A META-EVALUATION OF TAIWAN MINISTRY OF EDUCATION'S NATIONAL TECHNOLOGY INSTITUTES EVALUATION: A STUDY OF EVALUATION TEAM'S AND STAKEHOLDERS' JUDGMENTS ON THE EVALUATION PRACTICE

by

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ABSTRACT

A meta-evaluation of the Taiwan Ministry of Education's 1990 National Technology Institutes Evaluation practices was conducted. The major focus of the meta-evaluation was to compile pertinent information and to make comparisons of performance relative to the utility, feasibility, propriety, and accuracy of the Taiwan Ministry of Education's 1990 National Technology Institutes Evaluation practices as perceived by the evaluation team members (evaluators) and the stakeholders (the evaluated). The evaluation team and stakeholders were also asked to assess the importance of 30 Program Evaluation Practice Standards for the evaluation. Data were collected through mailed questionnaires and informal interviews. Information gleaned from this study were based on responses received from the 1990 Taiwan

National Technology Institutes Evaluation team members and the stakeholders including institute presidents and academic program leaders. Results of the study provided the basis for improving the evaluation practices of the Taiwan National Technology Institutes Evaluation including recommendations for improving the evaluation model, policies, procedures, and practices.

Results of the study revealed that:

1. The evaluation team and stakeholders held similar beliefs regarding the importance of the 30 Program Evaluation Practice Standards for the 1990 Taiwan National Technology Institutes Evaluation. The Program Evaluation Practice Standards were perceived as important ideals for the orientation of the process and practice of evaluation in Taiwan.

2. The evaluation team and stakeholders gave similar assessments as to the utility, feasibility, propriety, and accuracy of the 1990 Taiwan National Technology Institutes Evaluation practice.

Based upon analyses of the data, the findings indicated that the evaluation system employed by the Taiwan Ministry of Education produces outcomes that are overall acceptable to both the evaluators and the evaluated. As the result, recommendations were offered and reviewed by a panel of experts in Taiwan.

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CHAPTER ONE

INTRODUCTION

Introduction

Formally documented systems of evaluation date back to 2200 B.C., to the elaborate system of competitive examinations used in the Civil Service Testing System of China. Under this system, the Chinese emperor examined his officials every third year to determine their fitness for continuing in office. After three examinations, officials were either promoted or dismissed--a practice which, interestingly, resembled the current evaluation policies and practices used in Taiwan's academic institutions. The ability of these institutions to produce graduates capable of inventing new technologies, of commercializing those technologies, and revitalizing existing industry was essential in determining Taiwan's direction in the emerging, competitive global economy.

Today, the maintenance and promotion of individuals employed in Taiwan's industries, the granting of tenure in academic institutions, and school accreditations were often conducted in a fashion similar to the old Civil Service Testing System of China. Results of these evaluations were used in the formation of new standards and directed avenues

of change. The explosive growth of technology, its relationship to Taiwan's economic development, and the manner in which Taiwan reacted to increasing technological change relied on the outcomes and actions indicated by the evaluation process utilized. Institutional preparedness and instructional content must parallel technological advancements if Taiwan is to remain competitive in the global market place.

Evidence of prior efforts to document and determine the effectiveness of Taiwan's evaluation processes were lacking. To many school administrators, the evaluation process was equated with accreditation visits or staff evaluation procedures. To teachers, evaluation tended to imply measurement and was often considered solely in the context of testing students' performance. The perceived strategies, foci, and purposes of evaluation were as varied as the situations evaluated. As a consequence, numerous definitions and interpretations for the term "evaluation" existed.

A basic definition described evaluation as "the process of determining to what extent educational objectives are actually being realized" (Tyler, 1950, p. 69). However, a broader definition of evaluation has been more widely accepted by other evaluation scholars. According to the Phi Delta Kappa Commission on Evaluation, "Evaluation is the

process of delineating, collecting, and providing information useful for judging decision alternatives" (Stufflebeam, et al., 1971, p. 353). Stufflebeam believed evaluation to be a process that furnished information useful in guiding decision making. He and his associates defined this process as a particular and continuing activity subsuming many methods and involving a number of steps or operations. Wentling and Lawson concurred, "Evaluation is most useful when it is treated as a process--a way of decision making--and when it is applied as such" (Wentling and Lawson, 1975, p. 9). The process of conducting an evaluation is a function of the theoretical perception that guides the evaluation (Tyler, 1950).

Therefore, the merit of a particular evaluation should be determined by examination of the process utilized and evaluation of the applied outcomes. For example, was the evaluation process appropriate--realistic, prudent, diplomatic, and frugal? Was the evaluation conducted legally and ethically, and with regard for the welfare of those involved in the evaluation, as well as those affected by its results? Did the evaluation reveal and convey technically adequate information about the features of the object being studied?

The outcomes of an evaluation should be assessed in terms of the stakeholders. For instance, did the evaluation

yield practical information that effectively addresses the needs of the given audiences?

The practice, used by the Taiwan Ministry of Education's National Technology Institutes Evaluation, should be a guided decision-making process and reflect the needs of the stakeholders. The body of research available assessing the effectiveness of the current evaluation processes used in Taiwan was limited.

Statement of the Problem

The problem in the study stemmed from a lack of information regarding the perceived adequacy of the Taiwan Ministry of Education's National Technology Institutes Evaluation practices from the perspective of the evaluation team and the stakeholders. In order to judge the adequacy of these evaluation practices, their ability to assess the complexity of the engineering and industrial technology training programs, and identify the changes necessary to satisfy the needs of the stakeholders, the study utilized a meta-evaluation process designed to assess and compare the worth and value of the National Technology Institutes Evaluation practices as perceived by the evaluation team (evaluators) and stakeholders (institute presidents and academic program leaders).

Need for the Study

Taiwan's technical workforce of engineering and industrial technologists has been trained in the Technology Institutes, a division of Taiwan's Junior College System (see Figure 1). The purpose of these institutes was (1) to cultivate the students with knowledge of both the applied sciences and professional techniques necessary to perform the economic construction of their country and, (2) to confirm in the students the idea of unity between consciousness and fulfillments as well as the full development of their physical, intellectual, technical, virtuous, industrious, plain and honest capabilities so as to serve their country. The institutes provided educational guidance through developing specialized skills, professional spirit, and noble qualities. The Technology Institutes offer two-year and five-year programs.

Education in Taiwan has traditionally been influenced by the American education system (Lee, 1990). Institutional evaluation was one of the unique products that the Taiwan Ministry of Education adapted from the American system. Although the National Technology Institutes Evaluation practices have been used in Taiwan for sixteen years, most Chinese educators still view it as an "imported good". The lack of a domestic, specialized research organization has meant that Taiwanese can hardly avoid difficulties,

questions, and criticisms in the evaluation practices (Chen, 1985).

Starting in 1975, the Ministry of Education has completed six National Technology Institute Evaluations on a three-year interval basis. According to Dr. C. T. Liu, Chair of Taiwan Ministry of Education's National Technology Institutes Evaluation Committee and also President of the National Taiwan Institute of Technology, the Ministry for many years has successfully utilized the evaluation results as guides for grading, rewarding (allowing and helping the institute to expand its programs, classes, and student enrollment), punishing (not allowing the institute to expand its programs, classes, and student enrollment), and improving (giving recommendations for change) the institutes.

However, these evaluations were conducted with no clearly published rules in the selection of the evaluation team members and with limited stakeholder involvement. No empirical studies of guiding principles and practice (Program Evaluation Practice Standards) were conducted. No public records or reports representing any type of evaluation or meta-evaluation were available. No records reflecting the outcomes of prior evaluation processes in terms of the cautions, warnings and recommendations learned from past mistakes.

These practices appeared to be in contradiction with the 1981 Standards for Evaluations of Educational Programs, Projects, and Materials, which stated, "in essence, evaluators are advised to gather information which is relevant to the questions posed by clients and other audiences (stakeholders) and yet sufficient for assessing an object's effectiveness, costs, responses to societal needs, feasibility, and worth." A breakdown in the adherence to established standards can result in evaluation failure. When an evaluation has failed, the fault lies not with the concept but with the way in which the evaluation is conceived, conducted, reported, and eventually utilized. Therefore, the study of professional judgments regarding the adequacy, accountability, and worth of the National Technology Institutes Evaluation practices was needed.

Purpose of the Study

The purpose of the meta-evaluation was to obtain information regarding the 1990 Taiwan National Technology Institutes Evaluation practices and to make a comparison of opinions regarding the utility, feasibility, propriety, and accuracy as perceived by the evaluation team members and the stakeholders. Information gleaned from the study provided the basis for improvement of the Taiwan National Technology Institutes Evaluation practices including recommendations

for restructuring the evaluation model, policies, procedures and practices.

Four objectives were formulated as the basis for the meta-evaluation and study development:

1. To conduct meta-evaluation of the present system including the policies, practices and strategies affecting its usefulness, feasibility, propriety and accuracy.

2. To determine what is needed to improve the efficacy and ethics of the evaluation practices, model, procedures, and policies.

3. If indicated, to develop or create a framework for a new or restructured evaluation model for implementation in Taiwan, including the professional development of evaluators, training of stakeholders and evaluators; and the creation of evaluation practices, procedures, tools, materials, guidelines, etc.

4. If indicated, to conduct a formative review of the new or restructured evaluation model by a panel of experts including stakeholder representatives.

General Research Questions

In the study, two dimensions were investigated. What were the "real" evaluation practices used in Taiwan's evaluation processes versus the accepted evaluation practices (Program Evaluation Practice Standards)? In

general, two major research questions were formulated to guide the study:

1. Do evaluators (evaluation team) and stakeholders (institute presidents and institute program leaders) views differ relative to the assessed importance of the 30 Program Evaluation Practice Standards for the 1990 Taiwan National Technology Institutes Evaluation? Specifically:

(i) in the Utility (usefulness) of the evaluation? Did the evaluation serve the practical information needs of given audiences?

(ii) in the Feasibility of the evaluation? Was the evaluation realistic, prudent, diplomatic, and frugal?

(iii) in the Propriety of the evaluation? Was the evaluation conducted legally, ethically, and with due regard for the welfare of those involved in the evaluation, as well as those affected by its results?

(iv) in the Accuracy of the evaluation? Did the evaluation reveal and convey technically adequate information about the features of the object being studied that determine its worth or merit?

2. Do evaluators and stakeholders differ in their perceived performance judgments about the 1990 Taiwan National Technology Institutes Evaluation practices?

Specifically:

(i) in the Utility (usefulness) of the evaluation? Did the evaluation serve the practical information needs of given audiences?

(ii) in the Feasibility of the evaluation? Was the evaluation realistic, prudent, diplomatic, and frugal?

(iii) in the Propriety of the evaluation? Was the evaluation conducted legally, ethically, and with due regard for the welfare of those involved in the evaluation, as well as those affected by its results?

(iv) in the Accuracy of the evaluation? Did the evaluation reveal and convey technically adequate information about the features of the object being studied that determine its worth or merit?

Assumptions of the Study

The study was based on the following assumptions:

1. The Program Evaluation Practice Standards chosen were valid and representative of the most commonly acknowledged criteria for judging the worth of program evaluation efforts.

2. The participating institute presidents and academic program leaders were truly representative of the population

of the stakeholders.

3. The responses to the questions were conscientious and true expressions of the judgement of the respondents.

4. Those persons responding to the questions fully understood the evaluation concepts.

Limitations of the Study

The limitations of this study were:

1. The population of professionals investigated was limited to those who were evaluation team members, institute presidents, and school program leaders in the 1990 Taiwan National Technology Institutes Evaluation.

2. The population of the stakeholder group was limited to those institute presidents and academic program leaders who were in position during the 1990-1991 academic year, since they were the individuals involved in the evaluation process and who had an interest in the program and the outcome of the evaluation.

3. The data obtained were limited to those instruments returned from the initial mailing and informal interviews in Taiwan.

While there were many criteria that have been established for judging the worth of program evaluation practices, the most commonly acknowledged were those identified in the 1981 Standards for Evaluations of

Educational Programs, Projects and Materials (McLaughlin, 1990). The Program Evaluation Practice Standards were used by the participants in making judgments as to the quality of Taiwan National Technology Institutes Evaluation practices.

Definition of Terms

Prior to describe the research, it was important to first define several of the terms that were used throughout the study.

Technology Institute. An institution which is a part of higher education in the Taiwan educational system. Although Technology Institutes are somewhat like American community colleges, the curriculum is concentrated only on industrial technology training and engineering technology. The Institute offers two kinds of programs: a three-year program for senior vocational school or senior high school graduates who are about eighteen years of age, and a five-year program for junior high school graduates whose ages are about fifteen (Taiwan Ministry of Education, 1990).

National Technology Institutes Evaluation. An assessment of industrial technology training and engineering technology programs conducted by the Ministry of Education once every three years. It serves as the primary means of maintaining quality programs (Ministry of Education, 1990).

Program Evaluation Process. Activities, strategies,

and practices in planning and conducting an evaluation (McLaughlin, 1990).

Stakeholders. "Stakeholders are a group of individuals who have an interest or stake in the design, implementation, reporting and use of the evaluation" (McLaughlin, 1990, p. 43). In this study, they were institute presidents and academic program leaders of the evaluated schools. The evaluators, or the evaluation team members, were not considered as part of the stakeholder group in this study.

Evaluation Team. "These people are usually trained in the principles and practices of program evaluation. The evaluators should have a variety of skills including: program design, measurement, data analysis, report presentation, and group dynamics" (McLaughlin, 1990, p. 5). The researcher treated the evaluation team separately from stakeholders.

Program Evaluation Practice Standards. The same as The Standards for Evaluations of Educational Programs, Projects, and Materials, The Joint Committee Standards, and Program Evaluation Standards. A volume of evaluation standards produced by a Joint Committee led by Daniel Stufflebeam in 1981. "They are a compilation of commonly agreed upon characteristics of good evaluation practice" (Worthen, 1987, p. 375).

CHAPTER TWO

REVIEW OF LITERATURE

Overview

A review of the literature and studies related to program evaluation practice standards was conducted. The review was divided into the following sections: (1) model of Taiwan's education system, (2) purpose and process of Taiwan National Technology Institutes Evaluation, (3) concept of meta-evaluation, (4) evolution of meta-evaluation, (5) Program Evaluation Practice Standards development, (6) content of the Program Evaluation Practice Standards, and (7) validity of the Program Evaluation Practice Standards.

Model of Taiwan's Education System

The educational system (see Figure 1) in Taiwan was built around a core of a nine-year compulsory national education program: six-year elementary and a three-year junior high school. At the completion of the compulsory education program, graduates are required to take an entrance examination to determine which of the three parallel institutions--a senior high school, a senior vocational school, or junior college--they will attend. Junior colleges, which house the Technology Institutes,

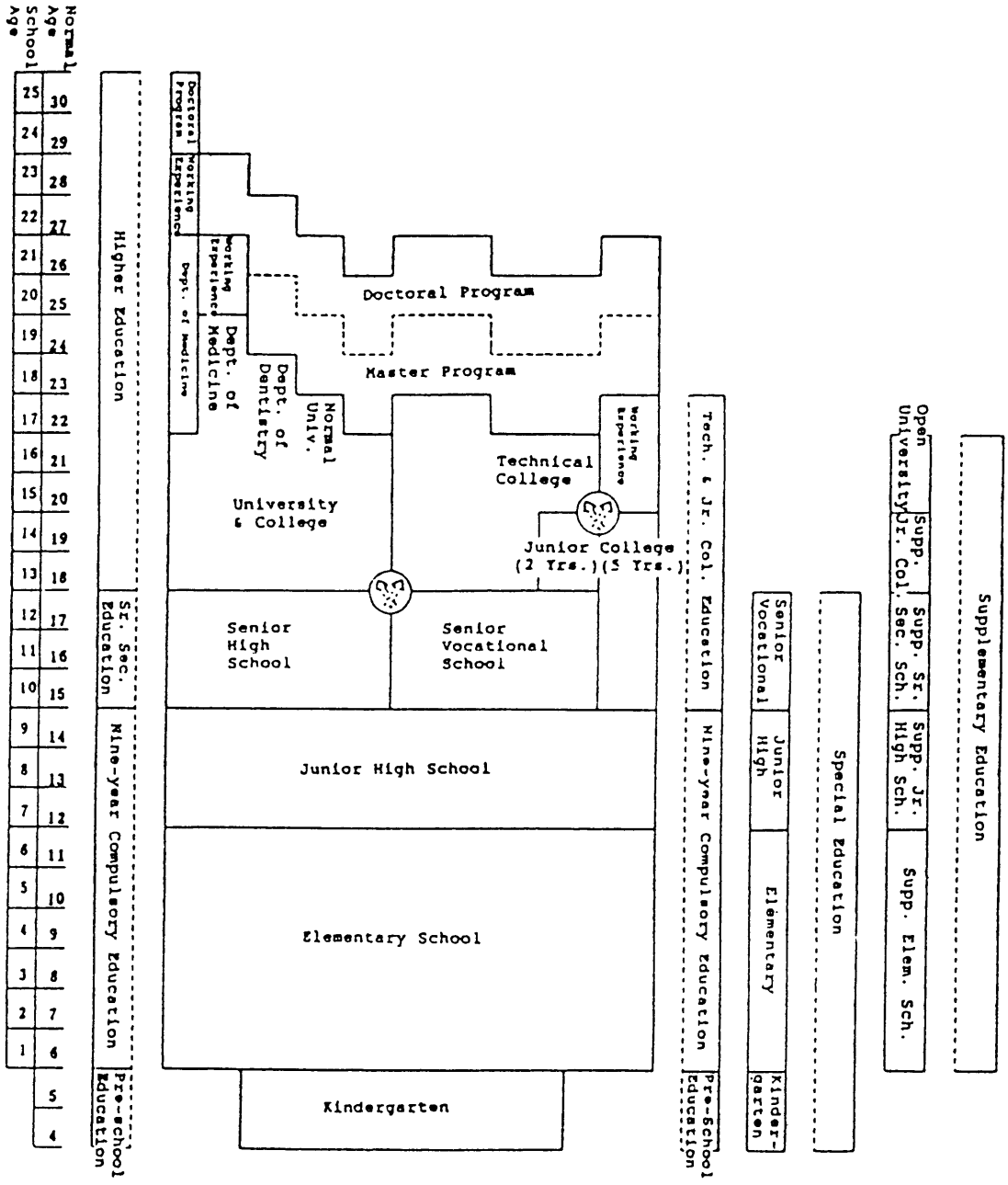

Figure 1

Model of Taiwan's Education Structure

provide two educational offerings: two-year and five-year programs. The Technology Institutes offer degrees in engineering and industrial technology. The institutes provided educational guidance by developing specialized technological skills, professional spirit, and instilling noble qualities. Upon completion of the Technology Institute's program, the graduates entered Taiwan's workforce or passed the entrance examination for acceptance into the Technical Colleges. Upon completion of college studies, advanced graduate degrees were available to the qualified. The minimum length of study for a master's degree was two years, with an additional two years for a doctoral degree (Lee, 1990).

According to Lee (1990) in his article, "A Perspective of Technology Education in Taiwan, Republic of China," "The absence of rich natural resources mandates that the Taiwanese workforce be highly productive in order that industry may be competitive; hence, a comprehensive educational system is needed to effectively develop productive abilities of the dense population" (p. 18). While Lee identified the problems related to curriculum and curriculum standards, the impact of the evaluation process and its part in providing feedback related to the political, economic, trade and technological "forces of change" were not addressed. The Taiwan Technology Institutes indicated

that the interval between the onset of these "change forces" and their reflection in the educational delivery took too long to allow Taiwan to be its most productive and competitive in the world economy.

Purpose and Process of Taiwan National Technology Institutes Evaluation

Since 1975, the Taiwan National Technology Institutes Evaluation has been conducted six times; once every three years. The last evaluation was performed in Fall 1990, covering 35 institutes; 268 programs in 15 academic departments including Mechanical, Materials, Electrical, Electronic, Civil, Chemical, Textile, Opto-electronics, Environmental Engineering, Industrial Design, Industrial Management, Architecture, Computer Instruction, Student Guidance and Training, and Administration. The President of the National Taiwan Institute of Technology, Dr. C. T. Liu, was commissioned by Ministry of Education to administrate the 1990 evaluation. A total of 117 committee members were appointed to plan and eventually prepared the evaluation in the beginning of 1990. The evaluation was conducted from October to December 1990.

One purpose for the Ministry of Education conducting this evaluation was to determine the present state of Taiwan Technology Institutes' achievement of their educational

goals or purposes. One goal for Taiwan Technology Institutes was to cultivate in students the knowledge of both the applied sciences and technological skills needed to continue the economic construction of their country. The second purpose for this evaluation was to assess the current condition of the cultivated objects, curriculum and instruction, faculty, facilities and resources, governance and planning, and effectiveness of teaching of each program in each technical institute for future programs improvement (Ministry of Education, 1990).

According to Dr. C. T. Liu (personal communication, August 27, 1992), Chairman of Taiwan Ministry of Education's National Technology Institutes Evaluation Committee and also President of the National Taiwan Institute of Technology, the Ministry had, for many years, successfully utilized the evaluation results as guides for ranking, rewarding (allowing and helping institutes to expand their quality programs, classes, and student enrollments), punishing (not allowing institutes to expand their programs, classes, and student enrollments), and improving (giving recommendations for change) these institutes.

The National Technology Institutes Evaluation Committee (Ministry of Education, 1990) had adapted Stufflebeam's CIPP evaluation model to categorize the elements used in evaluating the Taiwan's Technology Institutes' programs into

four groups:

1. Context Evaluation: Were the cultivated objectives of each program fitted to the current and future domestic productive situation, the progress of professional knowledge and technology, local need, the demand of citizen education and professional ethics, and the evaluation of students?

2. Input Evaluation: Were the proposed strategies for achieving the cultivated objectives or the curriculum development plan of each program appropriate? Were current resources for achieving the cultivated objectives sufficient?

3. Process Evaluation: Were all employable resources properly arranged? Was there any problem or inadequacy in the implementing of the teaching plan?

4. Product Evaluation: To use the state of cultivated objectives achievement, the discrepancy of actual and expected teaching effect, and graduates employment condition as the references for adjustments of cultivated objectives, curriculum development plan, resource investment, and teaching plan.

The National Technology Institutes Evaluation Committee specified 95 standards, subdivided into six groups, as guidelines for evaluating each institute's programs. The six groups were (1) cultivated objectives, (2) curricular

and instructions, (3) faculty, (4) facilities and resources, (5) governance and planning, and (6) effectiveness of teaching. For scoring purposes, the groups carried the weights of 10%, 20%, 20%, 15%, 20%, and 15%, respectively (Ministry of Education, 1990).

Once tabulated and totaled, the scores were used to rank the program's performance. "First grade" ranking was awarded to a program scoring 80 points or higher; "second grade" for scores between 75 to 79; "third grade" for scores between 70 to 74; "fourth grade" for scores between 65 to 69; and below 65 would be rated as "fifth grade" (Ministry of Education, 1990).

The National Technology Institutes Evaluation Committee developed specific procedures to be followed during the evaluation. The Process of the National Technology Institutes Evaluation entailed the following activities:

1. The evaluation committee sent an evaluation notice and related evaluation forms to each technology institute.

2. Each program of the institute conducted its Self-evaluation and prepares the Mid-long Range Development Plan.

3. The results of each program's Self-evaluation and its Mid-long Range Development Plan were sent to the evaluation committee before the on-campus visit by the visiting team.

4. During the visiting team's one day visit, the team

used the morning to meet the programs and validated the Mid-long Range Development Plans, and determined the strengths and weaknesses of each program based on the six groups of standards. In the afternoon, the team administered the program evaluation questionnaires to students and teachers, and held discussion meetings with students and school staff.

5. The team prepared Evaluation Grade Reports and Evaluation Reports which gave summaries of the programs strengths and weaknesses based on each standard and the degree to which each one was met.

6. Within two weeks following the visit, the team was required to send its Evaluation Grade Reports to the Board of Committee. The Evaluation Reports were required to be sent to the committee within one month following the visit.

7. The Board of Committee then gave notice to team members to attend the reviewing conference. In the conference, summaries of findings regarding each program were reported (Ministry of Education, 1990)

Similarities existed between the Taiwan Ministry of Education's National Technology Institutes Evaluation and the American system of education accreditation programs. According to Scriven (cited in Worthen & Sanders, 1987), shared distinctive features included:

(1) published standards; (2) a self-study by the institution; (3) a team of external assessors; (4) a

site visit; (5) a site-team report on the institution, usually including recommendations; (6) a review of the report by some distinguished panel; and (7) a final report. (p. 102).

It is also critical to note that (1) the National Technology Institutes Evaluation ranks the institutes, it does not grant the accreditation approval; (2) it is administrated and funded by a government agency, the Ministry of Education, not by an independent professional organization (Ministry of Education, 1990).

Concept of Meta-evaluation

Any evaluation study is inherently biased to some extent. According to meta-evaluation experts, Worthen and Sanders (1987), decisions made by an evaluator about what to examine, what methods and instruments to use, and who to talk and listen to, all influence the outcome of the evaluation. Even the evaluator's personal background, biases, professional training, and experience all affect the manner in which a study is conducted and evaluated.

Bias is not limited to the evaluator. Both evaluator and stakeholder must be concerned about evaluation bias: the evaluator, because his/her personal standards and professional reputation are at stake; the stakeholder, because he/she doesn't want to invest (either politically or

financially) in findings that are off target. Both have a lot to lose if an evaluation is found to be deficient in some critical aspect.

For these reasons, meta-evaluation--the evaluation of an evaluation--is important. Formative meta-evaluation can identify inherent problems in an evaluation and provide avenues for improvement before it is irretrievably too late. Summative meta-evaluation can add credibility to final results of the ongoing evaluation and serve to improve the overall evaluation process for future use.

According to Worthen and Sanders (1987), "Not even the most enthusiastic advocate would assert that all evaluation activities are intrinsically valuable, or even well-intentioned. Thoughtful observers have even asked, from time to time, whether evaluation results warrant their cost in human and other resources" (p. 369-370). As Nilsson and Hogben (1983) point out, meta-evaluation comprises not only the evaluation of a particular program but also the evaluation of the very function and practice of evaluation itself.

Properly practiced, evaluation has led to direct and incontestable improvements in educational systems, programs, and practices--improvements that would have occurred in any other way. Given the number and frequency of evaluation failures, however, it is understandable why some question

the basic concept. When evaluation goes wrong, the fault lies, not with the concept but with the way in which the evaluation is conceived, conducted, reported, and used (Worthen & Smith, 1987).

Evolution of Meta-evaluation

Informally applied, meta-evaluation has been around as long as evaluation. Someone has always had a judgement about the quality of every evaluation study ever conducted. However, sometime in the early 1960s, evaluators began to notice a need for formal meta-evaluation procedures and criteria. Writers began to suggest what constituted good and bad evaluations (Scriven, 1967, 1970; Stufflebeam, 1968). A variety of unpublished checklists of evaluation standards began to be exchanged among educational evaluators. Some evaluators even published their versions of evaluation guidelines, or "meta-evaluation" criteria, for use in assessing evaluation plans and reports (Guba & Stufflebeam, 1968; Stake, 1969; Stufflebeam and others, 1971; Stufflebeam, 1974; Scriven, 1974; Worthen, 1974; Sanders & Nafziger, 1975).

These lists of proposed meta-evaluation criteria were needed and welcomed by evaluation practitioners. "Several authors of the criteria attempted to make them useful to evaluation consumers, thinking that perhaps if evaluation

clients were more skillful in judging an evaluation's adequacy, the number of unhelpful and wasteful evaluations might diminish. Clients can demand high quality only if they can recognize what it is that makes one evaluation better or worse than another. For this to occur, evaluators and those they serve must reach shared agreements about what constitutes a good evaluation, in terms both can understand" (Worthen & Sanders, 1987, p. 370).

Some meta-evaluation documents were published in the context that they were for the benefit of school administrators and like consumers. However, the specialized terminology and/or technical knowledge they contained would not typically be of a nature that these consumers would possess. As a result, the evaluators continued to be the ones who benefited most from these efforts.

In addition, the variety of meta-evaluation documents, and the criteria they utilized, proved confounding to evaluators and consumers alike. Was one set better than another? If so, which one?

No one could answer these questions. None of "the proposed sets of criteria offered by educational evaluators carried any profession-wide endorsement. Consequently, an ambitious effort was launched in the late 1970s to develop a comprehensive set of standards explicitly tailored for use

in educational evaluations and containing generally agreed-upon standards for quality evaluation. Development of these standards began in 1975, under the direction of Daniel Stufflebeam, at Western Michigan University's Evaluation Center" (Worthen & Sanders, 1987, p. 371). Guidance and authorization were provided by a profession-wide Joint Committee on Standards for Educational Evaluation (Ridings & Stufflebeam, 1981).

The result of the Joint Committee's work was the Standards for Evaluations of Educational Programs, Projects, and Materials (Joint Committee, 1981), which has received widespread attention in education. The Joint Committee stated that development of sound standards could provide the following benefits:

> A common language to facilitate communication and collaboration in evaluation; a set of general rules for dealing with a variety of specific evaluation problems; a conceptual framework by which to study the often-confusing world of evaluation; a set of working definitions to guide research and development on the evaluation process; a public statement of the state of the art in educational evaluation; a basis for self-regulation and accountability by professional evaluators; and an aid to developing public credibility for the educational evaluation field. (Joint Committee, 1981, p.5)

Other efforts to set standards for evaluation for education as well as other certain professions were attempted (Ridings, 1982; Rossi, 1982). However, the

resulting set of standards produced for program evaluation borrowed heavily from the Joint Committee's Standards, and from guidelines of the United States General Accounting Office and the Office of the Auditor General of Canada. Worthen and Sanders (1987), reported the following comments about the attempts to establish other program standards: "(1) there is a heavy overlap in the coverage of the two sets; (2) the other standards are restricted solely to program evaluation, whereas the Joint Committee Standards include evaluation of projects and materials as well; (3) the Joint Committee Standards deal directly with evaluation of educational entities, the focus of this study; and (4) we accept the Joint Committee Standards as the canon of practice for educational evaluation" (p.371).

Program Evaluation Practice Standards Development

In developing the "Program Evaluation Practice Standards," the Joint Committee devised thirty standards that pertain to four attributes of an evaluation: Utility, Feasibility, Propriety, and Accuracy. According to Stufflebeam (cited in McLaughlin & Phillips, 1991), "The Utility standards reflect a general consensus that emerged in the educational evaluation literature during the late 1960s requiring program evaluations to respond to the information needs of their clients, and not merely to

address the interests of the evaluators. The Feasibility standards are consistent with the growing realization that evaluation procedures must be cost-effective and workable in real-world, politically charged settings; partly, these standards are a countermeasure to the penchant for applying the procedures of laboratory research to real-world settings regardless of the fit. The Propriety standards--particularly American--reflect ethical issues, constitutional concerns, and litigation concerning such matters as rights of human subjects, freedom of information, contracting, and conflict of interest. The Accuracy standards build on those that have long been accepted for judging the technical merit of information, especially validity, reliability, and objectivity" (p. 251).

The "Program Evaluation Practice Standards" establish a common language, terminology and reflect certain definitions of key concepts. "Evaluation means the systematic investigation of the worth merit of some object. The object of an evaluation is what one is examining (or studying) in an evaluation: a program, a project, instructional materials, personnel qualifications and performance, or student needs and performance. Standards are principles widely accepted for determining the value or the quality of an evaluation" (Stufflebeam, 1991, p. 251).

To ensure that the "Program Evaluation Practice

Standards" would reflect the best current knowledge and practice, the Joint Committee sought contributions from many sources as a part of an extensive and ambitious effort. They reviewed a wide range of literature; devised a list of possible topics for standards along with lists of guidelines and pitfalls thought to be associated with each standard; and illustrative cases showing an application of each standard. Independent review and input by a group of thirty experts was employed to expand the topics and write alternative versions for each standard. In conjunction with education evaluation consultants, the Committee rated the alternative standards, devised their preferred set, and compiled the first draft of the "Program Evaluation Standards." The first draft was then critiqued by a nationwide panel of fifty experts nominated by the twelve sponsoring organizations. The Committee debated the identified issues and prepared a version that was subjected to national hearings and field tests. The results of this five-year period of development activity led, in 1981, to the first published version of the "Program Evaluation Standards." The Joint Committee is in the process of collecting feedback on the use of the "Program Evaluation Standards" to help in preparing the next edition (Stufflebeam, 1991).

According to Stufflebeam (cited in McLaughlin &

Phillips, 1991), an important feature of the standards-setting process is the breadth of perspectives represented in their development. "The twelve organizations that originally sponsored the Joint Committee included the perspectives of the consumers as well as those who conduct program evaluations. The perspectives represented on the Joint Committee and among the approximately 200 other persons who contributed include, among others, statisticians and administrators, psychologists and teachers, researchers and counselors, psychometricians and curriculum developers, evaluators and philosophers, and school board members and sociologists. There is perhaps no feature about the Joint Committee that is as important as its representative nature, since by definition a standard is a principle agreed to by persons involved in evaluation of education. The diversity of the Committee made reaching agreements very difficult, but once reached, the agreed-upon standards and presentation material proved to be credible to a wide group concerned with education, to be relatively free of specialized jargon, and, in general, to be readable by a wide range of users" (p. 252-253).

Content of the Program Evaluation Practice Standards

The Joint Committee Standards are a set of 30 standards, each with an overview that provides definitions

and rationale for the standard, a list of guidelines, potential pitfalls and caveats, an illustrative case describing an evaluation practice that could have been guided by that particular standard, and an analysis of that case. The result is a work so comprehensive that it fills a book (Joint Committee, 1981).

One of the most important insights that the Joint Committee provides with the Standards is the concept that the quality of an evaluation study can be determined by looking at its (1) utility, (2) feasibility, (3) propriety, and (4) accuracy. The 30 standards are grouped according to their potential contribution to each of these four attributes. Utility is purposely listed first, for the Joint Committee recognized that without utility, an evaluation will be judged harshly, no matter how well it focuses on feasibility, propriety, and accuracy.

Following are the 30 Joint Committee Standards, with a brief explanation of each:

A. Utility Standards: The Utility Standards are intended to ensure that an evaluation will serve the practical information needs of given audiences. These standards are:

A1. Audience Identification: Audiences involved in or affected by the evaluation should be identified, so that their needs can be addressed.

A2. Evaluator Credibility: The persons conducting the evaluation should be both trustworthy and competent to perform the evaluation, so that their findings achieve maximum credibility and acceptance.

A3. Information Scope and Selection: Information collected should be of such scope and selected in such ways as to address pertinent questions about the object of the evaluation and be responsive to the needs and interests of specified audiences.

A4. Valuational Interpretation: The perspectives, procedures, and rationale used to interpret the findings should be carefully described, so that the bases for value judgments are clear.

A5. Report Clarity: The evaluation report should describe the object being evaluated and its context, and the purposes, procedures, and findings of the evaluation, so that the audiences will readily understand what was done, why it was done, what information was obtained, what conclusions were drawn, and what recommendations were made.

A6. Report Dissemination: Evaluation findings should be disseminated to clients and other right-to-know audiences, so that they can assess and use the findings.

A7. Report Timeliness: Release of reports should be

timely, so that audiences can best use the reported information.

A8. Evaluation Impact: Evaluations should be planned and conducted in ways that encourage follow-through by members of the audiences.

B. Feasibility Standards: The feasibility standards are intended to ensure that an evaluation will be realistic, prudent, diplomatic, and frugal. They are:

B1. Practical Procedures: The evaluation procedures should be practical, so that disruption is kept to a minimum, and that needed information can be obtained.

B2. Political Viability: The evaluation should be planned and conducted with anticipation of different positions of various interest groups, so that their cooperation may be obtained, and so that possible attempts by any of these groups to curtail evaluation operations or to bias or misapply the results can be averted or counteracted.

B3. Cost-Effectiveness: The evaluation should produce information of sufficient value to justify the resources extended.

C. Propriety Standards: The propriety standards are intended to ensure that an evaluation will be conducted legally, ethically, and with due regard for the welfare of those involved in the evaluation as well as those affected

by its results. These standards are:

C1. Formal Obligation: Obligations of the formal parties to an evaluation (what is to be done, how, by whom, when) should be agreed to in writing, so that these parties are obligated to adhere to all conditions of the agreement or formally to renegotiate it.

C2. Conflict of Interest: Conflict of interest, frequently unavoidable, should be dealt with openly and honestly, so that it does not compromise the evaluation processes and results.

C3. Full and Frank Disclosure: Oral and written evaluation reports should be open, direct, and honest in their disclosure of pertinent findings, including the limitations of the evaluation.

C4. Public's Right to Know: The formal parties to an evaluation should respect and assure the public's right to know, within the limits of other related principles and statutes, such as those dealing with public safety and the right to privacy.

C5. Rights of Human Subjects: Evaluations should be designed and conducted, so that the rights and welfare of the human subjects are respected and protected.

C6. Human Interactions: Evaluators should respect human dignity and worth in their interactions with other persons associated with an evaluation.

C7. Balanced Reporting: The evaluation should be complete and fair in its presentation of strengths and weaknesses of the object under investigation, so that strengths can be built upon and problem areas addressed.

C8. Fiscal Responsibility: The evaluator's allocation and expenditure of resources should reflect sound accountability procedures and otherwise be prudent and ethically responsible.

D. Accuracy Standards: The Accuracy Standards are intended to ensure that an evaluation will reveal and convey technically adequate information about the features of the object being studied that determine its worth or merit. These standards are:

D1. Object Identification: The object of the evaluation (Program, project, material) should be sufficiently examined, so that the form(s) of the object being considered in the evaluation can be clearly identified.

D2. Context Analysis: The context in which the program, project, or material exists should be examined in enough detail, so that its likely influences on the object can be identified.

D3. Described Purposes and Procedures: The purposes and procedures of the evaluation should be monitored

and described in enough detail, so that they can be identified and assessed.

D4. Defensible Information Sources: The sources of information should be described in enough detail so that the adequacy of the information can be assessed.

D5. Valid Measurement: The information-gathering instruments and procedures should be chosen or developed and then implemented in ways that will assure that the interpretation arrived at is valid for the given use.

D6. Reliable Measurement: The information-gathering instruments and procedures should be chosen or developed and then implemented in ways that will assure that the information obtained is sufficiently reliable for the intended use.

D7. Systematic Data Control: The data collected, processed, and reported in an evaluation should be reviewed and corrected, so that the results of the evaluation will not be flawed.

D8. Analysis of Quantitative Information: Quantitative information in an evaluation should be appropriately and systematically analyzed to ensure supportable interpretations.

D9. Analysis of Qualitative Information: Qualitative information in an evaluation should be appropriately

and systematically analyzed to ensure supportable interpretations.

D10. Justified Conclusions: The conclusions reached in an evaluation should be explicitly justified, so that the audience can assess them.

D11. Objective Reporting: The evaluation procedures should provide safeguards to protect the evaluation findings and reports against distortion by the personal feelings and biases of any party to the evaluation. (Joint Committee, 1981).

Validity of the Program Evaluation Practice Standards

Since the "Program Evaluation Practice Standards" were published, a considerable amount of information that bears on their validity has been presented. In general, this evidence supports the position that the "Program Evaluation Practice Standards" are needed; have been carefully developed; have involved an open search for participation and critique; have good credibility in the United States; and have been implemented successfully. While not intended to be used outside the geographic and substantive boundaries set by the Joint Committee, the "Program Evaluation Practice Standards" have been showed to have some applicability outside education, outside program evaluation, and outside the United States. Despite the overall positive feedback,

the assessments of the "Program Evaluation Practice Standards" also point out some limitations and areas for improvement.

Four papers presented at the 1982 meeting of the National Council on Measurement in Education (Bunda, Impara, Merwin, Wardrop) examined the congruence between the "Program Evaluation Practice Standards" and the principles of measurement that are embodied in the 1974 revision of Standards for Educational and Psychological Tests. The authors independently concluded that great consistency exists between these two sets of standards with regard to measurement. Jeri Ridings (1980) closely studied standard setting in the accounting and auditing fields and developed a check list by which to assess the Joint Committee effort against key checkpoints in the more mature standard-setting programs in accounting and auditing. In general, Ridings concluded that the Joint Committee had adequately dealt with four key issues: rationale, the standard-setting structure, content, and uses. Wildemuth (1981) issued an annotated bibliography with about five sources identified for each standard. These references help to confirm the theoretical validity of the "Program Evaluation Practice Standards," and they provide a convenient guide to users for pursuing in-depth study of the involved principles. Linn (1981) reported the results of twenty-five field trials conducted

during the development of the "Program Evaluation Practice Standards." These trials confirmed that the "Program Evaluation Practice Standards" were useful but not sufficient guides in such applications as designing evaluations, assessing evaluation proposals, judging evaluation reports, and training evaluators. Additionally, they provided direction for revising the "Program Evaluation Practice Standards" prior to publication. Stake (1981) observed that the Joint Committee had made a strong case in favor of evaluation standards, but he urged a careful look at the case against standards. He offered analysis in this vein and questioned whether the evaluation field has matured sufficiently to warrant the development and use of standards.

A number of writers have examined the applicability of the "Program Evaluation Practice Standards" to specialized situations. Wargo (1981) concluded that the "Program Evaluation Practice Standards" represent a sound consensus of good evaluation practice, but he called for more specificity regarding large-scale, government-sponsored studies and for more representation from this sector on the Committee. Ironically, federal agencies had been invited to appoint representatives to the Joint Committee but declined due to potential conflicts of interest regarding their involvement in funding the effort. Linn (1981) concluded

that the "Program Evaluation Practice Standards" contain sound advice for evaluators in out-of-school learning environments, but observed that the "Program Evaluation Practice Standards" are not suitable for dealing with trade-offs between standards or settling disputes between and among stakeholders. While the "Program Evaluation Practice Standards" explicitly are not intended for personnel evaluations, Carey (1979) examined the extent to which a draft of these standards was congruent with state policies for evaluating teachers. She concluded that only one standard (D11, Objective Reporting) was deemed inappropriate for judging teacher evaluations.

Burkett and Denson (1985) surveyed participants at a conference on evaluation in the health professions to obtain their judgments of the "Program Evaluation Practice Standards". While the respondents generally agreed that "the Standards represent a useful framework for designing evaluations and offer substantial potential for application to the evaluation of continuing education programs for the health professions" (p. 54), they also issued the following criticisms:

1. Crucial elements of certain standards lie outside the evaluator's professional area of control.

2. The Standards assume more flexibility, e.g., in the choice of methods of assessment, than sometimes may exist in

institutional settings.

3. The Standards deal better with external evaluations than with internal, self-evaluations.

4. The Standards need to be made more useful by ordering them in the same sequence as an evaluation typically unfolds, providing more specific guidelines and examples, and adding bibliographic references (p. 54-55).

Marsh, Newman, and Boyer (1981) used the "Program Evaluation Practice Standards" to study the practice of educational evaluation in California and concluded the following: "(1) the standards were perceived as important ideals for the orientation of the process and practice of evaluation; (2) the current practice of evaluation in California was perceived by professional evaluators as being, at most, of average quality; and (3) the practice of low-quality evaluation was attributed to a combination of restriction of time, of political and bureaucratic coercions, and of incompetence of the evaluator" (p. 264). Newman (1986) found that many of the standards were frequently violated. Newman and Brown (1987a) also found that perceptions of seriousness of the violations depended on one's experience with evaluation. Newman and Brown (1987b) used the "Program Evaluation Practice Standards" to study ethical issues in evaluation, finding that professional evaluators and educators could relate the

standards to five ethical principles: autonomy, nonmaleficence, beneficence, justice, and fidelity.

Several evaluators from other countries have examined the "Program Evaluation Practice Standards" for their applicability outside the United States. Nevo and Straton (1982), respectively from Israel and Australia, both concluded that while the "Program Evaluation Practice Standards" embody sound advice, they assume an American situation--regarding level of effort and citizens' rights, for example--that is different from their own national contexts. Rodrigues, Hoffman, Barros, Arruda, and Santos (1981) published a summary and critique of the "Program Evaluation Practice Standards" in Portuguese in the hope that their contribution would "Positively influence the quality of the evaluations conducted in Brazil, help in the training of educational evaluators, and help those who recommend evaluations to improve their value" (p. 264). Lewy (1983), from Israel, concluded that the "Program Evaluation Practice Standards" provide useful guidelines for evaluators in Israel as well as the U.S.A., but raised questions about the adequacy of their theoretical rationale and criticized their lack of specificity.

Lewy, like Dockrell (1983), saw great possibilities for unhealthy collusion between evaluators and sponsors and disagreed with the position reflected in the "Program

Evaluation Practice Standards" that evaluators should communicate continuously with their clients and report interim findings. Dockrell also observed that evaluation in Scotland and other European countries is much more qualitatively oriented than is evaluation practice in the United States and that the "Program Evaluation Practice Standards" do not and probably could not provide much guidance for the perceptiveness and originality required of excellent qualitative research. Scheerens and van Seventer (1983) saw in the "Program Evaluation Practice Standards" a useful contribution to the important need in the Netherlands to upgrade and professionalize evaluation practice. To promote utility in their country, however, they said the standards would need to be translated and illustrated at the national research policy level, as opposed to their present concentration on the individual evaluation project. Even so, they questioned whether such standards could be enforced in Holland, given the susceptibility of national research policy there to frequently changing political forces and priorities. Marklund (1983) concluded that the "Program Evaluation Practice Standards" provides a good check list of prerequisites for a reliable and valid evaluation, but that because of differences in values of program outcomes, such standards do not guarantee that the result of the evaluation will be indisputable. Overall, the main value of the

"Program Evaluation Practice Standards" outside the United States appears to be as a reference for discussing evaluation concepts and practices.

Six studies were conducted to examine the extent to which the "Program Evaluation Practice Standards" are congruent with the set of program evaluation standards issued by the Evaluation Research Society (Rossi, 1982; Cordray, 1982; Braskamp and Mayberry, 1982; Stufflebeam, 1982; McKillip and Garbert, 1983; Stockdill, 1984). The studies all found that the two sets of standards are largely overlapping.

Overall, the literature on the "Program Evaluation Practice Standards" indicates considerable support for these standards. They are seen to fill a need. They are judged to contain sound and clear content. They have been showed to be applicable in a wide range of American settings. They have been applied successfully. They are consistent with the principles in other sets of standards. And they are subject to an open and systematic process of review and revision (Stufflebeam, 1991).

CHAPTER THREE

METHODOLOGY AND PROCEDURES

Introduction

The need to evaluate the very function and practice of evaluation itself has led education specialists to develop a systematic research approach called meta-evaluation. The specific methodology and procedures utilized in the study were designed to assess the utility, feasibility, propriety, and accuracy of the Taiwan Ministry of Education's 1990 National Institutes Evaluation practices as perceived by the evaluation team members (evaluators) and the stakeholders (the evaluated).

This chapter is divided into the following sections: (1) scope of the study, (2) research procedures, (3) meta-evaluation: population and data collection, and (4) data analysis.

Scope of the Study

This study was designed to collect data to compare the judgments of evaluation team members (the evaluators) and stakeholders (the evaluated) relative to the value and the adequacy of Taiwan National Technology Institutes Evaluation practices.

Comparisons were made to identify the importance of the 30 Program Evaluation Practice Standards as assessed by the study population in Taiwan. Other comparisons were also made in this study to determine if different perceptions on the performance of the evaluation practices existed among the evaluators and stakeholders.

The meta-evaluation and the pilot testing of the data collection instrument (questionnaire) were conducted in Taiwan during August, September, and October of 1992, with the permission and cooperation of Dr. C. T. Liu, Chair of Taiwan Ministry of Education's National Technology Institutes Evaluation Committee and also President of the National Taiwan Institute of Technology.

Research Procedures

Based on needs and problem of the study, the following procedures were established to guide the research:

1. Conducted the review of development of the Program Evaluation Practice Standards and literature to determine a set of criteria used by professionals to judge the quality of the Taiwan National Technology Institutes Evaluation practice.

2. Identified the demographics of the study population to be surveyed.

3. Developed a research instrument (in Chinese) for

the meta-evaluation, and conducted a survey and focus group interviews of the evaluation team members and stakeholders in Taiwan to determine their perceptions of the performance of the Taiwan National Technology Institutes Evaluation practices and their judgments on the importance of these 30 Program Evaluation Practice Standards.

4. Scored research instruments completed by respondents and applied appropriate statistical procedures.

5. Reviewed, tabulated, and compiled results and prepared the final reports.

6. If indicated, suggest and develop framework for new/restructured evaluation model for implementation in Taiwan.

7. If indicated, conduct a formative review of the suggested evaluation model by a panel of experts (small random sample of evaluators and stakeholders and/or committee members).

Meta-evaluation: Population and Data Collection

In the 1960's, researchers began to propose formal procedures and criteria to conduct meta-evaluations. None of the proposed sets of criteria offered by educational evaluators carried any profession-wide consensus or endorsement. In the late 1970's, an ambitious effort was launched to develop "a comprehensive set of standards

explicitly tailored for use in educational evaluations and containing generally agreed-upon standards for quality evaluation" (Worthen & Sanders, 1987, p. 370-371). The product of this effort was the Standards for Evaluations of Educational Programs, Projects, and Materials (Joint Committee, 1981) and is considered "the canon of practice for educational evaluation" (Worthen & Sanders, 1987, p. 371). "One of the most important insights that the Joint Committee provides with the Standards is the concept that the quality of an evaluation study can be determined by looking at its (1) utility, (2) feasibility, (3) propriety, and (4) accuracy" (p. 372). These standards as applied to this study are referred to as the Program Evaluation Practice Standards in order to distinguish them as "practice" standards and not accreditation standards, such as facilities, faculty, and instruction criteria.

Population

The population used in the study consisted of two different groups of professionals involved in the Taiwan National Technology Institutes Evaluation: (1) the evaluation team and (2) the stakeholders. The total population of the evaluation team members and the stakeholders were used.

Evaluation Team. The population of evaluation team members consisted of all 117 members on the 1990 evaluation committee board. The board members included 3 heads of committee, 16 evaluation team leaders, and 98 evaluation team members (Ministry of Education, 1990). See Table 1.1.

Table 1.1 Number of Evaluation Team Members by Position

Position	Total Number
Head of Committee	3
Team Leader	16
Team Member	98
Total	117

Stakeholders. The population of stakeholders consisted of 303 persons who have investment and interests in the evaluation.

Table 1.2 Number of Stakeholders by Position

Position	Total Number
Institute President	35
Academic Program Leader	268
Total	303

According to the Handbook for Taiwan National Technology Institutes Evaluation (1990) and the Technology Institute Directory (1990), available through the Ministry of Education, there were 35 Technology Institute presidents and 268 academic program leaders who were affected by the design, implementation, reporting, and use of this 1990 Taiwan Ministry of Education's National Technology Institutes Evaluation.

Data Collection

Based on the numbers and locations of the population, and nature of the information needed, the survey was selected as the most appropriate method of data collection.

Construction of a survey instrument that would obtain the information required without bias was critical. Numerous practical problems were encountered by researchers in the development of survey instruments. According to Yates (1953), the purposes of the survey should be identified first. Surveys are conducted to provide information about a particular subject matter. Generally, subject matter relates to the demographic conditions, the social environment, the activities, or the attitudes and opinions of some particular set of people (Moser, 1958). The purpose of the survey was to obtain information on the utility, feasibility, propriety, and accuracy of Taiwan National Technology Institutes Evaluation practices as perceived by the population, the evaluation team members (the evaluators) and the stakeholders (the evaluated). Since the Joint Committee Standards were identified as the canon of practice for educational evaluation, they were used in development of the survey instrument.

Development of Program Evaluation Practice Standards. A review of literature and studies relative to purpose, concept, evolution, development, standards, and philosophy of meta-evaluation was conducted to develop an instrument that could be used to assess the perceived importance and performance of the Taiwan National Technology Institutes

Evaluation practices as perceived by evaluators and stakeholders. A valid instrument was selected that would elicit the necessary data and fulfill study requirements. Selection was based on the content of the instrument to reflect the following characteristics: (1) it was judged to contain sound and clear content; (2) it had been applied successfully in both America and outside; (3) its standards were consistent with the principles in other sets of evaluation standards; and (4) it was subject to an open and systematic process of review and revision. This instrument was called "Program Evaluation Practice Standards."

Ridings and Stufflebeam (1981) provided an excellent analysis of the relative importance of the Program Evaluation Practice Standards to various evaluation tasks, as shown in Figure 2. The Joint Committee (1981) also provided a Functional Table of Contents for each set of standards as showed in Figure 3. The Joint Committee believed all the standards were potentially applicable in all evaluations.

Data Collection Instrument Development. In order to collect the necessary data related to the perceptions of the evaluators and the stakeholders, a data collection instrument (questionnaire) was developed and later translated into Chinese (see Appendix C & D). The

Evaluation Function / Standards (Descriptors)	1. Deciding Whether to do a Study	2. Clarifying and Assessing Purpose	3. Ensure Political Viability	4. Contract	5. Staff the Study	6. Manage the Study	7. Collect Data	8. Analyze Data	9. Report Findings	10. Apply Results
A1 Audience Identification	×	×	×	×		×			×	×
A2 Evaluator Credibility	×		×	×	×	×	×			
A3 Information Scope and Selection				×			×		×	
A4 Valuational Interpretation		×	×				×	×	×	×
A5 Timely Reporting				×		×			×	
A6 Report Dissemination			×	×		×			×	×
A7 Clear Reporting									×	
A8 Evaluation Impact	×	×	×						×	×
B1 Practical Procedures			×				×	×		
B2 Political Viability	×		×	×	×	×	×			×
B3 Cost Effectiveness	×	×				×				
C1 Formal Obligation	×		×	×		×	×			×
C2 Conflict of Interest	×	×	×	×	×	×				×
C3 Full & Frank Disclosure									×	
C4 Public's Right to Know			×	×					×	×
C5 Rights of Human Subjects			×	×		×	×			×
C6 Human Interactions			×			×	×			
C7 Balanced Reporting							×		×	×
C8 Fiscal Responsibility			×	×		×				
D1 Object Identification	×	×		×			×	×	×	
D2 Context Analysis	×	×					×	×	×	×
D3 Described Purposes and Procedures	×	×	×	×		×	×		×	×
D4 Defensible Information Sources			×				×		×	
D5 Valid Measurement							×			
D6 Reliable Measurement							×			
D7 Systematic Data Control						×	×			
D8 Quantitative Analysis								×		
D9 Qualitative Analysis										
D10 Justified Conclusions		×						×	×	×
D11 Objective Reporting			×		×				×	

Figure 2

Analysis of the Relative Importance of 30 Standards in Performing 10 Tasks in an Evaluation

Standards (Descriptors)	1. Decide Whether To Do a Study	2. Define the Study	3. Design the Study	4. Budget the Study	5. Contract the Study	6. Staff the Study	7. Manage the Study	8. Collect Data	9. Analyze Data	10. Report Findings
A1 Audience Identification	X	X	X		X		X			X
A2 Evaluator Credibility	X				X	X	X	X		
A3 Information Scope and Selection			X	X	X			X		X
A4 Valuational Interpretation			X					X	X	X
A5 Report Clarity										X
A6 Report Dissemination					X		X			X
A7 Report Timeliness					X		X			X
A8 Evaluation Impact	X									X
B1 Practical Procedures			X					X	X	
B2 Political Viability	X				X	X	X	X		
B3 Cost Effectiveness	X			X			X			
C1 Formal Obligation	X		X	X	X		X	X		
C2 Conflict of Interest	X				X	X	X			
C3 Full & Frank Disclosure					X					X
C4 Public's Right to Know					X					X
C5 Rights of Human Subjects					X		X	X		
C6 Human Interactions							X	X		
C7 Balanced Reporting			X					X		X
C8 Fiscal Responsibility				X	X		X			
D1 Object Identification	X	X	X	X	X			X	X	X
D2 Context Analysis	X	X						X	X	X
D3 Described Purposes and Procedures		X	X	X	X		X	X		X
D4 Defensible Information Sources			X					X		X
D5 Valid Measurement			X					X		
D6 Reliable Measurement			X					X		
D7 Systematic Data Control							X	X		
D8 Quantitative Analysis			X						X	
D9 Qualitative Analysis			X						X	
D10 Justified Conclusions			X						X	X
D11 Objective Reporting			X			X				X

Figure 3

Functional Table of Contents for Program Evaluation

instrument was composed of 30 evaluation practice statements constructed by the 30 Program Evaluation Practice Standards, and used a four-point Likert scale to determine identified population's opinions on the importance of the 30 Program Evaluation Practice Standards and the perceived performance of the practices of 1990 Taiwan National Technology Institutes Evaluation.

The Likert scale was used to assess participants' attitudes by presenting statements about a topic that range from very favorable to very unfavorable and asking respondents to select from these statements those that most nearly correspond to their own attitude (Ary, Jacobs, and Razavieh, 1990). The scales ranged from strongly agree or very important (assigned 4) to strongly disagree or very unimportant (assigned 1). The mid-point 2.5 represented neutral in opinion, any rating above 2.5 is agreement or important, any rating under 2.5 is disagreement or unimportant. For a standard to be determined as satisfactory or acceptable, 75% of the respondents in a group must rate above 2.5 for a standard to be acceptable. A space for respondents' comments was provided on each questionnaire item to be used in data analysis and final reporting.

The validity of the survey instrument was based on examinations and empirical studies previously conducted

using the Program Evaluation Practice Standards (McLaughlin & Phillips, 1991). The researcher also conducted a pilot study in Taiwan on this instrument before data collection.

Due to the language requirements of the study population, the data collection instrument was translated into Chinese (see Appendix C & D). A pilot testing of the data collection instrument was conducted at three Technology Institutes and one university in Taiwan with a test sample of 10 program leaders, two institute presidents, and eight evaluation team members. The pilot testing was conducted with the permission and cooperation of Dr. C. T. Liu, Chair of Taiwan Ministry of Education's National Technology Institutes Evaluation Committee and also President of the National Taiwan Institute of Technology. The researcher interviewed each participant after he/she finished the questionnaire to discuss the results. The researcher then used the feedback and participants' comments to improve and modify the data collection instrument.

Based on the feedback and results of the pilot testing, the researcher made the following changes to the instrument and its cover letter: (1) several phrases were reworded in the questionnaire for clearer understanding in Chinese; and (2) to show endorsement of the project by the National Technology Institutes Evaluation Committee and promote a higher rate of questionnaire return, the cover letter was

modified and written by Dr. C. T. Liu and printed on the National Taiwan Institute of Technology's letterhead. The return address was changed to the National Taiwan Institute of Technology in Taipei, Taiwan; and (3) the follow-up letters and the follow-up procedure were eliminated. In Chinese society, a respectful mentor or educator does not need to be reminded to send back his/her questionnaire; and (4) the dateline for participants to mail their questionnaires back to the researcher was extended one month, because it was the beginning of the fall semester and the participants were engaged in other duties.

To supplement and clarify the data collected from the participants' returned questionnaires, focus group interviews with random samples of 15 evaluators and 16 stakeholders were conducted in Taiwan. Due to the sensitive nature of questionnaire topics and other controversial issues, the identities and content of the informal conversations were not disclosed.

A question that survey researchers frequently ask concerns the percentage return that should be achieved in a mail survey. It should be pointed out that the body of inferential statistics used in connection with survey analysis assumes that all members of the initial sample, or in this case, population, will complete and return their questionnaires. Since this almost never happens, potential

response bias became a concern in the study.

It is not possible to state the exact percentage of return a study should achieve. Babbie (1983) suggested that a response of at least 50 percent is adequate for analysis and reporting; 60 percent is good; and 70 percent is very good. Lake (1987) stated that most studies end up with response somewhere between 55% and 65%. Professional responses range from 60% to 75%. He further stated that response rate estimate should not be lower than 50% because it often indicated a seriously biased sample. A 60% response rate was anticipated in the study.

Data Collection Instrument Distribution. On August 27, 28, and 29, 1992, with the permission and cooperation of Dr. C. T. Liu, Chair of Taiwan Ministry of Education's National Technology Institutes Evaluation Committee and also President of the National Taiwan Institute of Technology, a pilot study was conducted. This allowed the researcher to validate the instrument, and evaluate data collection and analysis procedures.

On September 3, 1992, 420 copies of the final questionnaire (Appendix B), with cover letters (Appendix A) and stamped, self-addressed envelopes were mailed to 117 evaluation team members and 303 stakeholders including 35 institute presidents and 268 program leaders. Instructions

were provided on the questionnaire to help participants respond appropriately using Likert scales.

On September 10, 1992, the researcher was invited to become the official observer for the 1992 Evaluation of the Newly Established Institutes of Technology and Commerce to spend nine days with the evaluation team observing all steps of the evaluation.

In September and October, 1992, the researcher conducted focus group interviews with 15 evaluation team members, five institute presidents, and 11 program leaders to gather more thorough information to supplement the questionnaire survey.

By October 29, 1992, two months after the questionnaire survey, 82 evaluation team members, 28 institute presidents, and 222 academic program leaders had responded to the instrument for a total of 332 or 79.0 percent of the total survey population. Data collection was ended and data were now ready for analysis.

Data Analysis

Data were collected related to the 30 Program Evaluation Practice Standards and respondents' opinions on the importance and performance of 1990 Taiwan National Technology Institutes Evaluation practices. In the first group of analyses, the data were cross-tabulated into

responses by respondent group corresponding with each standard or questionnaire item. In the second group of analyses, mean responses were calculated for each participant group corresponding with each standard or questionnaire item.

The results were clustered according to the four standard categories that correspond to the four important attributes of any evaluation--its utility, feasibility, propriety, and accuracy. Results were tabulated separately for each participant group: the evaluators and the stakeholders.

A four-point Likert scale was used to determine (1) respondents' assessed importance of these 30 Program Evaluation Practice Standards and (2) respondents' opinions on the practices of 1990 Taiwan National Technology Institutes Evaluation. The scale used to assess the importance that respondents' placed on each questionnaire item ranged from very unimportant (assigned 1) to very important (assigned 4). The scale used to assess the respondents' perceived performance of the Technology Institutes Evaluation practices with regard to each questionnaire item ranged from strongly agree (assigned 4) to strongly disagree (assigned 1). The mid-point 2.5 represented a neutral opinion or average perceived performance by the respondent; any rating above 2.5 was in

agreement or important, any rating below 2.5 was in disagreement or unimportant. At least 75% of the respondents in a group must have rated above 2.5 in the four-point Likert scale for a standard to be acceptable or satisfactory.

The mean scores on each standard for each respondent group were translated into their respective qualitative counterpart. For example, a mean score of 3.4 was assigned as "agree" or "important" and a mean score of 2.1 was assigned "disagree" or "unimportant." Each questionnaire item on the survey instrument provided a space for the respondents' comments.

An item-by-item analysis was conducted on tabulated data collected on each of the 30 Program Evaluation Practice Standards. Distributions and mean scores for the evaluators' responses and the stakeholders' responses were compared to identify areas of discrepancies and commonalities. Respondents' comments were utilized to elaborate or explain the nature of their responses and were employed in data analysis and the preparation of the final report.

The research results were reviewed to determine if a need existed for the development of a new or restructured evaluation model or framework for Taiwan's Technology Institutes Evaluation practices.

On December 20, 1993, a formative review of the findings, including proposed recommendations, was conducted with a panel of experts in Taiwan. This panel contained five evaluators including Dr. C. T. Liu, the Chair of the Evaluation Committee, three institute presidents, and six program leaders.

The results of the data analysis and the formative review assessment were used to prepare a final report on Taiwan's National Technology Institutes Evaluation practices (see Chapter Five, Summary, Discussion, Conclusions, and Recommendations).

CHAPTER FOUR

ANALYSIS OF DATA

Overview

Data were collected related to the 30 Program Evaluation Practice Standards and respondents' opinions on the importance and performance of 1990 Taiwan National Technology Institutes Evaluation practices. In the first group of analyses, the data were cross-tabulated into responses by respondent group corresponding with each standard or questionnaire item (see Appendix F). In the second group of analyses, mean responses were calculated for each participant group corresponding with each standard or questionnaire item (see Appendix G).

Result Summaries

The results were clustered according to the four standard categories that correspond to the four important attributes of any evaluation--its utility, feasibility, propriety, and accuracy. Results were tabulated separately for each participant group: the evaluators and the stakeholders. The result summaries of the analyses are presented in Table A, B, C, and D.

Utility Standards Ratings

The Utility Standards were intended to ensure that an evaluation will serve the practical needs of a given audience. These standards were represented in questionnaire items number one through eight. Ratings on these standards regarding the Ministry of Education's Technology Institutes Evaluation are showed in Table A.

Data analysis indicated that both evaluators and stakeholders agree that all of the Utility Standards were valuable and important. Further, their assessment of the performance of the evaluation with respect to the Utility Standards indicated that, in general, the standards were met by the evaluation.

Review of Table A indicated that Standard 1, Audience Identification: "audiences involved in or affected by the evaluation should be identified, so that their needs can be addressed," was given the lowest ratings in both value and performance among these 30 standards by both the evaluators and stakeholders: 29% of the evaluators and 12% of the stakeholders did not believe it is important; 42% of the evaluators and one-third of stakeholders including 13 institute presidents (more than half of the institute president respondents) disapproved in the performance of the Ministry's evaluation with respect to this standard.

TABLE A

Response Distributions and Means of
Utility Standards Ratings

STANDARD NO.	GROUP	DIMENSION									
		IMPORTANCE					PERFORMANCE				
		VI	I	U	VU	MEAN	SA	A	D	SD	MEAN
1	E	13	44	22	1	2.9	8	39	29	5	2.6
		71%		29%			58%		42%		
	S	65	137	27	0	3.2	9	143	75	4	2.7
		88%		12%			66%		34%		
2	E	41	38	2	0	3.5	19	59	6	0	3.2
		98%		2%			93%		7%		
	S	92	142	2	0	3.4	22	151	57	7	2.8
		99%		1%			73%		27%		
3	E	24	53	2	0	3.3	7	68	6	0	3.O
		97%		3%			93%		7%		
	S	68	160	6	2	3.2	20	158	55	2	2.8
		97%		3%			76%		24%		
4	E	18	54	8	0	3.1	7	61	11	10	2.7
		90%		10%			76%		24%		
	S	73	156	4	2	3.3	20	136	72	1	3.3
		97%		3%			68%		32%		
5	E	32	50	0	0	3.O	17	59	5	0	3.1
		100%		0%			94%		6%		
	S	94	145	0	0	3.4	25	155	54	5	2.8
		100%		0%			75%		25%		
6	E	48	32	2	1	3.6	49	31	2	0	3.6
		96%		4%			98%		2%		
	S	153	81	1	2	3.6	145	90	1	3	3.7
		99%		1%			98%		2%		
7	E	44	35	3	0	3.5	36	42	4	0	3.4
		96%		4%			95%		5%		
	S	88	135	13	0	3.3	83	119	28	7	3.2
		94%		6%			85%		15%		
8	E	19	55	6	1	3.1	15	47	18	2	2.9
		91%		9%			76%		24%		
	S	104	121	10	0	3.4	70	120	35	11	3.1
		96%		4%			81%		19%		

TABLE A Cont.

Note.
Scales are as follows:

VI = Very Important	SA = Strongly Agree
I = Important	A = Agree
U = Unimportant	D = Disagree
VU = Very Unimportant	SD = Strongly Disagree

Group E = Evaluators
Group S = Stakeholders

Standard 1 = Audience Identification
Standard 2 = Evaluator Credibility
Standard 3 = Information Scope and Selection
Standard 4 = Valuational Interpretation
Standard 5 = Report Clarity
Standard 6 = Report Dissemination
Standard 7 = Report Timeliness
Standard 8 = Evaluation Impact

More than half of the evaluator respondents and 90% of the stakeholder respondents indicated that only few evaluators had the necessary time and were able to identify those audiences involved in or affected by the evaluation. They believed predetermined impression, identity, or status of the evaluated program or institute influenced the fairness of the evaluation result. These beliefs are exemplified in the following statements offered by respondents:

> The purposes of evaluations are to improve the educational environment rather to consider the affects of the evaluations.--From an evaluator.
>
> If the evaluators don't have any predetermined impression or relationship with the evaluated schools then it is helpful to be fair.--From an evaluator.
>
> The evaluators don't quite understand the evaluated schools. The time is too short for them to truly catch on the real points.--From an institute president.
>
> The understandings before evaluation are good for reference but erroneous or biased recognition may cause prejudice.--From a program leader.

While there was unanimity in both the evaluators' and the stakeholders' ratings of the value of Standard 2, Evaluator Credibility: "the persons conducting the evaluation should be both trustworthy and competent to perform the evaluation, so that their findings achieve maximum credibility and acceptance," there was disagreement regarding their perceptions of the extent to which the evaluation met this standard. Almost all of the evaluators thought the standard was met in the evaluation practice, however, nearly one-third of stakeholders believed that the standard was not met.

In their comments, all 25 stakeholder respondents, including two institute presidents and 23 program leaders, pointed out that not all evaluators were reliable and competent when evaluating Technology Institutes. The following statement is one example:

> Not all evaluators are trustworthy and competent according to my experience.--From a program leader.

Review of Table A indicated that both evaluators and stakeholders agreed the importance of Standard 4, Valuational Interpretation: "the perspectives, procedures, and rationale used to interpret the findings should be carefully described, so that the bases for value judgments are clear," but one-fourth of the evaluators and one-third of the stakeholders disapproved of the performance of the evaluation. One evaluator indicated that:

> Some (interpretations) need to be discussed among evaluators.--From an evaluator.

and several stakeholders felt that:

> There are variations (in the interpretations) among evaluators.--From a program leader.

Feasibility Standards Ratings

The Feasibility Standards were intended to ensure that an evaluation will be realistic, prudent, diplomatic, and frugal. These standards were represented in questionnaire items number nine, 10, and 11. Responses' ratings on these standards regarding the Ministry of Education's Technology Institutes Evaluation are displayed in Table B.

The results of the data analysis demonstrated that both evaluators and stakeholders agree that all of the Feasibility Standards were valuable and important. Further,

TABLE B

Response Distributions and Means of
Feasibility Standards Ratings

STANDARD NO.	GROUP	DIMENSION									
		IMPORTANCE					PERFORMANCE				
		VI	I	U	VU	MEAN	SA	A	D	SD	MEAN
9	E	22	56	3	0	3.2	7	57	15	1	2.9
		96%		4%			80%		20%		
	S	76	150	6	0	3.3	16	154	68	4	2.8
		97%		3%			70%		30%		
10	E	16	52	9	1	3.1	7	60	11	0	2.9
		87%		13%			86%		14%		
	S	71	144	14	1	3.7	35	144	46	8	2.9
		93%		7%			77%		23%		
11	E	16	53	6	2	3.1	14	51	11	1	3.o
		90%		10%			84%		16%		
	S	55	139	25	0	3.1	19	119	69	14	2.6
		89%		11%			62%		38%		

Note.
Scales are as follows:

VI = Very Important
I = Important
U = Unimportant
VU = Very Unimportant

SA = Strongly Agree
A = Agree
D = Disagree
SD = Strongly Disagree

Group E = Evaluators
Group S = Stakeholders

Standard 9 = Practical Procedures
Standard 10 = Political Viability
Standard 11 = Cost-Effectiveness

their assessment of the performance of the evaluation with respect to the Feasibility Standards indicated that, in general, the standards were met by the evaluation.

Review of Table B indicated that both evaluators and stakeholders agree that the importance of Standard 9, Practical Procedures: "the evaluation procedures should be practical, so that disruption is kept to a minimum, and that needed information can be obtained," and 80% of the evaluators approved the performance of the evaluation, but nearly one-third of the stakeholders disapproved the evaluation performance.

Among the comments regarding this standard, almost all the respondents including one evaluator, two institute presidents, and 15 program leaders indicated that (1) a one day on site visit was too short for both the evaluation team and the evaluated institutes; and (2) the evaluated programs needed long term observation. The current evaluation, which was held every three years, was too short to accurately assess the development of the programs.

These beliefs were exemplified in the following statements offered by an institute president and a program leader:

> The evaluation needs regular and long term observations. Current evaluation lacks concrete long term observation.--From an institute president.

> Because only limited time can be used, the evaluation seems rough.--From a program leader.

The Table B indicated that both evaluators and stakeholders agree on the importance of Standard 11, Cost Effectiveness: "the evaluation should produce information of sufficient value to justify the resources extended," and 84% of the evaluators approved the performance of the evaluation, but more than one-third of the stakeholders disapproved the evaluation performance of this standard.

Many stakeholders indicated that all the evaluated institutes spent too much money and energy preparing for the evaluation and that it was impossible to justify the resources expended. The following statements from two program leaders summarized these respondents' comments:

> It is not easy to calculate the cost, time and manpower used for evaluation. It varies among schools.--From a program leader.

> Though the Ministry of Education hopes the schools not to get too excited about the evaluation. But it is impossible for us. Almost every schools spend quite a lot of money on preparation of evaluation. I suggest to let the excellent schools join the evaluation for every five or six years.--From a program leader.

Propriety Standards Ratings

The Propriety Standards were intended to ensure that an evaluation would be conducted legally, ethically, and with due regard for the welfare of those involved in the

evaluation, as well as those affected by its results. These standards were represented in questionnaire items number 12 through 19. Responses' ratings on these standards regarding the Ministry of Education's Technology Institutes Evaluation are displayed in Table C.

Data analysis indicated that both evaluators and stakeholders agree that all of the Propriety Standards were valuable and important. Further, their assessment of the performance of the evaluation with respect to the Propriety Standards indicated that, in general, the standards were met by the evaluation.

Review of Table C indicated that both evaluators and stakeholders agreed on the importance of Standard 13, Conflict of Interest: "conflict of interest, frequently unavoidable, should be dealt with openly and honestly, so that it does not compromise the evaluation processes and results," and 87% of the evaluators approved the practice of the evaluation with respect to this standard, but nearly one-third of the stakeholders disapproved the evaluation practice of this standard.

Two out of three institute president respondents indicated that the evaluation results should be revealed with discretion to avoid conflicts or misrepresentation of the evaluated programs. They made the following comments:

TABLE C

Response Distributions and Means of
Propriety Standards Ratings

STANDARD NO.	GROUP	DIMENSION									
		IMPORTANCE					PERFORMANCE				
		VI	I	U	VU	MEAN	SA	A	D	SD	MEAN
12	E	17	51	10	0	3.1	11	61	5	2	3.0
		87%		13%			91%		9%		
	S	65	139	11	0	3.3	48	147	13	5	3.1
		95%		5%			92%		8%		
13	E	20	59	0	0	3.3	20	49	8	2	3.1
		100%		0%			87%		13%		
	S	82	144	5	2	3.3	29	138	62	3	2.8
		97%		3%			72%		28%		
14	E	23	53	4	0	3.2	18	47	14	0	3.1
		95%		5%			82%		18%		
	S	71	153	8	1	3.3	34	160	38	3	2.8
		96%		4%			83%		17%		
15	E	16	59	2	0	3.2	10	54	12	0	3.0
		97%		3%			84%		16%		
	S	56	162	11	0	3.2	28	165	34	3	2.9
		95%		5%			84%		16%		
16	E	17	56	7	0	3.1	14	59	6	1	3.2
		91%		9%			91%		9%		
	S	77	150	4	3	3.3	22	164	41	8	2.9
		97%		3%			79%		21%		
17	E	26	53	2	0	3.3	21	55	4	1	3.2
		98%		2%			94%		6%		
	S	82	151	1	0	3.0	34	167	30	3	3.0
		100%		0%			86%		14%		
18	E	35	42	1	1	3.4	17	45	16	0	3.0
		97%		3%			79%		21%		
	S	99	131	5	0	3.4	20	133	75	6	2.9
		98%		2%			65%		35%		
19	E	12	57	9	0	3.0	7	52	18	2	2.7
		88%		12%			75%		25%		
	S	54	129	8	1	3.2	32	132	11	1	3.1
		95%		5%			93%		7%		

TABLE C Cont.

Note.
Scales are as follows:

VI = Very Important	SA = Strongly Agree
I = Important	A = Agree
U = Unimportant	D = Disagree
VU = Very Unimportant	SD = Strongly Disagree

Group E = Evaluators
Group S = Stakeholders

Standard 12 = Formal Obligation
Standard 13 = Conflict of Interest
Standard 14 = Full and Frank Disclosure
Standard 15 = Public's Right to Know
Standard 16 = Rights of Human Subjects
Standard 17 = Human Interactions
Standard 18 = Balanced Reporting
Standard 19 = Fiscal Responsibility

> Not all evaluation results are fair, objective and reasonable. To reveal the results publicly may induce protest and dissatisfaction.--From an institute president.
>
> Don't reveal the results to media. Notice the evaluated schools by the Ministry of Education will decrease the negative response.--From an institute president.

Some program leaders thought this was a difficult standard to achieve, and two wanted the evaluation results of each school to be revealed to the public:

> Reveal the results of each school to the public as soon as possible. It can decrease the conflict of

benefit and increase the fairness of evaluation.--From a program leader.

The results can be revealed. But the credibility depends on the quality of the reports.--From a program leader.

Among all responses to these 30 standards, this was the only case that the two respondent groups (the institute presidents and the program leaders) representing the stakeholders showed opposite beliefs in their comments.

Review of Table C indicated that both evaluators and stakeholders agree on the importance of Standard 18, Balanced Reporting: "the evaluation should be complete and fair in its presentation of strengths and weaknesses of the object under investigation, so that strengths can be built upon and problem areas addressed," and 79% of the evaluators approved of the performance of the evaluation with respect to this standard, but more than one-third of the stakeholders including 13 institute presidents disapproved.

The comments from the stakeholders for this standard were all negative toward the performance of the evaluators. All 15 of the stakeholders were program leaders. Two institute presidents stayed neutral. These program leaders indicated that the evaluation reports were biased and incomprehensible. Their views were exemplified in the following statements:

Some evaluators are subjective. Some don't understand technical education.--From a program leader.

> The evaluators can't comprehensively describe the merits and demerits because they don't have deep understanding.--From a program leader.

Accuracy Standards Ratings

The Accuracy Standards were intended to ensure that an evaluation will reveal and convey technically adequate information about the features of the object being studied that will determine its worth or merit. These standards were represented in questionnaire items number 20 through 30. Responses' ratings on these standards regarding the Ministry of Education's Technology Institutes Evaluation are showed in Table D.

The results of the data analysis performed for this study indicated that both evaluators and stakeholders agree that all of the Accuracy Standards were valuable and important. Further, their assessment of the performance of the evaluation with respect to the Accuracy Standards indicated that, in general, the standards were met by the evaluation.

Review of Table D indicated that both evaluators and stakeholders agree on the importance of Standard 20, Object Identification: "the object of the evaluation should be sufficiently examined, so that the form(s) of the object being considered in the evaluation can be clearly identified," and almost all the evaluators approved the

TABLE D

Response Distributions and Means of
Accuracy Standards Ratings

STANDARD NO.	GROUP	DIMENSION									
		IMPORTANCE					PERFORMANCE				
		VI	I	U	VU	MEAN	SA	A	D	SD	MEAN
20	E	35	45	2	0	3.4	18	58	5	1	2.9
		98%		2%			93%		7%		
	S	92	141	0	3	3.4	27	143	62	4	2.8
		99%		1%			72%		28%		
21	E	37	42	2	0	3.4	9	51	20	1	2.8
		98%		2%			74%		26%		
	S	106	123	2	2	3.4	31	108	86	6	2.7
		98%		2%			60%		40%		
22	E	21	54	4	1	3.2	8	63	9	0	3.0
		94%		6%			89%		11%		
	S	65	166	2	0	3.3	27	162	43	0	2.9
		99%		1%			81%		19%		
23	E	26	53	3	0	3.3	5	48	27	1	2.7
		96%		4%			65%		35%		
	S	59	153	7	2	3.2	25	138	54	3	2.8
		96%		4%			74%		26%		
24	E	25	44	1	0	3.3	8	58	14	0	2.8
		99%		1%			83%		17%		
	S	67	155	2	0	3.3	17	134	68	2	2.8
		99%		1%			68%		32%		
25	E	32	48	0	0	3.4	5	60	14	1	2.9
		100%		0%			81%		19%		
	S	66	144	1	0	3.3	18	136	65	3	2.8
		100%		0%			69%		31%		
26	E	22	57	1	0	3.3	10	56	13	0	3.0
		99%		1%			84%		16%		
	S	66	144	1	0	3.3	18	139	41	3	2.9
		100%		0%			78%		22%		
27	E	24	51	4	0	3.3	9	59	12	0	3.0
		95%		5%			85%		15%		
	S	52	164	3	0	3.2	21	135	57	3	2.8
		99%		1%			72%		28%		

TABLE D Cont.

STANDARD NO.	GROUP	DIMENSION									
		IMPORTANCE					PERFORMANCE				
		VI	I	U	VU	MEAN	SA	A	D	SD	MEAN
28	E	24	51	4	0	3.3	9	46	23	1	2.8
		95%		5%			70%		30%		
	S	78	148	2	0	3.3	18	142	55	10	2.7
		99%		1%			71%		29%		
29	E	43	36	0	1	3.o	21	56	2	0	3.2
		99%		1%			97%		3%		
	S	114	116	2	0	3.5	20	149	56	6	2.8
		99%		1%			73%		27%		
30	E	34	43	3	1	3.4	13	49	19	1	2.9
		95%		5%			76%		24%		
	S	119	103	0	0	3.5	37	100	72	11	2.7
		100%		0%			62%		38%		

Note.
Scales are as follows:

VI = Very Important
I = Important
U = Unimportant
VU = Very Unimportant

SA = Strongly Agree
A = Agree
D = Disagree
SD = Strongly Disagree

Group E = Evaluators
Group S = Stakeholders

Standard 20 = Object Identification
Standard 21 = Context Analysis
Standard 22 = Described Purposes and Procedures
Standard 23 = Defensible Information Sources
Standard 24 = Valid Measurement
Standard 25 = Reliable Measurement
Standard 26 = Systematic Data Control
Standard 27 = Analysis of Quantitative Information
Standard 28 = Analysis of Qualitative Information
Standard 29 = Justified Conclusions
Standard 30 = Objective Reporting

efficacy of the evaluation practices with respect to this standard. However, nearly one-third of the stakeholders disapproved.

Half of the respondents, who made comments for this standard including one evaluator, one institute president, and four program leaders, indicated that the visiting team had limited time to adequately conduct the on-site evaluation. These constraints restricted those evaluators from sufficiently examining the programs. The following statement served as an example:

> The evaluators don't have enough time to scrutinize. --From a program leader.

The Table D indicated that both evaluators and stakeholders agree on the importance of Standard 21, Context Analysis: "the context in which the program, project, or material exists should be examined in enough detail, so that its likely influences on the object can be identified." However, 26% of the evaluators and 40% of the stakeholders disapproved of the performance of the evaluation with respect to this standard. Again, like the previous standard, almost half the respondents who made the comments, including all the evaluators and several program leaders, indicated that they needed more time to examine the context of the evaluated institutes in enough detail. The following were some examples of the respondents' comments:

> The time is tight. The evaluation is intensive. We are hindered by above reasons.--From an evaluator.

> It is not easy to have thorough understanding because the time for evaluation is less than a day.--From an evaluator.

> How can we let the evaluators understand the details of the schools by the brief introduction?--From a program leader.

> We have so many departments. How can they (the evaluators) clearly understand all of them in the very short time?--From a program leader.

Review of Table D indicated that both the evaluators and stakeholders believed in the importance of Standard 23, Defensible Information Sources: "the sources of information should be described in enough detail so that the adequacy of the information can be assessed," but more than one-third of the evaluators and one-fourth of stakeholders disapproved of the performance of the Ministry's evaluation.

The evaluators argued that the sources of evaluation information were from the evaluated institutes and they indicated that:

> The explanations (of the information sources) can be more concrete and appropriate in order to increase the effects of evaluation.--From an evaluator.

Most program leaders in their comments questioned the accuracy of the evaluated information. Two respondents gave the following statements:

> We don't know where the evaluators obtain their

informations.--From a program leader.

The evaluators may subjectively take care of the affairs by informal informations.--From a program leader.

While there was unanimity in both the evaluators' and the stakeholders' ratings of the value of Standard 24, Valid Measurement: "the information-gathering instruments and procedures should be chosen or developed and then implemented in ways that will assure that the interpretation arrived at is valid for the given use," there was discord in the perception of the degree to which the evaluation met this standard. For example, 83% of the evaluators thought the standard was met in the evaluation practice and one-third of stakeholders believed that the standard was not met.

Some program leaders, and even several evaluators, expressed concerns about the validity of the information gathering instruments in their comments:

It can be more concrete and detailed to make the evaluation more effective.--From an evaluator.

I can't distinguish whether the information is proper or not because all the information is provided by the schools and departments. I have received contradictory informations between the schools and the departments. Which shall I believe?--From an evaluator.

It may need experts to collect, analyze and filter the informations.--From a program leader.

The way of sampling can't represent the population.--

From a program leader.

> Their (evaluators') sampling are not proper. Their understandings are superficial.--From a program leader.

Review of Table D indicated that both evaluators and stakeholders agree on the importance of Standard 25, Reliable Measurement: "the information-gathering instruments and procedures should be chosen or developed and then implemented in ways that will assure that the information obtained is sufficiently reliable for the intended use." Eighty-one percent of the evaluators approved the performance of the evaluation with respect to this standard, but nearly one-third of the stakeholders disapproved.

In their comments, one institute president and four program leaders indicated that the evaluators' sampling instruments were not reliable. The following statements were two examples:

> Chance exits in sampling. It means there is probability to be unfair.--From an institute president.

> This statement is important regarding the reliability of sampling. It is unfair to jump to the conclusions by asking just one or two students randomly.--From a program leader.

Both the evaluators and stakeholders believed in the importance of Standard 27, Analysis of Quantitative Information: "quantitative information in an evaluation should be appropriately and systematically analyzed to

ensure supportable interpretations," and 85% of the evaluators approved the performance of the evaluation with respect to this standard, but nearly one-third of the stakeholders disapproved.

In the respondents' comments, almost all the stakeholders, including one institute president and 10 program leaders, indicated that they had no knowledge of how the evaluators analyzed the quantitative data. The following statement was just one example of their comments:

> I don't know. There is no way to tell how the evaluators analyze the data.--From an institute president.

Review of Table D indicated that both evaluators and stakeholders agree on the importance of Standard 28, Analysis of Qualitative Information: "qualitative information in an evaluation should be appropriately and systematically analyzed to ensure supportable interpretations." However, 30% of the evaluators and 29% of the stakeholders disapproved of the performance of the evaluation with respect to this standard. Again, like the previous standard, almost half the respondents who made the comments including several program leaders indicated that they had no knowledge about how the evaluators analyzed the qualitative data. Further, three evaluators, one institute president and some program leaders, indicated that these evaluators failed to appropriately and systematically

analyze the qualitative information. The following were some of these respondents' comments:

> I don't have enough informations. It is not easy to do.--From an evaluator.

> The evaluators did only the quantitative evaluation, but no qualitative evaluation.--From a program leader.

> There is no way to tell.--From a program leader.

While there was unanimity in both the evaluators' and the stakeholders' ratings of the value of Standard 29, Justified Conclusions: "the conclusions reached in an evaluation should be explicitly justified, so that the audience can assess them," there was discord in the perception of the degree to which the evaluation met this standard. Almost all of the evaluators thought the standard was met in the evaluation practice, but 27% of stakeholders believed that the standard was not met.

In their comments, 11 stakeholder respondents, including one institute president and 10 program leaders, indicated that the conclusions reached in the evaluation were not explicitly justified. The following statements were some examples:

> Some are objective and fair. But a few still are too subjective and superficial.--From an institute president.

> I agree with most of the conclusions. But some are

contradictory to the reports of previous evaluation.--From a program leader.

We have four departments for evaluation. Due to the different evaluation standards among the evaluators, the conclusions are not fair and objective. If they could have the same standard then it will be better.--From a program leader.

The Table D indicated that both evaluators and stakeholders agree on the importance of Standard 30, Objective Reporting: "the evaluation procedures should provide safeguards to protect the evaluation findings and reports against distortion by the personal feelings and biases of any party to the evaluation," but nearly one-fourth of the evaluators and more than one-third of the stakeholders disapproved of the performance of the evaluation with respect to this standard.

In their comments, two evaluators indicated that there were no precautions or safeguards to protect the evaluation findings and reports against distortion by the personal feelings and biases of the evaluators. Four evaluators believed there were some precautions to this matter, but they needed to be improved. One institute president and most program leaders indicated that there were some biases in the evaluation procedures, and they had no knowledge about any precaution or safeguard to it. These beliefs were exemplified in the following statements offered by respondents:

It seems no precautions are taken.--From an evaluator.

There are some precautions. But how about the effects?--From an evaluator.

Once there was an evaluator who was laid off by my school came to evaluate us.--From a program leader.

I don't know if any precautions are taken to avoid prejudice. However, the evaluation process must be fair, open and credible.--From a program leader.

Summary

The results of the quantitative analyses performed for this study demonstrated that both evaluators and stakeholders agree that all of the 30 Program Evaluation Practice Standards were valuable and important. Further, their assessment of the performance of the evaluation with respect to the 30 Program Evaluation Practice Standards indicated that, in general, all the standards were met by the evaluation practices. In other words, as to the utility, feasibility, propriety, and accuracy of the 1990 Taiwan National Technology Institutes Evaluation practices, the evaluators and stakeholders judged that the "real" evaluation efforts of the 1990 Taiwan National Technology Institutes Evaluation have achieved the expectation of the 30 Program Evaluation Practice Standards.

However, according to the criteria established (at least 75% of the respondents in a group must rate above 2.5

in the four-point Likert scale for a standard to be acceptable, or satisfactory), there were some dissatisfactions within and/or across these respondent groups as indicated by their ratings of the 30 standards.

For the value ratings of the 30 Program Evaluation Practice Standards, there was only one instance that was determined unacceptable, or unsatisfactory: the evaluators' responses to the standard 1, Audience Identification. Nearly one-third of the evaluators indicated that it was unimportant.

The performance ratings indicated that four unsatisfactory instances occurred in the evaluators' ratings of the 30 standards. They were Standards 1, 21, 23, and 28. The stakeholders' performance ratings to Standards 1, 2, 4, 9, 11, 13, 18, 20, 21 23, 24, 25, 27, 28, 29, and 30 were determined as unacceptable, or unsatisfactory. See Table 1.3.

Table 1.3 The Unacceptable/unsatisfactory Instances in the Performance Ratings of the 30 Program Evaluation Practice Standards

Standard	Evaluators	Stakeholders
1. Audience Identification	*	*
2. Evaluator Credibility		*
4. Valuational Interpretation		*
9. Practical Procedures		*
11. Cost Effectiveness		*
13. Conflict of Interest		*
18. Balanced Reporting		*
20. Object Identification		*
21. Context Analysis	*	*
23. Defensible Info. Sources	*	*
24. Valid Measurement		*
25. Reliable Measurement		*
27. Quantitative Info. Analysis		*
28. Qualitative Info. Analysis	*	*
29. Justified Conclusion		*
30. Objective Reporting		*

CHAPTER FIVE

SUMMARY, DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

A brief summary of the study, and an in-depth discussion of the study findings and the implications of those findings were developed based on the analyses of data. Conclusions drawn from these findings are presented along with recommendations.

This chapter is divided into the following sections: (1) summary of the study, (2) discussion of the findings, (3) conclusions and recommendations, and (4) major contributions and summary.

Summary of the Study

As stated in Objective 1 of the study, its purpose was to conduct a meta-evaluation of the 1990 Taiwan National Technology Institutes Evaluation including the policies, practices, and strategies affecting its usefulness, feasibility, propriety, and accuracy; and to make a comparison of opinions as to the utility, feasibility, propriety, and accuracy of its practices as perceived by evaluation team members and the evaluated Technology Institutes. Data collection and analysis were conducted from August 1992 and completed in December 1993. The

resulting analysis and report were used to fulfill Objective 2, which was to determine what was needed to improve the efficacy and ethics of the evaluation model, procedures, practices, and policies; and to provide information relative to the two research questions:

1. Do evaluators (evaluation team) and stakeholders (institute presidents and institute program leaders) differ relative to the assessed importance of the 30 Program Evaluation Practice Standards for the 1990 Taiwan National Technology Institutes Evaluation?

--in the Utility (usefulness) of the evaluation? Did the evaluation serve the practical information needs of given audiences?

--in the Feasibility of the evaluation? Was the evaluation realistic, prudent, diplomatic, and frugal?

--in the Propriety of the evaluation? Was the evaluation conducted legally, ethically, and with due regard for the welfare of those involved in the evaluation, as well as those affected by its results?

--in the Accuracy of the evaluation? Did the evaluation reveal and convey technically adequate information about the features of the object being studied that determine its worth or merit?

2. Do evaluators and stakeholders differ in their perceived performance of the 1990 Taiwan National Technology Institutes Evaluation practices?

--in the Utility (usefulness) of the evaluation? Did the evaluation serve the practical information needs of given audiences?

--in the Feasibility of the evaluation? Was the evaluation realistic, prudent, diplomatic, and frugal?

--in the Propriety of the evaluation? Was the evaluation conducted legally, ethically, and with due regard for the welfare of those involved in the evaluation, as well as those affected by its results?

--in the Accuracy of the evaluation? Did the evaluation reveal and convey technically adequate information about the features of the object being studied that determine its worth or merit?

The results of the data collection and analyses indicated that both groups, the evaluators and stakeholders, agreed that all of the 30 Program Evaluation Practice Standards were valuable and important in terms of the 1990 Taiwan National Technology Institutes Evaluation practices and approved the performance of these practices. However, areas of discrepancies and commonalities existed related to

specific issues and were addressed in the final report.

Based on the outcome of Objectives 1 and 2, Objective 3 which provided for, if indicated, the development or creation of a framework for a new or restructured evaluation model, was not necessary.

Objective 4, which, if indicated, established an avenue to conduct a formative review of the new or restructured evaluation model by a panel of experts including stakeholder representatives. Although it was determined that a new model was not needed, a formative review was conducted with the panel to present and discuss the study findings and recommendations.

Discussion of the Findings

The results of the data collection and analyses indicated that both groups, the evaluators and stakeholders, agreed that all of the 30 Program Evaluation Practice Standards were valuable and important and approved the performance of the 1990 Taiwan National Technology Institutes Evaluation with respect to the 30 Program Evaluation Practice Standards. While most responses indicated that the standards were satisfactory, the specific distribution of scores and comments in certain areas indicated some polarity of opinions.

According to the criteria established in the study, at

least 75% of the respondents in a group must rate above 2.5 in the four-point Likert scale for a standard to be satisfactorily acceptable, there were some dissatisfactions within and/or across these respondent groups as indicated by their ratings of the 30 standards. See Table 1.3.

In only one instance was the "importance" of any of the 30 standards indicated as "unacceptable." The evaluators' responses to Standard 1, Audience Identification, did not achieve the 75% necessary for acceptance.

The performance ratings of the 30 Program Evaluation Practice Standards yielded 20 instances where the respondents indicated as "unsatisfactory." The evaluators' performance ratings on Standards 1, 21, 23, 28, and the stakeholders' performance ratings on Standards 1, 2, 4, 9, 11, 13, 18, 20, 21, 23, 24, 25, 27, 28, 29, 30 were determined as "unsatisfactory" or "unacceptable" (see Table 1.3).

The results were discussed according to four standard areas that correspond to four main concerns about any evaluation--its utility, feasibility, propriety, and accuracy.

Utility Standards

The Utility Standards were intended to ensure that an evaluation would serve the practical information needs of

given audiences. The only instance where the importance of any of the 30 standards was indicated as "unacceptable" was the evaluators' responses to Standard 1, Audience Identification. The standard stated that "audiences involved in or affected by the evaluation should be identified, so that their needs can be addressed." Nearly one-third of evaluators thought this standard was unimportant for conducting the 1990 Taiwan National Technology Institutes Evaluation. Three evaluators expressed their view points in the following statements:

> The understandings (of the audiences involved in or affected by the evaluation) before evaluation are good for reference but erroneous or biased recognition may cause prejudice.
>
> The understandings (of the audiences involved in or affected by the evaluation) before evaluation may help to make good judgement and may mislead judgement, too.
>
> Predetermined impression of the status of the schools, such as board of directors or environment, may influence the results of evaluations.

Basically, the evaluators expressed that "the less an evaluator knows about the audiences involved in or affected by the evaluation, the easier it is for this evaluator to achieve more objective evaluation results." The evaluators indicated that they perform better if they could avoid any personal or political ties to the evaluated objects that might create a conflict of interest.

Additionally, Standard 1, Audience Identification, was given the lowest ratings in the performance among the 30 standards by both the evaluators (42%) and stakeholders (34%). More than half of the institute presidents indicated disapproval of audience identification performance. One institute president stated:

> The evaluators understand more about the status of the university than the junior college.

More than half of the evaluator respondents and 90% of the stakeholder respondents indicated that only few evaluators had the necessary time to involve the audience. Another institute president indicated:

> The evaluators don't quite understand the evaluated schools. The time is too short for them to truly catch on the real points.

Both the evaluator and stakeholder groups indicated that a predetermined impression, identity, and/or status of the evaluated program or institute might influence the fairness of the evaluation results. According to Marsh, Newman, and Boyer (1981), a combination of time restriction and political and bureaucratic coercions erode the quality of an evaluation.

The evaluators and stakeholders were confused about the importance of identifying the audiences targeted for the evaluation. The Ministry of Education, its evaluation teams, and stakeholders should be aware that profession-wide

acknowledged criteria for quality evaluations always call for multiple and diverse audiences. "The group should be composed of different types of people including program administrators, instructional and support staff, consumer representatives, etc. It is very important to include representatives of the group(s) to be evaluated" (McLaughlin, 1990, p. 8). Worthen and Sanders (1987) further pointed out that an evaluation was adequate only if it collected information from and reported information to all legitimate evaluation audiences. An evaluation of a school program that answered only the questions of the school staff and ignored questions of parents, children, and community groups was simply a bad evaluation.

In response to Standard 2, Evaluator Credibility: "the persons conducting the evaluation should be both trustworthy and competent to perform the evaluation, so that their findings achieve maximum credibility and acceptance," the evaluators found the performance to be satisfactory (93%), while and stakeholders indicated that the performance of standard was unsatisfactory (27%).

In their comments, all 25 stakeholder respondents, including two institute presidents and 23 program leaders, pointed out that not all evaluators were reliable and competent when evaluating Technology Institutes. The following statements are examples:

> Not all evaluators are trustworthy and competent according to my experience.
>
> Some evaluators were absent in the evaluation day. Some left before the end of the evaluation. We hope they can improve in the future.
>
> The evaluators don't have a deep understanding of the junior college.

Review of the handbook used by the evaluators provided no guidelines for evaluator selection criteria or conduct. If evaluators were absent at the scheduled time of the evaluation, it could negatively impact the evaluation.

Also, the evaluation of the Technology Institutes by college professors apparently caused some concerns. Stakeholders indicated that the evaluators lacked understanding of the institutes' "goals, status, working environments, and background."

The Joint Committee on Standards for Educational Evaluation (1981) has stated, "Evaluators are credible to the extent that they exhibit the training, technical competence, substantive knowledge, experience, integrity, public relations skills, and other characteristics considered necessary by the client and other users of the evaluation reports. Since few individuals possess all of the characteristics needed for particular evaluations, it is often necessary that an evaluation be done by a team of persons who collectively possess those qualifications" (p. 24). The extent and impact that these concerns have on

evaluation quality and outcomes warrant further investigation by the Taiwan's Ministry of Education.

The Ministry of Education should reveal its evaluator selection procedures and policies to the public, so that the qualifications of the evaluation teams can be reviewed and approved by the evaluated audiences. Further, the Ministry should involve evaluation consumers in all steps of planning and conducting the evaluation.

Although both evaluators and stakeholders indicated satisfactory importance and performance in their responses to Standard 3, Information Scope and Selection: "information collected should be of such scope and selected in such ways as to address pertinent questions about the object of the evaluation and be responsive to the needs and interests of specified audiences," respondents' comments were diverse and appeared to be related more specifically to the unique needs of the particular program that to the evaluation process.

Both evaluators and stakeholders agreed on the importance of Standard 4, Valuational Interpretation: "the perspectives, procedures, and rationale used to interpret the findings should be carefully described, so that the bases for value judgments are clear," but 24% of the evaluators and 32% of the stakeholders indicated that criteria for interpretation of the findings and bases for value judgments were not presented. An evaluator indicated:

> Some (interpretations) need to be discussed among evaluators.

and several stakeholders shared the following comment:

> There are variations (in the interpretations) among evaluators.

No evidence of a communicated common approach or written guidelines for interpreting findings could be located in the Ministry of Education's evaluation handbook or other documents. The Joint Committee on Standards for Educational Evaluation (1981) stated that "the point of this standard is that evaluators and their clients (stakeholders) should thoughtfully determine the approach to be followed in assigning values to the obtained information and should reveal and justify their chosen approach" (p. 32).

In response to Standard 5, Report Clarity: "the evaluation report should describe the object being evaluated and its context, and the purposes, procedures, and findings of the evaluation, so that the audiences will readily understand what was done, why it was done, what information was obtained, what conclusions were drawn, and what recommendations were made," both the evaluators and the stakeholders agreed 100% on the importance of this standard. However, one-fourth of the stakeholders disapprove of the performance. Reasons reflected in respondents' comments gave some indication of their dissatisfaction:

> Not all the reports reflect the truth.

> The reports from the evaluation could really point out the facts related to the problems. It didn't mention the purposes or procedures.

Respondents (over 96% of both evaluators and stakeholders) were more satisfied with the importance of and performance related to report dissemination, Standard 6, Report Dissemination. Standard 6 stated that "evaluation findings should be disseminated to clients and other right-to-know audiences, so that they can assess and use the findings." As to the response of Standard 7, Report Timeliness: "release of reports should be timely, so that audiences can best use the reported information," the respondents indicated that it was important to receive the reports on time and that the evaluation team performance was satisfactory. Overall, the evaluation team performed satisfactorily in disseminating the completed evaluation reports to the stakeholders in a timely manner.

On Standard 8, Evaluation Impact: "evaluations should be planned and conducted in ways that encourage follow-through by members of the audiences," the respondents indicated satisfactory ratings on both importance and performance. However, 24% of the evaluators and 19% of the stakeholders did not approve of the evaluation teams' performance of this standard. They indicated that the evaluators did not help the institutes use the evaluation findings in taking beneficial actions such as improving

programs; selecting more cost-beneficial approaches; or stopping unproductive procedures.

Overall, the "Utility Standards" were concerned with whether an evaluation serves the practical information needs of its stakeholders. Although all responses to these eight standards, with the exception of importance related to Audience Identification, were satisfactory, evidence existed that suggested there were areas which could use improvement, specifically in terms of documentation of procedures, policies, and guidelines for assessing value of the obtained information, evaluator selection criteria, interpretation of the findings, and follow-through. The source of dissatisfaction, to a large extent, was a lack of concrete, written documentation that could be referred to by both evaluators and stakeholders as a common reference.

Feasibility Standards

The feasibility standards were intended to ensure that an evaluation will be realistic, prudent, diplomatic, and frugal.

Nearly one-third of the stakeholders disapproved the evaluation performance of Standard 9, the Practical Procedures: "the evaluation procedures should be practical, so that disruption is kept to a minimum, and that needed information can be obtained." Some respondents indicated

that the evaluation process was not long enough to gain a complete perspective of the institute. One evaluator, two institute presidents, and 15 program leaders indicated that (1) a one day on-site visit was too short for both the evaluation team and the evaluated institutes; and (2) the evaluated programs required a longer term of observation. The current evaluation, held every three years, was too short to accurately determine the development of the programs. The stakeholders were seeking involvement in the evaluation planning process. And again, a lack of communication between the evaluated institutes and the Ministry of Education was indicated.

On Standard 10, Political Viability: "The evaluation should be planned and conducted with anticipation of different positions of various interest groups, so that their cooperation may be obtained, and so that possible attempts by any of these groups to curtail evaluation operations or to bias or misapply the results can be averted or counteracted," 16% of the evaluators and 38% of the stakeholders disapproved the performance of the evaluation with respect to this standard. The following stakeholders' remarks highlighted such concerns:

> Please change the evaluators every time. Do no invite professors who also work as consultants for [manufacturers] to be evaluators.

> The same evaluator can work on the second time but

no more than the third time. This is to avoid under table negotiation and to increase the reliability of the evaluation.

Many stakeholders viewed that all the evaluated institutes spent too much money and energy to prepare for the evaluation and that it was impossible to justify the resources expended, so more than one-third of the stakeholders disapproved of the evaluation performance related to Standard 11, the Cost Effectiveness. Standard 11 stated that "the evaluation should produce information sufficient value to justify the resources expended." Respondents indicated that the Ministry of Education held back evaluation results and informations. Many schools expressed that they expended great resources to provide evaluation data to the Ministry of Education, with only limited feedback. The stakeholders indicated that the Ministry was the primary beneficiary of the evaluation process. In other words, the institutes were not getting their monies' worth.

Propriety Standards

The propriety standards were intended to ensure that an evaluation would be conducted legally, ethically, and with due regard for the welfare of those involved in the evaluation as well as those affected by its results.

On Standard 12, Formal Obligation: "obligations of the

formal parties to an evaluation (what is to be done, how, by whom, when) should be agreed to in writing, so that these parties are obligated to adhere to all conditions of the agreement or formally to renegotiate it." Over 91% of the respondents agreed that this standard was met with satisfactory performance in the evaluation.

Nearly one-third of the stakeholders disapproved of the evaluation performance of Standard 13, the Conflict of Interest: "conflict of interest, frequently unavoidable, should be dealt with openly and honestly, so that it does not compromise the evaluation processes and results." These stakeholders indicated that the evaluators' private interests might be affected by their evaluative actions. A possible solution to this problem would be to request that these evaluation procedures, data, and reports, be reviewed by other independent evaluators and stakeholders and the results compared.

The issue of public disclosure and right-to-know identified some unique concerns. With regard to Standard 14, Full and Frank Disclosure: "oral and written evaluation reports should be open, direct, and honest in their disclosure of pertinent findings, including the limitations of the evaluation," and Standard 15, Public's Right To Know: "the formal parties to an evaluation should respect and assure the public's right to know, within the limits of

other related principles and statutes, such as those dealing with public safety and the right to privacy," stakeholder respondents, although citing overall satisfactory performance, individually voiced different opinions on how the evaluation results should be handled.

Two out of three institute president respondents indicated that the evaluation results should not be released publicly or, if necessary, be revealed with discretion to avoid conflicts or misrepresentation of the evaluated programs. Some program leaders stated that this was a difficult standard to achieve, and two wanted the evaluation results of each school to be revealed to the public in order to increase the fairness of the evaluation. Among all responses to these 30 standards, this was the only case in which the institute presidents and the program leaders, representing the stakeholder group, were at opposition in their comments. Interestingly, it was the institute presidents who were more conservative than the program leaders when their schools' reputations were involved.

In response to human relationships and interaction, Standard 16, Rights of Human Subjects: "evaluations should be designed and conducted so that the rights and welfare of the human subjects are respected and protected," and Standard 17, Human Interactions: "evaluators should respect human dignity and worth in their interactions with other

persons associated with an evaluation," the stakeholders were less satisfied with the performance of the two standards than the evaluators. Stakeholders indicated that some evaluators had "predetermined and somewhat subjective impressions, and they were opinionated, disrespectful, and arrogant." If evaluators displayed the characteristics described above, they must make every effort to guard against the potentially harmful effects of their interactions with the evaluated. Poor relations could inhibit the evaluation process and cause stakeholders to ignore the results.

More than one-third of the stakeholders including 13 institute presidents disapproved the evaluation performance of the Standard 18, Balanced Reporting: "the evaluation should be complete and fair in its presentation of strengths and weaknesses of the object under investigation, so that strengths can be built upon and problem areas addressed." The comments from the 15 program leaders were all negative toward the evaluators' performances with respect to this standard. They indicated that the evaluation reports were biased and incomprehensible.

Balanced reporting should exhibit the characteristics of complete and fair assessment and report both the negative and positive aspects of the object being evaluated. A balanced evaluation report stated with both weaknesses and

strengths of an object will more than likely be accepted by its readers.

In response to Standard 19, Fiscal Responsibility: "the evaluator's allocation and expenditure of resources should reflect sound accountability procedures and otherwise be prudent and ethically responsible," the evaluators rated the performance of this standard lower than the stakeholders. Basically, the evaluators were dissatisfied with their compensation for their work. The focus group interview further validated that the low compensation in relation to the effort expended by evaluators was a major concern.

The "Propriety Standards" contained standards which reflected the fact that educational evaluations affect the individuals involved in numerous ways. The standards in this group were intended to ensure that the rights of persons affected by an evaluation would be protected. Collectively, these standards required that evaluations be conducted legally, ethically, and with regard of the welfare of those involved in the evaluations, as well as those who would be affected by the results. While the respondents indicated satisfaction with the performance related to these standards, comments indicated that the stakeholders were somewhat intimidated by the evaluators, i.e. college professors versus technology institute instructors, and that the evaluators lacked an understanding of the Technology

Institutes programs and background. Additionally, the mixed views on public exposure indicated stakeholders had some anxiety concerning their evaluation outcomes. This anxiety could possibly have been eliminated by coming to a mutual agreement prior to the evaluation process. The Joint Committee (1981) recommended that by "having a written agreement, both parties have a legal and ethical obligation to carry it out in a forthright manner or to renegotiate it. Neither party is obligated to honor decisions made unilaterally by the other" (p. 65).

Accuracy Standards

The Accuracy Standards were intended to ensure that an evaluation revealed and conveyed technically adequate information about the features of the object being studied that determine its worth or merit.

Nearly one-third of the stakeholders disapproved of the evaluation performance of Standard 20, Object Identification: "the object of the evaluation (Program, project, material) should be sufficiently examined, so that the form(s) of the object being considered in the evaluation can be clearly identified." Both respondent groups indicated that the visiting team had limited time to conduct the on-site evaluation. It restricted those evaluators from sufficiently examining the object of the evaluation.

Comments indicated that the "capabilities of the evaluators were over estimated." The time available for evaluators was insufficient to thoroughly identify the evaluated object.

About one-fourth of the evaluators and 40% of the stakeholders disapproved the performance of the evaluation with respect to the Standard 21, Context Analysis: "the context in which the program, project, or material exists should be examined in enough detail, so that its likely influences on the object can be identified." All the evaluators and several program leaders indicated that they needed more time to examine the context of the evaluated institutes in more detail. The Ministry of Education should investigate this problem in up-coming evaluations. Given the opportunity, it could prove beneficial to allow the evaluation team and stakeholders to solve this time-frame problem together, and to mutually agree on a reasonable and acceptable length of time for the evaluators to achieve object identification and context analysis.

The respondents were satisfied with the evaluation practices regarding Standard 22, Described Purposes and Procedures: "the purposes and procedures of the evaluation should be monitored and described in enough detail, so that they can be identified and assessed." The Technology Institutes Evaluation Handbook described the evaluation purpose and procedures in detail; however, some respondents

indicated in the focus group interview that the manner in which the results were analyzed and utilized were unclear.

More than one-third of the evaluators and one-fourth of stakeholders disapproved of the performance of evaluation practices relative to Standard 23, the Defensible Information Sources: "the sources of information should be described in enough detail so that the adequacy of the information can be assessed." Most program leaders questioned the accuracy of the evaluated information. But the evaluators argued that the sources of evaluation information were provided by the evaluated institutes and indicated having the information sources better identified could improve evaluation results.

Extensive review of the evaluation document indicated that the sources of information were not described in sufficient detail in the evaluators' notes. Most of the evaluators did not document and report their information sources, the criteria and methods used to select them, the means used to derive information from them, how they were selected as samples of some larger population of interest, and any unique and biasing features of the obtained information. Because all of the evaluators' notes and document were considered as top secret material by the Ministry of Education, they were not allowed to be revealed to the public. This requirement prevented others from

determining the adequacy of the sources in addressing the evaluative questions. Poorly described information sources can reduce an evaluator's credibility, they can also mislead members of the audience to assume that the evaluation's conclusions and recommendations were based on sound information, even when this was not true.

One-third of stakeholders stated that the evaluation performances regarding Standard 24, Valid Measurement: "the information-gathering instruments and procedures should be chosen or developed and then implemented in ways that will assure that the interpretation arrived at is valid for the given use," and Standard 25, Reliable Measurement: "the information-gathering instruments and procedures should be chosen or developed and then implemented in ways that will assure that the information obtained is sufficiently reliable for the intended use," were not satisfactory. Some program leaders and even several evaluators showed concerns about the validity and reliability of the information-gathering instruments and procedures in their comments:

> I can't distinguish whether the information is proper or not because all the information is provided by the schools and departments. I use to have contradictory informations between the schools and the departments. Which shall I believe?

> It may need experts to collect, analyze and filter the information.

The way of sampling doesn't represent the population.

Their (evaluators') sampling are not proper. Their understandings are superficial.

Validation was the process of compiling evidence that supported the use and the interpretations to be made on a given measurement device or procedure. On the other hand, to obtain dependable results efficiently, evaluators should have chosen instruments that have acceptable reliability for their intended uses. Also, they should have checked and reported the reliability of the measurement techniques they actually used in the evaluation. Surprisingly, no document in the Ministry's files was located to indicate whether or not any the above activities or procedures was conducted by the evaluators during the evaluation. Validity and reliability were the most fundamental concerns in the use of any measurement process. These concerns needed to be brought to the attention of the Ministry of Education, and documented and reviewed openly throughout the evaluation practice.

Although all of the respondents indicated that Standard 26, Systematic Data Control: "the data collected, processed, and reported in an evaluation should be reviewed and corrected, so that the results of the evaluation will not be flawed," was important, 16% of the evaluators and 22% of the stakeholders indicated disapproval in the performance of the evaluation with respect to this standard. No documented

data control system was located in any of Ministry's literature or handbooks. Formal steps to assure that all data used be as error-free as possible is needed.

On Standard 27, Analysis of Quantitative Information, and Standard 28, Analysis of Qualitative Information: "quantitative and qualitative information in an evaluation should be appropriately and systematically analyzed to ensure supportable interpretations." Nearly one-fourth of the evaluators and one-third of the stakeholders disapproved the performance of the evaluation practices with respect to these standards. These respondents' comments indicated that most stakeholders had no knowledge about how the evaluators analyzed the quantitative and qualitative data. Further, three evaluators, one institute president, and some program leaders indicated that these evaluators failed to appropriately and systematically analyze the qualitative information. These evaluators had very limited time to explain how they analyzed the quantitative and qualitative data to the stakeholders. It would be beneficial for the Ministry of Education to offer some seminars to educate both evaluators and stakeholders as to the basic quantitative and qualitative analyses that will be utilized in future evaluations.

For the Standard 29, Justified Conclusions: "the conclusions reached in an evaluation should be explicitly

justified, so that the audience can assess them," 27% of stakeholders expressed dissatisfaction in the performance of the evaluation with respect to this standard. They indicated that the conclusions reached in the evaluation were unfair and that reporting was not objective.

Nearly one-fourth of the evaluators and more than one-third of the stakeholders disapproved the performance of the evaluation with respect to the Standard 30, Objective Reporting: "the evaluation procedures should provide safeguards to protect the evaluation findings and reports against distortion by the personal feelings and biases of any party to the evaluation." Two evaluators indicated that no precautions or safeguards were in place to protect the evaluation findings and reports. Four evaluators believed some precautions existed, but they needed to be improved. One institute president and most program leaders indicated that there were some biases in the evaluation procedures. They too expressed no knowledge of any precautions or safeguards to protect the evaluation findings and reports against distortion by the personal feelings and biases of any party involved.

Needless to say, the above standards were the most important guidelines to ensure justice and objectiveness in the evaluation process. After all, they enhance the quality of the evaluation outcomes. Unfortunately, one-third of the

evaluation participants did not approve the of quality of the evaluation results. The Ministry of Education should realize this as a serious obstacle in obtaining the trust of education professionals and evaluation consumers. It could potentially affect the success of future evaluations.

After the extensive study of the current Taiwan's Technology Institutes Evaluation practice, it appeared that the most effective way to prevent or correct the unjustified conclusions and reporting was to make the evaluation results verifiable. These evaluation results and the reports of all the evaluated institutes should be disclosed to the public, so that the conclusions and reports reached in the evaluation can be explicitly justified and assessed by the audiences and professionals.

Conclusions and Recommendations

Based on the research findings, the evaluation system employed by the Taiwan Ministry of Education produced outcomes that are acceptable overall to both the evaluators and the evaluated. The existing evaluation system was indicated to be satisfactory. However, it was important to note a considerable diversity in responses. The qualitative information derived from the analysis of the respondents' comments complemented the quantitative data and was important in clarifying and extending the findings.

The findings of this research addressed Marsh, Newman, and Boyer's (1981) study conclusion and indicated that "the standards (Program Evaluation Practice Standards) were perceived as important ideals for the orientation of the process and practice of evaluation." Stufflebeam (1991) added, "overall, the literature on the 'Program Evaluation Practice Standards' indicates considerable support for these standards, they are seen to fill a need, they are judged to contain sound and clear content,...and they are subject to an open and systematic process of review and revision."

Based upon the research findings, recommendations were made to improve the current evaluation model used by the National Technology Institutes Evaluation Committee. All of these proposed recommendations were reviewed by a panel of experts in Taiwan. This panel consisted of five evaluators including Dr. C. T. Liu, the chair of the Evaluation Committee, three institute presidents, and six program leaders. The suggested improvements were as follows:

Recommendation #1:

In order to insure the quality of the future evaluations of Taiwan's Technology Institutes, it was recommended that this study be replicated at the end of each evaluation cycle by the Ministry of Education, the Evaluation Committee, and ideally by an independent organization.

It is important and critical to see if any changes of professionals' perceptions of the evaluation practice occurred as a result of participating in the study. These dissatisfactions, disagreements, complaints, suggestions, comments, and opinions from the evaluators and the evaluated will serve as the primary means for the improvements of future evaluations.

Recommendation #2:

Besides the Ministry of Education, evaluators, and the evaluated institutes, there are other audiences equally interested in the results and findings of the evaluation. They are students, parents, industries, various professionals, and anyone who has stake and interest in the evaluation and the programs it is aimed to improve. The Ministry of Education should provide a more detailed evaluation report to the public, so the people will have an opportunity to understand why and how one school may be better than another, and how all are striving to improve.

Recommendation #3:

The number of evaluation team members should be increased in order to: (1) split the heavy work load; (2) have more time per person to do the evaluation; (3) shorten the time spent on data analysis and preparing the report; (4) obtain more objective view points; and (5) produce more accurate evaluation results.

Recommendation #4:

The Ministry of Education should spend time to educate its evaluators and the evaluated regarding the basic educational evaluation guidelines through some short training workshops or seminars and document these guidelines in the Technology Institutes evaluation handbook.

This action will (1) help people to develop a clear perspective about the role of evaluation in education; (2) prepare evaluators to conduct useful, feasible, proper, and technically sound evaluation works; (3) help people to develop an awareness of and sensitivity to critical concepts and issues in educational evaluation; and (4) help people to become enlightened users of evaluation.

Recommendation #5:

The Evaluation Committee needs to produce a more comprehensive evaluation handbook to satisfactorily ensure people's understanding of the evaluation process. In addition to the existing contents, the following items should be explained and added to the new handbook: (1) the administrative organization structure and its functions and responsibilities; (2) more detailed evaluation policies including the uses of the evaluation results, the methods for selecting the evaluators, review of procedure to process complaints, the process for review and approval of evaluation policies, procedures, and standards; and (3)

develop a documented data control system.

Recommendation #6:

The Ministry of Education should consider increasing the evaluation interval from three years to four years. To conduct the evaluation every four years has many merits: (1) it is economically feasible, (2) it will be easier to see the growth of each institution, (3) each evaluated institute will have more time to improve its programs before the evaluation, (4) it will release the tensions between the evaluated institutes and Ministry of Education, and (5) it gives more time for the Evaluation Committee and some institutes to prepare the follow-up evaluations.

Recommendation #7:

The Evaluation Committee should invite these evaluated institutes and other stakeholders to participate in preparation meetings and review conferences, asking them to reflect on the purpose of the evaluation, evaluation questions and methods, as well as planned reporting procedures. The stakeholder group should be composed of diverse representatives including institute presidents, program administrators, instructional and support staff, parents, students, industrial representatives, and others who have a stake in the evaluation outcomes.

Recommendation #8:

The Ministry of Education should consider reallocating

the work load of the current Evaluation Committee among other professional organizations, so that each group would have enough time and manpower to concentrate its evaluation work on one kind of institution. For example, one committee would be responsible for the evaluation of all Technology Institutes, while the other committee would be responsible for the evaluation work of all business institutes, and the third committee will handle all agriculture institutes' evaluations, and so on.

Recommendation #9:

When evaluating an educational institution, it may prove beneficial to track graduates and periodically obtain input from them in terms of where they are working, what skills they are utilizing, what skills they were lacking upon graduation, and job placement records. As active members of the workforce, they can provide insight into the performance outcomes required for professional training and employment.

Major Contributions and Summary

One of the primary purposes of program evaluation is the review and critical analysis of instructional programs to obtain objective data and information of value to decision makers and stakeholders. This information may then be used as part of the process to improve the quality of

educational experiences and performance outcomes and also, as measures of accountability and standards of performance.

Of major concern to educational leaders, however, is the improvement of educational programs and services to all stakeholders including schools, students, the Ministry of Education, business/industry, and community. Thus, one of the outcomes of this research has been the objective and external review of the evaluation processes incorporated by the Ministry of Education.

The major contributions of this study are summarized as follows:

1. The information regarding the perceived adequacy of the Taiwan Ministry of Education's National Technology Institutes Evaluation practices, from the perspective of the evaluators and the evaluated institutes, was obtained and recorded. This critical information has never been collected since the initiation of Taiwan's first National Technology Institutes Evaluation in 1975.

2. For the first time, the researcher, as an independent party, was able to successfully utilize a meta-evaluation process and a set of American evaluation guiding principles to assess the Taiwan Ministry of Education's performance in conducting the National Technology Institutes Evaluation. As the result, the Ministry was given credit for its evaluation efforts, and the set of American

evaluation standards was validated for its value outside the United States.

3. Information gleaned from the study provided the basis for improvement of the National Technology Institutes Evaluation process including recommendations for restructuring the evaluation policies, procedures, and practices.

4. These research findings served as a communication bridge between the evaluators and the evaluated. The Findings identified changes in methodology, goals, and procedures necessary to satisfy the needs of the stakeholders and those evaluated as part of the total evaluation process.

After review of the findings and conclusions of this study, the Ministry of Education should consider its recommendations to update and restructure current institute evaluation policies, procedures, and practices, and should include more stakeholder involvement in all phases of the evaluation process. This includes planning, implementation, reporting, and deciding what to do with the evaluation findings.

The meta-evaluation is a comparative process in which standards for effective evaluations are used to judge the quality of the evaluation program as designed, conducted, and reported. While there are many criteria that have been

established for judging the worthiness of program evaluation efforts in the United States, there is no one set of criteria with perfect applicability for Taiwan. The Chinese culture has its unique values and ethics to judge evaluation practices. The researcher observed urgent need for the development of Taiwan's own "program evaluation practice standards," and believes that subsequent study will yield more significant results if standards were based on the educational practices in Taiwan.

It is the researcher's hope that this study will assist in the overall improvement of the Ministry of Education's evaluation policies and practices as a mean of improving quality educational opportunities for those seeking technical and educational training in Taiwan.

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Appendix A

Cover Letters in English

NATIONAL TAIWAN INSTITUTE OF TECHNOLOGY
TAIPEI, TAIWAN

September 3, 1992

Dear 1990 Taiwan National Technology Institutes Evaluation Team Member:

As the Chair of the 1990 Taiwan National Technology Institutes Evaluation Committee, I thank you for your full support and cooperation in this evaluation process. You made this evaluation possible and successful.

In order to make future improvement on this evaluation task, it is important to know how professional like yourself judges the adequacy, accountability and worth of this evaluation practices. You will find that the enclosed questionnaire will take a minimal amount of your valuable time. Please help us in this important endeavor by completing and returning the questionnaire by September 18, 1992. Your response is essential in order to adequately represent evaluation team members.

Thank you very sincerely for your help in this research endeavor. You are a valuable contributor to the study.

Sincerely,

Ching-Tien Liu
President

NATIONAL TAIWAN INSTITUTE OF TECHNOLOGY
TAIPEI, TAIWAN

September 3, 1992

Dear 1990 Taiwan National Technology Institutes Evaluation Stakeholder (Institute President):

As the Chair of the 1990 Taiwan National Technology Institutes Evaluation Committee, I thank you and your program leaders for the full support and cooperation in this evaluation process. You made this evaluation possible and successful.

In order to make future improvement on this evaluation task, it is important to know how professionals like yourself and your program leaders judge the adequacy, accountability and worth of this evaluation practices. You will find that the enclosed questionnaires will take a minimal amount of your valuable time. Please help us in this important endeavor by asking your program leaders and yourself to complete and return the questionnaires by September 18, 1992. Your responses are essential in order to adequately represent evaluation stakeholders.

Thank you very sincerely for your help in this research endeavor. You all are valuable contributors to the study.

Sincerely,

Ching-Tien Liu
President

Appendix B

Cover Letters in Chinese

委員台鑒：

弟承教育部委辦第六次工業專科學校評鑑工作，渥蒙　台端全力支持與合作，使評鑑工作得以順利完成，特此致謝。

茲為檢討實施結果之得失，俾對爾後評鑑改進工作之參考，特擬問卷調查數則，敬請撥冗惠予填答，以求集思廣益，改進缺失。問卷資料煩請於九月十八日前掷下為荷，不勝感激！

弟劉清田　敬託

八十一年九月三日

國立臺灣工業技術學院院長室用箋

國立臺灣工業技術學院院長室用箋

校長台鑒：

弟承教育部委辦第六次工業專科學校評鑑工作，溷叡　台端全力支持與合作，使評鑑工作得以順利完成，特此致謝。

茲為檢討實施結果之得失，俾對爾後改進評鑑工作使其更臻落實，特擬問卷調查數則，敬請校長暨　接受評鑑科組負責同仁撥冗惠予填答，以求集思廣益，改進缺失。煩請於九月十八日前寄回本院為荷。承蒙協助，萬分感激！

弟劉清田　敬託

八十一年九月三日

Appendix C

Data Collection Questionnaire in English

QUESTIONNAIRE

A STUDY OF PROFESSIONALS' JUDGMENTS ON THE UTILITY, FEASIBILITY, PROPRIETY, AND ACCURACY OF THE 1990 TAIWAN MINISTRY OF EDUCATION'S NATIONAL TECHNOLOGY INSTITUTES EVALUATION PRACTICES.

INTRODUCTION

The data in this survey are for statistical purposes only.

The purpose of this study is to obtain information and to make comparison of the judgments on the utility, feasibility, propriety, and accuracy of Taiwan National Technology Institutes Evaluation practices as perceived by the evaluation team members and the stakeholders. It is the intent of this study to assess the perceptions of the quality of the National Technology Institutes Evaluation practices by the professionals in Taiwan, and suggest improvements for this evaluation practice.

INSTRUCTION

This questionnaire contains a set of 30 statements/standards which are compilation of commonly agreed upon characteristics of good evaluation practice.

Please read each of the following statements/standards and make your judgments on the adequacy of the 1990 Taiwan National Technology Institutes Evaluation practices. Be sure to circle a number from 1 (Strongly Disagree) to 4 (Strongly Agree) which reflects your opinions.

Please also rate each statement as its importance in the practice of the National Technology Institutes Evaluation. Circle a number from 1 (Very Unimportant) to 4

(Very Important) to reflects your opinions.

Your comments are very valuable to this study, too. Please feel free to write them on the space provided.

1. Audiences involved in or affected by the evaluation were identified.

STRONGLY DISAGREE	*DISAGREE*	*AGREE*	*STRONGLY AGREE*
1	2	3	4

Importance of the above statement to the evaluation.

VERY UNIMPORTANT	UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4

COMMENT:

2. The persons conducting the evaluation were both trustworthy and competent to perform the evaluation.

STRONGLY DISAGREE	*DISAGREE*	*AGREE*	*STRONGLY AGREE*
1	2	3	4

Importance of the above statement to the evaluation.

VERY UNIMPORTANT	UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4

COMMENT:

3. Information collected was of such scope and selected in such ways as to address pertinent questions about the object of the evaluation and was responsive to the needs and interests of specified audiences.

STRONGLY DISAGREE	*DISAGREE*	*AGREE*	*STRONGLY AGREE*
1	2	3	4

Importance of the above statement to the evaluation.

VERY UNIMPORTANT	UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4

COMMENT:

4. The perspectives, procedures, and rationale used to interpret the findings were carefully described.

STRONGLY DISAGREE	*DISAGREE*	*AGREE*	*STRONGLY AGREE*
1	2	3	4

Importance of the above statement to the evaluation.

VERY UNIMPORTANT	UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4

COMMENT:

5. The evaluation report described the object being evaluated and its context, and the purposes, procedures, and findings of the evaluation.

STRONGLY DISAGREE	*DISAGREE*	*AGREE*	*STRONGLY AGREE*
1	2	3	4

Importance of the above statement to the evaluation.

VERY UNIMPORTANT	UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4

COMMENT:

6. Evaluation findings were disseminated to clients and other right-to-know audiences.

STRONGLY DISAGREE	*DISAGREE*	*AGREE*	*STRONGLY AGREE*
1	2	3	4

Importance of the above statement to the evaluation.

VERY UNIMPORTANT	UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4

COMMENT:

7. Release of reports was timely.

STRONGLY DISAGREE	*DISAGREE*	*AGREE*	*STRONGLY AGREE*
1	2	3	4

Importance of the above statement to the evaluation.

VERY UNIMPORTANT	UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4

COMMENT:

8. Evaluations were planned and conducted in ways that encouraged follow-through by members of the audiences.

STRONGLY DISAGREE	*DISAGREE*	*AGREE*	*STRONGLY AGREE*
1	2	3	4

Importance of the above statement to the evaluation.

VERY UNIMPORTANT	UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4

COMMENT:

9. The evaluation procedures were practical.

STRONGLY DISAGREE	*DISAGREE*	*AGREE*	*STRONGLY AGREE*
1	2	3	4

Importance of the above statement to the evaluation.

VERY UNIMPORTANT	UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4

COMMENT:

10. The evaluation was planned and conducted with anticipation of the different positions of various interest groups.

STRONGLY DISAGREE	*DISAGREE*	*AGREE*	*STRONGLY AGREE*
1	2	3	4

Importance of the above statement to the evaluation.

VERY UNIMPORTANT	UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4

COMMENT:

11. The evaluation produced information of sufficient value to justify the resources expended.

STRONGLY DISAGREE	*DISAGREE*	*AGREE*	*STRONGLY AGREE*
1	2	3	4

Importance of the above statement to the evaluation.

VERY UNIMPORTANT	UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4

COMMENT:

12. Obligations of the formal parties to the evaluation were agreed to in writing.

STRONGLY DISAGREE	*DISAGREE*	*AGREE*	*STRONGLY AGREE*
1	2	3	4

Importance of the above statement to the evaluation.

VERY UNIMPORTANT	UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4

COMMENT:

13. Conflict of interest, frequently unavoidable, was dealt with openly and honestly.

STRONGLY DISAGREE	*DISAGREE*	*AGREE*	*STRONGLY AGREE*
1	2	3	4

Importance of the above statement to the evaluation.

VERY UNIMPORTANT	UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4

COMMENT:

14. Oral and written evaluation reports were open, direct, and honest in their disclosure of pertinent findings, including the limitations of the evaluation.

STRONGLY DISAGREE	*DISAGREE*	*AGREE*	*STRONGLY AGREE*
1	2	3	4

Importance of the above statement to the evaluation.

VERY UNIMPORTANT	UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4

COMMENT:

15. The formal parties to the evaluation respected and assured the public's right to know, within the limits of other related principles and statutes.

STRONGLY DISAGREE	*DISAGREE*	*AGREE*	*STRONGLY AGREE*
1	2	3	4

Importance of the above statement to the evaluation.

VERY UNIMPORTANT	UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4

COMMENT:

16. Evaluation was designed and conducted, so that the rights and welfare of the human subjects were respected and protected.

STRONGLY DISAGREE	*DISAGREE*	*AGREE*	*STRONGLY AGREE*
1	2	3	4

Importance of the above statement to the evaluation.

VERY UNIMPORTANT	UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4

COMMENT:

17. Evaluators respected human dignity and worth in their interactions with other persons associated with an evaluation.

STRONGLY DISAGREE	*DISAGREE*	*AGREE*	*STRONGLY AGREE*
1	2	3	4

Importance of the above statement to the evaluation.

VERY UNIMPORTANT	UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4

COMMENT:

18. The evaluation was complete and fair in its presentation of strengths and weaknesses of the object under investigation.

STRONGLY DISAGREE	*DISAGREE*	*AGREE*	*STRONGLY AGREE*
1	2	3	4

Importance of the above statement to the evaluation.

VERY UNIMPORTANT	UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4

COMMENT:

19. The evaluators' allocations and expenditures of resources reflected sound accountability procedures and otherwise were prudent and ethically responsible.

STRONGLY DISAGREE	*DISAGREE*	*AGREE*	*STRONGLY AGREE*
1	2	3	4

Importance of the above statement to the evaluation.

VERY UNIMPORTANT	UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4

COMMENT:

20. The object of the evaluation (institute programs) was sufficiently examined.

STRONGLY DISAGREE	*DISAGREE*	*AGREE*	*STRONGLY AGREE*
1	2	3	4

Importance of the above statement to the evaluation.

VERY UNIMPORTANT	UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4

COMMENT:

21. The context of the institute programs was examined in enough detail.

STRONGLY DISAGREE	*DISAGREE*	*AGREE*	*STRONGLY AGREE*
1	2	3	4

Importance of the above statement to the evaluation.

VERY UNIMPORTANT	UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4

COMMENT:

22. The purposes and procedures of the evaluation were monitored and described in enough detail.

STRONGLY DISAGREE	*DISAGREE*	*AGREE*	*STRONGLY AGREE*
1	2	3	4

Importance of the above statement to the evaluation.

VERY UNIMPORTANT	UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4

COMMENT:

23. The sources of information were described in enough detail.

STRONGLY DISAGREE	*DISAGREE*	*AGREE*	*STRONGLY AGREE*
1	2	3	4

Importance of the above statement to the evaluation.

VERY UNIMPORTANT	UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4

COMMENT:

24. The information-gathering instruments and procedures were chose or developed and then implemented in ways that would assure that the interpretation arrived at was valid for the given use.

STRONGLY DISAGREE	*DISAGREE*	*AGREE*	*STRONGLY AGREE*
1	2	3	4

Importance of the above statement to the evaluation.

VERY UNIMPORTANT	UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4

COMMENT:

25. The information-gathering instruments and procedures were chose or developed and then implemented in ways that would assure that the information obtained was sufficiently reliable for the intended use.

STRONGLY DISAGREE	*DISAGREE*	*AGREE*	*STRONGLY AGREE*
1	2	3	4

Importance of the above statement to the evaluation.

VERY UNIMPORTANT	UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4

COMMENT:

26. The data collected, processed, and reported in the evaluation were reviewed and corrected.

STRONGLY DISAGREE	*DISAGREE*	*AGREE*	*STRONGLY AGREE*
1	2	3	4

Importance of the above statement to the evaluation.

VERY UNIMPORTANT	UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4

COMMENT:

27. Quantitative information in the evaluation was appropriately and systematically analyzed.

STRONGLY DISAGREE	*DISAGREE*	*AGREE*	*STRONGLY AGREE*
1	2	3	4

Importance of the above statement to the evaluation.

VERY UNIMPORTANT	UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4

COMMENT:

28. Qualitative information in the evaluation was appropriately and systematically analyzed.

STRONGLY DISAGREE	*DISAGREE*	*AGREE*	*STRONGLY AGREE*
1	2	3	4

Importance of the above statement to the evaluation.

VERY UNIMPORTANT	UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4

COMMENT:

29. The conclusions reached in the evaluation were explicitly justified.

STRONGLY DISAGREE	*DISAGREE*	*AGREE*	*STRONGLY AGREE*
1	2	3	4

Importance of the above statement to the evaluation.

VERY UNIMPORTANT	UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4

COMMENT:

30. The evaluation procedures provided safeguards to protect the evaluation findings and reports against distortion by the personal feelings and biases of any party to the evaluation.

STRONGLY DISAGREE	*DISAGREE*	*AGREE*	*STRONGLY AGREE*
1	2	3	4

Importance of the above statement to the evaluation.

VERY UNIMPORTANT	UNIMPORTANT	IMPORTANT	VERY IMPORTANT
1	2	3	4

COMMENT:

For statistical purpose, please identify your position and number of years served in educational field.

__Institute President __Academic Program Leader __Evaluator # years served__

Appendix D

Data Collection Questionnaire in Chinese

問卷簡要說明：

一、本問卷定名為「教育部第六次工專評鑑工作實施之評估研究」。
二、本問項僅供研究參考。
三、本項研究工作目的在瞭解評鑑者及被評鑑者對七十九年度工專評鑑工作實施之效用、正確度及其可行性、適行性之認定比較並提供改進意見。

問卷調查表

本問卷共計三十題，其內容係依據一般公認之健全的評鑑工作之特性代表。請詳閱每一問題，然後依照您個人對79年度工專評鑑工作實施之適宜加以評估，並請在您認為最合適答案打✓。

一、評鑑委員早在執行評鑑前，就已對會被評鑑結果影響的人及團体有所確認及瞭解。
(A)非常不同意____ (B)不同意____ (C)同意____ (D)非常同意____
本項陳述對於評鑑工作實施的重要性，您認為：
(A)非常不重要____ (B)不重要____ (C)重要____ (D)非常重要____
您的意見：

二、負責評鑑委員對評鑑工作既可信賴又勝任。
(A)非常不同意____ (B)不同意____ (C)同意____ (D)非常同意____
本項陳述對於評鑑工作實施的重要性，您認為：
(A)非常不重要____ (B)不重要____ (C)重要____ (D)非常重要____
您的意見：

三、評鑑委員所收集與選定評鑑資料範圍切題，並能配合相關人員的需要與興趣。
(A)非常不同意____ (B)不同意____ (C)同意____ (D)非常同意____
本項陳述對於評鑑工作實施的重要性，您認為：
(A)非常不重要____ (B)不重要____ (C)重要____ (D)非常重要____
您的意見：

四、評鑑委員對評鑑見尋的問題，其見解、程序、理論基礎闡述詳盡。
(A)非常不同意____ (B)不同意____ (C)同意____ (D)非常同意____
本項陳述對於評鑑工作實施的重要性，您認為：
(A)非常不重要____ (B)不重要____ (C)重要____ (D)非常重要____
您的意見：

五、評鑑結果報告，能指出其受評事項的評鑑內容、目的、程序與問題的發現。
(A)非常不同意____ (B)不同意____ (C)同意____ (D)非常同意____
本項陳述對於評鑑工作實施的重要性，您認為：
(A)非常不重要____ (B)不重要____ (C)重要____ (D)非常重要____
您的意見：

六、評鑑所發現結果，應讓當事者及「有知道權利的人」知道。
(一)非常不同意____ (二)不同意____ (三)同意____ (四)非常同意____
本項陳述對於評鑑工作實施的重要性，您認為：
(一)非常不重要____ (二)不重要____ (三)重要____ (四)非常重要____
您的意見：

七、評鑑結果適時發佈。
(一)非常不同意____ (二)不同意____ (三)同意____ (四)非常同意____
本項陳述對於評鑑工作實施的重要性，您認為：
(一)非常不重要____ (二)不重要____ (三)重要____ (四)非常重要____
您的意見：

八、教育部曾鼓勵所有評鑑相關人員（包括被評鑑者）參與評鑑的計劃與執行。
(一)非常不同意____ (二)不同意____ (三)同意____ (四)非常同意____
本項陳述對於評鑑工作實施的重要性，您認為：
(一)非常不重要____ (二)不重要____ (三)重要____ (四)非常重要____
您的意見：

九、評鑑程序很實際。
(一)非常不同意____ (二)不同意____ (三)同意____ (四)非常同意____
本項陳述對於評鑑工作實施的重要性，您認為：
(一)非常不重要____ (二)不重要____ (三)重要____ (四)非常重要____
您的意見：

十、教育部曾聘各個持不同態度及立場的評鑑委員參與評鑑的計劃與執行。
(一)非常不同意____ (二)不同意____ (三)同意____ (四)非常同意____
本項陳述對於評鑑工作實施的重要性，您認為：
(一)非常不重要____ (二)不重要____ (三)重要____ (四)非常重要____
您的意見：

十一、此次工專評鑑所得效果足夠抵償所消耗的經費、人力及時間。
(一)非常不同意____ (二)不同意____ (三)同意____ (四)非常同意____
本項陳述對於評鑑工作實施的重要性，您認為：
(一)非常不重要____ (二)不重要____ (三)重要____ (四)非常重要____
您的意見：

十二、評鑑委員的責任、義務及工作，有書面編檔保存著。
(一)非常不同意____ (二)不同意____ (三)同意____ (四)非常同意____
本項陳述對於評鑑工作實施的重要性，您認為：
(一)非常不重要____ (二)不重要____ (三)重要____ (四)非常重要____
您的意見：

十三、評鑑所帶來利益衝突，在所難免，其處理方式公開且可信任。
(一)非常不同意____ (二)不同意____ (三)同意____ (四)非常同意____
本項陳述對於評鑑工作實施的重要性，您認為：
(一)非常不重要____ (二)不重要____ (三)重要____ (四)非常重要____
您的意見：

十四、評鑑時之口頭報告對評鑑實施的優缺點，均能直接及誠實的提出。
(一)非常不同意____ (二)不同意____ (三)同意____ (四)非常同意____
本項陳述對於評鑑工作實施的重要性，您認為：
(一)非常不重要____ (二)不重要____ (三)重要____ (四)非常重要____
您的意見：

十五、負責評鑑單位在其規範下，能尊重及確保大眾得知的權利。
(一)非常不同意____ (二)不同意____ (三)同意____ (四)非常同意____
本項陳述對於評鑑工作實施的重要性，您認為：
(一)非常不重要____ (二)不重要____ (三)重要____ (四)非常重要____
您的意見：

十六、此次工專評鑑的規劃與執行，能尊重與保障學校權利與福址。
(一)非常不同意____ (二)不同意____ (三)同意____ (四)非常同意____
本項陳述對於評鑑工作實施的重要性您認為：
(一)非常不重要____ (二)不重要____ (三)重要____ (四)非常重要____
您的意見：

十七、負責評鑑委員在其與評鑑相關人員相互影響及溝通下，能被比尊重。
(一)非常不同意____ (二)不同意____ (三)同意____ (四)非常同意____
本項陳述對於評鑑工作實施的重要性，您認為：
(一)非常不重要____ (二)不重要____ (三)重要____ (四)非常重要____
您的意見：

十八、評鑑結果能將受評對象的優缺點公平地陳述無遺。
(一)非常不同意____ (二)不同意____ (三)同意____ (四)非常同意____
本項陳述對於評鑑工作實施的重要性，您認為：
(一)非常不重要____ (二)不重要____ (三)重要____ (四)非常重要____
您的意見：

十九、評鑑委員的待遇及經費的支應是合理、審慎及道德的。
(一)非常不同意____ (二)不同意____ (三)同意____ (四)非常同意____
本項陳述對於評鑑工作實施的重要性，您認為：
(一)非常不重要____ (二)不重要____ (三)重要____ (四)非常重要____
您的意見：

二十、評鑑委員對於評鑑對象及事物，均給予審慎的審查及斟酌。
(一)非常不同意____ (二)不同意____ (三)同意____ (四)非常同意____
本項陳述對於評鑑工作實施的重要性，您認為：
(一)非常不重要____ (二)不重要____ (三)重要____ (四)非常重要____
您的意見：

廿一、評鑑委員對於各校、科、系之環境、背景，均給與詳細的瞭解。
(一)非常不同意____ (二)不同意____ (三)同意____ (四)非常同意____
本項陳述對於評鑑工作實施的重要性，您認為：
(一)非常不重要____ (二)不重要____ (三)重要____ (四)非常重要____
您的意見：

廿二、評鑑委員對評鑑之目的及實施過程給予其檢查與詳盡之說明。
(一)非常不同意____ (二)不同意____ (三)同意____ (四)非常同意____
本項陳述對於評鑑工作實施的重要性，您認為：
(一)非常不重要____ (二)不重要____ (三)重要____ (四)非常重要____
您的意見：

廿三、所收集之評鑑資料其來源說明詳細。
(一)非常不同意____ (二)不同意____ (三)同意____ (四)非常同意____
本項陳述對於評鑑工作實施的重要性，您認為：
(一)非常不重要____ (二)不重要____ (三)重要____ (四)非常重要____
您的意見：

廿四、評鑑委員對評鑑資料收集之方法及過程，均有計劃與篩選；收集之資料是適切的及有效的。
(一)非常不同意____ (二)不同意____ (三)同意____ (四)非常同意____
本項陳述對於評鑑工作實施的重要性，您認為：
(一)非常不重要____ (二)不重要____ (三)重要____ (四)非常重要____
您的意見：

廿五、評鑑委員對評鑑資料收集方法及過程均有計劃與篩選；收集的資料是可信的、可靠的。
(一)非常不同意____ (二)不同意____ (三)同意____ (四)非常同意____
本項陳述對於評鑑工作實施的重要性，您認為：
(一)非常不重要____ (二)不重要____ (三)重要____ (四)非常重要____
您的意見：

廿六、評鑑委員對評鑑資料之收集、處理及報告，均有覆查與校對。
(一)非常不同意____ (二)不同意____ (三)同意____ (四)非常同意____
本項陳述對於評鑑工作實施的重要性，您認為：
(一)非常不重要____ (二)不重要____ (三)重要____ (四)非常重要____
您的意見：

廿七、關於數量化方面的評鑑資料，評鑑委員有給予適當及系統式的分析。
(一)非常不同意____ (二)不同意____ (三)同意____ (四)非常同意____
本項陳述對於評鑑工作實施的重要性，您認為：
(一)非常不重要____ (二)不重要____ (三)重要____ (四)非常重要____
您的意見：

廿八、關於學校質的方面的評鑑資料，評鑑人員有給予適當及系統式的分析。
(一)非常不同意____ (二)不同意____ (三)同意____ (四)非常同意____
本項陳述對於評鑑工作實施的重要性，您認為：
(一)非常不重要____ (二)不重要____ (三)重要____ (四)非常重要____
您的意見：

廿九、評鑑後，達成的結論是客觀公正的。
(一)非常不同意____ (二)不同意____ (三)同意____ (四)非常同意____
本項陳述對於評鑑工作實施的重要性，您認為：
(一)非常不重要____ (二)不重要____ (三)重要____ (四)非常重要____
您的意見：

三十、評鑑過程中，設有避免個人或團体的偏見所造成不實結果的防範。
(一)非常不同意____ (二)不同意____ (三)同意____ (四)非常同意____
本項陳述對於評鑑工作實施的重要性，您認為：
(一)非常不重要____ (二)不重要____ (三)重要____ (四)非常重要____
您的意見：

再者：為便於統計分析工作，請賜知您的職位與服務年資。
□校長　□主任　□評鑑委員，　教育服務年資____年

Appendix E

Comments from Respondents in English

Descriptions of symbols:

Schools/departments code	Persons	Working years in educations
0520	PL	2

P->President
E->Evaluator
PL->Program Leader

COMMENTS FOR QUESTION 1

0523 PL 2 Only few evaluators have done as this statement claims.

0501 PL 6 The evaluation ought to be objectively judged from all respects. Every schools works hard toward evaluation, so it is important not only to pay attention to the preparation of evaluation but also to the usual daily inspections.

2223 PL 25 The evaluators' personal feelings affect the results very much.

3217 PL 5 It is important for the evaluators to have some understandings before evaluation. It can help them to evaluate more correctly.

0401 PL 20 Some evaluators do have, some don't.

3223 PL 20 The understandings before evaluation are good for reference but erroneous or biased recognition may cause prejudice.

0415 PL 18 The evaluators are professors. Their understandings about the junior college are not the same as ours.

3324 PL 5 The evaluators only have scattered informations

and often ask the colleges to provide them more without notice.

3001 PL 2 Evaluators only have limited time to understand.

0421 PL 9 Some evaluators understand more. Some don't.

0422 PL 11 Some evaluators quite understand. Some seem very unfamiliar with the evaluated schools.

0423 PL 24 The evaluators use the standard of university to evaluate junior college.(especially in the discipline education)

0815 PL 10 We hope the evaluators to have the chance to teach in the junior college such that they can understand the differences among schools, and so they can comparatively evaluate us.

1224 PL 11 Not every evaluators does.

2809 PL 15 The understandings before evaluation may help to make good judgement and may mislead judgement too.

2723 PL 13 Predetermined impression of the status of the schools, such as board of directors or environment, may influence the result of evaluations.

3523 PL 25 Too many schools to be evaluated. The evaluators may be too busy to understand in advance.

0501 PL 3 The Ministry of Education has the obligation to provide informations about the evaluated schools to the evaluators in order that they can have better judgement.

2315 PL 21 Good understandings before evaluation will make the evaluation more objective.

2309 PL Understanding doesn't guarantee the evaluation will be fair, especially when the evaluators don't have enough administrative experience to tackle the black mails.

2726 P 40 If predetermined impression may lead prejudice then it is not necessary.

0426 P 24 The evaluators understand more about the status of university than the junior college.

1810 P 40 The evaluators don't quite understand the evaluated schools. The time is too short for them to truly catch on the real points.

050 E 10 The principles of evaluation are fair, objective and open.

064 E 8 The understandings can be used for reference in evaluation.

116 E 13 The purposes of evaluations are to improve the educational environment rather to consider the affects of the evaluations.

090 E 3 Lacking understandings of evaluated schools may cause subjective evaluation.

083 E 26 Don't invite those who have prejudice to be evaluators.

082 E 10 Understandings before evaluation help to let the evaluators notice the development of the schools.

059 E 17 Few new evaluators can understand the status of the evaluated schools.

028 E 7 The informations of the evaluated schools are from the basic inquiry forms, they filled in, or from evaluators' experience.

030 E 11 Due to the limitation of the evaluation time, it is necessary for evaluators to understand the status of the schools before evaluation and then verify which are obscure in the evaluation.

013 E 21 Predetermined opinions will affect the objective judgement.

009 E 12 If the evaluators don't have any predetermined impression or relationship with the evaluated schools then it is helpful to be fair.

COMMENTS FOR QUESTION 2

0523 PL 2 It's too subjective for the evaluators to use their own working environments to judge the evaluated schools.

1710 PL 2 Not all evaluators are experts in the particular area they evaluated. The evaluated people may be doubtful of the professional knowledge of the evaluators.

0501 PL 6 It is more important to do usual small scale inspection than to do the large scale evaluation. In case of shortage of manpower, ask more institutes of science and technology or enterprise to support.

2225 PL 10 It only takes the chance.

2223 PL 25 The evaluators don't quite understand the status of junior colleges, especially the private schools.

0309 PL 10 It is effective to supervise.

1826 PL 25 Some evaluators are too subjective.

0421 PL 20 Yes, some are.

3223 PL 20 Not all evaluators are trustworthy and competent according to my experience.

0415 PL 18 Some evaluators are too subjective.

3119 PL 10 Some evaluators were absent in the evaluation day. Some left before the end of evaluation. We hope they can improve in the future.

2525 PL 5 Only those who have excellent professional background are qualified to be evaluators.

0409 PL 6 Most are competent but some are not.

0421 PL 9 Most are competent but some are not.

0422 PL 11 Only those who have deep understanding of the status of the evaluated schools are trustworthy and competent.

0709 PL 8 Some evaluators don't even understand the goals of junior colleges.

2609 PL 15 All the evaluators are professors. Though they are strict, they are fair too.

2723 PL 13 The evaluators are polite and helpful but they pay too much attention to the opinions of the students.

3523 PL 25 Some evaluators are not familiar with the administrative affairs. They often have biased understandings.

1809 PL 23 Evaluators may be influenced by their own emotion on the evaluation day.

2001 PL 7 The evaluators may not have practical and administrative experience.

2023 PL 10 Because the evaluators don't have deep understanding of the junior colleges, they even

can't find the deception of some schools.

2315 PL 21 Only if the evaluators are trustworthy then the results are reliable.

2309 PL Rumors influenced the reliability of evaluation.

2726 P 40 Not all evaluators are reliable and competent.

0426 P 24 Not all evaluators are reliable and competent.

064 E 8 The leader of the evaluators ought to use his noble status to carefully negotiate to minimize the subjective judgements of his members of evaluators.

083 E 26 Some evaluators are old friends of some schools. It hurts the reliability of evaluation.

028 E 7 Generally speaking, the evaluators are fair and objective.

030 E 11 Evaluators are professors and experts. They are surely competent and reliable though they may emphasize different area as we expect sometimes.

025 E 20 The selection of evaluators is important.

013 E 21 The evaluators certainly will affect the results.

COMMENTS FOR QUESTION 3

2225 PL 10 The evaluators had better have the same checking list and grading standard.

0401 PL 20 Only those which can be quantified are reliable.

3223 PL 20 Their collections are not sufficient.

0415 PL 18 They can only prepare about what can be

quantified. But it is hard to do quality evaluation.

0409 PL 6 They properly select the evaluation items which can be quantified. But I can't tell if they properly prepare the quality evaluation methods or not.

0421 PL 9 Some are not properly evaluated.

0421 PL 11 The evaluators are confident in evaluating which can be quantified, such as ratio of teacher/students or costs/students. However the evaluators don't like to talk about how they do the quality evaluation.

0323 PL 20 I only concern the scopes of evaluations which is adequate or not in stead of paying attention to the interest or requirement of the relative people.

0824 PL 2 The duties of computer center are to provide the facilities and service to the faculties and students. Don't grade us by the numbers of teachers or the effects of teaching.

1224 PL 11 Even the evaluators in the same group have different grading standards.

2809 PL 15 The forms which ask us to fill in use descriptive words only. If they could be quantified then it will be better.

2723 PL 13 I hope that they can give higher weighting to the works of software, such as policy or methods or endeavor or innovation.

2023 PL 10 During the evaluation, some evaluators are absent without notice.

2315 PL 21 Only do as this statement claims then the evaluation can be more penetrating and decent.

2309 PL The evaluators jump to the conclusions before carefully looking into our prepared informations.

2726 P 40 Not all evaluators can.

0426 P 24 They have done good jobs in quality evaluation but need to improve about quality evaluation.

047 E 14 The evaluated schools provide informations to us. We seldom collect the informations ourselves.

019 E 11 I can't subjectively comment whether the scopes of evaluations are fit for the practical requirement or not.

083 E 26 The evaluation manual for evaluators has only rough directions. It shall be more concrete and comprehensive. We then can use it to detect the improvement of the schools.

030 E 11 Every evaluated schools only need to provide us the same informations listed in the evaluation manual. No more informations are required in order to increase the fairness of evaluation.

COMMENTS FOR QUESTION 4

1710 PL 2 The evaluators who came to visit us didn't have the majors of our departments. We are doubtful of their professional backgrounds.

0501 PL 6 We don't know whether there are any standard process or theory.

2225 PL 10 It varies among different persons and departments.

3217 PL 5 They invite chemical engineering professors as evaluators to evaluate us. They can't really

catch on the core knowledge of ceramics science. How can they give any suggestion to us for improvement ?

0401 PL 20 Some evaluators are fine.

0415 PL 18 Some evaluators are too subjective. They only guess.

3324 PL 5 Every evaluators has his own understanding.

3001 PL 2 The evaluators only have limited time to use.

0409 PL 6 There are variations among evaluators.

0421 PL 9 Everything must be open.

1224 PL 11 I hope that every evaluators can.

2809 PL 15 I hope the evaluators to be kind enough to help us.

2723 PL 13 Please give us proper informations such that we can prepare efficiently.

3409 PL 7 Their understandings seem somewhat subjective.

2726 P 40 Not all evaluators can.

0426 P 24 It varies among evaluators.

0126 P 20 Some evaluators can.

064 E 8 The meeting before evaluation is successful and helpful.

096 E 14 It is not necessary to state the procedure and theory.

083 E 26 It is important to find out the problems of the evaluated schools and have someone who are responsible to happily manage to improve. Then

I fulfil the goals of evaluation.

028 E 7 Some need to be discussed among evaluators.

030 E 11 To understand the current status of evaluated schools and to give proper suggestion about some specific problems are the purposes of evaluation. I give the explanation to schools in accordance with their own particular problems.

COMMENTS FOR QUESTION 5

0523 PL 2 The grading can affect the development of schools. However some evaluators give ambiguous opinions in their reports.

0501 PL 6 The fairness of evaluation ought not be influenced by personal reason of the evaluators. Let the schools understand their shortcomings. Let the Ministry of Education know the true problems of the schools. And let the public have general understanding of the schools.

2225 PL 10 They just give a list of opinions.

1224 PL 25 The evaluators criticize what they don't understand. It is not reliable.

0401 PL 20 Some really are.

0415 PL 18 It needs long term observation and evaluation.

3324 PL 5 Please list the grading of each evaluation items clearly.

0125 PL 13 The schools are not necessary to be responsible for everything. One of the examples is the numbers of faculties of the public schools.

0422 PL 11 The reports of evaluation could really point out the facts of the problems. But it didn't mention the purposes or the procedures.

0425 PL 12 Not all in the reports reflect the truth.

0815 Pl 10 I hope that the majors of evaluators are fit for the characteristics of each schools.

0709 PL 8 The Ministry of Education didn't strictly supervise the schools to properly improve what listed in the evaluation reports.

1224 PL 11 The Ministry of Education regulate the hours and credits of courses. However the evaluators still criticize us according to their own standards. (even by the interview with students)

2809 PL 15 I have the experience of evaluation in 1987 and 1990 and get a feeling that we can't solve all the problems listed in the final reports of evaluation. We do much efforts to improve and develop in the department. However concerning the working hours of teachers, promotion, retirement and welfare, they shall ask the school administration to improve.

2723 PL 25 Please give us more concrete suggestions.

3523 PL 25 The opinions listed in the reports are not clear and comprehensive.

2315 PL 21 Please give us more concrete suggestions.

2309 PL Some of the evaluators still have old and incorrect impression of the junior technical colleges. They think the level of junior colleges is still low. They even can't accept the posters in the laboratory. They seem very happy when discover our small shortcomings and forget their duties are to help the colleges to improve.

2726 P 40 Not all the reports can.

0426 P 24 Some evaluators have preoccupied impressions.

088 E 5 Please open the evaluation to the public.

083 E 26 We report which need the board of directors to improve to the Ministry of Education. Only the Ministry of Education is able to supervise them to improve. The school administration can't handle those about the board of directors.

028 E 7 We report what we discovered.

030 E 11 The main purpose of evaluation is to let the evaluated schools recognize their merits and demerits. It is helpful for the schools if every items in the reports could clearly list the contents, objects, procedures and problems.

025 E 20 The more concrete the better.

COMMENTS FOR QUESTION 6

3324 PL 5 List what need to be improved in the reports.

2525 PL 5 It can help the improvement of shortcomings in time.

0125 PL 13 Let those who are responsible know in order that they can manage to improve.

0421 PL 9 It will be more effective if the announcement of the results could be as soon as possible.

2809 PL 15 Please let the head of department and the teachers know their shortcomings on the very evaluation day and give them chance to explain.

2723 PL 13 If those who are responsible don't know their own demerits then they don't know how to

improve.

3413 PL 3 This is important. This is the basis of improvement.

2315 PL 21 It makes the evaluation meaningful and leads to real development.

1326 P 20 It is more important to let those who will take the responsibility know than announce the results in the media.

019 E 11 Please be careful about the consequences of the announcement of the results.

064 E 11 Those who will be responsible surely have the right to know. But it is not easy to define who has the right to know.

083 E 26 The mutual acceptance of the results between evaluators and the evaluated groups is the key for improvement.

111 E 15 Let those who are responsible know otherwise it is meaningless.

COMMENTS FOR QUESTION 7

0615 PL 4 The evaluation results may be over exaggerated in the joint entrance examination. It hurts the dignity of teacher and education.

1401 PL 4 Different evaluation results were reported in different newspaper. It ought to be announced solely by the Ministry of Education.

2225 PL 10 They announced too late.

1909 PL 7 Please announce the results as soon as possible.

2223 PL 25 The sooner the better.

3001 PL 2 Please let us know when the results will be announced. It increases the credibility of evaluation.

0925 PL 11 Please let us know the results on the day of evaluation in order to get rid of the suspicion of the grading may be arranged under table.

0910 PL 10 Please announce the results within three months.

3119 Pl 10 Please announce the results in the academic year of evaluation.

2525 PL 5 Please announce the results in time in order to get rid of the suspicion of compromise.

0209 PL 10 Please quantify the grading.

0809 PL 15 Let the public know the results. It can encourage the excellent schools.

3413 PL 3 Please don't announce the results during the period of entrance examination.

2315 PL 21 The schedule and program of next evaluation had better be announced in advance.

2726 P 40 Misjudging may lead to argument and misunderstanding.

064 E 8 That will add pressure to evaluators and evaluated schools.

083 E 26 The evaluation results ought to be orderly arranged. Please announce the results in time to win the reliability of people.

111 E 15 Suspicion will arise if the results are not announced in time.

015 E 26 Announce the results on predetermined date rather on "suitable date". Except for special purpose, don't open to the public.

COMMENTS FOR QUESTION 8

0523 PL 2 Please set up the evaluation standard to be fit for the various characteristics of each schools.

1401 PL 4 They don't encourage us. They control the expansion of junior colleges. All what we know before evaluation is the date only.

0309 PL 10 It is the business of Ministry of Education.

0415 PL 18 Not good enough.

0424 PL 2 We didn't see the Ministry of Education take any action.

0125 PL 13 The evaluators must quite understand the educational goals of evaluated schools.

0124 PL 10 I hope that the teachers in the junior colleges could have the chance to join the evaluation.

1224 PL 11 I hope that the teachers in the private schools could have the chance to be evaluators.

2809 PL 15 I think the Ministry of Education didn't really carry out as this statement claims.

2723 PL 13 The mutual communication between evaluators and evaluated persons is important. It needs communication skills. Don't lead to argument and inharmonious situation.

3409 PL 7 I think the Ministry of Education didn't really carry out this statement.

3413 PL 3 The Ministry of Education have to do as this statement claims in order to keep the evaluation fair. I hope that the teachers in the junior colleges can have the opportunity to become evaluators.

2315 PL 21 It will be more objective to do as this statement claims. I hope the evaluated people to have the chance to explain.

2726 P 40 It only waste time and money. It is useless.

064 E 8 It can increase the feasibility of decision and the credibilities of the evaluation.

116 E 13 The evaluated schools especially need to join the design of contents, quantified method and execution of evaluation.

090 E 3 The prior communication can only lead to deception of the evaluated schools. They will only prepare what will be evaluated.

083 E 26 Only both of the evaluators and evaluated schools seriously take part in the evaluation then we can fulfill the goals of evaluation.

111 E 15 There is no following checks after evaluation.

028 E 7 I hope that the evaluated schools could participate in the configuration and execution of evaluation.

025 E 20 It needs positive and concrete methods.

013 E 21 It is good for communication.

002 E 15 Yes, the Ministry of Education has had this arrangement.

COMMENTS FOR QUESTION 9

1301 PL 4 The current evaluation is held for every three years. It is too short to see the development of the schools.

0401 PL 20 It needs both short term and long term observations.

0415 PL 18 The time is too short.

3001 PL 2 The time is too short.

2525 PL 5 Every evaluators has his own understanding of the evaluated schools.

0114 PL 20 It's full of red tapes. Neglect the real essence of teaching.

0409 PL 6 Evaluation needs long term observation.

0421 PL 9 It still needs improvement.

0422 PL 11 The evaluation needs regular and long term observation. Currently, it has regular evaluation only.

0423 PL 24 It needs long term observation.

0425 PL 12 The evaluation needs regular and long term observation.

0709 PL 8 Let the schools have the chance to express their opinions during the evaluation. The evaluation results have to be actually fulfilled.

2809 PL 15 Yes, it is acceptable.

2023 PL 10 Because only limited time can be used, the evaluation seems rough.

2309 PL The time for discussion is too short.

0426 P 24 The evaluation needs regular and long term observations. Current evaluation lacks concrete long term observation.

1326 P 20 Limited time causes superficial understanding.

019 E 11 Some schools tend to do paper works only.

116 E 13 Evaluating the common courses area, an evaluator

criticized the other department that was not his major. It seemed impractical.

096 E 14 The time is short. The evaluation is intensive. We need long term evaluation.

083 E 26 It is good for the evaluators to discover, to communicate and to judge objectively.

028 E 9 Don't let the meeting before evaluation become the rehearsal of evaluation.

030 E 11 Current evaluation methods can't prevent the schools from cheating. It is not easy to evaluate the effects of teaching.

COMMENTS FOR QUESTION 10

0309 PL 10 It is the business of Ministry of Education.

0110 PL We don't care the different viewpoints among evaluators. However only those who agree the evaluation system can be the evaluators.

1301 PL 4 I hope more evaluators to be the professors from the institute of technology. In nowadays, it seems indifferent between university and the institute of technology.

0401 PL 20 It is fine in the stage of planning. However they must have the same standard during evaluation.

0415 PL 18 It is fine in the stage of planning. However they must have the same standard during evaluation.

3324 PL 5 Invite those who are excellent in the enterprise or industry as evaluators.

0424 PL 2 Generally speaking, they have the same attitude and standard.

3119 PL 10 The university professors think too much of theory. They are not suitable to evaluate technology oriented colleges. Please invite those who has practical experiences in technology to be evaluator.

2525 PL 5 Not to let subjectivity influence the whole results.

0125 Pl 13 Invite those who are from technical education system to be the evaluators. They have experience and understand more about junior colleges.

0124 PL 10 Invite a few evaluators from junior colleges.

0114 PL 20 I have never seen contradictory opinions of evaluators. But I used to see some evaluators evaluated what were not their majors.

0101 PL 4 All the evaluators are from university. They don't quite understand the goals of teaching in junior colleges.

0209 PL 10 Please change the evaluators every time. Don't invite the professors who work as consultant for instrumental company to be evaluators.

0409 PL 6 It is fine in the stage of planning. However they must have the same standard during evaluation.

0421 PL 9 They must have the same standard during evaluation.

0306 PL 18 Please invite more evaluators from enterprise.

0815 PL 10 Please invite the evaluators from both public and private schools. The majors of evaluators had better be well distributed in every fields such that they can understand more about the characteristics of every schools.

0809 PL 20 Please invite some evaluators from the private university.

0709 PL 8 Please invite the experts who have just returned from foreign countries to be the evaluators. The same evaluator can work on the second time but no more on the third time. This is to avoid under table negotiation and to increase the reliability of evaluation.

2809 PL 15 I haven't seen any persons who are not from university can be the evaluators.

2723 PL 13 Not all the same evaluators took part in the evaluation of every schools according to our past experience. For instance, a group may have fifteen evaluators but they divide themselves into several small groups and then evaluate schools in turn. It will cause variation of fairness in terms of probability.

3523 PL 25 Most of the evaluators are from public schools. They don't quite understand the status of private schools.

3409 Pl 7 Almost all the evaluators have been predetermined already. They have the same viewpoint and standpoint.

2309 PL It doesn't matter that the evaluators have different viewpoints. But they must have the same wish, that is to promote the quality of junior colleges. And they all must be fair also.

2726 P 40 There are contradictory opinions among evaluators. Whom shall I listen to ? It loses the meaning of evaluation.

0426 P 24 It is fine in the stage of planning. However they must have the same standard during evaluation.

064 E 8 The evaluators can have different viewpoints. But everyone has to follow the basic principle of evaluation.

116 E 13 Don't invite evaluators with similar background.

090 E 14 I don't know. I think any experts will do.

083 E 26 I agree with this statement. To select evaluators from every fields is helpful to make the evaluation more comprehensive and profound. It is good for the development of the education. And objective comments can be obtained.

COMMENTS FOR QUESTION 11

0523 PL 2 It is not easy to calculate the cost, time and manpower used for evaluation. It varies among schools.

2223 PL 25 It is not worth spending because we didn't have good grading. I don't know the cost either.

0110 PL The effect of evaluation is more helpful than harmful.

0401 PL 20 I hope so.

3119 PL 10 We have to fill in the same forms again and again. It just wastes time and manpower.

0125 PL 13 It is necessary to evaluate the bad schools. However I suggest to let the excellent schools skip one evaluation or just evaluate them by paper works.

0115 PL 8 I suggest to decrease the evaluation frequency of excellent schools. For example, extend it to every six years. Only those schools with bad grade need to be evaluated frequently in order

that they can improve.

0114 PL 20 It depends on what the Ministry of Education wants.

0209 PL 10 Though the Ministry of Education hopes the schools not to get too excited about the evaluation. But it is impossible for us. Almost every schools spend quite a lot of money on preparation of evaluation. I suggest to let the excellent schools join the evaluation for every five or six years.

0323 PL 20 It can't be measured by time or money or manpower.

0709 PL 8 Some evaluators don't have well understanding of junior colleges. They regard the junior college as the incarnation of university.

2809 PL 15 The effects of evaluation rely on that the schools always appreciate education, teachers and students. It is meaningless to only consider money. Until now, every schools spends too much money on evaluation.

3409 PL 7 Everybody is exhausted.

2033 PL 10 We are not satisfied with the results of evaluation.

2315 PL 21 We regard the praise of the efforts of us as an encouragement. The proper suggestion is the power for development.

2726 P 40 No estimation of the cost and no comment.

064 E 8 The evaluation needs long term observation. How can we ask whether it worths for this time or not?

090 E 3 According to current regulation, every grades has its own percentage. Please discard this

regulation. Otherwise it is not fair for the schools worked very hard in the competition to earn better grading but are limited by the inherited restrictive factors.

083 E 26 We, the evaluators, shouldn't care about this statement. This is the business of the evaluation administration. Our jobs are to do our best to fulfill the duties of evaluators.

013 E 21 I find that some schools just prepare for what the evaluation needs and forget the essence of education.

009 E 12 The percentage of scores is low in the group evaluation. However its cost is high.

COMMENTS FOR QUESTION 12

2225 PL 10 It must be.

2223 PL 25 It is for reference only and is not necessary to be kept forever.

0309 PL 25 Yes, it ought to be.

3001 PL 2 It can let the evaluated schools have further understandings and increase mutual respect.

3119 PL 10 I don't know whether those informations are kept or not. But it is good to keep because the evaluators can then understand more about the condition of schools before and after evaluation.

2525 PL 5 It helps to clarify who will take the responsibility.

2809 PL 15 It is enough only to let the evaluators know.

2001 PL 7 It needs the statistical analysis.

2315 PL 27 I don't quite understand. I hope to have the chance to know more about it.

2726 P 40 It can be used for reference as well as research.

064 E 8 It ought to be kept forever.

116 E 15 All the informations and opinions of evaluation are signed and kept by the administration. We take the responsibilities.

028 E 7 Hand those informations out to the evaluators for reference.

015 E 26 The schools can improve step by step and we can use those informations for reference in the next evaluation too.

COMMENTS FOR QUESTION 13

1401 PL 4 They only blame the bad grading schools without further understanding and assistance.

1909 PL 7 I am not sure. But it looks like nothing happened.

0415 PL 18 Let's think more about it.

0910 PL 10 Reveal the evaluation results of each school to the public as soon as possible. It can decrease the conflict of benefit and increase the fairness of evaluation.

2525 PL 5 It means the selection of evaluators is especially important.

0114 PL 20 The results can be revealed. But the credibility depends on the quality of the reports.

0421 PL 9 We need to think more about it.

2815 PL 5 I haven't seen any beneficial conflicts.

2723 PL 13 The purpose of evaluation is to discover the shortcomings of the schools and then to improve them. But some are beyond our capabilities. For example, the acres of campus is limited by circumstance.

1509 PL 2 The intimate relationship between evaluators and the evaluated schools is hard to avoid.

2309 PL Difficult!

2726 P 40 Not all evaluation results are fair, objective and reasonable. To reveal the results publicly may induce protest and dissatisfaction.

2026 P 40 Don't reveal the results to media. Notice the evaluated schools by the Ministry of Education will decrease the negative response.

0426 P 24 We ought to think more about it.

064 E 8 Yes, we must be open minded and fair.

116 E 13 The processing must be open. But I haven't heard anything about the treatment of last evaluation.

028 E 7 Please take the feasibility into consideration.

COMMENTS FOR QUESTION 14

3213 PL 10 The oral reports are not concrete.

0401 PL 20 Yes, some can.

0415 PL 18 It is quite up to the evaluators. Some evaluators can't.

3324 PL 5 Please give us written reports with items which need us to improve.

0409 PL 6 The evaluators have different performance.

0421 PL 9 Some reports are hard to be mentioned at the meeting directly.

0422 PL 11 They didn't mention directly at the meeting.

1224 PL 11 Actually, the evaluators only mentioned the demerits.

2809 PL 15 The evaluated departments will mention the merits only. None will mention the demerits.

2315 PL 21 Please give more encouragement to the merits. Too many demerits depress the evaluated persons and the worse, they will be replaced.

0426 P 24 It is up to the capability of evaluators.

2226 P 22 Oral reports at the meeting are direct and sincere. However there are misunderstandings and distortions in the written reports and we don't know how to explain.

064 E 8 After reaching common understandings, we report orally.

090 E 3 We didn't directly mention the demerits at the meeting sometimes because it really hurts the harmony. We noticed the evaluated schools secretly.

083 E 26 We carefully write the demerits in the reports in order not to embarrass the evaluated people and hinder the improvement.

037 E 13 Not all can.

027 E 18 It can be used for reference.

013 E 21 I could sense that the reports exaggerate the merits and overlook the demerits.

COMMENTS FOR QUESTION 15

3001 PL 2 They announce the results long after evaluation.

2809 PL 15 The evaluated schools didn't participate in the design of regulations. We even didn't receive any regulations in details before evaluation. They announce the results one or two years later. It is out of date and ineffective.

1810 P 40 Open the absolutely correct informations to the public otherwise it hurts the evaluated schools very much.

090 E 3 Only abstracts of the evaluation results are published in the newspaper. The administration can publish the full reports for purchase and the people can use it as reference to choose the schools to enter.

083 E 26 It doesn't matter to publish or not. But we always keep in mind that we are to help the schools to improve and develop.

COMMENTS FOR QUESTION 16

1826 PL 25 The time for evaluation is too short to let the evaluators understand more about the practical difficulties of private schools.

0401 PL 20 Please pay more attention to the characteristics of each schools.

0415 PL 18 Some evaluators have predetermined and somewhat subjective impressions. Inasmuch, it is unfair for schools with their own characteristics.

0421 PL 9 It can prevent schools from becoming money oriented.

0422 PL 11 It protect the benefits of the public schools

and doesn't encourage the excellent private schools.

0423 PL 24 Please don't interfere with the administration and characteristics of the schools.

0709 PL 8 We must do more about it.

1224 PL 11 The evaluators very cared about the rights of the students but ignore the school.

2809 PL 15 The configuration and execution of evaluation are to take care of the rights of the students and faculties and not the benefits of the schools.

2723 PL 13 The evaluators were kind and patient. They were apt to believe what students told them too.

3525 PL 12 Almost every schools got low grades on this kind of my group. It really hurts the morale of the administration.

2315 PL 21 Considering the standpoints of the schools can increase the effects of evaluation.

3526 P 30 Almost every schools got low grades on the evaluation of administration. It really hurts the morale of the administration.

0426 P 24 It has a little bit bad influence on the schools which are excellent.

064 E 8 It was very successful for the meeting before evaluation.

111 E 15 It is correct to pay more attention to the rights of the teachers.

030 E 11 The students have the rights to have better quality of the teachers, facilities and courses. We need to pay more attention to these.

015 E 26 Please pay attention to it.

COMMENTS FOR QUESTION 17

1909 PL 7 I don't know. But this statement is important.

0309 PL 10 The evaluators know more than anybody.

0415 PL 18 We need to improve.

2525 PL 5 This can decrease the influence of prejudice and subjective judgement to the results of evaluation.

0409 PL 6 Some evaluators' attitude didn't seem to respect us.

0425 PL 12 Some evaluators are opinionated

2809 PL 15 Everybody has his own feeling. Some evaluators didn't seem to respect the evaluated people.

2725 PL Some evaluators are arrogant.

1525 PL 30 I can't agree the attitude of some evaluators.

3410 PL 15 Please don't deny our opinion aggressively and subconsciously.

3409 PL 7 They seldom accept the explanations of evaluated schools. We take full responsibilities for everything even including what we can't determine.

0426 P 24 Some evaluators themselves need to improve.

2226 P 22 Some evaluators prefer to believe informal informations rather than verify them.

064 E 8 The regulations for evaluators have clearly ordered.

083 E 26 This is important for the achievement of goals of evaluations. It can also let the evaluation go smoothly.

COMMENTS FOR QUESTION 18

0523 PL 2 The evaluators are influenced by their working environment so they have predetermined standard.

1826 PL 25 Almost all the evaluators teach in the public schools. They don't quite understand the difficulties of the private schools.

3213 PL 10 They didn't take into account the variations of every schools while they set up the standard of merits and demerits.

0415 PL 18 Some evaluators are subjective. Some don't understand technical education.

2525 PL 5 The evaluation only reflects the results. It didn't take into account the backgrounds and difficulties of the schools.

0114 PL 20 It is up to the capabilities of the evaluators.

0421 PL 8 It is unfair and unnecessary. If it is not able to supervise the schools to improve, it loses its authority.

2809 PL 15 Yes, at least it is now.

1409 PL 2 Due to the scores of the students in the entrance examination vary so much, it is not objective to test the students' performance for grading the evaluation.

1525 PL 30 Some of the grading standard are inconvincible.

3409 PL 7 Please clearly describe whether the evaluated unit need to take responsibilities or not because not all that they can determine. There

are general descriptions only.

2023 PL 10 The evaluators can't comprehensively describe the merits and demerits because they don't have deep understanding.

2501 PL 8 Please pay more attention to the so called software activities.

2315 PL 21 It is not enough to describe the merits. Everybody needs applause after working hard. Please compliment the head of the department if he is so devoted to his work. It is good for the development of the department because it can help him to win the support of the school administration.

2309 PL Too subjective.

3526 P 30 It varies among different groups.

0426 P 24 It depends on the capabilities and viewpoints of the evaluators.

047 E 14 It can fairly describe. But I am doubtful of the sufficiency.

090 E 3 Basically, it is fair. To describe everything is not easy because some demerits are not suitable to open to the public.

083 E 26 Fully describe the merits and carefully describe the demerits. If the description of the demerits embarrasses the supervisor and administration too much, it may hurt the future development.

082 E 10 Use the restrained words in the description of demerits.

074 E 4 The evaluators can only submit comparative results. To have comprehensive understanding we

need to join the evaluation consistently.

073 E 25 We can't describe comprehensively.

028 E 7 The reports are fair but not comprehensive.

030 E 11 The reports tend to compare the grading of evaluated schools. But they are short of giving advice.

025 E 20 Most of us can.

013 E 21 I can't.

COMMENTS FOR QUESTION 19

0309 PL 10 It is the business of the Ministry of Education.

0910 PL 10 The evaluators travel frequently. It is a tough job. To increase their reward may increase effects also.

108 E 20 The reward has to be in commensuration with the working hours.

096 E 14 Not quite reasonable.

083 E 26 Every evaluators is paid according to the regulation.

057 E 16 The reward and budget are low.

013 E 21 Just fine.

COMMENTS FOR QUESTION 20

0401 PL 20 The time is not enough.

0415 PL 18 Some evaluation items need long term observation. They oughtn't to jump to the

conclusion by just one day observation.

0409 PL 6 The evaluators don't have enough time to scrutinize.

0412 PL 9 The evaluators don't have enough time to scrutinize.

0425 PL 12 The evaluators don't have enough time to scrutinize.

0709 PL 8 Not very penetrating.

1224 PL 11 Please set up a standard procedure such that both the evaluators and the evaluated people can follow.

2809 PL 15 Most of the evaluators are careful and decent.

2709 PL 7 Reckless evaluation happens occasionally.

3526 P 30 Most of the evaluators are careful and deliberate.

0426 P 24 The capabilities of evaluators are over estimated. The time for them to use is not enough.

083 E 26 Prudent evaluation satisfies both the evaluators and evaluated persons.

013 E 21 The evaluators don't have enough time to scrutinize.

COMMENTS FOR QUESTION 21

0501 PL 6 Only if the Ministry of Education has sufficient understanding of the evaluated schools then they can give the evaluators proper informations.

2223 PL 25 The evaluators don't understand the practical operation of private schools.

0309 PL 10 How can we let the evaluators understand the details of the schools by the brief introduction ?

0424 PL 2 We have so many departments. How can they clearly understand all of them in the very short time ?

0422 PL 11 It needs long time observation.

0425 PL 12 Every situations varies.

0323 PL 20 It is important. I am afraid that it is impossible.

0809 PL 20 It is the business of the evaluators. I don't understand.

1224 PL 11 Every evaluators varies.

2809 PL 15 Some evaluators have previous understandings of the schools. It may lead to misunderstanding. However it can impress them about the development of the schools also. Most of the evaluators like to understand on the spot.

1525 PL 30 I am not satisfied with some evaluators' performance.

3526 P 30 Every groups varies. Most of them are good.

0426 P 24 Some evaluators themselves need to improve.

066 E 30 It is not easy to understand in the limited time and informations.

096 E 14 The time is tight. The evaluation is intensive. We are hindered by above reasons.

083 E 26 No, I didn't. I hope the evaluated schools to provide the brochures to us in advance. In the brochure it is supposed to describe the

foundation of school, departments and all they want to include. It is beneficial for the mutual communication.

111 E 15 It can't be comprehensive. I tried to do my best in the very short time. But this is still up to the informations that the evaluated departments provided.

028 E 7 The understanding of the background and history of the evaluated schools are not enough.

030 E 11 It is not easy to have thorough understanding because the time for evaluation is less than a day.

025 E 20 I wish I could. But I am constrained by the limited time to evaluate. I am afraid that it is hard to be fairly done.

013 E 21 It is not easy to have thorough understanding because the time for evaluation is short.

COMMENTS FOR QUESTION 22

2809 PL 15 The evaluators introduced briefly about the procedures of evaluation after they arrived at the school or department. But they didn't explain the purpose of evaluation to us. Actually, we speculated and prepared ourselves.

064 E 8 This is the foundation of mutual trust.

096 E 14 The school administration must have known already.

028 E 7 Please refer the evaluation brochures and relative informations.

COMMENTS FOR QUESTION 23

2223 PL 25 We don't know where the evaluators collect their

informations.

3119 PL 10 The evaluators didn't explain to us.

2525 PL 5 I think that they use it for basic reference.

0114 PL 20 I don't know. All the informations are provided by the administration.

0422 PL 11 I don't know how the evaluators will do.

2809 PL 15 Most of the evaluators explain the sources of information to us. If they don't explain or give us chance to explain then it is possible to have erroneous results.

1525 PL 30 Several explanations are inconvincible.

2023 PL 10 I think that the evaluators may need more time to prepare.

2309 PL The evaluators may subjectively take care of the affairs by informal informations and even blackmails.

083 E 26 The explanations can be more concrete and appropriate in order to increase the effects of evaluation.

056 E 11 There are incorrect and fragmental examples.

111 E 15 It is impossible to collect all the informations.

028 E 7 I only collect the informations from schools or departments.

030 E 11 All the informations are furnished by the schools.

025 E 20 Not all the schools understand.

013 E 21 Just fine.

COMMENTS FOR QUESTION 24

0501 PL 6 It may need experts to collect, analyze and filter the informations.

1826 PL 25 Some informations are inadequate.

0401 Pl 20 The way of sampling can't represent the population.

3223 PL 20 Not all kinds of informations are suitable and correct.

0415 PL 18 Their sampling are not proper. Their understandings are superficial.

3324 PL 5 Please let us know as earlier as possible if the evaluators want us to provide the relative informations.

0422 PL 11 This statement is important regarding the reliability of sampling. It is unfair to jump to the conclusions by asking just one or two students randomly.

0709 PL 8 It is not rigorous sometimes.

1224 PL 11 Please don't overestimate the interview with the students. It still can't objectively and properly reflect the truth.

1321 PL 7 I don't know how they collect the informations except the very evaluation day.

2723 PL 13 I am confident in the informations provided by the schools. But I am not sure the informations from the other sources are suitable or not.

1525 PL 30 I am not satisfied with some informations.

3410 PL 15 Please don't be mislead by informations. All the collected informations ought to be carefully verified and explained.

0426 P 24 Chance exits in sampling. It means there is probability to be unfair.

083 E 26 It can be more concrete and detailed to make the evaluation more effective.

028 E 7 One of the examples is the collection of the courses opened in the past years.

030 E 11 I can't distinguish whether the informations are proper or not because all the informations are provided by the schools and departments. I used to have contradictory informations between the schools and the departments. Which shall I believe ?

025 E 20 It needs further improvement.

COMMENTS FOR QUESTION 25

1826 PL 25 The evaluated persons voluntarily provide the informations to the evaluators in hopes of assistance. But they use these as evidence to grade demerits.

0415 PL 18 Their sampling are not proper. Their understandings are superficial.

0422 PL 11 This statement is important regarding the reliability of sampling. It is unfair to jump to the conclusions by asking just one or two students randomly.

1224 PL 11 Please use uniform standard and objective method to collect informations.

2809 PL 15 It has been true until now.

1525 PL 30 I am satisfied with most of them.

3409 PL 7 Some informations are gathered only by chance and some are biased. The evaluated people don't know how to explain.

2309 PL Most informations are credible. However there are unverified informations and even some are from black mails.

3526 P 30 It depends on various evaluation groups. Most are fine.

0426 P 24 Chance exits in sampling. It means there is probability to be unfair.

066 E 30 It is not easy to judge the credibility.

083 E 26 No, we can't. The evaluated schools directly mail the informations to the evaluators for reference. Though we verify during evaluation, we still are not sure if it is true. The Ministry of Education had better verify all the informations first and then hand out to us.

111 E 15 Some schools furnish correct informations. But some schools try to cheat. Our jobs are to explore the problems and find out the truth. What they try to hide are demerits.

028 E 7 Check with the basic informations of the schools. Recheck what are doubtful at the meeting.

030 E 11 Some informations are hard to tell it is true or not. For example, the school administration and department give us different numbers of faculties. Whom shall I believe?

025 E 20 Improvement is needed.

015 E 26 Though the design is so well, it still can't

prevent cheating.

COMMENTS FOR QUESTION 26

2223 PL 25 Who knows?

2525 PL 5 They have to do that to prevent errors.

1224 PL 11 I hope to recheck objectively and scrupulously.

2809 PL 15 Most are rechecked. Some are not.

2723 PL 13 Might be.

3409 PL 7 The evaluators decide our fate. Our opinions are hard to be accepted.

2315 PL 21 Most of the evaluators give opportunity to the head of department to discuss and explain. It is great for them to do so.

066 E 30 I have done my best to do so.

111 E 15 I didn't check again.

022 E 15 They didn't give us the final reports of evaluation.

028 E 7 I only recheck what are doubtful.

030 E 11 The evaluation time was too short to recheck the informations, though I tried.

COMMENTS FOR QUESTION 27

0601 PL 15 I don't know.

0501 PL 6 We can't quantify the regulation and laws. But those are important for education.

2223 PL 25 I don't know.

3213 PL 10 I don't know.

0401 PL 20 I don't know.

0415 PL 18 There is no way to know.

3001 PL 2 I don't know.

0421 PL 9 I can not answer.

0422 PL 11 These evaluators did not do it on the day of visiting.

0709 PL 8 Some evaluators don't have the capability to analyze.

1321 PL 7 I don't know.

2809 PL 15 I don't know the evaluators' analysis procedures and their findings.

3523 PL 25 I don't know.

3409 PL 7 The evaluators did not do as this statement claims.

0426 P 24 I don't know. There is no way to tell how the evaluators analyze the data.

050 E 10 I use questionnaire in the department of environmental engineering and systematically analyze the informations.

081 E 20 They only emphasize quantity. Pay much attention to superficial performance without noticing the essence of education.

025 E 20 I fail to do as this statement claims.

COMMENTS FOR QUESTION 28

2223 PL 25 I don't know.

0415 PL 18 The evaluators did only the quantitative evaluation, but no qualitative evaluation.

3001 PL 2 I don't know.

0424 PL 2 No qualitative evaluation.

2525 PL 5 No objective standard to evaluate the quantitative evaluation.

0409 PL 6 The qualitative informations need long term observation to be evaluated.

0421 PL 9 There is no way to tell.

1321 PL 7 I don't know.

2809 PL 15 I don't know.

3523 PL 25 I don't know.

3409 PL 7 No, they don't.

0426 P 24 No, they don't.

066 E 30 I don't have enough informations. It is not easy to do.

056 E 11 I don't have enough time.

025 E 20 I failed to do so.

COMMENTS FOR QUESTION 29

0523 PL 2 The conclusions are objective but not quite fair.

2225 PL 10 Every departments has different standards.

2223 PL 25 I don't think so.

0415 PL 18 They invite the university professor to evaluate junior college and the public school to evaluate the private school. It lacks fairness and objectiveness in the beginning.

3001 PL 2 I agree with most of the conclusions. But some are contradictory to the reports of previous evaluation.

0114 PL 20 They only list the demerits without explanation.

0709 PL 8 It is useless to just have conclusion without the execution scheme.

2809 PL 8 Most are fair and objective. Some are not really so.

3410 PL 15 Please take into account the uneven background of the schools, such as the quality of the students.

3409 PL 7 It is more convincible if we had the opportunities to discuss and explain before they come to the conclusions.

2023 PL 10 The evaluators are under the pressure of their acquaintance occasionally. It decreases the fairness and objectiveness of evaluation.

2415 PL 21 We have four departments for evaluation. Due to the different evaluation standards among the evaluators, the conclusions are not fair and objective. If they could have the same standard then it will be better.

2726 P 40 Some are objective and fair.

1326 P 20 Some are objective and fair. But a few still are too subjective and superficial.

028 E 7 We come to the conclusions by the discussion among the evaluators in our group.

025 E 20 Not always. But most of the conclusions are fair.

013 E 21 Just fine.

009 E 12 There are big variations between general and specific group evaluation.

COMMENTS FOR QUESTION 30

0523 PL 2 It still can't reflect the true status of the schools even through interviewing with the teachers or students.

1112 PL 2 No precautions are taken.

1826 PL 25 Once there was an evaluator who was laid off by my school came to evaluate us.

3217 PL 5 My department specializes in the theory and technology of the manufacturing process of ceramics material. They should invite the professors of material science in stead of professors of chemical engineering to evaluate us. It can decrease the misunderstanding and increase the fairness.

0415 PL 18 They invite the university professor to evaluate junior college and the public school to evaluate the private school. It lacks fairness and objectiveness in the beginning.

3324 PL 5 It is a conscious work.

3119 PL 10 Some evaluators are very subjective. Past evaluations are worse than this.

0409 PL 6 I suggest that don't evaluate the public schools

and the private schools at the same time. They have different structures and are difficult to use the same standard to evaluate.

2809 PL 15 I don't know if any precautions are taken to avoid prejudice. However, the evaluation process must be fair, open and credible.

3410 PL 15 Some evaluators are very subjective.

3526 P 30 If different evaluators evaluate different schools then the grading is meaningless. Please increase the percentage of the same evaluators to join all the evaluations.

064 E 8 I suggest that the evaluated schools can report to the Ministry of Education about their opinions regarding the evaluators.

083 E 26 It seems no precautions are taken.

028 E 7 I think the discussion among evaluators before writing the reports can prevent personal prejudice.

025 E 20 It needs improvement.

031 E 21 No precautions are taken.

005 E 9 All the evaluators are fair and objective. It is not necessary to worry about it.

009 E 12 I am a new evaluators. I have no acquaintance in the evaluated schools. I am not puzzled by personal influence.

002 E 15 There are some precautions. But how about the effects?

MISCELLANEOUS OPINIONS

3225 PL 20 I suggest that the first grade schools could be

evaluated for every six years. The second grade schools, if win the first grade in the following reevaluation, could be evaluated for every five years. The third grade schools and those worse than the third grade shall be evaluated for every three years.

044 E 20 I find that the configuration of courses and technical education belong to the policy of education. I suggest to let the evaluators join the configuration of the courses and participate in the design of educational policy. We need to unify the educations of technical high schools, the junior colleges and the universities .

025 E 20 The evaluation still needs to be improved in order that we can evaluate the schools more fairly, concretely and objectively. The status of the junior college graduate in the industry or enterprise ought to be evaluated in the future. The graduates are the output of the junior colleges. This is the contribution of junior college to the society. It is not easy to evaluate the performance of the graduate. But we can try step by step. We can ask the industry to assist to build the data base of the graduate and then feed back to the schools for evaluation and improvement.

Appendix F

Cross Tabulation of the Responses to the Questionnaire Items

Cross Tabulation

The cross tabulation of the responses to the second part of questionnaire items number 1 through 30 are presented in Exhibits 1 through 30. The exhibits follow:

Exhibit 1

Importance of "Audience Identification Was Effective" Evaluators Compared to Stakeholders Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Very important	13	65	78	25.2
Important	44	137	181	58.6
Unimportant	22	27	49	15.9
Very unimportant	1	0	1	0.3
Total	80	229	309	
Percent	25.9	74.1		100.0

Exhibit 2

Importance of "Researchers Were Trustworthy And Competent"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Very important	41	92	133	41.9
Important	38	142	180	56.8
Unimportant	2	2	4	1.3
Very unimportant	0	0	0	0.0
Total	81	236	317	
Percent	25.6	74.4		100.0

Exhibit 3

Importance of "Information Was Responsive To Needs"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Very important	24	68	92	29.2
Important	53	160	213	67.6
Unimportant	2	6	8	2.6
Very unimportant	0	2	2	0.6
Total	79	236	315	
Percent	25.1	74.9		100.0

Exhibit 4

Importance of "Perspectives, Procedures, And Rationale Were Carefully Described":
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Very important	18	73	91	28.9
Important	54	156	210	66.7
Unimportant	8	4	12	3.8
Very unimportant	0	2	2	0.6
Total	80	235	315	
Percent	25.4	74.6		100.0

Exhibit 5

Importance of "Evaluation Report Was Complete"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Very important	32	94	126	39.3
Important	50	145	195	60.7
Unimportant	0	0	0	3.0
Very unimportant	0	0	0	0.0
Total	82	239	321	
Percent	25.5	74.5		100.0

Exhibit 6

Importance of "Evaluation Findings Were Disseminated Optimally":
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Very important	48	153	201	62.8
Important	32	81	113	35.4
Unimportant	2	1	3	0.9
Very unimportant	1	2	3	0.9
Total	83	237	320	
Percent	25.9	74.1		100.0

Exhibit 7

Importance of "Report Was Released On A Timely Basis"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Very important	44	88	132	41.5
Important	35	135	170	53.5
Unimportant	3	13	16	5.0
Very unimportant	0	0	0	0.0
Total	82	236	318	
Percent	25.8	74.2		100.0

Exhibit 8

Importance of "Evaluation Procedure Encouraged Audience Follow-Through":
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Very important	19	104	123	38.9
Important	55	121	176	55.7
Unimportant	6	10	16	5.1
Very unimportant	1	0	1	0.3
Total	81	235	316	
Percent	25.6	74.4		100.0

Exhibit 9

Importance of "Evaluation Procedures Were Practical"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Very important	22	76	98	31.3
Important	56	150	206	65.8
Unimportant	3	6	9	2.9
Very unimportant	0	0	0	0.0
Total	81	232	313	
Percent	25.9	74.1		100.0

Exhibit 10

Importance of "Evaluation Plan Anticipated Position Diversity":
Evaluators Compared to Stakeholders, Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Very important	16	71	87	28.2
Important	52	144	196	63.6
Unimportant	9	14	23	7.5
Very unimportant	1	1	2	0.7
Total	78	230	308	
Percent	25.3	74.7		100.0

Exhibit 11

Importance of "Evaluation Results Justify Resource Expenditure":
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Very important	16	55	71	24.0
Important	53	139	192	64.9
Unimportant	6	25	31	10.5
Very unimportant	2	0	2	0.6
Total	77	219	296	
Percent	26.0	74.0		100.0

Exhibit 12

Importance of "Obligations Of Participants Were Agreed To Formally":
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Very important	17	65	82	28.0
Important	51	139	190	64.8
Unimportant	10	11	21	7.2
Very unimportant	0	0	0	0.0
Total	78	215	293	
Percent	26.6	73.4		100.0

Exhibit 13

Importance of "Conflict Of Interest Was Dealt With Openly And Honestly":
Evaluators Compared to Stakeholders, Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Very important	20	82	102	32.7
Important	59	144	203	65.1
Unimportant	0	5	5	1.6
Very unimportant	0	2	2	0.6
Total	79	233	312	
Percent	25.3	74.7		100.0

Exhibit 14

Importance of "Evaluation Reports Were Open, Direct, And Honest In The Disclosure Of Findings And Limitations": Evaluators Compared to Stakeholders Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Very important	23	71	94	30.1
Important	53	153	206	65.8
Unimportant	4	8	12	3.8
Very unimportant	0	1	1	0.3
Total	80	233	313	
Percent	25.6	74.4		100.0

Exhibit 15

Importance of "Public's Legal Right To Know Was Protected" Evaluators Compared to Stakeholders Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Very important	16	56	72	23.5
Important	59	162	221	72.2
Unimportant	2	11	13	4.3
Very unimportant	0	0	0	0.0
Total	77	229	306	
Percent	25.2	74.8		100.0

Exhibit 16

Importance of "The Rights And Welfare Of Human Subjects Were Protected":
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Very important	17	77	94	29.9
Important	56	150	206	65.6
Unimportant	7	4	11	3.5
Very unimportant	0	3	3	1.0
Total	80	234	314	
Percent	25.5	74.5		100.0

Exhibit 17

Importance of "Researchers Respected To Human Dignity And Worth Of Other Participants":
Evaluators Compared to Stakeholders, Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Very important	26	82	108	34.3
Important	53	151	204	64.8
Unimportant	2	1	3	0.9
Very unimportant	0	0	0	0.0
Total	81	234	315	
Percent	25.7	74.3		100.0

Exhibit 18

Importance of "Evaluation Fairly Presented Both Strengths And Weaknesses": Evaluators Compared to Stakeholders Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Very important	35	99	134	42.7
Important	42	131	173	55.1
Unimportant	1	5	6	1.9
Very unimportant	1	0	1	0.3
Total	79	235	314	
Percent	25.2	74.8		100.0

Exhibit 19

Importance of "Researchers Were Fiscally Prudent, Accountable, And, Ethically Responsible": Evaluators Compared to Stakeholders, Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Very important	12	54	66	24.4
Important	57	129	186	68.9
Unimportant	9	8	17	6.3
Very unimportant	0	1	1	0.4
Total	78	192	270	
Percent	28.9	71.1		100.0

Exhibit 20

Importance of "The Examination Of Programs Evaluated Was Sufficient":
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Very important	35	92	127	40.0
Important	45	141	186	58.5
Unimportant	2	0	2	0.6
Very unimportant	0	3	3	0.9
Total	82	236	318	
Percent	28.9	71.1		100.0

Exhibit 21

Importance of "Program Context Evaluation Was Sufficient"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Very important	37	106	143	45.5
Important	42	123	165	52.6
Unimportant	2	2	4	1.3
Very unimportant	0	2	2	0.6
Total	81	233	314	
Percent	25.8	74.2		100.0

Exhibit 22

Importance of "Evaluation Purpose And Procedures Were Sufficiently Described And Monitored": Evaluators Compared to Stakeholders Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Very important	21	65	86	27.5
Important	54	166	220	70.3
Unimportant	4	2	6	1.9
Very unimportant	1	0	1	0.3
Total	80	233	313	
Percent	25.6	74.4		100.0

Exhibit 23

Importance of "Information Sources Were Described In Sufficient Detail": Evaluators Compared to Stakeholders, Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Very important	26	59	85	28.0
Important	53	153	206	68.0
Unimportant	3	7	10	3.3
Very unimportant	0	2	2	0.7
Total	82	221	303	
Percent	27.1	72.9		100.0

Exhibit 24

Importance of "Instrumentation Was Valid"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Very important	25	67	92	31.3
Important	44	155	199	67.7
Unimportant	1	2	3	1.0
Very unimportant	0	0	0	0.0
Total	70	224	294	
Percent	23.8	76.2		100.0

Exhibit 25

Importance of "Instrumentation Was Reliable"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Very important	32	66	98	33.7
Important	48	144	192	66.0
Unimportant	0	1	1	0.3
Very unimportant	0	0	0	0.0
Total	80	211	291	
Percent	27.5	72.5		100.0

Exhibit 26

Importance of "Data Used In The Evaluation Were Reviewed And Corrected":
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Very important	22	66	88	30.2
Important	57	144	201	69.1
Unimportant	1	1	2	0.7
Very unimportant	0	0	0	0.0
Total	80	211	291	
Percent	27.5	72.5		100.0

Exhibit 27

Importance of "Quantitative Analysis Was Sufficient"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Very important	24	52	76	25.5
Important	51	164	215	72.1
Unimportant	4	3	7	2.4
Very unimportant	0	0	0	0.0
Total	79	219	298	
Percent	26.5	73.5		100.0

Exhibit 28

Importance of "Qualitative Analysis Was Sufficient"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Very important	24	78	102	33.2
Important	51	148	199	64.8
Unimportant	4	2	6	2.0
Very unimportant	0	0	0	0.0
Total	79	228	307	
Percent	25.7	74.3		100.0

Exhibit 29

Importance of "Conclusions Of Evaluation Were Justified"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Very important	43	114	157	50.3
Important	36	116	152	48.7
Unimportant	0	2	2	0.7
Very unimportant	1	0	1	0.3
Total	80	232	312	
Percent	25.6	74.4		100.0

Exhibit 30

Importance of "Procedures Provided Safeguards Against Bias" Evaluators Compared to Stakeholders Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Very important	34	119	153	50.5
Important	43	103	146	48.2
Unimportant	3	0	3	1.0
Very unimportant	1	0	1	0.3
Total	81	222	303	
Percent	26.7	73.3		100.0

Cross Tabulation

The cross tabulation of the responses to the first part of questionnaire items number one through 30 are presented in Exhibits 31 through 60. The exhibits may be found on the next several pages.

Exhibit 31

"Audience Identification Was Effective"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Strongly agree	8	9	17	5.5
Agree	39	143	182	58.3
Disagree	29	75	104	33.3
Strongly disagree	5	4	9	2.9
Total	81	231	312	
Percent	26.0	74.0		100.0

Exhibit 32

"Researchers Were Trustworthy And Competent"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Strongly agree	19	22	41	12.8
Agree	59	151	210	65.4
Disagree	6	57	63	19.6
Strongly disagree	0	7	7	2.2
Total	84	237	321	
Percent	26.2	73.8		100.0

Exhibit 33

"Information Was Responsive To Needs"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Strongly agree	7	20	27	8.6
Agree	68	158	226	71.5
Disagree	6	55	61	19.3
Strongly disagree	0	2	2	0.6
Total	81	235	316	
Percent	25.6	74.4		100.0

Exhibit 34

"Perspectives, Procedures, And Rationale Were Carefully Described": Evaluators Compared to Stakeholders Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Strongly agree	7	20	27	8.5
Agree	61	136	197	61.9
Disagree	11	72	83	26.1
Strongly disagree	10	1	11	3.5
Total	89	229	318	
Percent	28.0	72.0		100.0

Exhibit 35

"Evaluation Report Was Complete" Evaluators Compared to Stakeholders Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Strongly agree	17	25	42	13.1
Agree	59	155	214	66.9
Disagree	5	54	59	18.4
Strongly disagree	0	5	5	1.6
Total	81	239	320	
Percent	25.3	74.7		100.0

Exhibit 36

"Evaluation Findings Were Disseminated Optimally"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Strongly agree	49	145	194	60.5
Agree	31	90	121	37.7
Disagree	2	1	3	0.9
Strongly disagree	0	3	3	0.9
Total	82	239	321	
Percent	25.5	74.5		100.0

Exhibit 37

"Report Was Released On A Timely Basis"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Strongly agree	36	83	119	37.3
Agree	42	119	161	50.5
Disagree	4	28	32	10.0
Strongly disagree	0	7	7	2.2
Total	82	237	319	
Percent	25.7	74.3		100.0

Exhibit 38

"Evaluation Procedure Encouraged Audience Follow-Through"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Strongly agree	15	70	85	26.7
Agree	47	120	167	52.5
Disagree	18	35	53	16.7
Strongly disagree	2	11	13	4.1
Total	82	236	318	
Percent	25.8	74.2		100.0

Exhibit 39

"Evaluation Procedures Were Practical"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Strongly agree	7	16	23	7.1
Agree	57	154	211	65.5
Disagree	15	68	83	25.8
Strongly disagree	1	4	5	1.6
Total	80	242	322	
Percent	24.8	75.2		100.0

Exhibit 40

"Evaluation Plan Anticipated Position Diversity"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Strongly agree	7	35	42	13.5
Agree	60	144	204	65.6
Disagree	11	46	57	18.3
Strongly disagree	0	8	8	2.6
Total	78	233	311	
Percent	25.1	74.9		100.0

Exhibit 41

"Evaluation Results Justify Resource Expenditure"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Strongly agree	14	19	33	11.1
Agree	51	119	170	57.0
Disagree	11	69	80	26.9
Strongly disagree	1	14	15	5.0
Total	77	221	298	
Percent	25.8	74.2		100.0

Exhibit 42

"Obligations Of Participants Were Agreed To Formally"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Strongly agree	11	48	59	20.2
Agree	61	147	208	71.2
Disagree	5	13	18	6.2
Strongly disagree	2	5	7	2.4
Total	79	213	292	
Percent	27.1	72.9		100.0

Exhibit 43

"Conflict Of Interest Was Dealt With Openly And Honestly"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Strongly agree	20	29	49	15.8
Agree	49	138	187	60.1
Disagree	8	62	70	22.5
Strongly disagree	2	3	5	1.6
Total	79	232	311	
Percent	25.4	74.6		100.0

Exhibit 44

"Evaluation Reports Were Open, Direct, And Honest In The Disclosure Of Findings And Limitations": Evaluators Compared to Stakeholders Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Strongly agree	18	34	52	16.6
Agree	47	160	207	65.9
Disagree	14	38	52	16.6
Strongly disagree	0	3	3	0.9
Total	81	235	314	
Percent	26.0	74.8		100.0

Exhibit 45

"The Public's Legal Right To Know Was Protected" Evaluators Compared to Stakeholders Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Strongly agree	10	28	38	12.4
Agree	54	165	219	71.6
Disagree	12	34	46	15.0
Strongly disagree	0	3	3	1.0
Total	81	230	306	
Percent	24.8	75.2		100.0

Exhibit 46

"The Rights And Welfare Of Human Subjects Were Protected"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Strongly agree	14	22	36	11.4
Agree	59	164	223	70.8
Disagree	6	41	47	14.9
Strongly disagree	1	8	9	2.9
Total	80	235	315	
Percent	25.4	74.6		100.0

Exhibit 47

"Researchers Respected To Human Dignity And Worth Of Other Participants":
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Strongly agree	21	34	55	17.4
Agree	55	167	222	70.5
Disagree	4	30	34	10.8
Strongly disagree	1	3	4	1.3
Total	81	234	315	
Percent	25.7	74.3		100.0

Exhibit 48

"Evaluation Fairly Presented Both Strengths And Weaknesses"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Strongly agree	17	20	37	11.9
Agree	45	133	178	57.0
Disagree	16	75	91	29.2
Strongly disagree	0	6	6	1.9
Total	78	234	312	
Percent	25.0	75.0		100.0

Exhibit 49

"Researchers Were Fiscally Prudent, Accountable, And,
Ethically Responsible":
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Strongly agree	7	32	39	15.3
Agree	52	132	184	72.1
Disagree	18	11	29	11.4
Strongly disagree	2	1	3	1.2
Total	79	176	255	
Percent	31.0	69.0		100.0

Exhibit 50

"The Examination Of Programs Evaluated Was Sufficient"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Strongly agree	18	27	45	14.1
Agree	58	143	201	63.2
Disagree	5	62	67	21.1
Strongly disagree	1	4	5	1.6
Total	82	236	318	
Percent	25.8	74.2		100.0

Exhibit 51

"Program Context Evaluation Was Sufficient"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Strongly agree	9	31	40	12.8
Agree	51	108	159	51.0
Disagree	20	86	106	34.0
Strongly disagree	1	6	7	2.2
Total	81	231	312	
Percent	26.0	74.0		100.0

Exhibit 52

"Evaluation Purpose And Procedures Were Sufficiently Described And Monitored":
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Strongly agree	8	27	35	11.2
Agree	63	162	225	72.1
Disagree	9	43	52	16.7
Strongly disagree	0	0	0	0.0
Total	80	232	312	
Percent	25.6	74.4		100.0

Exhibit 53

"Information Sources Were Described In Sufficient Detail"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Strongly agree	5	25	30	10.0
Agree	48	138	186	61.8
Disagree	27	54	81	26.9
Strongly disagree	1	3	4	1.3
Total	81	220	301	
Percent	26.9	73.1		100.0

Exhibit 54

"Instrumentation Was Valid"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Strongly agree	8	17	25	8.3
Agree	58	134	192	63.8
Disagree	14	68	82	27.2
Strongly disagree	0	2	2	0.7
Total	80	221	301	
Percent	26.6	73.4		100.0

Exhibit 55

"Instrumentation Was Reliable"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Strongly agree	5	18	23	7.6
Agree	60	136	196	64.9
Disagree	14	65	79	26.2
Strongly disagree	1	3	4	1.3
Total	80	222	302	
Percent	26.5	73.5		100.0

Exhibit 56

"Data Used In The Evaluation Were Reviewed And Corrected"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Strongly agree	10	18	28	10.0
Agree	56	139	195	69.6
Disagree	13	41	54	19.3
Strongly disagree	0	3	3	1.1
Total	79	201	280	
Percent	28.2	72.8		100.0

Exhibit 57

"Quantitative Analysis Was Sufficient"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Strongly agree	9	21	30	10.1
Agree	59	135	194	65.6
Disagree	12	57	69	23.3
Strongly disagree	0	3	3	1.0
Total	80	216	296	
Percent	27.0	73.0		100.0

Exhibit 58

"Qualitative Analysis Was Sufficient"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Strongly agree	9	18	27	8.9
Agree	46	142	188	61.8
Disagree	23	55	78	25.7
Strongly disagree	1	10	11	3.6
Total	79	225	304	
Percent	26.0	74.0		100.0

Exhibit 59

"Conclusions Of Evaluation Were Justified"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Strongly agree	21	20	41	13.2
Agree	56	149	205	66.1
Disagree	2	56	58	18.7
Strongly disagree	0	6	6	2.0
Total	79	231	310	
Percent	25.5	74.5		100.0

Exhibit 60

"Procedures Provided Safeguards Against Bias"
Evaluators Compared to Stakeholders
Response Distributions

Assessment	Evaluators	Stakeholders	Total	Percent
Strongly agree	13	37	50	16.6
Agree	49	100	149	49.3
Disagree	19	72	91	30.1
Strongly disagree	1	11	12	4.0
Total	82	220	302	
Percent	27.2	72.8		100.0

Appendix G

Mean Response to the Questionnaire Items

Mean Response Data

The mean responses to the second part of questionnaire items number one through 30 are presented in Tables 1 through 30. The tables may be found on the next several pages.

Table 1

Importance of "Audience Identification Was Effective" Evaluators Compared to Stakeholders Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	2.9	3.2	3.1
Qualitative	Agree	Agree	Agree

Table 2

Importance of "Researchers Were Trustworthy And Competent"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.5	3.4	3.4
Qualitative	Agree	Agree	Agree

Table 3

Importance of "Information Was Responsive To Needs"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.3	3.2	3.2
Qualitative	Agree	Agree	Agree

Table 4

Importance of "Perspectives, Procedures, And Rationale Were Carefully Described":
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.1	3.3	3.2
Qualitative	Agree	Agree	Agree

Table 5

Importance of "Evaluation Report Was Complete"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.0	3.4	3.3
Qualitative	Agree	Agree	Agree

Table 6

Importance of "Evaluation Findings Were Disseminated Optimally":
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.6	3.6	3.6
Qualitative	Strongly Agree	Strongly Agree	Strongly Agree

Table 7

Importance of "Report Was Released On A Timely Basis"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.5	3.3	3.4
Qualitative	Agree	Agree	Agree

Table 8

Importance of "Evaluation Procedure Encouraged Audience Follow-Through":
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.1	3.4	3.3
Qualitative	Agree	Agree	Agree

Table 9

Importance of "Evaluation Procedures Were Practical"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.2	3.3	3.3
Qualitative	Agree	Agree	Agree

Table 10

Importance of "Evaluation Plan Anticipated Position Diversity":
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.1	3.7	3.5
Qualitative	Agree	Strongly Agree	Agree

Table 11

Importance of "Evaluation Results Justify Resource Expenditure":
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.1	3.1	3.1
Qualitative	Agree	Agree	Agree

Table 12

Importance of "Obligations Of Participants Were Agreed To Formally":
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.1	3.3	3.2
Qualitative	Agree	Agree	Agree

Table 13

Importance of "Conflict Of Interest Was Dealt With Openly And Honestly":
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.3	3.3	3.3
Qualitative	Agree	Agree	Agree

Table 14

Importance of "Evaluation Reports Were Open, Direct, And Honest In The Disclosure Of Findings And Limitations": Evaluators Compared to Stakeholders Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.2	3.3	3.3
Qualitative	Agree	Agree	Agree

Table 15

Importance of "The Public's Legal Right To Know Was Protected": Evaluators Compared to Stakeholders Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.2	3.2	3.2
Qualitative	Agree	Agree	Agree

Table 16

Importance of "The Rights And Welfare Of Human Subjects Were Protected": Evaluators Compared to Stakeholders Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.1	3.3	3.2
Qualitative	Agree	Agree	Agree

Table 17

Importance of "Researchers Respected To Human Dignity And Worth Of Other Participants": Evaluators Compared to Stakeholders Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.3	3.0	3.1
Qualitative	Agree	Agree	Agree

Table 18

Importance of "Evaluation Fairly Presented Both Strengths And Weaknesses" Evaluators Compared to Stakeholders Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.4	3.4	3.4
Qualitative	Agree	Agree	Agree

Table 19

Importance of "Researchers Were Fiscally Prudent, Accountable, And, Ethically Responsible": Evaluators Compared to Stakeholders Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.0	3.2	3.2
Qualitative	Agree	Agree	Agree

Table 20

Importance of "The Examination Of Programs Evaluated Was Sufficient":
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.4	3.4	3.4
Qualitative	Agree	Agree	Agree

Table 21

Importance of "Program Context Evaluation Was Sufficient"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.4	3.4	3.4
Qualitative	Agree	Agree	Agree

Table 22

Importance of "Evaluation Purpose And Procedures Were Sufficiently Described And Monitored":
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.2	3.3	3.2
Qualitative	Agree	Agree	Agree

Table 23

Importance of "Information Sources Were Described In Sufficient Detail":
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.3	3.2	3.2
Qualitative	Agree	Agree	Agree

Table 24

Importance of "Instrumentation Was Valid"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.3	3.3	3.3
Qualitative	Agree	Agree	Agree

Table 25

Importance of "Instrumentation Was Reliable"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.4	3.3	3.3
Qualitative	Agree	Agree	Agree

Table 26

Importance of "Data Used In The Evaluation Were Reviewed And Corrected":
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.3	3.3	3.3
Qualitative	Agree	Agree	Agree

Table 27

Importance of "Quantitative Analysis Was Sufficient"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.3	3.2	3.2
Qualitative	Agree	Agree	Agree

Table 28

Importance of "Qualitative Analysis Was Sufficient"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.3	3.3	3.3
Qualitative	Agree	Agree	Agree

Table 29

Importance of "Conclusions Of Evaluation Were Justified"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.0	3.5	3.4
Qualitative	Agree	Agree	Agree

Table 30

Importance of "Procedures Provided Safeguards Against Bias"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.4	3.5	3.5
Qualitative	Agree	Agree	Agree

Mean Response Data

The mean responses to the first part of questionnaire items number one through 30 are presented in Tables 31 through 60. The tables may be found on the next several pages.

Table 31

"Audience Identification Was Effective"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	2.6	2.7	2.7
Qualitative	Agree	Agree	Agree

Table 32

"Researchers Were Trustworthy And Competent"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.2	2.8	2.9
Qualitative	Agree	Agree	Agree

Table 33

"Information Was Responsive To Needs"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.0	2.8	2.9
Qualitative	Agree	Agree	Agree

Table 34

"Perspectives, Procedures, And Rationale Were Carefully Described": Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	2.7	3.3	3.2
Qualitative	Agree	Agree	Agree

Table 35

"Evaluation Report Was Complete"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.1	2.8	2.9
Qualitative	Agree	Agree	Agree

Table 36

"Evaluation Findings Were Disseminated Optimally"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.6	3.7	3.7
Qualitative	Strongly Agree	Strongly Agree	Strongly Agree

Table 37

"Report Was Released On A Timely Basis"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.4	3.2	3.2
Qualitative	Agree	Agree	Agree

Table 38

"Evaluation Procedure Encouraged Audience Follow-Through"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	2.9	3.1	3.0
Qualitative	Agree	Agree	Agree

Table 39

"Evaluation Procedures Were Practical"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	2.9	2.8	2.8
Qualitative	Agree	Agree	Agree

Table 40

"Evaluation Plan Anticipated Position Diversity"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	2.9	2.9	2.9
Qualitative	Agree	Agree	Agree

Table 41

"Evaluation Results Justify Resource Expenditure"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.0	2.6	2.7
Qualitative	Agree	Agree	Agree

Table 42

"Obligations Of Participants Were Agreed To Formally"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.0	3.1	3.1
Qualitative	Agree	Agree	Agree

Table 43

"Conflict Of Interest Was Dealt With Openly And Honestly"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.1	2.8	2.9
Qualitative	Agree	Agree	Agree

Table 44

"Evaluation Reports Were Open, Direct, And Honest In The Disclosure Of Findings And Limitations": Evaluators Compared to Stakeholders Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.1	2.8	2.9
Qualitative	Agree	Agree	Agree

Table 45

"The Public's Legal Right To Know Was Protected" Evaluators Compared to Stakeholders Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.0	2.9	3.0
Qualitative	Agree	Agree	Agree

Table 46

"The Rights And Welfare Of Human Subjects Were Protected" Evaluators Compared to Stakeholders Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.2	2.9	2.9
Qualitative	Agree	Agree	Agree

Table 47

"Researchers Respected To Human Dignity And Worth Of Other Participants":
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.2	3.0	3.0
Qualitative	Agree	Agree	Agree

Table 48

"Evaluation Fairly Presented Both Strengths And Weaknesses"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.0	2.9	2.9
Qualitative	Agree	Agree	Agree

Table 49

"Researchers Were Fiscally Prudent, Accountable, And, Ethically Responsible":
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	2.7	3.1	3.0
Qualitative	Agree	Agree	Agree

Table 50

"The Examination Of Programs Evaluated Was Sufficient"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	2.9	2.8	2.9
Qualitative	Agree	Agree	Agree

Table 51

"Program Context Evaluation Was Sufficient"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	2.8	2.7	2.7
Qualitative	Agree	Agree	Agree

Table 52

"Evaluation Purpose And Procedures Were Sufficiently
Described And Monitored":
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.0	2.9	2.9
Qualitative	Agree	Agree	Agree

Table 53

"Information Sources Were Described In Sufficient Detail"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	2.7	2.8	2.8
Qualitative	Agree	Agree	Agree

Table 54

"Instrumentation Was Valid"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	2.8	2.8	2.8
Qualitative	Agree	Agree	Agree

Table 55

"Instrumentation Was Reliable"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	2.9	2.8	2.8
Qualitative	Agree	Agree	Agree

Table 56

"Data Used In The Evaluation Were Reviewed And Corrected"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.0	2.9	2.9
Qualitative	Agree	Agree	Agree

Table 57

"Quantitative Analysis Was Sufficient"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.0	2.8	2.8
Qualitative	Agree	Agree	Agree

Table 58

"Qualitative Analysis Was Sufficient"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	2.8	2.7	2.8
Qualitative	Agree	Agree	Agree

Table 59

"Conclusions Of Evaluation Were Justified"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	3.2	2.8	2.9
Qualitative	Agree	Agree	Agree

Table 60

"Procedures Provided Safeguards Against Bias"
Evaluators Compared to Stakeholders
Mean Responses

Assessment	Evaluators	Stakeholders	Total
Quantitative	2.9	2.7	2.8
Qualitative	Agree	Agree	Agree

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Taiwanese Educational System Analysis
Curriculum Development and Training Course Design
Total Quality Management
Human Resources Management and Supervision
Technology Management
Technology Education

Language Skills:

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