td>
</tr>
<tr>
<td>22</td>
<td>group dynamics</td>
<td>4.00</td>
<td>4.00</td>
<td>0.00</td>
<td>2.00</td>
</tr>
<tr>
<td>23</td>
<td>principles and models of distance education</td>
<td>4.00</td>
<td>5.00</td>
<td>1.00</td>
<td>2.00</td>
</tr>
<tr>
<td>24</td>
<td>specific courses and practicum</td>
<td>4.00</td>
<td>3.00</td>
<td>1.00</td>
<td>2.00</td>
</tr>
</tbody>
</table>
Table 9, all ten statements were identified by the consensus of the panelists as appropriate knowledge for the adult educator. Only two statements (item 37 and 31, knowledge of human relationships, and knowledge of decision making by using data) were rated at the highest priority of importance. Eight statements were rated at above average priority of importance: the eight statements were item 32, knowledge of reporting; item 29, knowledge of public relations; item 30, knowledge of general planning; item 33, knowledge of budgeting; item 34, knowledge of educational administration and management; item 35, knowledge of business and marketing; item 36, knowledge of adult educational personnel, functions, and organizations; and item 38, knowledge of leadership.

Table 9

<table>
<thead>
<tr>
<th>Rank</th>
<th>Item No.</th>
<th>Knowledge of</th>
<th>Mdn</th>
<th>Mode</th>
<th>Mdn-Mode</th>
<th>InterQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>37</td>
<td>human relationships</td>
<td>5.00</td>
<td>5.00</td>
<td>0.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>
In Table 10, thirty-five statements were identified by the consensus of the panelists as appropriate knowledge for adult educators. Seven highest priority of importance statements were: item 40, knowledge of adult education, continuing education, non-formal education and life-long education; item 46, knowledge of urban and rural development; item 47, knowledge of social cooperation; item 49, knowledge of project follow up; item 50, knowledge of survey and analysis of adult problems and needs; item 63, knowledge of human equality; and item 44, knowledge of social development. Twenty-six above average priority of importance statements were: item 43, knowledge of self-improvement; item 69, knowledge of the nature of adult education in Thailand; item 56, knowledge of social institutions and organizations; item 42, knowledge of definitions related to adult education; item 45, knowledge of adult education extension; item 48, knowledge of
activities and projects in adult education; item 51, knowledge of human evolution; item 52, local and country problems; item 53, knowledge of politics and administration of the country; item 55, knowledge of adult education and non-formal education target groups; item 60, knowledge of self-knowledge; item 61, knowledge of knowing others; item 64, knowledge of the nature of life and environment; item 66, knowledge of basic education in society, economy, and politics; item 67, knowledge of educational needs of the citizens; item 68, knowledge of humanity and sociology; item 70, knowledge of virtue and morality of the adult educator; item 71, knowledge of the interrelationship among formal, non-formal education and educational development; item 72, knowledge of specific problems and situations of particular working areas; item 73, knowledge of attitude and process of attitude change; item 74, knowledge of problems, barriers and forms of non-formal education; item 75, knowledge of the preservation of national uniqueness; item 54, knowledge of society, culture, custom and dialects; item 65, knowledge of individual differences: problems and limitations; item 57, knowledge of adult education professional associations and item 58, knowledge of rules, regulations, acts, and laws of adult education. Two statements were rated at average priority of importance (item 41, knowledge of general education and item 59, knowledge of health and nutrition).
Two statements did not meet the interquartile range criterion as a consensus of the panelists (item 62, knowledge of society, countries, and the world and item 39, knowledge of adult education history of Thailand and other countries).

Table 10
Ranking of Knowledge Statements on General Experience

<table>
<thead>
<tr>
<th>Rank</th>
<th>Item No.</th>
<th>Knowledge of</th>
<th>Mdn</th>
<th>Mode</th>
<th>Mdn-Mode</th>
<th>InterQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>40</td>
<td>adult education, continuing education, non-formal education and life-long education</td>
<td>5.00</td>
<td>5.00</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>1</td>
<td>46</td>
<td>urban and rural development</td>
<td>5.00</td>
<td>5.00</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>1</td>
<td>47</td>
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<td>0.00</td>
<td>1.00</td>
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<tr>
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<td>49</td>
<td>project follow up</td>
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<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
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<td>50</td>
<td>survey and analysis of adult problems and needs</td>
<td>5.00</td>
<td>5.00</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>1</td>
<td>63</td>
<td>human equality</td>
<td>5.00</td>
<td>5.00</td>
<td>0.00</td>
<td>1.00</td>
</tr>
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<td>7</td>
<td>44</td>
<td>social development</td>
<td>4.50</td>
<td>5.00</td>
<td>0.50</td>
<td>1.00</td>
</tr>
<tr>
<td>8</td>
<td>43</td>
<td>self improvement</td>
<td>4.00</td>
<td>4.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>8</td>
<td>69</td>
<td>the nature of adult education in Thailand</td>
<td>4.00</td>
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<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>10</td>
<td>56</td>
<td>social institutions and organizations</td>
<td>4.00</td>
<td>4.00</td>
<td>0.00</td>
<td>0.75</td>
</tr>
<tr>
<td>11</td>
<td>42</td>
<td>definitions related to adult education</td>
<td>4.00</td>
<td>4.00</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>11</td>
<td>45</td>
<td>adult education extension</td>
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<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>11</td>
<td>48</td>
<td>activities and projects in adult education</td>
<td>4.00</td>
<td>4.00</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>11</td>
<td>51</td>
<td>human evolution</td>
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<td>4.00</td>
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<td>1.00</td>
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<tr>
<td>11</td>
<td>52</td>
<td>local and country problems</td>
<td>4.00</td>
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<td>0.00</td>
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<tr>
<td>11</td>
<td>53</td>
<td>politics and administration of the country</td>
<td>4.00</td>
<td>4.00</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>11</td>
<td>55</td>
<td>adult education and non-formal education target groups</td>
<td>4.00</td>
<td>4.00</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>Rating</td>
<td>Weight</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>------------------------------------------------------------------------------</td>
<td>---------</td>
<td>--------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>self knowledge</td>
<td>4.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>knowing others</td>
<td>4.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>the nature of life and environment</td>
<td>4.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>basic education in society, economy, and politics</td>
<td>4.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>educational needs of the citizens</td>
<td>4.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>humanity and sociology</td>
<td>4.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>virtue and morality of the adult educator</td>
<td>4.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>the interrelationship among formal, non-formal education and educational</td>
<td>4.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>specific problems and situations of particular working areas</td>
<td>4.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>attitude and the process of attitude change</td>
<td>4.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>problems, barriers and forms of non-formal education</td>
<td>4.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>the preservation of national uniqueness</td>
<td>4.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>society, culture, custom and dialects</td>
<td>4.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>individual differences: problems and limitations</td>
<td>4.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>society, countries, and the world</td>
<td>4.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>adult education history of Thailand and other countries</td>
<td>4.00</td>
<td>2.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>adult education professional associations</td>
<td>3.50</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>rules, regulations, acts, and laws of adult education</td>
<td>3.50</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>general education</td>
<td>3.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>health and nutrition</td>
<td>3.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In Table 11, twelve out of fourteen statements were identified by the consensus of the panelists as appropriate skills for the adult educator. Three statements were rated
at the highest priority of importance (item 1, skill of the use of various teaching methods and techniques; item 14, skill of training in how to think critically and item 11, skill of application of theories to practice). Nine above average priority of importance statements were: item 6, skill of guidance and counseling; item 3, skill of creating and adapting teaching aids from local materials; item 2, skill of the use of teaching aids; item 4, skill of program and curriculum designing and development; item 8, skill of the use of local educational resources; item 9, skill of dissemination of knowledge in adult education; item 10, skill of follow up techniques; item 12, skill of educational planning and item 13, skill of program and project evaluation. Only two statements failed to meet the interquartile range criterion (item 5, skill of arrangement of learning environment and item 7, skill of creating local media).

**Table 11**

**Ranking of Skill Statements on Teaching**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Item No.</th>
<th>Skill of Mdn</th>
<th>Mode</th>
<th>Mdn-Mode</th>
<th>InterQ Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>the use of various teaching methods and techniques</td>
<td>5.00</td>
<td>5.00</td>
<td>0.00</td>
</tr>
<tr>
<td>1</td>
<td>14</td>
<td>training in how to think critically</td>
<td>5.00</td>
<td>5.00</td>
<td>0.00</td>
</tr>
<tr>
<td>3</td>
<td>11</td>
<td>application of theories to practice</td>
<td>4.50</td>
<td>4.00</td>
<td>0.50</td>
</tr>
</tbody>
</table>
In Table 12, all three statements (item 15, skill of general research; item 16, skill of the application of research reports; and item 17, skill of the use of research in planning) were above average priority of importance. A consensus of the panelists existed in them.

Table 12

Ranking of Skill Statements on Research

<table>
<thead>
<tr>
<th>Rank</th>
<th>Item No.</th>
<th>Skill of</th>
<th>Mdn</th>
<th>Mode</th>
<th>Mdn-Mode</th>
<th>InterQ</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>15</td>
<td>general research</td>
<td>4.00</td>
<td>4.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>16</td>
<td>the application of research reports</td>
<td>4.00</td>
<td>4.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>17</td>
<td>the use of research in planning</td>
<td>4.00</td>
<td>4.00</td>
<td>0.00</td>
<td>1.00</td>
<td></td>
</tr>
</tbody>
</table>
In Table 13, all fifteen statements were identified by the consensus of the panelists as appropriate skills for the adult educators. Six statements were rated at the highest priority of importance (item 20, skill of developing human relationships; item 23, skill of acceptance of the opinions of others; item 18, skill of leadership; item 29, skill of coordinating; item 31, skill of developing interpersonal relationships and item 32, skill of participation and cooperation enhancement). Nine above average priority of importance statements were: item 30, skill of decision making; item 19, skill of being a follower; item 21, skill of public relations; item 22, skill of assistance and support; item 24, skill of human motivation; item 25, skill of moral and virtue role modeling; item 26, skill of development of activities and models in adult education administration for target groups; item 27, skill of administration and management and item 28, skill of money and accounting.

Table 13

Ranking of Skill Statements on Administration

<table>
<thead>
<tr>
<th>Rank</th>
<th>Item No.</th>
<th>Skill of</th>
<th>Mdn</th>
<th>Mode</th>
<th>Mdn-Mode</th>
<th>InterQ</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20</td>
<td>developing human relationships</td>
<td>5.00</td>
<td>5.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>23</td>
<td>acceptance of the opinions of others</td>
<td>5.00</td>
<td>5.00</td>
<td>0.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>18</td>
<td>leadership</td>
<td>4.50</td>
<td>4.00</td>
<td>0.50</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
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<tr>
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<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>29</td>
<td>coordinating</td>
<td>4.50</td>
<td>4.00</td>
<td>0.50</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>31</td>
<td>developing interpersonal relationships</td>
<td>4.50</td>
<td>4.00</td>
<td>0.50</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>32</td>
<td>participation and cooperation enhancement</td>
<td>4.50</td>
<td>4.00</td>
<td>0.50</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>30</td>
<td>decision making</td>
<td>4.00</td>
<td>4.00</td>
<td>0.00</td>
<td>0.75</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>19</td>
<td>being a follower</td>
<td>4.00</td>
<td>4.00</td>
<td>0.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>21</td>
<td>public relations</td>
<td>4.00</td>
<td>4.00</td>
<td>0.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>22</td>
<td>assistance and support</td>
<td>4.00</td>
<td>4.00</td>
<td>0.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>24</td>
<td>human motivation</td>
<td>4.00</td>
<td>4.00</td>
<td>0.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>25</td>
<td>moral and virtue role modeling</td>
<td>4.00</td>
<td>4.00</td>
<td>0.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>26</td>
<td>development of activities and models in adult education administration for target groups</td>
<td>4.00</td>
<td>4.00</td>
<td>0.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>27</td>
<td>administration and management</td>
<td>4.00</td>
<td>4.00</td>
<td>0.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>28</td>
<td>money and accounting</td>
<td>3.50</td>
<td>3.00</td>
<td>0.50</td>
<td>1.00</td>
<td></td>
</tr>
</tbody>
</table>

In Table 14, sixteen statements were identified by the consensus of the panelists as appropriate skills for the adult educator. Six statements were rated at the highest priority of importance (item 33, skill of social adjustment; item 40, skill of creative thinking development; item 42, skill of professional situation endurance; item 43, skill of having great tact in working; item 37, skill of self-improvement and item 38, skill of the process of conducting meetings and seminars). Nine above average priority of importance statements: item 47, skill of offering opinions and suggestions; item 44, skill of harmonizing western values with Thai values; item 49, skill of training processes; item 36, skill of persuading target groups to accept the project or plans; item 39, skill of
motivational speaking; item 41, skill of observance of surroundings; item 45, skill of problem solving and analysis; item 46, skill of maintaining a sense of humor and item 48, skill of brainstorming with co-workers. Only one statement (item 35, skill of basic first aid) was rated at average priority of importance. Two statements (item 34, skill of some necessary dialects and item 50, skill of traveling and living in rural areas) did not meet the percentile range criterion as a consensus of the panelists.

Table 14

Ranking of Skill Statements on General Experience

<table>
<thead>
<tr>
<th>Rank</th>
<th>Item No.</th>
<th>Skill of</th>
<th>Mdn Mode</th>
<th>Mdn-Mode InterQ Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>33</td>
<td>social adjustment</td>
<td>5.00</td>
<td>5.00</td>
</tr>
<tr>
<td>1</td>
<td>40</td>
<td>creative thinking development</td>
<td>5.00</td>
<td>5.00</td>
</tr>
<tr>
<td>1</td>
<td>42</td>
<td>professional situation endurance</td>
<td>5.00</td>
<td>5.00</td>
</tr>
<tr>
<td>1</td>
<td>43</td>
<td>having great tact in working</td>
<td>5.00</td>
<td>5.00</td>
</tr>
<tr>
<td>1</td>
<td>37</td>
<td>self improvement</td>
<td>4.50</td>
<td>4.00</td>
</tr>
<tr>
<td>1</td>
<td>38</td>
<td>the process of conducting meetings and seminars</td>
<td>4.50</td>
<td>5.00</td>
</tr>
<tr>
<td>7</td>
<td>47</td>
<td>offering opinions and suggestions</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>8</td>
<td>44</td>
<td>harmonizing western values with Thai values</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>8</td>
<td>49</td>
<td>training processes</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>10</td>
<td>36</td>
<td>persuading target groups to accept the project or plans</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>10</td>
<td>39</td>
<td>motivational speaking</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>10</td>
<td>41</td>
<td>observance of surroundings</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>10</td>
<td>45</td>
<td>problem solving and analysis</td>
<td>4.00</td>
<td>4.00</td>
</tr>
</tbody>
</table>
In considering the complete list of 125 statements, thirty-one statements were rated at the highest priority of importance; seventy-nine statements were found to be at above average priority of importance; only three statements were at average; and twelve statements (10 percent) failed to meet the interquartile range criterion. On seventy-five knowledge statements, sixteen statements were rated at the highest priority of importance; forty-nine statements were above average; only two statements were average; and eight statements did not meet the interquartile range criterion. In total, fifty skill statements were above average; and four statements did not meet the interquartile range criterion.

Table 15
Rating Results on Round 3 Questionnaire

<table>
<thead>
<tr>
<th>Rating Scale</th>
<th>Knowledge Statements</th>
<th>Skill Statements</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.00 - 4.50</td>
<td>16</td>
<td>15</td>
<td>31</td>
</tr>
<tr>
<td>4.49 - 3.50</td>
<td>49</td>
<td>30</td>
<td>79</td>
</tr>
<tr>
<td>3.49 - 2.50</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>2.49 - 1.50</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Sixteen Highest Priority of Importance Skill Statements

Knowledge of:

1. adult learning theories
2. adult teaching methods and techniques
3. adult learning psychology
4. adult education philosophy of Thailand and other countries
5. implication and application of knowledge, technology and innovations
6. adult education goals and objectives
7. adult educators' roles
8. human relationships
9. decision making by using data
10. adult education, continuing education, non-formal education and life-long education
11. urban and rural development
12. social cooperation
13. project follow-up
14. survey and analysis of adult problems and needs
15. human equality
16. social development
Fifteen Highest Priority of Importance Knowledge Statements

Skill of:

1. the use of various teaching methods and techniques
2. thinking process training
3. application of theories to practice
4. developing human relationships
5. acceptance of the opinions of others
6. leadership
7. coordinating
8. developing interpersonal relationships
9. participation and cooperation enhancing
10. social adjustment
11. creative thinking development
12. professional situation endurance
13. having great tact in working
14. self-improvement
15. the process of conducting meetings and seminars

Interestingly, these thirty-one knowledge and skill statements were rated at the highest priority of importance by the panelists. In considering the value of medians, modes and interquartile ranges, only two knowledge statements (knowledge of adult learning theories and knowledge of adult teaching methods and techniques, see
Table 7, p. 51), and only one skill statement (skill of developing human relationships, see Table 13, p. 60) were rated at the highest priority of importance among thirty-one knowledge and skill statements. The medians of these three statements were 5.00 and the interquartile ranges were 0.00.

Some competencies which were found in both the knowledge and skill lists were: the knowledge of adult teaching methods and techniques and the skill of the use of various teaching methods and techniques; the knowledge of human relationships and the skill of developing human relationships.

Three knowledge statements in this list revealed that Thailand, as a developing country, needs the adult educator to be well trained in urban and rural development, social cooperation and social development.
CHAPTER V

SUMMARY OF FINDINGS, A COMPARISON OF INSTRUMENTS, CONCLUSIONS AND RECOMMENDATIONS

This study undertook to identify and specify knowledge and skills needed by the adult educator in Thailand. It provides information for establishing a guideline in professional adult education training and graduate program training.

The Delphi technique was used to develop the instrument in this study. Twenty-two panelists were selected; they included twelve non-formal education officers and ten university professors in adult and continuing education and non-formal education. A series of three rounds of questionnaires was administered to these panelists. The first round solicited open-ended responses from this panel of experts. In the second round and the third round, a five-point rating scale questionnaire, containing one hundred and twenty-five knowledge and skill statements, was employed to develop group consensus on the statements. Median, mode and interquartile ranges were applied to analyze the data by an SPSS computer package.
Summary of Findings

One hundred twenty-five Delphi items were generated by the panel. Of these, seventy-five items were knowledge statements and fifty were skill statements. From seventy-five knowledge statements, sixteen were rated at five on a five-point rating scale (highest priority of importance). Forty-nine statements were rated at four (above average priority of importance) and two statements were rated at three (average priority of importance); eight statements did not meet the interquartile range criterion as a consensus of the panelists (the value of the difference between the third and the first quartiles is more than 1.50). From fifty skills statements, fifteen statements were rated at five (highest priority of importance); thirty statements were rated at four (above average); one statement was rated at three (average); and four statements failed to meet the interquartile range criterion. Major findings are reported as follows:

1. The strongest agreement on knowledge statements was on knowledge of adult learning theories and knowledge of adult teaching methods and techniques (median = 5.00, mode = 5.00, median - mode = 0.00 and interquartile range = 0.00).

2. The strongest agreement on skill statements was the skill of developing human relationships (median = 5.00, mode = 5.00, median-mode = 0.00, and interquartile range = 0.00).
3. The competencies which can be found on both knowledge and skill statements were the knowledge of adult teaching methods and techniques and the skill of the use of various teaching methods and techniques, the knowledge of human relationships and the skill of developing human relationships, the knowledge of social cooperation and the skill of developing of participation and cooperation, and both knowledge and skills of guidance and counseling.

4. The need for knowledge of developing the society for the adult educator became evident in this study. The panel showed a strong emphasis on urban and rural development and social development. These two statements appeared on the list of sixteen highest priority of importance knowledge statements.

5. On research, the panel seemed to agree on both knowledge and skill on general research. Apparently, this statement can be found on the list of both knowledge and skill statements.

6. On teaching, basic knowledge and skills in teaching were clearly accepted by the panel of experts. The highest priority of importance knowledge statements were knowledge of: adult learning theories, adult teaching methods and techniques, adult learning psychology and philosophy, adult education goals and objectives, implication and application of knowledge, technology and innovation, and role of the adult educator.
The highest priority of importance skill statements were skills of: the use of various teaching methods and techniques, training in how to think critically, and application of theories into practice were the highest consensus of the panel.

7. On administration, knowledge statements of human relationships and decision making by using data were identified as the highest priority of importance. Skill statements of developing human relationships, acceptance of other opinions, leadership, coordinating, developing interpersonal relationships, and participation and cooperation enhancement were also rated as the highest consensus.

8. On general experience, the highest priority of importance knowledge statements were knowledge of: adult education, continuing education, non-formal education and life-long education; urban and rural development; social cooperation; project follow up; survey and analysis of adult problems and needs; human equality and social development.

The highest priority of importance skill statements were skills of: social adjustment; creative thinking development; professional endurance; having great tact in working; self-improvement and the process of meetings and seminars.
9. From the complete list of knowledge and skill statements in Chapter IV, these were a few knowledge statements related to non-formal education: (1) adult education, continuing education, non-formal education, and life-long education; (2) the interrelationship among formal, non-formal education and educational development and (3) problems, barriers and forms of non-formal education. The lack of non-formal education statements may come from the application of the two open-ended questions which allowed various answers from the panel. If some specific researching areas are expected, the particular framework should be initially formed as a controlled guideline.

A Comparison of Instruments

Two lists were used in this comparison, one American and one Thai. A comparison and a critique was made of these lists from different cultural backgrounds.

This comparison is based on the same research topic, knowledge and skills for adult educators, and the same methodology, a Delphi technique.

In 1976, Richard L. Bunning of Arizona State University conducted a Delphi study on skills and knowledge for adult educators. The sample population for the study was 141 university professors of adult education from the United States and Canada. This panel of experts identified 101 skill and knowledge statements, forty-eight knowledge
statements and fifty-three skill statements, on the Round 2 questionnaire (see Appendix E, pp. 107-110).

In this study, the researcher (Jiearatrakul) used a Delphi technique to collect data from the sample population of twenty panelists, eleven Non-formal Education Department officials and nine university professors. This panel of experts generated 125 skill and knowledge statements, seventy-five knowledge statements and fifty skill statements on the Round 2 questionnaire (see Appendix C, pp. 90-97).

This comparison shows that on Bunning's list of forty-eight knowledge statements, twenty-two statements (45.83 percent) are similar or identical ideas to the list developed in Thailand. On Bunning's list of fifty-three skill statements, only twenty statements (37.73 percent) are similar or identical ideas. Thirty-two skill statements (60.38 percent) are different. The high percentage of different concepts indicate a major difference between the two lists. Table 16 summarizes the similarity of the two list.

Table 16

<table>
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<tr>
<th>No.</th>
<th>Bunning's list</th>
<th>No. Jiearatrakul's list</th>
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<tbody>
<tr>
<td>1.</td>
<td>of the functions of the adult educator.</td>
<td>35. of roles of the adult educator.</td>
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<td>3.</td>
<td>of educational institutions:</td>
<td>53. of adult educational</td>
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their functions, their interrelationships with society, and how they may be changed.

4. of the ever changing nature of the adult and his needs.
7. of learning theories in practice.
8. of situational analysis techniques.
11. of group dynamics.
12. of community resources.
13. in a specialty area or specific discipline.
14. of a broad liberal arts tradition.
15. of the history and development of adult education as it relates to contemporary society.
19. of the use of mass media as its related to contemporary society.
23. of educational technology, A-V aids, computers, etc.
27. of the principles of adult education.
29. of proper use of various educational methods, techniques, and/or devices.
32. of the community: its organization and power structure as well as methods of development.
33. of educational planning.
35. of the decision-making process.
37. of himself.
40. of the psychology of adult: intellectual development, adjustment, personality.
42. of economics.
46. of contemporary society: its subgroupings, needs, trends, culture, and how it interrelates with and personnel functions and organizations.

36. of adult learning psychology.
3. of adult learning theories.
33. of survey and analysis of adult problems and needs.
14. of group dynamics.
44. in local natural resource application.
71. in specific problems and situations of particular working areas.
7. in general education.

5. of adult education history of Thailand and other country.
72. role of mass media in educational provision.
16. in the implication and application of knowledge, technology, and innovations.
28. of adult education goals and objectives.
12. in adult teaching methods and techniques.
11. of social development.
31. of educational planning.
41. of decision making.
56. in self-knowledge.
36. in adult learning psychology.
63. in basic education in society, economy and politics.
48. in society, culture, custom and dialects.
affects the adult.

48. of philosophy.

1. of educational philosophy of Thailand and other countries.

Skills:

2. as an educational consultant.
3. in conducting research and statistical analysis.
7. in leadership: group, academic, and/or community.
9. in creating enhancing interpersonal relationships.
10. in public relations.
11. in public relations.
13. in gaining the cooperation of community agencies and/or groups in educational endeavors.
14. in administration or management of adult programs.
19. in the use of guile when necessary.
21. in counseling adults.
22. in fiscal aspects of the educational process.
24. in utilizing educational resources.
29. as a competent instructor.
31. in human motivation.
36. as a teacher trainer.
41. in systematic inquiry, critical assessment; and problem solving.
42. in evaluating the effectiveness of the educational process.
43. in the use of educational technology.
45. in continuous self-improvement.
46. in helping groups engage in problem solving.
49. in utilizing research findings to improve instruction.

26. in guidance and counseling.
41. in general research.
46. in training processes.
47. in program and project evaluation.
48. in participation and cooperation enhancement.
32. in money and accounting.
28. in the use of local educational resources.
21. in the use of various teaching methods and techniques.
16. in human motivation.
34. in problem solving and analysis.
On differences of statements in the two lists, cultural differences are evident.

From Bunning's list of knowledge statements, some democratic ideas are proposed:
knowledge of right or wrong.
knowledge of how to muster courage to make unpopular decisions.
knowledge of the adult handicapped learner.

From Jiearatrakul's list of knowledge statements, some characteristics of a developing country, a unique form of the educational process and conservative ideas were included:
knowledge in social development.
knowledge in urban and rural development.
knowledge in adult education, continuing education, non-formal education and life-long education.
knowledge in the interrelationships among formal, non-formal education and educational development.
knowledge in problems, barriers and forms of non-formal education.
knowledge in the preservation of national uniqueness.

From Bunning's list of skill statements, the characteristics of a developed country and a democracy can be observed:
skills in marketing the 'educational product'.
skills in initiating the self-actualization process in
the adult learner; encouraging individual responsibility and/or independence.

skills in 'second guessing' the future.

skills in proper utilization of advisory committees.

skills in working with legislators.

skills in driving a car.

skills in promoting teamwork as a member of the total educational team.

skills in creating non-traditional learning opportunities.

From Jiearatrakul's list of skill statements, the characteristics of a developing country are revealed:

skills in harmonizing western values with Thai values.

skills in traveling and living in rural areas.

skills in thinking process training.

According to the result of this comparison, the differences between the two lists are distinctive. Thus, utilizing the list or questionnaire from different cultures would probably reduce the level of reliability of that study. If it is necessary to use a list developed in other countries, a pilot study should be conducted to verify reliability. Generally, there will be some cultural orientation in tests or questionnaires. If the researcher can control the cultural effect of them, the outcome of the study will be more reliable and valid.
Conclusions

The aim of this study was to secure information which would lead to knowledge and skills needed by the adult educator in Thailand. The conclusions of this study are:

1. In considering Table 15, page 63, the panel's responses demonstrated a strong agreement in the field of adult education. Of one hundred and twenty-five total statements, seventy-nine statements (63.20 percent) were rated at above average priority of importance. Thirty-one statements (24.80 percent) were rated at the highest priority of importance. Only three statements (2.40 percent) were rated of average importance. Twelve statements (9.60 percent) failed to meet the interquartile range criterion. The results of this rating indicated that the panelists were in general agreement. Their highest level of education and experience probably created a strong agreement among the panel of experts. In considering the panelists' highest educational level and years of experience in adult education (Table 5 and 6 pages 41-42), these panelists had a high educational level. Fifteen panelists (75 percent) possessed a doctoral degree, and five (25 percent) had a master's degree. The majority had over ten years of experience in adult education.

2. Since the advent of non-formal education in 1979, the adult educator in Thailand has had to perform an
increasing variety of roles. Common knowledge and skills required to fulfill these varying roles can be grouped into four major categories. These categories are teaching, administration, research and general experience.

3. Of one hundred and twenty-five knowledge and skill statements, thirty-one knowledge and skill statements were rated at the highest priority of importance. According to the values of median, mode, and interquartile range, only two knowledge statements, knowledge of adult learning theories and knowledge of adult teaching methods and techniques were rated at the highest priority of importance. Only one skill statement, skill of developing human relationships, was rated at the highest.

4. The low consensus, the statements that failed to meet the interquartile range criterion for knowledge statements were knowledge of: comparative adult education, educational media usage and development, group dynamics, principles and models of distance education, specific courses and practicum, qualitative research, society, countries and the world, and the history of adult education in Thailand and other countries.

The low consensus skill statements were skills of arrangement of learning environment, creating local mass media, some necessary dialects and traveling and living in rural areas.
Recommendations

The recommendations based upon the conclusions and findings of this study are presented in two areas: (1) practical application of the study findings, and (2) further research studies.

Recommendations for Practical Application of Study Findings

1. Since the role of non-formal education is multifaced, adult educators are not trained to serve only the adult but also the entire population. The adult educator should begin to prepare and adjust himself to his/her variety of tasks.

2. The list developed in this study should be used as a tool in identifying individual competencies or graduate program evaluation.

3. Some of the high consensus statements should be considered as important educational objectives in adult graduate program training in Thailand.

4. The four major categories, teaching, administration, research and general experiences, should be utilized as a guide in adult education and non-formal education practice.

Recommendations for Further Research

From insight gained in this study, the following suggestions are offered for future research.
1. A comparative study of adult education practitioners and professors on knowledge and skills needed by the adult educator in Thailand should be studied to examine any gap between theories and practice.

2. A similar study should be conducted by using a non-formal education framework.

3. A study of the level of mastery learning in knowledge and skills needed by the adult educator should be conducted with the graduate students in each program and between programs to make a comparison. This kind of research can indicate weak points in graduate programs in adult education.

4. An in-depth study of each of the four major categories, teaching, administration, research, and general experiences, should be conducted in order to decrease problems in these particular areas.
APPENDIX A

A COVER LETTER AND A LETTER TO FIVE EXPERTS
North Texas State University  
Higher and Adult Education  
June 3, 1986  

To Whom It May Concern:  

This letter introduces Mr. Tamrongsin Jiearatrakul, an Assistant Professor at Ramkhamheang University in Bangkok, Thailand and a doctoral student in Adult/Continuing Education at North Texas State University in Denton, Texas, U.S.A.  

During the summer and fall 1986, Mr. Jiearatrakul will travel to Thailand to collect data for his dissertation. He seeks to identify, describe and analyze professional competencies considered necessary for the adult educators in Thailand.  

Such a study will be value to adult education as a field of study in both Thailand and the United States and also will contribute to comparative adult education.  

I would greatly appreciate any assistance that you can provide Mr. Jiearatrakul. Your efforts will benefit adult education in Thailand and the United States.  

Thank you in advance for your cooperation and assistance.  

Sincerely,  

Ron Newsom, Ph.D.  
Associate Professor  
Program Area Head for Adult Education
Dear ...............:

I am an assistant professor in the Division of Curriculum and Teaching, Faculty of Education, Ramkhamhaeng University, Bangkok. I am working for my doctoral degree in Adult/Continuing Education at North Texas State University, Denton, Texas, U.S.A. I am conducting a study of 'Knowledge and Skills for the Adult Educator in Thailand'. The Delphi technique will be used in collecting data for this study.

The main purpose of this study is to determine knowledge and skills needed by the adult educator in Thailand. This study will be useful in adult education professional training and graduate program developing.

You are selected to be one of the five experts who will identify a list of adult and continuing education experts for this study based on 1) the experience in adult education 2) publications in adult education, and 3) academic practitioners in adult education.

I would like to take this opportunity to invite you to take part in this study. Please use the above criteria in submitting your list of experts.

Your participation will be very important in proceeding to a consensus of opinion for this study.

Thank you very much for your cooperation.

Yours Truly,

(Tamrongsin Jiearatrakul)
Assistant Professor
Faculty of Education
Ramkhamhang University, Bangkok
A List of the Experts in Adult Education

Three criteria for selecting the experts in adult and continuing education:
1. the experience in adult education
2. publications in adult education
3. academic practitioners in adult education

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APPENDIX B

ROUND I CORRESPONDENCE AND QUESTIONNAIRE
Dear .................:

I am an assistant professor in the Division of Curriculum and Teaching, Faculty of Education, Ramkhamhaeng University, Bangkok. I am working for my doctoral degree in Adult/Continuing Education at North Texas State University, Denton, Texas, U.S.A. I am conducting a study of 'Knowledge and Skills for the Adult Educator in Thailand'

The purpose of this study is to determine knowledge and skills which are necessary for the adult educator in Thailand. This study will be useful in adult education professional training and graduate program developing.

You are selected to be one of the panelists for this study. Your participation will be important in developing a consensus of opinion for this study. I hope that you will accept my invitation to join this group of panelists.

The Delphi technique of three rounds will be applied to collect data. On Round I, you will be asked to answer two open-ended questions. On Round II, you will be asked to rate the statements generated by the panel from Round I on a five-point rating scale (1 2 3 4 5). On Round III, the questionnaire which consists of the list of statements with a group median and a group interquartile range for each statement from Round II will be sent to you to rate it again. You will be asked to reconsider your Round II responses and make any revisions that are called for.

Thank you for your cooperation.

(Tamrongsin Jiearatrakul)
Assistant Professor
The Division of Curriculum and Teaching
Faculty of Education
Ramkhamheang University
Bangkok
ROUND I QUESTIONNAIRE

INSTRUCTION:
Please answer the following two questions in statements. Be brief but adequately communicate your ideas.

According to the rapid change of Thai society and the upgrading of The Non-formal Education Department from The Division of Adult Education, these situations require the adult educator to perform complicate role. In order to fulfill that role, the adult educator should acquire appropriate knowledge and skills to be successful in the changing society.

I. What knowledge should be needed for Thai adult educators?
In my opinion, knowledge that is necessary for Thai adult educators is:
1. .................................................................
2. .................................................................
3. .................................................................
4. .................................................................
5. .................................................................
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20. .................................................................

II. What skills should be needed for Thai adult educators?
In my opinion, skills that are necessary for Thai adult educators are:
1. .................................................................
2. .................................................................
3. .................................................................
4. .................................................................
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6. .................................................................
7. .................................................................
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10. .................................................................
11. .................................................................
12. .................................................................
Thank you very much for your cooperation.

Tamrongsin Jiearatrakul
A ROUND I FOLLOW-UP LETTER

Dear .................:

Last week I sent you a questionnaire (two open-ended questions) on 'Knowledge and Skills for the Adult Educator in Thailand'. Perhaps you did not receive the questionnaire or you may have been busy with your professional or personal obligations. However, your help is needed to complete this study. Your opinions are very important for the study because in Thailand we do not have many experts in adult education. Thus, your participation will make this study reliable.

Enclosed are a questionnaire and a return envelope for your convenience.

Thank you in advance for your cooperation.

Tamrongsin Jiearatrakul
APPENDIX C

ROUND II QUESTIONNAIRE
Dear .................:

Thank you for your help in answering the Round I questionnaire. For this round (Round II), I would like you to 1) check six items related to demographic information about the panel (This information will be held in strictest confidence), and 2) rate all items according to the priority of importance on a five-point rating scale.

Because this Delphi technique will take another round to complete the study, I do not want to spend much of your time. Thus, please finish this questionnaire in a week and send it back to me in the provided envelope.

Thank you for your good cooperation.

Tamrongsin Jiearatrakul
Assistant Professor
The Division of Curriculum and Teaching
Faculty of Education
Ramkhamhaeng University
Bangkok
ROUND II QUESTIONNAIRE

PART I
Demographic Information
Instruction:
Please check ( ) what is appropriate.

1. Work Places: now you are working in ........
       ........ A. The Non-formal Education Department
                ........ B. a university

2. Practice Areas: now you are working in ........
       ........ A. an urban area
                ........ B. a rural area

3. Age: you are ........ years of age.
       ........ A. 25 - 30
                ........ B. 31 - 35
                ........ C. 36 - 40
                ........ D. over 40

4. Gender: you are ........
       ........ A. male
                ........ B. female

5. Highest Educational Level: your highest educational level is ........
       ........ A. master degree
                ........ B. doctoral degree

6. Years of Experience in Adult Education: your experience in adult education is ........ years.
       ........ A. 1 - 3
                ........ B. 4 - 6
                ........ C. 7 - 10
                ........ D. over 10
PART II
Knowledge and Skill Questionnaire
This part consists of: A) 75 knowledge statements, B) 50 skill statements.
Definitions:
1. Knowledge refers to facts, information or principles acquired as a result of study or investigation in the field of adult education.
2. Skills refer to ability to perform an adult education task effectively as a result of professional preparation or experience in the field of adult education.
Instruction:
Please read each statement carefully and rate it by checking ( ) on the five-point rating scale according to the following criteria:

1 = lowest importance (lowest)
2 = below average importance (low)
3 = average importance (average)
4 = above average importance (high)
5 = highest importance (highest)

Please answer every statement.

A. KNOWLEDGE STATEMENTS
The adult educator in Thailand should acquire knowledge of:

Level of Importance
Low to high

EXAMPLE: Trends of higher education and continuing education 1 2 3 4 5

1. educational philosophy of Thailand and other countries 1 2 3 4 5
2. adult education philosophy of Thailand and other countries 1 2 3 4 5
3. adult learning theories 1 2 3 4 5
4. adult education in comparison 1 2 3 4 5
5. adult education history of Thailand and other countries 1 2 3 4 5
6. adult education, continuing education, non-formal education and life-long education 1 2 3 4 5
7. general education 1 2 3 4 5
8. definitions related to adult education 1 2 3 4 5
9. a comparison of adult and child education 1 2 3 4 5
10. self-improvement 1 2 3 4 5
11. social development 1 2 3 4 5
12. adult teaching methods and techniques 1 2 3 4 5
13. specific courses and practicum 1 2 3 4 5
14. group dynamics 1 2 3 4 5
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<td>principles and models of distance education</td>
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<td>implication and application of knowledge, technology and innovations</td>
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62. individual differences: problems and limitations 1 2 3 4 5
63. basic education in society, economy and politics 1 2 3 4 5
64. educational needs of the citizens 1 2 3 4 5
65. educational research in Thailand and other countries 1 2 3 4 5
66. humanity and sociology 1 2 3 4 5
67. the nature of adult education in Thailand 1 2 3 4 5
68. virtue and morality of the adult educator 1 2 3 4 5
69. leadership 1 2 3 4 5
70. the interrelationship among formal, non-formal education and educational development 1 2 3 4 5
71. specific problems and situations of particular working areas 1 2 3 4 5
72. role of mass media in educational provision 1 2 3 4 5
73. attitude and the process of attitude change 1 2 3 4 5
74. problems, barriers and forms of non-formal education 1 2 3 4 5
75. the preservation of national uniqueness 1 2 3 4 5

B. SKILL STATEMENTS
The adult educator in Thailand should acquire skills of:

1. leadership 1 2 3 4 5
2. being a follower 1 2 3 4 5
3. social adjustment 1 2 3 4 5
4. some necessary dialects 1 2 3 4 5
5. basic first aid 1 2 3 4 5
6. persuading target groups to accept the projects or plans 1 2 3 4 5
7. self-improvement 1 2 3 4 5
8. the process of meetings and seminars 1 2 3 4 5
9. creating human relationship 1 2 3 4 5
10. motivative speaking 1 2 3 4 5
11. public relations 1 2 3 4 5
12. assistance and support 1 2 3 4 5
13. creative thinking development 1 2 3 4 5
14. observance of surroundings 1 2 3 4 5
15. acceptance of other opinions 1 2 3 4 5
16. human motivation 1 2 3 4 5
17. moral and virtue role modeling 1 2 3 4 5
18. professional situation endurance 1 2 3 4 5
19. having great tact in working 1 2 3 4 5
20. adjusting western values in harmony with Thai values 1 2 3 4 5
21. the use of various teaching methods and techniques 1 2 3 4 5
22. the use of teaching aids 1 2 3 4 5
23. creating and adapting teaching aids from local materials 1 2 3 4 5
24. program and curriculum designing and developing 1 2 3 4 5
25. arrangement of learning environment 1 2 3 4 5
26. guidance and counseling 1 2 3 4 5
27. creating local mass media 1 2 3 4 5
28. the use of local educational resources 1 2 3 4 5
29. dissemination of knowledge in adult education 1 2 3 4 5
30. development of activities and models in adult education administration for target groups 1 2 3 4 5
31. administration and management 1 2 3 4 5
32. money and accounting 1 2 3 4 5
33. coordination 1 2 3 4 5
34. problem solving and analysis 1 2 3 4 5
35. follow-up techniques 1 2 3 4 5
36. decision making 1 2 3 4 5
37. creating interpersonal relationship 1 2 3 4 5
38. maintaining a sense of humor 1 2 3 4 5
39. application of theories into practice 1 2 3 4 5
40. offering opinions and suggestions 1 2 3 4 5
41. general research 1 2 3 4 5
42. the application of research reports 1 2 3 4 5
43. the use of research in planning 1 2 3 4 5
44. educational planning 1 2 3 4 5
45. personnel brainstorming 1 2 3 4 5
46. training processes 1 2 3 4 5
47. program and project evaluation 1 2 3 4 5
48. participation and cooperation enhancement 1 2 3 4 5
49. traveling and living in rural areas 1 2 3 4 5
50. training in how to think critically 1 2 3 4 5

Thank you very much for your participation.

Tamrongsin Jiearatrakul
A FOLLOW-UP LETTER

Dear ...............:

Last week I sent you a Round II questionnaire on 'Knowledge and Skills for the Adult Educator in Thailand'. Perhaps you did not receive the questionnaire or you may have been very busy with your professional or obligations. However, your help is valuable to this study. I hope that you will return the questionnaire to me in a few days.

A questionnaire and a self addressed envelope are enclosed for you in case you did not receive the last week questionnaire.

I am waiting for your reply soon.
Thanks again,

Tamrongsin Jiearatrakul
APPENDIX D

ROUND III QUESTIONNAIRE
Knowledge and Skills for the Adult Educator in Thailand

Dear ...............:

Thank you very much for answering those two-round questionnaires. This is the last round. On this round, the consensus of the panelists in each statement from Round II questionnaire is presented by the values of median and interquartile range.

The MEDIAN is the point below which fifty percent of the responses fall. The INTERQUARTILE RANGE, Q1 - Q3, contains the middle fifty percent of the responses. It size gives some idea of how widely the responses differed from one another. Generally, the larger the interquartile range, the less consensus on the particular item.

Your answers on Round II are shown by the mark of.

The purpose of this round is to provide you a chance to reconsider your answers from Round II questionnaire. You may change your mind and give me some new answers if you would like to. Please make no mark for the unaltered items. If you want to make any changes, please make a circle around one of the five numbers on the scale. If your new answer is outside the interquartile range, please write your reasons on the provided sheets. If you still confirm on some of your answers which are outside the interquartile range, please state your reasons for each statement on the provided sheets.

I hopefully will receive your best cooperation again. In order to save your time, please return this questionnaire to me in one week in the provided return address envelope.

Thank you very much in advance for your cooperation.

Tamrongsin Jiearatrakul
ROUND III QUESTIONNAIRE
Knowledge and Skills for the Adult Educator in Thailand

Instruction: Change only those rating you feel need to be revised. After considering Round II ratings, make any changes by CIRCLING the appropriate number on the scale below. Your answers on Round II are shown by the mark ( ).

A. KNOWLEDGE STATEMENTS
The adult educator in Thailand should acquire knowledge of:

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**EXAMPLE:**
Trends of higher education and continuing education

1. educational philosophy of Thailand and other countries
2. adult education philosophy of Thailand and other countries
3. adult learning theories
4. comparative adult education
5. adult education history of Thailand and other countries
6. adult education, continuing education, non-formal education and life-long education
7. general education
8. definitions related to adult education
9. a comparison of adult and child education
10. self-improvement
11. social development
12. adult teaching methods and techniques
13. specific courses and practicum
14. group dynamics
15. activity preparation
16. adult centered learning
17. principles and models of distance education
18. educational media
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74. problems, barriers and forms of non-formal education  4.00  4.00  5.00  1 2 3 4 5
75. the preservation of national uniqueness  3.00  4.00  4.00  1 2 3 4 5

B. SKILL STATEMENTS
The adult educator in Thailand should acquire skills of:

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50. training in how to think critically  4.00  5.00  5.00  1 2 3 4 5
A follow-up Letter for Round III

Dear.................:

Last week I sent you the third round questionnaire on 'Knowledge and Skills for the Adult Educator in Thailand'. Perhaps you are busy with your work. Or, you did not receive the questionnaire. Since this is the final round of the Delphi process, your cooperation will make this study more valid.

If you have not had a chance to complete the questionnaire, please do so as soon as possible. I have sent another questionnaire and a return envelope for you if you had lost your last one. If you have already mailed it, please disregard.

Thank you very much for taking part in this study.

Yours sincerely,

Tamrongsin Jiearatrakul
APPENDIX E

RICHARD BUNNING'S LIST OF KNOWLEDGE AND SKILL STATEMENTS
Bunning's list of Knowledge and Skill Statements

The adult educator of the coming decade should acquire knowledges:
1. of the functions of the adult educator.
2. of epistemology.
3. of educational institutions: their functions, their interrelationships with society, and how they may be changed.
4. of the ever changing nature of adult and his needs.
5. of other ways to define knowledge beside the dominant scientific one.
6. of the broad spectrum of changing adult characteristics.
7. of learning theories in practice.
8. of situational analysis techniques.
9. of organizational, group, and/or individual behavior.
10. of the implications of updated research findings for practical application.
11. of group dynamics.
12. of community resources.
13. in a specialty area or specific discipline.
14. in a broad liberal arts tradition.
15. of the history and development of adult education as it relates to contemporary society.
16. of right and wrong.
17. of how to muster courage to make unpopular decisions.
18. of professionalization: a sense of mission and purpose and how the professional functions.
19. of the use of mass media as it relates to adult education.
20. of human resource development theory.
21. of career education.
22. of the pursuit of common goals: how to compromise, adjust, and participate.
23. of educational technology, A-V aids, computers, etc.
24. of the Federal Government's role in educational programs.
25. of the Federal Government's role in social service programs.
26. of the broad field of adult education as it relates to the individual, the community, and/or society.
27. of the principles of adult education.
28. of bio-spheric and ecological disequilibrium.
29. of the proper use of various educational methods, techniques, and/or devices.
30. of the evaluation of methods, techniques, devices as to appropriateness.
31. of trends of higher and continuing education.
32. of community: its organization and power structure as well as methods of development.
33. of educational planning techniques.
34. of competency based instruction.
35. of the decision-making process.
36. of the process of change.
37. of himself.
38. of the designing of innovative programs.
39. of the implementation of innovative programs.
40. of the psychology of the adult: intellectual development, adjustment, personality theory, the effects of aging, the psychology of dying, etc.
41. of current events and their relevancy to adult education.
42. of economics.
43. of societal trends as they affect adult education.
44. of the adequacies of educational programs.
45. of the shortcomings of educational programs.
46. of contemporary society: its subgroupings, needs, trends, culture, and how it interrelates with and affects the adult.
47. of the adult handicapped learner.
48. of philosophy.

The adult educator of the coming decade should acquire skills:
1. in diagnosing educational needs of the individual.
2. as an educational consultant.
3. in conducting research and statistical analysis.
4. in designing learning experiences based on need.
5. in conducting learning experiences based on need.
6. in diagnosing the educational needs of society.
7. in leadership: group, academic, and/or community.
8. in marketing the 'educational product.'
9. in creating enhancing interpersonal relationships.
10. in public relations.
11. in initiating the self-actualization process in the adult learner; encouraging individual responsibility and/or independence.
12. in objectively merging personal perceptions with those of the adult clientele.
13. in gaining the cooperation of community agencies and/or groups in educational endeavors.
14. in administration or management of adult programs.
15. in identifying alternative futures for current issues.
16. in communicating (including listening skills).
17. in 'second-guessing' the future.
18. in practical politics.
19. in the use of guile when necessary.
20. in the proper utilization of advisory committees.
21. in counseling adult.
22. in fiscal aspects of the educational process.
23. in finding and/or creating educational resources.
24. in utilizing educational resources.
25. in being accountable to the public.
26. in recruiting techniques.
27. in writing behavioral objectives.
28. in implementing behavioral objectives.
29. as a competent instructor.
30. as a fund raiser.
31. in human motivation.
32. in creating non-traditional learning opportunities.
33. as a change agent for himself, individuals, organizations, and/or the community.
34. in encouraging creativity.
35. in balancing individual and societal needs when different.
36. as a teacher trainer.
37. in working with legislators.
38. in driving a car.
39. in promoting teamwork as a member of the total educational team.
40. in providing for the individual within group learning situations.
41. in systematic inquiry, critical assessment; and problem solving.
42. in evaluating the effectiveness of the educational process.
43. in the use of educational technology.
44. in cross-sectioning/decompartmentalizing the learning experiences.
45. in continuous self-improvement.
46. in helping groups engage in problem solving.
47. in helping others identify life goals.
48. in scenario writing.
49. in utilizing research findings to improve instruction.
50. in organization maintenance, development and/or renewal.
51. in dealing with bureaucracy.
52. in proposal writing.
53. in implementing strategies for adults to self-diagnose learning needs.
APPENDIX F

A LIST OF THE PANEL OF EXPERTS
A List of Five Experts Who Generated the List of Panelists

1. Dr. Gowit Worrapipat (Non-formal Education Department)
2. Dr. Tongyoo Keawsaiha (Non-formal Education Department)
3. Dr. Kasama Worrawon Na-Ayoutaya (Non-formal Education Department)
4. Assoc. Prof. Dr. Pratom Nikamanon (Srinakarinwirot University)
5. Assoc. Prof. Dr. Somkiat Srijakawan (Kasetsart University)

A List of Twenty Panelists

From Non-formal Education Department

1. Dr. Gowit Worrapipat
2. Dr. Tongyoo Keawsaiha
3. Assoc. Prof. Dr. Jaroenpol Suwannashote
4. Mr. Soontorn Sunanchai
5. Dr. Kasama Worrawon Na-Ayutaya
6. Dr. Somprasong Wittayakiat
7. Dr. Chuekiat Leesuwon
8. Dr. Tawee Narkbood
9. Dr. Mohamed Abdul Kadir
10. Mr. Pipope Kanjana
11. Mr. Boonton Chalouesee

From universities in Bangkok

12. Assoc. Prof. Dr. Pratom Nikamanon (Srinakarinwirot University)
13. Assoc. Prof. Dr. Soontorn Koatbuntao (Srinakarinwirot University)
14. Assoc. Prof. Suwat Watanawong (Srinakarinwirot University)
15. Dr. Sawanee Sanasu (Srinakarinwirot University)
16. Assoc. Prof. Dr. Ratana Poompiesan (Chulalongkorn University)
17. Assoc. Prof. Oonta Nopakoon (Chulalongkorn University)
18. Asst. Prof. Kiattiwon Amatayakul (Chulalongkorn University)
19. Dr. Wikorn Tantawuttow (Kasetsart University)
20. Dr. Chidchong Sor-Muntananade (Silapakorn University)
BIBLIOGRAPHY

Books


Thesis and Dissertations


Reports


Thai Government Publications


Department of Non-formal Education. (1979). Bangkok: Department of Non-formal Education, Ministry of Education.

Introduction to the Non-formal Education Department. (1984). Bangkok: Non-formal Education Department, Ministry of Education.


Articles


