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RESEARCH TO DEVELOP A CONSENSUS SELF-EVALUATION
MODEL OF NATIONAL NORMS OF EXCELLENCE FOR
ALTERNATING COOPERATIVE EDUCATION
PROGRAMS AT FOUR-YEAR COLLEGES
AND UNIVERSITIES

by

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Old Dominion University in Partial Fulfillment of the
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DOCTOR OF PHILOSOPHY
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May, 1984

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ABSTRACT

RESEARCH TO DEVELOP A CONSENSUS SELF-EVALUATION MODEL OF NATIONAL NORMS OF EXCELLENCE FOR ALTERNATING COOPERATIVE EDUCATION PROGRAMS AT FOUR-YEAR COLLEGES AND UNIVERSITIES

Constance F. Brothers
Old Dominion University, 1983
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The research described in this dissertation was conducted in response to an expressed need for the development of national norms of excellence for cooperative education programs in the United States in 1980. In academic year 1981-1982 a Delphi technique was used with 12 cooperative education experts, who identified 155 cooperative education program norms of excellence specifically for four-year alternating cooperative education programs.

In academic year 1982-1983, the 155 norms identified were transposed into a 90-item self-evaluation questionnaire which was field tested and sampled at 14 colleges and universities with alternating cooperative education programs in the United States. Of 900 college administrators, faculty, cooperative education

coordinators, students and employers contacted, 730 responded (81%).

The alternating cooperative education program consensus self-evaluation model developed was the first of its kind in the United States. With further refinement and testing it could be adapted for use by other cooperative education programs. Appendices include directions for conducting a Delphi Technique, directions for conducting cooperative education program self-evaluation, anecdotal comments from respondents, and definitions of cooperative education provided by respondents.

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Constance F. Brothers
Old Dominion University
May, 1984

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CHAPTER I

INTRODUCTION

A Definition of Alternating Cooperative Education at Four-Year Colleges and Universities

Because this study focused on alternating cooperative education programs in place at four-year colleges and universities in the United States from 1981 through 1984, and therefore "alternating" programs were referred to frequently, it was appropriate to first define the meaning of "alternating" cooperative education. One good example was that nearest at hand, the cooperative education program at Old Dominion University, where this study was conducted. The 1983 University Catalog provided the following definition:

. . . The Cooperative Education Program is designed to offer enrolled students in approved programs the opportunity to integrate academic study with actual work experiences relating to their career objectives. This is accomplished by alternating semesters of full-time study with semesters of full-time curriculum related employment (alternating plan) or by combining full-time studies with part-time work experience on a concurrent basis (parallel plan). Students may earn one to three hours credit per work semester.

The coordination of academic study and work experience combines theory and practice in the educational process. The ultimate objectives of the program are to provide relevance in the educational process and direction in career planning, bring business and industry and governmental agencies close

to the educational programs of the University, and have the graduates accepted for permanent employment by leading employers. Since the employer pays the student a wage or salary during the work experience, the student is assisted in meeting educational expenses. . . .¹

Old Dominion University's definition of cooperative education was used as a starting point to discuss the purpose of this study, with two caveats: at some four-year institutions cooperative education was a mandatory, rather than an elective part of the course of study; and at some four-year institutions students participating in cooperative education programs did not receive academic credit, but their participation in the program was noted on the student transcript. More often than not, where cooperative education was mandatory, it was also non-credit. However, the basic principles remained intact. For a more extensive general definition of cooperative education and a specific definition of "alternating" cooperative education, see National Commission for Cooperative Education, "Definition of Cooperative Education" (1978), p. 4.

Need for the Study

When this study was undertaken, during academic year 1981-1982, it was in response to an expressed need for cooperative education programs at institutions of higher education to become accountable for program operation.

Cooperative education programs often were not monitored by college administrators, principally because those administrators frequently did not know what cooperative education was, or what it hoped to accomplish. Additionally, over a thirteen-year period, substantial numbers of individual cooperative education programs had existed by receiving administrative funds from the federal government. Beginning under the Higher Education Act of 1965, as amended in 1968, Title IV-D (changed subsequently to Title VIII in 1976), slightly less than half of all established cooperative education programs received some form of direct federal assistance for program operation. Yet program evaluation during that period was not consistently administered.

Cooperative education programs in the United States received, annually, anywhere from a high of 23 million dollars (1980) to the recent low of 14.4 million dollars (1983). It was clear to many interested parties that (1) norms of excellence needed to be established, and (2) some measure needed to be developed in order to assess those norms.

In the summer of 1980 an entire issue of The Journal of Cooperative Education was devoted to the problem of cooperative education program evaluation. In an introduction to that issue, James W. Wilson, guest editor, stated the problem:

Provision for periodic evaluation is integral to any conception of educational planning and operation. The intent, of course, is to take stock--to determine if the efforts and money being expended are appropriate and achieving their intended outcomes--and then using that information to plan further. It has been my experience, however, that relatively few program administrators translate their conceptual awareness into practice. In the absence of external pressure, most practitioners find themselves too tied-down with day to day responsibilities to stand back and look carefully at their programs.

Thus it has been with cooperative education. Until the last few years, formal summative evaluations of cooperative education were conducted only infrequently.²

Other authors, in the same issue of the Journal, addressed the problems of accreditation when cooperative education was an integral part of the curriculum of study; structuring evaluation; developing faculty support through evaluation; criteria for such evaluation; the ethics involved; and accountability to the (then) Office of Education through whose largess many programs were funded. So, by 1980, cooperative education coordinators had become aware that pressures were mounting for them to show more specific, appraisable results.

Pressure was greatest for those cooperative education programs which existed primarily through federal subvention. In academic year 1981-1982, Terrel H. Bell, Secretary, United States Department of Education, reviewed all proposals for federal funding of cooperative education programs at institutions of higher education

with two specific criteria among those considered as paramount:

- The projects to be administered by means of federal subvention would include exemplary evaluation plans.
- Methods used for project evaluation would be appropriate to individual projects, would be objective to the extent that objectivity was possible, and would be generalizable to other cooperative education programs; that is, the results would produce data which could be quantified.³

Thus, in 1981, the need for this study was established by mandate of professionals in the field and by the primary funding agency (the U.S. government). It was clear, as well, that norms of excellence needed to be established and quantified. This study was conducted as a response to the mandate to establish norms of excellence and examine quantitative data at four-year colleges and universities with alternating cooperative education programs.

Theoretical Formulation of the Study

Cooperative education programs needed consistent, agreed-upon norms against which they could be evaluated. Those norms, having been identified, needed to be tested. This study was undertaken to establish and test one evaluation model designed to determine whether or not cooperative education programs at four-year institutions of higher education were meeting their stated goals and

objectives. The theoretical formulation which follows constituted the basis for the research.

Cooperative Education Constructs

1. Cooperative Education Work Experience Has Validity as a Method of Education

From the time of Aristotle and Plato, many understood that learning by doing had validity. John Dewey's theory of experiential education was experientially proven, and Mortimer Adler's recent re-exploration of the Paideia indicated that life was a combination of cognition, work, and leisure--of which learning by doing was an integral part.⁴

2. Cooperative Education Work Experience Programs at Four-Year Institutions of Higher Education Can Be Evaluated Based on the Perceptions of the Persons Directly Involved.

For the successful placement of an individual student in an alternating cooperative education work experience during a given academic semester, interaction of various levels must have occurred among five different sets of people (these will be referred to as status group members from this point on). College administrators must have supported the activity by verbal and written communication, and by assigning financial support to the cooperative education enterprise. Faculty members in whose disciplines or departments cooperative education was operative must have been convinced that work experience, using the

cooperative education model, was a valid form of learning for those disciplines or departments. Students must have perceived the program as valid learning, rather than simply as a way to finance the cost of education. Employers must have been satisfied that hiring cooperative education students had the short-range benefit of their receiving qualified workers, and the long-range benefit of their developing a pool of qualified permanent employees. Cooperative education coordinators must have interacted with each of the other status groups to maintain a program which was academically sound, fiscally solvent, and satisfying to all, most particularly students and employers. Unfortunately, coordinators must have often shown numerical growth to satisfy the "growth in numbers" syndrome in higher education. Numerical growth did not necessarily indicate sound cooperative education programs at steady-state institutions, but it was a pressure to which cooperative education coordinators constantly responded.

If members of each status group (administrators, faculty, students, employers, and cooperative education coordinators) were asked to evaluate the success of a given cooperative education program, the summary of their varying responses would be a good indicator of whether or not the program was providing an enriching educational

experience for students enrolled. Their responses would also point out areas of disagreement to be addressed. No such evaluation of status group members' perceptions of cooperative education program success using a single instrument/questionnaire had been conducted at the time this research began.

By correspondence and through contacts within the Cooperative Education Association and the Cooperative Education Division of the American Society for Engineering Education, the researcher, during October, 1981, located those institutions which had developed their own program self-evaluation instruments. They were: Trenton State College, La Guardia Community College, Cook College--Rutgers University, Drexel University, and the University of Waterloo (Ontario, Canada). It must be pointed out, however, that those institutions used separate instruments for each status group. Other evidence for the need to evaluate perceptions of status group members using one standardized instrument will be discussed further in the Review of the Literature, Chapter II.

3. Four Areas of Support Are Essential for Cooperative Education Program Success

Just as it was essential to know how administrators, faculty, students, employers, and cooperative education coordinators perceived an individual cooperative education

program, so also was it essential that critical support categories be identified as a framework within which to analyze those perceptions.

James W. Wilson, Director, Cooperative Education Research Center, Northeastern University, proposed two standards for judging the adequacy of cooperative education evaluation criteria. First, the criteria must be functional, constituting "a fundamental expression of some explicit notion of the nature and excellence of cooperative education." Second, they must be "sufficiently general to be applicable to the full range of programs that fall within a specific conception of cooperative education."⁵

Wilson further suggested two primary criteria for assessing the excellence of cooperative education programs:

1. The program must demonstrate conclusively that it has been conceived, designed, and is functioning as an education program within the context of an institution of higher education.
2. The program must demonstrate that it is an integral, functional, and vital element of the institution with good prospects for continued viability and development.⁶

Wilson identified other inferential secondary criteria which he described as "functional and universal in their applicability:"

1. The major objectives of the program are directed toward student learning.

2. The program is, in fact, reaching students and serving their educational needs.
3. There is broad-based institutional commitment to the program.
4. There is evidence of careful planning of policies and procedures for achieving the objectives of the program.
5. Educationally meaningful co-op jobs are being obtained.
6. The staff are supportive of the program and competent to execute it.
7. There is adequate financial support.
8. The program is likely to continue and prosper over the next several years.⁷

Sheila C. Gordon, formerly Associate Dean of Cooperative Education, currently Development Director at LaGuardia Community College, and Harry N. Heinemann, Dean of Cooperative Education there, have suggested a framework for developing an internal evaluation system for cooperative education programs. In their model, three categories of objectives were identified as relevant:

1. Programmatic Goals--the specific set of expectations established by the institution for the co-op program per se;
2. Operational Objectives--typically process-oriented, short-term, and readily measurable;
3. Institutional Objectives that cooperative education can help achieve.⁸

Gordon and Heinemann indicated that, specifically, a good internal evaluation should provide information which:

1. Points out programmatic weaknesses that need to be strengthened;
2. Guides the growth and development of the program;
3. Allows administrators and faculty to reassess and possibly change the co-op program's objectives;
4. Allows for the examination of existing priorities;
5. Is relevant and interesting to faculty, administrators, employers, students, and others.⁹

The criteria established by Wilson, and the goals and objectives identified by Gordon and Heinemann were consistent with four specific categories of support essential to cooperative education program success. These categories were listed in an Evaluator Training Manual published in 1979 by the National Commission for Cooperative Education and used by the Commission to train outside evaluators for cooperative education programs:¹⁰

1. Institutional Commitment--this support category is consistent with Wilson's requirement that co-op be a functioning education program, and that it is a vital, functional, integral element of the institution. It is also consistent with Gordon and Heinemann's institutional objectives. This category would also address financial support, faculty involvement, and policy issues.
2. Program Operation--this support category is consistent with Wilson's emphasis on careful planning and competent staffing. It is also consistent with Gordon and Heinemann's programmatic goals and operational objectives.
3. Student Participation and Learning--this support category is consistent with Wilson's injunction that

programs be directed toward student learning, that the program reach students, and that educationally meaningful jobs be obtained. It is also consistent with Gordon and Heinemann's requisite measurable learning objectives.

4. Employer Participation--this support category serves as the linchpin for the other, more academic, support categories; for without adequate employer involvement, there is no co-op program. This category is also consistent, however, with Wilson's call for educationally meaningful jobs, and Gordon and Heinemann's mandate that results be relevant to faculty, administrators, employers, students, and others.

Thus the four support categories--institutional commitment, program operation, student participation and learning, and employer participation--are compatible with Wilson's criteria and Gordon and Heinemann's indices of good internal evaluation.

Action Evaluation Definitions

Carol H. Weiss, Columbia University, stated that what distinguished evaluation research from other methods of social research was "not method or subject matter, but intent--the purpose for which it is done."¹¹ Francis W. Hoole, Political Science Department, Indiana University, indicated, however, that "Within the evaluation research movement there is no commonly accepted definition of the concept of evaluation:"

However, most evaluation researchers would not disagree too much with Suchman's view of evaluation as "the determination (whether based on opinions, records, subjective or objective data) of the results (whether desirable or

undesirable; transient or permanent; immediate or delayed) attained by some activity (whether a program, or part of a program, a drug or therapy, an ongoing or one shot approach) designed to accomplish some valued goal or objective (whether ultimate, intermediate, or immediate, effort or performance, long or short range)." There would also be considerable agreement with Joseph S. Wholey and his associates when they contend that "evaluation is research, the application of the scientific method to experience with public programs to learn what happens as a result of program activity."¹²

Evaluation theory remained a relatively new system of principles. According to Leonard Rutman, author of Planning Useful Evaluations: Evaluability Assessment (1980), some disenchantment had begun to surface. Critics, Rutman pointed out, feared that the evaluation "boom" led to almost faithful belief in the efficacy of the procedure. According to Rutman, rigorous analysis of the methodological strengths and weaknesses of program evaluation were few, but he concluded that:

. . . [The] basic research methods that underly program evaluation are quite well developed. There are generally accepted procedures for sampling, determining the reliability and validity of measurement instruments, and data analysis. . . . Those who defend the methodology of evaluation claim that the criteria used by critics are too strict, and that there is a bias as to what constitutes acceptable methodology (e.g., a preference for experimental designs and quantitative data).¹³

However, Robert Perloff, 1978 President of the Evaluation Research Society, pointed out that while the field of program evaluation was still a relatively new decision-making tool, nonetheless:

When all is said and done, the major purpose of an evaluation is to provide as rational and as comprehensive as possible a basis for making decisions vis à vis program formulation or adoption, changes, or dissolution. However, problems associated with improving the contributions of evaluation information to decision-making continue to be among the more complex facing the evaluation researcher.¹⁴

Although Weiss, Hoole, Suchman, Wholey, Rutman, and Perloff all agreed that program evaluation should be undertaken soberly and advisedly, they also tacitly agreed that it was worth doing. Thus, for the purposes of this study, Weiss's stated intent--the purposes for which internal program evaluations were done--became the study's operational definitions.

1. Use for Decision Making. Evaluation is intended for use. Where basic research puts the emphasis on the production of knowledge . . . evaluation starts out with use in mind [*italics added*].
2. Program Derived Questions. The questions that the evaluation considers are the decision-maker's questions rather than the evaluator's. . . . The common evaluation hypothesis is that the program is accomplishing what it set out to do.
3. Judgmental Quality. Evaluation compares "what is" with "what should be." . . . [The] investigator . . . is concerned with phenomena that demonstrate whether the program is achieving its intended goals.
4. Action Setting. Evaluation takes place in an action setting, where the most important thing that is going on is the program.
5. Role Conflicts. Interpersonal frictions are not uncommon between evaluators and practitioners. . . . Furthermore, the judgmental quality of evaluation research means that the merit of their

[practitioner's] activities is being weighted.
 . . . The possibilities for friction are obvious.

6. Publication. In evaluation research probably the majority of study reports go unpublished.
 . . . Yet if progress is to be made in learning which types of programs work and which do not, a cumulative information base is essential.
 . . . If only the specific program has been tested and not the concepts or the approaches (variables) on which it is based, the study makes little contribution to developing knowledge.

7. Allegiance. The evaluation researcher has a dual, perhaps a triple, allegiance. He has obligations to the organization that funds his study. . . . [He] has responsibility to contribute to the improvement of social change efforts. . . . On both counts, he has commitments in the action arena. He also has an obligation to the development of knowledge and to his profession.¹⁵

To summarize, this study was developed using three theoretical constructs regarding cooperative education: that it has validity as a method of education; that programs can be evaluated based on the perceptions of college administrators, faculty, students, cooperative education coordinators, and participating employers; that institutional commitment, program operation, student participation and learning, and employer participation are the areas of support that are generalizable to all cooperative education programs in the United States.

Additionally, the research was based on seven definitions of program evaluation currently extant in evaluation theory, and expressed by Weiss. The evaluation was conducted with the understanding:

it would be used for decision making; that it would raise decision-makers' questions; that it would compare "what is" with "what ought to be;" that it would take place in an action setting; that role conflicts would be a possibility; that results should contribute to refinement of concepts and be publishable; and that the researcher would be aware of allegiances to the funding organization, to efforts at social change, and to the development of professional knowledge.

Within this theoretical framework, the study was conducted to present a systematic view of the phenomena, cooperative education program success, by specifying relations among the variables group status and support categories, with the purpose of explaining and predicting program success.¹⁶

Purpose of the Study

The primary purpose of this study was to develop national norms of excellence for alternating cooperative education programs at four-year colleges and universities in the United States. Specific secondary purposes were to develop a standardized consensus-based self-evaluation instrument for alternating cooperative education programs at those same institutions; and to test whether or not the variables group status and support categories interacted to affect the manner in which individuals involved in the

program perceived it. A final purpose was to stimulate interest in internal self-evaluation within the cooperative education community, which had no such model, and to contribute to program refinement in terms of identified norms of excellence.

Limitations of the Study

This study was essentially aggregative and summative. Conclusions were based on the norm perceptions of participants in the research, rather than norms developed by the researcher. To that extent, the research was not prescriptive, but rather descriptive of discovered norms of excellence for the target population.

Statement of the Problem

The problem under consideration was expressed by these questions: (1) "Do college administrators, faculty, cooperative education coordinators, students, and participating employers agree about the success of the cooperative education program in which they are participants; (2) Do participants agree to program success, based on degree of institutional commitment, quality of program operation, level of student participation and learning, and level of employer participation; (3) Does the status of cooperative education program participants interact with the affective support categories, previously

identified as essential to program success, so that there are differences in perceptual response when reacting to questions about program success; and (4) Can status group responses to perceptual questions be measured against determined support categories by a standardized questionnaire instrument intended to measure interaction between status group membership and support categories?

Method and Procedures

In September, 1981, a group of twelve cooperative education experts (defined as directors of cooperative education programs at four-year institutions with alternating term models, who had demonstrated success over at least a five-year period) were identified, contacted, offered an honorarium of \$250 each, and asked to participate in a four-round Delphi Technique to establish national norms of excellence for such cooperative education programs. All twelve agreed, in writing, to participate, and all twelve participated in the process until its conclusion in the spring of 1982. The Delphi Consultants identified were: Dr. Fred Abitia, California Polytechnic and State University; Dr. H. E. Bowling, Virginia Polytechnic and State University; Dr. Steven H. Eichmeier, Weber State College (Utah); Dr. Luther B. Epting, Mississippi State University; Dr. John V. Hamme, North Carolina State University;

Dr. Maurice P. Hartley, Cook College--Rutgers University;
Dr. William Hitch, Georgia Institute of Technology;
Dr. Alan B. McNabb, Indiana University; Paul Pratt,
Northeastern University; E. Sam Sovilla, University
of Cincinnati; Patricia van der Vorm, American University;
and Steven Yates, Texas A&M. Five of the consultants
represented four-year institutions with "traditional"
cooperative education programs where most of the students
were in the engineering curriculum. The remaining seven
were from more eclectic programs. Eight of the consul-
tants represented state supported institutions. All
consultants were from predominantly white institutions.
One consultant was from the Northeast region, three were
from the Mid-Atlantic region, three were from the Southeast
region, two were from the Mid-west region, one was from
the Southwest region, and two were from the West region
(as defined by the Cooperative Education Director,
1981-1982).

The initial use of the Delphi Technique represented
Stage 1 of a two-year research project conducted by
Professional Experience Programs, Old Dominion University
and funded, in part, by two research grants from the
Cooperative Education Branch, Title VIII, of the United
States Department of Education. The first three stages
of the research were completed in academic year 1981-1982,

and the remainder in academic year 1982-1983. Stages one through six occurred as outlined below.

Stage 1. Utilization of the Delphi Technique to Determine a Consensus Among Twelve Nationwide Geographically Representative Cooperative Education Professionals Concerning National Norms of Excellence for Alternating Cooperative Education Programs at Four-Year Institutions.

The Delphi technique is a method for structuring collective judgments when a problem requires the contribution of thoughts from a group whose members cannot meet face to face. It was originally developed by Olaf Helmer for the Rand Corporation.¹⁷ A panel of participants was selected and polled on a problem of mutual interest. They remained anonymous as responses were collected and feedback was given in the form of median response. Second, third, and fourth round responses were usually stabilized and ideally represented the most rational judgment of the group.

By February 8, 1982, a computer search of the Delphi Technique had been made by the researcher within seven data bases. Five hundred twenty-eight citations were found within these data bases: ERIC, 271; Social Science Citation Index, 23; Psychological Abstracts, 28; Abstracted Business Information, 49; Comprehensive Dissertation Abstracts, 83; Sociological Abstracts, 6; and Management Contents, 68. Of the 528 citations found,

250 proved useful to the purposes of this research.

The most notable and thorough among the critics was Harold Sackman, who did not view the technique as scientific, because to Sackman consensus data was biased data.¹⁸

The Sackman criticism was addressed in consultation with Dr. Wayne K. Talley, Associate Professor, Economics, Old Dominion University. Using his model, described in "Stability and Agreement Criteria for the Termination of Delphi Studies" (with Jarir S. Dajani, and Michael Z. Sincoff),¹⁹ a nonparametric χ^2 test was used to check for the independence of each of the Delphi rounds from responses obtained in them. The four Delphi rounds used were found to be independent of the responses obtained in them at the .05 level of significance, thus strengthening the conclusion that actual agreement was achieved by the Delphi participants, rather than that their responses represented random concurrence.

The Delphi Questionnaire developed by the researcher contained four rounds and involved the twelve identified consultants who were directors of successful cooperative education programs. Each consultant constructed sentences which were initiated with the active verbs increase, decrease, maintain, develop, and promote, and were categorized in terms of institutional commitment, program operation, student participation and learning, and

employer participation. The consultants rated 319 generic norm statements on a Likert type scale from 1 (of highest importance) to 5 (of little or no importance). The consultants reached consensus on 90 items at the level "of highest importance" to quality cooperative education programs. These agreed-upon norms for quality program operation were utilized in the subsequently developed 90-item self-evaluation questionnaire.

Walter L. Gant, Assistant Superintendent, Yorktown Public Schools, gave invaluable consultation, based upon his utilization of the Delphi technique in educational matters for over a decade.²⁰ Peter M. Gotlieb shared his experience with the Delphi technique as it applied to important issues in cooperative education.²¹ The works of Gant and Gotlieb were relied upon heavily in this research.

Stage 2. Identification of Field-Test Institutions

Four field-test institutions were selected, primarily for their widely recognized program excellence, their willingness to participate in the research, and their geographic representativeness. These institutions administered the self-evaluation instrument to 100 people at each institution, who included administrators, faculty, coordinators, students, and employers. The institutions were: California State University--Fresno,

Central Connecticut State University, Southern Technical Institute (Marietta, Georgia), and Wilberforce University (Ohio).

Stage 3. Development of Self-Evaluation Instrument

The instrument was developed from norm statements generated by the Delphi consultants and administered by the method described by Donald A. Dillman in Mail and Telephone Surveys: The Total Design Method (1978).²²

Stage 4. Refinement of Self-Evaluation Instrument

Comparison of results among the four field-test institutions were made. The cooperative education coordinators at each institution evaluated the appropriateness of the instrument, particularly as to wording and distribution scales. The questionnaire was revised according to their critiques.

Stage 5. Identification of Sampling Institutions

Ten institutions were identified, primarily for program excellence, willingness to participate, and representative locations. They were:

Eastern Kentucky University
Drake University
South Dakota State University
Southwest Missouri State University
Temple University
University of Arkansas--Pine Bluff
University of Georgia
University of Iowa
Western Carolina University

Stage 6. Sampling of Refined Self-Evaluation Instrument

Each of the ten institutions listed above administered the questionnaire instrument to 50 individuals comprising administrators, faculty, coordinators, students, and employers.

After the completion of Stages 1 through 6, the data from the four field-test and ten sample institutions were collated. A proposal was written and funded, for \$2,000.00, to obtain assistance with statistical analysis of the collated data. Dr. Philip R. Wohl, Graduate Program Director for Computational and Applied Mathematics, identified Karan Pal Singh, graduate assistant in the program, for that assistance. During the summer of 1983, Singh assisted, under Wohl's supervision, in determining the proper model for statistical analysis of the data, and in writing and running the program at Old Dominion University's Computer Center.

The data from 14 individual institutions were subjected to Two-Way Analyses of Variance and Multiple Classification Analyses, utilizing the Statistical Package for the Social Sciences.²³ Responses to the questionnaire were ranked according to status group mean score deviations. Data from the four field-test institutions, as well as data from the ten sample institutions, were separately subjected to Three-Way

Analyses of Variance and Multiple Classification Analyses of those Three-Way Analyses.²⁴

The statistical analyses were performed in order to determine whether or not status of respondents interacted with support categories in determining cooperative education program success at four-year institutions of higher education which participated in the research. In the Three-Way Analyses of Variance and Multiple Classification Analyses, institutions were ranked by mean score deviations. Results from the survey were analyzed by individual institution as well as by two aggregations: four field-test institutions and ten sample institutions. The results of the use of these methods and procedures will be fully discussed in Chapter III.

CHAPTER I

ENDNOTES

¹1983 University Catalog (Norfolk, Va.: Old Dominion University, 1983), p. 20.

²James W. Wilson, guest ed., The Journal of Cooperative Education, Special Thematic Issue: Program Evaluation, XVI, No. 3 (Summer, 1980), p. 5.

³The Federal Register (Washington, D.C.: U.S. Government Printing Office, December 31, 1980), p. 96834.

⁴John Dewey, The Quest for Certainty: A Study of the Relation of Knowledge and Action (Gifford Lectures--1929) (New York: G. P. Putnam & Sons, 1960). Mortimer Adler, The Paideia Proposal: An Educational Manifesto (New York: MacMillan Publishing Company, Inc., 1983).

⁵James W. Wilson, "Criteria for the Evaluation of Cooperative Education Programs," Journal of Cooperative Education, Special Thematic Issue: Program Evaluation, XVI, No. 3 (Summer, 1980), pp. 103-104.

⁶Ibid., p. 104.

⁷Ibid., p. 105.

⁸Sheila C. Gordon and Harry N. Heinemann, "Structuring an Internal Evaluation Process," Journal of Cooperative Education, XVI, No. 3 (Summer, 1980), p. 48.

⁹Ibid., p. 47.

¹⁰From an unpublished manual used by the researcher during a training seminar jointly sponsored by the National Commission for Cooperative Education and the University of South Florida, Tampa, September, 1979.

¹¹Carol H. Weiss, Evaluation Research: Methods for Assessing Program Effectiveness (Englewood Cliffs, N.J.: Prentice-Hall, 1972), p. 6.

¹²Francis W. Hoole, Evaluation Research and Development Activities, Vol. 68, Sage Library of Social Research (Beverly Hills, Calif.: Sage Publications, 1978), p. 17. Suchman's definition is found in E. A. Suchman, Evaluation Research: Principles and Practice in Public Service and Social Action Programs (New York: Russell Sage, 1967), pp. 31-32. Wholey's definition is found in J. S. Wholey, et al., Federal Evaluation Policy: Analyzing the Effects of Public Programs (Washington, D.C.: Urban Institute, 1973), p. 19.

¹³Leonard Rutman, Planning Useful Evaluations: Evaluability Assessment, Sage Library of Social Research, Vol. 96 (Beverly Hills: Sage Publications, 1980), pp. 31-32.

¹⁴Robert Perloff, ed., Evaluation Interventions: Pros and Cons, Sage Research Progress Series in Evaluation, Vol. 2 (Beverly Hills: Sage Publications, 1979), p. 9.

¹⁵Weiss, pp. 6-8.

¹⁶Fred N. Kerlinger, Foundations of Behavioral Research, 2nd ed. (New York: Holt, Rinehart and Winston, Inc., 1973), p. 9.

¹⁷Olaf Helmer, Analysis of the Future: The Delphi Method (Santa Monica: Rand Corporation, 1967).

¹⁸Harold Sackman, Delphi Critique (Lexington, Mass.: Lexington Books, 1975).

¹⁹Jarir S. Dajani, Michael Z. Sincoff, and Wayne K. Talley, "Stability and Agreement Criteria for the Termination of Delphi Studies," Technological Forecasting and Social Change, Vol. 13, No. 1 (January, 1979), pp. 83-90.

²⁰Walter L. Gant, "Consensus Among Status Leaders of Selected Formal Organizations Concerning the Goals of the Elementary Schools in the Commonwealth of Virginia," The School of Education, The University of Virginia, June, 1969 (unpublished Doctoral Dissertation). Gant has utilized the technique frequently since 1969 and has both published and unpublished documentation of its utility. He has freely given matter-of-fact, common-sense advice to this researcher on numerous occasions.

²¹Peter M. Gotlieb, "Cooperative Education: Selected Issues and Their Significance," Doctoral Dissertation (unpublished) (New York: Teachers College, Columbia University, 1981), pp. 1-240.

²²Donald Dillman, Mail and Telephone Surveys: The Total Design Method (New York: John Wiley and Sons, 1978).

²³Norman H. Nie, et al., Statistical Package for the Social Sciences, 2nd ed. (New York: McGraw-Hill, 1975), pp. 398-422.

²⁴Ibid.

CHAPTER II

BACKGROUND OF THE STUDY

Although cooperative education, as it was known in 1984 in the United States, was an outgrowth of a study of engineering education undertaken by Professor Herman Schneider at the University of Cincinnati in 1901, and although the concept had spread from there to other engineering programs by 1906, it was not until 1921 that the idea was more universally applied in higher education. President Arthur E. Morgan of Antioch College in 1921 first applied the cooperative education program in the liberal arts, but also developed a different, less vocational, approach.¹ At Antioch, emphasis was placed on "the importance of work experience to the understanding of life," rather than on specific vocational skills or the amount of money which could be earned by a student.²

Despite adverse economic conditions in the 1930's, cooperative education continued to expand slowly into a variety of disciplines and students continued to be hired by industry. Civil service reform also led to openings in federal agencies, but World War II brought problems: most cooperative education programs were either suspended or adapted to the war effort. During the fifteen years

immediately following World War II, fifty-one new cooperative education programs were founded, but the concept remained, well into the 1950's, one adopted primarily in schools of engineering.³

In 1957, with support from the Fund for the Advancement of Education, James W. Wilson of Northeastern University conducted a national study to discover whether or not students who had participated in cooperative education compared favorably with those who had not had this method of work experience education. The results of that study indicated that cooperative education students did, in fact, compare favorably. Between 1963 and 1970, one hundred eleven new programs were founded and existing programs continued to expand into new curricula.⁴

In 1965, under President Lyndon Johnson's push for the "Great Society," the federal government, through the then Office of Health, Education, and Welfare, instituted within the Office of Education a Cooperative Education Branch which from then through 1984 funded cooperative education programs in all branches of higher education. Awards to individual schools were as small as ten thousand dollars or as large as nearly a half million dollars. Awards were granted primarily in individual categories for either the administration of programs, to establish professional training centers, to

demonstrate the ability of institutions to expand cooperative education into all curricula, or for research. Funds were granted on the basis of a competitive application process. Administrative grants were awarded for a period of one year at a time, or for multiple year periods, not exceeding a total of five years. Training and research awards were funded on an annual basis. Research awards were discontinued in 1983. Demonstration grants were awarded for a three-year period. Thus, in 1984, as a result of nineteen years of federal support, nearly nine hundred cooperative education programs were at some stage of development at community colleges, four-year institutions, and a handful of graduate schools. Despite many differences in policy and program administration, cooperative education was broadly defined by the National Commission for Cooperative Education in 1978 in the following terms:

Cooperative education represents a working partnership in which an educational institution joins with an employer in a structured relationship. Its basic purpose is that of providing a means whereby a student can combine study at the institution with a work experience which is under the supervision of the employer in order to fulfill the total requirements of a particular educational program. Students engaged in such a program must be regularly matriculated students at the institution as defined by the institution.

The requirements of a cooperative education program include the successful completion of a specified combination of alternating classroom and

work experiences, being as frequent as morning and afternoon patterns or following the more traditional alternation of a full college term or terms. The total work experience is of sufficient duration to be considered a meaningful part of the program in which the student is enrolled, and is evaluated by the institution, the employer, and the student. Work experience must be preceded by a consultation between the student and a staff member of the institution and/or the employer, at which time the objectives of the work experience are discussed. A work experience should neither precede the first academic term of a student nor be initiated following graduation at the degree-granting institution, unless such student is involved in an articulated cooperative education program.

Whether cooperative education is mandatory or voluntary at an institution, student participation in work experiences should be considered a regular part of the degree program in the same sense as any of the institution's academic offerings.

Work experiences are to be appropriately related to the educational and career objectives of the particular student and at a rate of pay comparable to employees who do similar work. However, a student may work without pay for a social welfare or educational organization provided that the position is not one for which other persons are compensated by the organization. Some of the activities which would not be considered appropriate cooperative education experiences are life experiences, independent study, surveys, and travel.

It is expected that there will be various cooperative education models, including the use of mandatory or voluntary options, credit or noncredit for work experiences, and differences in the number, duration, and schedule of work experiences. Regardless of the model, the institution's calendar shall provide for a continuous and orderly advancement toward a degree for a cooperative education student.⁵

As cooperative education programs developed at campuses across the nation from 1965 until 1984, frequently with the aid of federal funds, two problems

emerged. The first of these was addressed by Robert L. Heybourne, in 1978, when he discussed "The Institutionalization of Cooperative Education." Heybourne pointed out that institutions of higher education often discontinued cooperative education programs as soon as federal support ceased:

Despite the fact that work experience education as practiced within the various cooperative education models is built upon a sound educational base, cooperative education programs have grown in a direct relationship to the amount of federal support given to individual institutions. This critical relationship has caused many institutions to refuse or neglect to utilize their own resources to support cooperative education, with the result that when federal funding ceases, so does the program.⁶

The second problem was that a void existed in research and theory regarding cooperative education program evaluation. Ralph Tyler, a member of Science Research Associates, indicated the magnitude of that void in research and theory in 1980, in his "Brief Overview of Program Evaluation." Tyler said, in part:

. . . But although significant progress is being made in developing procedures of program evaluation that are appropriate and adequate for this greatly enlarged conception, there are still critical problems that have not yet been fully solved. Among them are the identification and definition of program objectives . . . , the development of the range of valid, reliable, and practical means of appraising all of the major objectives . . . , the development of methods of analysis and interpretation of evaluation data that appropriately serve the various purposes of evaluation and the extension on a broad scale of the internal uses of evaluation. Working on these problems should be on the agenda for the future.⁷

Thus, at the time the research described in this dissertation was begun in 1981, cooperative education program evaluation had been inconsistently administered, and had been facilitated primarily where federal funds for such evaluation were available. Many colleges and universities without federal funds had not budgeted institutional funds for evaluation by outside consultants, nor had any colleges and universities with cooperative education programs begun to develop individual, consensus-based internal self-evaluation instruments. Based upon an informal survey of selected institutions, using correspondence and personal telephone contacts made by the author of this dissertation in 1981 which located only five institutions of higher education with exemplary cooperative education program self-evaluation instruments, it was concluded that the majority of cooperative education programs had no ongoing method for evaluating whether or not cooperative education program objectives had been met. The survey also indicated that the majority of cooperative education programs which used some form of evaluation had been evaluated by a variety of anecdotal methodologies.

In 1981, 66 cooperative education directors or coordinators, as well as employers and private consultants, held quasi-credentials as outside evaluators of cooperative

education programs at institutions of higher education. Those who held quasi-credentials were 35 persons listed as having been trained by the National Commission for Cooperative Education during 1978-1979⁸ as well as 31 persons whose credentials were first circulated by the Cooperative Education Division of the American Society for Engineering Education in 1981.⁹ One individual appeared on both lists. In addition, there were an unknown number of outside evaluators of college and university cooperative education programs whose names appeared on neither list. No documentation was recorded on how many evaluations were conducted annually by these outside evaluators, nor was there any documentation of specifically how many outside evaluations were annually conducted at four-year colleges and universities with alternating cooperative education programs.

Consensus among the many administrators of cooperative education programs indicated that cooperative education programs at four-year colleges and universities across the nation were in need of an adequate, cost-effective self-evaluation tool to assess program objectives.

To summarize, there were no field-tested self-evaluation models in existence for four-year alternating cooperative education programs in 1981 when the research described in this dissertation was initiated. A consensus

self-evaluation model was developed and tested to address the need for a method to better analyze existing cooperative education program objectives. The model was also developed and tested to define the elements which were necessary components of exemplary alternating cooperative education programs at four-year colleges and universities. The review of the literature which follows gave indication that such research was needed.

Review of the Literature

The literature on Cooperative Education consists primarily of descriptive journal articles, principally in the Journal of Cooperative Education. . . . In recent years some research has been conducted, and the Cooperative Education Association has begun to sponsor a series of research monographs. While some of this research has been conducted by outsiders, most of it has been conducted either by Cooperative Education practitioners or under the sponsorship of the Cooperative Education community and reported in publications directed at this community.

Peter M. Gotlieb,
"Cooperative Education:
Selected Issues and Their
Significance" (1981)¹⁰

In his extensive review of the cooperative education literature through 1981, Gotlieb identified the following categories of concern to cooperative education practitioners: (1) history and growth; (2) philosophy and goals/objectives; (3) program planning, implementation, administration, and personnel; (4) financing of programs;

(5) evaluation of programs and assessment of their outcomes; and (6) professionalism and credibility.¹¹

The review of the literature by the author of this dissertation took into account all of Gotlieb's categories; it focused specifically on "5. Evaluation of programs and assessment of their outcomes."

The earliest reference to cooperative education program evaluation was in James W. Wilson's "Concerns and Issues of Cooperative Education: Survey of Cooperative Education: 1973."¹² Because Wilson developed a more comprehensive set of criteria in 1980, this reference is cited only as the first in the literature.¹³

In 1974, Phillip J. Laurer and Alan B. McNabb suggested steps toward the development of an evaluation system for cooperative education programs,¹⁴ and the following year Richard Swanson surveyed Cooperative Education Association members in order to establish a definition of objectives and evaluation criteria for cooperative education programs.¹⁵ In 1975, Aaron Lucas, then chief personnel officer for the state of Florida, warned that the vagueness of objectives and methods of assessment, combined with "cost accounting" procedures in higher education, would make it difficult for cooperative education programs to continue without more specific methods of assessment.¹⁶ The following year James E.

Garmon and Ronald A. Grant gave a detailed account of a cooperative education program evaluation procedure for community colleges in the state of California, as well as a step-by-step guide for its implementation.¹⁷ The evaluation program, called Community College Occupational Programs Evaluation System (COPES) was directed to all occupational education programs in California community colleges, with no particular emphasis on cooperative education. A questionnaire was used but the primary emphasis was on outside evaluation.

Leslie C. Squires, E. Daniel McKenna, and Roger Spilde were the first cooperative education practitioners to suggest that questionnaires should be used as a principal tool in cooperative education program self-evaluation. Their 1977 survey, however, used individual questionnaires for each of the status groups involved in the cooperative education program at Concordia College.¹⁸ Also in 1977, John S. Duley and Sheila Gordon suggested that the "potential outcomes" of cooperative education programs should be explored through program evaluation.¹⁹

One model for cooperative education program evaluation was reported in the Journal of Cooperative Education in 1979. Designed by Patricia C. van der Vorm, Nancy R. Jones, and Ann C. Ferren, the model included input from cooperative education coordinators, university

administrators, faculty, students, and participating employers involved at The American University. The project, sponsored through a grant from the U.S. Office of Education, brought together 35 individuals to discuss and evaluate the university's cooperative education program.

The General Workshop Outcomes covered three topics:

(1) communication, (2) role identification, and (3) program evaluation.

. . . [S]tudents expressed a need for more thorough preparation for the actual work experience; they also wanted a better understanding of the function of the faculty coordinator and of the academic expectations. Faculty also expressed some confusion about their role and responsibilities. . . . Employers felt somewhat confused about their role with respect to the academic and evaluation components. Staff expressed some frustration in trying to serve all three other populations when they have conflicting goals.²⁰

Although van der Vorm, Jones, and Ferren indicated that the workshop model for cooperative education program self-evaluation was enthusiastically received, no other authors were found who developed similar models. Also, during 1979, James W. Hall indicated that there was no model for program evaluation in the overall field of experiential education. In the Chronicle of Higher Education, he urged, "Let's Find a Way to Evaluate Experiential Education."²¹

By 1980 it was understood that the cooperative education community needed generally accepted norms of

excellence for cooperative education programs, and that those norms needed to be tested in a consistent manner. Tyler made clear, in the Summer, 1980, issue of the Journal of Cooperative Education, that although there were many sorts of educational evaluation tools, the most pressing problem in the cooperative education field was program evaluation:

Developers, teachers, coordinators, and employment supervisors, as well as administrators who are responsible for the program need to know whether the problem is being implemented as planned, and if not what should be done to assure an effective cooperative education program. Then, . . . responsible administrators as well as teachers, coordinators, and employment supervisors can use the results of periodic monitoring to learn where the program is not functioning and to indicate the need for actions to prevent the deterioration of the program.²²

Tyler indicated that program evaluation was needed by those administrators who were responsible for program decision-making in order to decide on program continuance; by employers, faculty members, and cooperative education coordinators, in order to appraise the success of their work; and by accrediting agencies and the interested public, in order to use it as a basis for understanding whether cooperative education programs are effective.²³ From Tyler's point of view, however, program evaluation was not without its problems. He cited four critical issues concerning program evaluation: First, there was the problem of formulating program objectives in order

that those objectives could be evaluated. Second, there was the problem of selecting or developing the means for getting evidence of the behavior to be appraised. Third, there was the need for development and use of appropriate methods of analysis and interpretation of the appraisal data. Fourth, there was the problem of failure on the part of program staff to utilize internal appraisals.²⁴ These problems were not insurmountable, however, according to Tyler. In terms of formulating program objectives, he suggested that the solution was to "recognize what important things need to be learned and could be learned by a proposed program and then to define these things in terms of behavior, using behavior in the broad sense to refer to any kind of reaction a human being is capable of making." Selecting more flexible means of appraisal than the usual "paper and pencil tests" solved the problem of developing the means for getting evidence of the behavior to be appraised:

For example, questionnaires are employed to obtain information about work habits and study habits and also to find out from students, teachers, and employment supervisors what the program is in actuality as a check on its implementation. Interest questionnaires are commonly being used to get data on the patterns of interest in work, study, and civic affairs that co-op students develop. . . . It appears likely that the problem of finding and using appropriate techniques of data collection will largely be solved within the next dozen years.²⁵

Using appropriate methods of analysis and interpretation of the appraisal data was impeded by the academic tradition of "test scoring," according to Tyler, "But most of the uses of program evaluation require analytical and descriptive data answering such questions as: which objectives are being reached and which are only partially attained?; Which parts of the program are implemented as planned?; What kinds of students are developing desirable work habits?; etc." Tyler acknowledged that appropriate procedures for analysis and interpretation of cooperative education program evaluation data were slowly being developed, ". . . but further work is greatly needed to provide for the many different particular circumstances in which cooperative education programs are found."²⁶

To increase the use of internal self-evaluation of cooperative education programs, it was only necessary, in Tyler's view, that academicians overcome their practice of looking at what others were doing as the standard for their programs, rather than seeking relatively objective evidence about their own program operations and outcomes. Tyler conjectured that the cooperative education community had to face the reality that, "If new and improved programs of cooperative education are to be soundly developed, we need to go beyond conformity to

common practice and utilize program evaluation as a major tool of development and improvement.²⁷

Morris T. Keeton, Executive Director of the Council for the Advancement of Experiential Learning (CAEL) enumerated new developments in evaluating experiential learning programs in 1980.²⁸ Keeton's enumeration bore similarities to Tyler's enunciated critical problems. Keeton cited these new developments:

1. The 1977-1978 CAEL survey of 600 colleges and universities had concluded that neither liaison persons nor anyone else at institutions of higher education could provide a comprehensive picture of the use of internships, practica, field experience education, or other forms of sponsored experiential learning at individual institutions.
2. A search for exemplary in-house self-evaluation models led to concern over whose educational objectives were to govern: "the students?; a particular professor's?; a cooperative education coordinator's or a classroom teacher's?; a department's or the colleges's?; or all of some combination of these?"²⁹ Learning to map intended program outcomes was necessary in order to successfully evaluate program performance.
3. Experiential learning programs at institutions of higher education needed a more systematic program of educational auditing. Where such auditing is routinely done, and where its primary purpose is "the identification of needed improvements and the allocation of resources to that end once they are chosen--the dangers of program failure and of audits leading to terminations of program or dismissal of staff are greatly reduced."³⁰
4. Training external evaluators and designing accreditation teams for competence in assessing experiential learning programs was a necessity. Although untrained program professionals could go far in accumulating internal evaluation data, it

was unfair and inappropriate "for accrediting teams and reviewers to evaluate institutions emphasizing experiential learning if these bodies do not include people experienced in conducting such programs and trained for competent and objective evaluation of them."³¹ To that end CAEL began to offer training.

Keeton concluded that training of institutional evaluators for evaluation of experiential education programs was a necessary next step toward assuring that visiting teams and reviewing bodies contained an adequate number of people qualified to evaluate these programs. ". . . [A]ccrediting bodies will not be able to carry out their priority purpose of contributing to the improvement of member institutions with such programs until this needed sophistication of their examiner corps has occurred."³²

Again, in 1980, John L. Chase, former Chief, Cooperative Education Branch, Division of Training and Facilities, U.S. Department of Education, reminded those institutions with federally funded cooperative education programs of the two-fold nature of accountability: that of the administering agency (the Cooperative Education Branch) to higher Executive Branch authority and to the Congress; and that of applicants and grantees (college or university cooperative education programs) to the then Office of Education.³³ Performance reports from federally funded cooperative education programs were required of program directors at the end of each grant year, and

those program directors were requested to provide factual evidence of cooperative education program accomplishment. Chase suggested that the kind of evidence requested allowed the funding agency staff to compare performance with original plans, and also permitted inter-institutional comparisons. According to Chase, "The information requested is the kind any competent manager should have at his fingertips. Supplying it should pose no special problem."³⁴

Yet cooperative education professionals in 1980 needed to find ways to produce program information that "any competent manager should have at his fingertips." Gordon and Heinemann, whose categories of cooperative education objectives were discussed in Chapter I (Pages 10-11), indicated that a variety of questions need to be answered in order to build and sustain effective cooperative education programs through internal evaluation systems:

Is the co-op program achieving its objectives? If not, why not? Are the characteristics of co-op students changing? Are they well prepared and performing well on the job? Are employers as satisfied with the program as in the past? Is changing technology shifting the knowledge and skills needed by employers? Are the policies and procedures effective? Does the record keeping system need to be changed? What are the program costs? Is the student's educational experience being strengthened? Are the institutional goals for co-op being met?³⁵

Gordon and Heinemann concluded that an internal evaluation system was the key to a viable cooperative education program. This internal evaluation system could "provide crucial information about the program and indications for change; it can make others more aware of co-op and its interdependent function in the institution; and it can garner new support and enthusiasm for cooperative education."³⁶

During 1980, Marshall E. McGhee, McGhee and Associates, identified seven examples of cooperative education program elements which needed evaluation: (1) program philosophy and its relationship to institutional mission and goals; (2) program objectives, both academic and educational, as well as operational; (3) structural design; (4) policies and procedures; (5) intra-institutional relationships; (6) program income and expense; and (7) cooperative education program staff skill.³⁷ McGhee indicated that data collected and analyzed came in three primary forms, quantitative, qualitative, and comparative; and should provide specific measurements associated with the findings. But McGhee also noted that, "One day cooperative education will have criteria which its professionals have agreed upon for furthering the development of cooperative education. Such criteria would certainly provide guidelines for new program development."³⁸

Dorothy E. McNutt, Chairperson, Division of Business, College of the Mainland, Texas City, Texas, found yet another reason in 1980 for augmenting institutional internal cooperative education program evaluation: that of developing faculty support. Citing efforts to establish cooperative education program objectives at eight institutions of higher education, McNutt concluded that "The faculty are as important to the success of CE [cooperative education] as the process that administrators design for their participation."³⁹ The following varied processes for identifying cooperative education program objectives were documented by McNutt:

1. The 1978 Cooperative Education Goal-Setting Workshop sponsored by Concordia College, Moorhead, Minnesota, at which workshop faculty, administrators, and cooperative education staff enumerated 14 program goals through a nominal group process.
2. The 1978 workshop conducted at Central College, McPherson, Kansas, in which faculty recommended the identification of skills, knowledges, and behaviors necessary for cooperative education students to successfully complete a course of study based on classroom performance and work experience.
3. The cooperative education workshop at Elgin Community College, Elgin, Illinois, in January, 1978, in which faculty groups determined how cooperative education could have uniformity of goals and still preserve programmatic differences.
4. The experience of North Harrison County College, Houston, Texas, which by 1978 had cooperative education goals established by the cooperative education program director, with support of administrators, and confirmation by faculty.

5. The outside evaluation of North Iowa Area Community College, Mason City, Iowa, 1979, which confirmed faculty support of cooperative program goals when faculty served on an advisory council for development of cooperative education.

6. The evaluation report for Cooperative Education at North Lake and Cedar Valley Colleges, Bloomington, Minnesota, 1979, in which it was concluded that administrators at each campus had provided opportunities for the faculty to shape cooperative education to fit the mold of their specific student body and community.

7. The five-step plan developed at Weber State College, Ogden, Utah, 1979, through which faculty became "stockholders" in the cooperative education program by making the program acceptable at the instructional norm level.

8. The experience of College of the Mainland, from 1967 through 1980, where the mission statement generated by the board of trustees included experiential education and faculty chose cooperative education as the best strategy for carrying out that mission.⁴⁰

Joseph E. Barbeau, Professor of Education, Northeastern University, Boston, Massachusetts, shared McNutt's concerns in 1980 that the faculty role in cooperative education needed to be confirmed. Barbeau suggested that cooperative education program evaluation should be directed toward: (1) contributing to decisions about program installation; (2) contributing to decisions about program continuation, expansion, or "acceptability;" (3) contributing to decisions about program modification; (4) obtaining evidence to rally support; (5) obtaining evidence to rally opposition; (6) contributing to the understanding of basic psychological, social, and other

processes. Barbeau indicated that cooperative education program evaluation sought to accomplish three objectives: (1) assess the level of commitment and support; (2) determine the degree of "institutionalization" of program; and (3) discover problem areas in program operation.⁴¹

Barbeau postulated that, "Assessing faculty's attitudes and behavior is essential in making judgments regarding the degree to which commitment, acceptance, and effectiveness are achieved." He further raised a set of questions not unlike those of Gordon and Heinemann:

Are there problems with the calendar?
Can students on co-op jobs get the required courses when they need them? Can these students meet program requirements? Does the faculty assure that learning is the prime focus, not earning? Are the perceptions of the students, administrators, and employers consistent with those of the faculty? Does the faculty feel the co-op program is meeting their perceived objectives? How is the co-op staff perceived by the faculty? Are there some departments in which the co-op program is more readily accepted than in others? If so, which ones and for what reasons? For those faculty who do not endorse the co-op concept, what is the source of their reluctance? Can this reluctance be overcome?⁴²

Barbeau concluded that it was essential that cooperative education program evaluation be motivated by the need to describe faculty's attitudes and behavior as accurately as possible.⁴³

Other issues emerged in 1980 as cooperative education practitioners discussed the best methods for program evaluation. Irwin Feifer feared that the cooperative

education community might begin to place too much emphasis on necessary, reliable, and valid measurement of program outcomes.⁴⁴ Feifer warned that measurement of cooperative education program objectives should be used as a supplement to, rather than a substitute for, good judgment:

. . . [T]oo often we find competent practitioners seduced into accepting the "measurement divinity" at the expense of their "programmatic smarts." This tendency is particularly prevalent in those fields for which knowledge of psychometric theory does not directly contribute to program expertise.

Unfortunately, we administrators and coordinators of cooperative education programs exhibit our own professional insecurities in this regard. We frequently push ourselves into rigorous measurement as a valid entity in itself, without adequate knowledge of the where's, when's, and especially the why's of its appropriateness.⁴⁵

Feifer's concern that measurement remain a supplement to good judgment was grounded in a thorough knowledge of measurement criteria. He developed seven theoretical statements regarding measurement of cooperative education program objectives intended to keep evaluation in balance between quantitative analysis and qualitative judgment:

(1) reliable and valid measures of outcomes are necessary in order to assess program effectiveness and provide feedback regarding performance; (2) absolute faith in measurement at the expense of professional judgment is neither necessary nor desirable; (3) the reliability of a measure is a necessary but not sufficient condition for

its validity; (4) reliability should be enhanced by specifying each behavior which contributes to an identified global concept regarding cooperative education; (5) practitioners should not demand measurement of 100% reliability at the risk of sacrificing the validity of a resulting measure; (6) when identifying global cooperative education concepts, the practitioner should attempt to define each behavior which is a component of that global concept; and (7) in programs that are concerned with human behavior, measurement is not synonymous with evaluation.⁴⁶ Feifer concluded that "Measurement is good. Measurement, however, is not holy. While we should not worship measurement, we should utilize it as fully as possible, for without reliable and valid measures of program outcomes we remain unsure."⁴⁷

James W. Wilson's criteria for cooperative education were discussed in Chapter I (page 9). His two primary criteria were: (1) that the cooperative education program must function as an education program within the context of an institution of higher education; and (2) that the program must demonstrate that it is vital to the college or university and will continue to grow and develop.⁴⁸ Because cooperative education program evaluation dealt with judgments about human behavior, Wilson was concerned that a code of ethics needed to be

developed to serve evaluators of cooperative education programs. He suggested this single generalized ethical principle: "All actions of the evaluator and all conditions surrounding the evaluator's assumption of responsibility to evaluate will contribute to a wise, fair, and useful evaluation."⁴⁹ Although Wilson's primary concern was to guide outside evaluators of cooperative education programs, his ethical principle had applicability to self-evaluation as well. The aim of the evaluation, according to Wilson, was to "communicate the competency and objectivity of the evaluation and of the evaluator," and focus on "program issues and situations."⁵⁰

Thus, by 1980, theory had been established for cooperative education program evaluation, structure for evaluation had been established, criteria had been developed, and ethical guidelines were in place.

By 1981 it was generally agreed by cooperative education professionals that no cooperative education program could exist without support from the faculty, students, employers, and administration. McKenna, Spilde, and Nieves-Squires reported the results of three years of repeated measures at Concordia College designed to provide a conceptual framework for measuring cooperative education program institutionalization.⁵¹ They indicated that the precise way in which the cooperative education

program is integrated into the broader program of an institution could be assessed by conceptual indicators as support, communication, acceptance, participation, and satisfaction.⁵² Results from questionnaires to program participants would, according to McKenna, Spilde, and Nieves-Squires, "reveal the essential nature of the involvement of various segments in a program of an institution."⁵³ Statements were developed for each conceptual indicator to precisely define criteria for cooperative education program institutionalization:

Support

1. Program objectives are consistent with institutional mission.
2. Institutional publicity is broadly based.
3. Adequate financial and support services are provided.
4. Administrative services facilitate the program.
5. Participants support and attend program functions.

Communications

1. Mechanics of the program are clearly defined.
2. The participants are knowledgeable about program mechanics.
3. Faculty and employers understand counseling coordinating and supervising.
4. The process of student evaluation is clear.
5. Students and faculty are well prepared for cooperative education.

6. Students' job experiences are related to academic pursuits.
7. Students are encouraged to enroll for additional work experiences.

Acceptance

1. Participants agree with program regulations.
2. Locating cooperative education positions is an institution-wide effort.
3. Recommendations to participate in cooperative education come from many sources.
4. Students recommend the program to other students.
5. Cooperative education modifies faculty advisement and teaching.
6. Cooperative education integrates with academic and career interests.

Participation

1. Many academic departments are involved in the program.
2. A sufficient number of faculty coordinators must be involved.
3. Adequate student involvement is needed.
4. Faculty coordinator loads must be at a satisfactory level.
5. An ample number of employers and faculty are needed.
6. Students are well placed.
7. Effective recruitment of faculty and employers is broad based.
8. There is general satisfaction with the program.⁵⁴

Although the data for many of the measures cited by McKenna, Spilde, and Nieves-Squires revealed "broad and

complex sets of interactions among the various constituents of cooperative education," they concluded that "The results clearly show the vital role of all segments of an institution and employers in the institutionalization of a program."⁵⁵

The results from another 1981 study by William A. Stull, Kimberly B. Boal, and Michael M. Homer revealed ten critical issues facing higher education cooperative education as perceived by cooperative education directors and their supervisors.⁵⁶ Ranked in order of importance, the issue statements were:

1. The best technique of developing institutional commitment in terms of administrative, faculty, staff, and financial support.
2. The extent to which cooperative education is accepted as a valid mode of study, on par with academic study.
3. Determining the proper amount of structure which should be built into students' co-op experience in order to insure that they have meaningful learning experiences.
4. Maintaining the quality of cooperative education work assignments with an increasing number of institutions and students participating.
5. The desirability of offering academic credit for students' cooperative education experience.
6. Developing cooperative education programs which can become cost-effective in the financial structure of the institution.
7. The best techniques of internalizing and integrating cooperative education into the philosophies and curriculums of institutions of higher education.

8. The responsibility of the college or university in preparing the co-op student for his or her initial cooperative education assignment.
9. If academic credit is offered, determining the proper amount to be granted and the basis for assigning the credit.
10. The extent to which the philosophy of cooperative education integrates or conflicts with other educational philosophies of the institution.⁵⁷

Stull, Boal, and Homer concluded that a high level of agreement appeared to exist between cooperative education directors and their supervisors on the critical issues identified.⁵⁸

In his study conducted to identify dominant issues in cooperative education, Gotlieb used the Delphi technique with a panel of experts from cooperative education who met three or more of the following criteria:

1. An administrator of a cooperative education program;
2. An officer of the Cooperative Education Association, the Cooperative Education Division of the American Society for Engineering Education, and/or the National Commission for Cooperative Education;
3. An author of published literature on cooperative education;
4. A trainer of cooperative education practitioners;
5. A recipient of either of the two major awards of the Cooperative Education Association, the Dean Herman Schneider Award or the Charles Kettering Award--presented annually for outstanding contributions to advancement of the philosophy and practice of cooperative education, the former to an educator, and the latter to an employer;

6. A cooperative education practitioner who is an officer of the Council for the Advancement of Experiential Learning and/or the National Society for Internships and Experiential Education.⁵⁹

Eleven experts who met the above criteria identified six highest ranked dominant issues in the following order:

1. Cooperative education programs must continuously demonstrate that they are economical to employers in order to retain participating employers and attract additional ones.
2. Cooperative education is a program uniquely suited to assist colleges and universities in attracting and retaining today's predominantly career oriented student.
3. Both external and institutional support of cooperative education in the future are, in part, dependent upon the documentation of the outcomes for which the program was designed.
4. Specific methods of assessment that take into account the goals of the program and the nature of the cooperative education experience are likely to provide the most valid evaluation of the student learning that results from the experience.
5. Cooperative education is an effective program for those students concentrating in non-career specific disciplines, as well as those concentrating in the career specific disciplines.
6. Programs are needed to introduce faculty members to the nature and purpose of cooperative education and to train them for participation in program development, administration, and evaluation.⁶⁰

In his discussion of the dominant issues identified in the study Gotlieb pointed out that "[T]hese are evolving issues and their importance is likely to change

over time. Future studies of this type may find that some or all of the six highest ranked issues will no longer be dominant, and that other issues will have emerged."⁶¹

During academic year 1981-1982, at Pace University, Alice Korngold and Paul Dubé conducted studies to demonstrate the "value of assessment instruments in obtaining the information needed to plan program development effectively, focus on ways to improve a Cooperative Education Program, and demonstrate program effectiveness in meeting student, campus, and employer needs."⁶²

Korngold and Dubé used separate survey instruments with employers, students, and faculty and additionally studied admissions, permanent placements, retention, and salary data for cooperative education students. The aggregate data from the surveys and studies led Korngold and Dubé to identify six essential and interrelated elements necessary to successful cooperative education programs:

1. Commitment of presidents and first-line administrators,
2. Faculty support,
3. Adequate economic resources,
4. Quality staffs,
5. Employer participation,
6. Prominent roles for the programs on their campuses.⁶³

Korngold and Dubé concluded that "The Pace experience with surveys . . . suggests that, in many ways, surveys may raise greater awareness of the Cooperative Education Program than the traditional program evaluation."⁶⁴ They further concluded that more accurate and complete information was gathered through the use of surveys than by outside evaluation, and that "If an institution does have a good program . . . effective surveys will make this fact more widely known with the result that the program will be provided with opportunities to accomplish more."⁶⁵

To summarize, the purpose of the literature review was to examine the definition, history, and current practice of cooperative education program evaluation at colleges and universities in the United States. Although a number of sources were consulted and read, issues of the Journal of Cooperative Education from November, 1964, through Winter, 1984, provided the most comprehensive information on the subject. The review established the need for consistently administered cooperative education program evaluation; identified published models for that evaluation; indicated that questionnaires provided a method to analyze perceptions of program success among cooperative education constituents; enumerated critical issues for program success; ascertained that measurement should supplement judgment in program evaluation;

identified a single generalizable ethical principle for program evaluation; and concluded that the critical issues which determine quality cooperative education program performance interact in a complex manner with the status of cooperative education program's constituencies.

The review of the literature provided the documentation on which the research described in Chapter III was based.

Setting in Which Research Was Conducted

Research to Develop a Consensus Self-Evaluation Model of National Norms of Excellence for Alternating Cooperative Education Programs at Four-Year Colleges and Universities was conducted between September 1, 1981, and November 30, 1983, at Old Dominion University, Norfolk, Virginia. The 1983 University Catalog states that the university is the state-supported, urban, regional university for eastern Virginia. It serves both undergraduate and graduate students, resident as well as commuter students, with an annual enrollment of approximately 14,000 students:

Old Dominion University is an urban university with the primary mission of meeting the educational and professional needs of its students and the region through excellence in teaching, scholarly research, and leadership in community service. . . .

The commitment of the University influences the nature of the research and related forms of

scholarly endeavor undertaken by its faculty. While basic or pure research is encouraged, emphasis is given to applied research because of the professional nature of the University's graduate programs and because of the University's special responsibilities to the region which it serves. . . . The University recognizes that it serves best by cooperating with other institutions of higher learning, both to expand educational opportunities and to avoid unnecessary duplication of specialized programs and services.⁶⁶

The research was funded, in part, by two grants from Title VIII, Cooperative Education Branch, U.S. Department of Education. The grants were administered by the Old Dominion University Research Foundation, incorporated in 1965 to assist the faculty in their research activities, and supervise research grants and contracts for the University. The foundation maintains a close liaison with the University through the associate vice president for research and sponsored programs.⁶⁷

The research was conducted in the Office of Professional Experience Programs which administered the University's Cooperative Education Programs.⁶⁸ The director of Professional Experience Programs served as project director and supervised the principal investigator. The director had been, since 1977, when the cooperative education program was instituted, directly accountable to the university's vice-president for Academic Affairs. In 1984, the cooperative education program supervised 360 students enrolled in alternating cooperative education.

From the Office of Professional Experience Programs, the principal investigator utilized the services of Old Dominion University's Computer Center which provided a wide range of computing services for the research. The center operated a Digital Equipment Corporation DEC system-10 computer with 512,000 words of memory, and more than a billion characters of on-line storage. The DEC system-10 was used by the principal investigator for programming and analyzing the statistical data collected during the research.⁶⁹

The Old Dominion University Library, one of Virginia's first fully-automated libraries, was utilized for research of relevant literature. The staff of the library assisted in computer-assisted searches within 125 indexing and abstracting services for literature on the Delphi technique, experiential learning, and cooperative education program self-evaluation.⁷⁰

The Graduate Program Director for Computational and Applied Mathematics, Mathematical Sciences Department, the School of Science and Health Professions of the University, assisted in identifying appropriate statistical models for analysis of the research data.

Description of the Research Samples

The research was conducted using two samples. The first research sample consisted of 12 representative

cooperative education program directors who met at least three of the six criteria identified by Gotlieb in 1981 (page 55, Chapter II). The 12 directors administered exemplary alternating four-year college and university cooperative education programs as perceived by the cooperative community in the United States. They were widely dispersed geographically and brought regional perspectives to the research. During academic year 1981-1982, the twelve consultants participated in a four-round Delphi Technique which identified 90 norm statements vital to successful alternating cooperative education programs at four-year colleges and universities. The results of their efforts will be discussed fully in Chapter III.

The second study sample was selected from an Office of Management and Procurement, U.S. Department of Education list of all four-year colleges and universities in the United States which received federal funds for cooperative education program administration during fiscal year 1981.⁷¹ Thirty-six cooperative education program administrators from four-year colleges and universities with alternating cooperative education programs were contacted and requested to participate in the research. Fourteen responded positively and signed agreements to participate. Each of the fourteen administrators and the

higher education institutions they represented conducted and participated in, during academic year 1982-1983, questionnaire evaluation of their individual cooperative education programs. The institutions were geographically dispersed, both public and private, and had been defined as successful by virtue of the fact that they had been awarded federal Title VIII funds according to the criteria of the Secretary of the U.S. Department of Education either for program administration, or comprehensive demonstration of ability to show rapid program growth. The identified cooperative education program administrators sent Old Dominion University's 90-item evaluation instrument to a total of 900 college administrators, faculty, students, cooperative education coordinators, and participating employers. A total of 730 respondents answered the questionnaire including 100 college and university administrators, 140 faculty members, 210 cooperative education students, 79 cooperative education coordinators, and 201 participating employers. These data will be described and discussed fully in Chapter III.

CHAPTER II

ENDNOTES

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Chapter III

ANALYSES OF THE DATA

Data Bases Used

The analyses of Delphi technique data and cooperative education program self-evaluation data were undertaken as an extension of research conducted by the Office of Professional Experience Programs, Old Dominion University, Norfolk, Virginia, during academic years 1981-1982 and 1982-1983. The two 1981-82 and 1982-83 research projects were funded in part by grants from the Cooperative Education Branch, Title VIII, United States Department of Education. Performance reports for each of the projects were filed with Grants Management Staff, Office of Postsecondary Education, United States Department of Education.

Background Summary

The review of the literature on cooperative education program evaluation indicated that there was an urgent need to develop criteria for cooperative education program consensus self-evaluation models at colleges and universities in the United States. The review of the literature further indicated that the administration of questionnaires to constituents involved in cooperative

education programs was one method for gathering more accurate and complete information than could be obtained through traditional, outside evaluator cooperative education program evaluation. The review of the literature further indicated that no questionnaire had been developed which asked all status group members (college administrators, faculty, cooperative education coordinators, students, and participating employers) the same series of perceptual questions. Nor had a developed questionnaire model been utilized at more than one college or university.

Additionally, the review of the literature identified four general headings under which criteria for cooperative education program performance could be grouped:

(1) institutional commitment, (2) employer participation, (3) student participation and learning, and (4) program operation.

Preliminary Search for Cooperative
Education Program Consensus
Self-Evaluation Models

As a preliminary step toward data collection and analysis, the author of this dissertation conducted an informal survey of selected cooperative education coordinators from higher education institutions with cooperative education programs. Twenty officers and

committee chairs of the Cooperative Education Association, Inc., were contacted by telephone, as well as 12 selected members of the Cooperative Education Division of the American Society for Engineering Education from September through November, 1981. Each was asked to describe his or her technique for cooperative education program evaluation. Each was asked further to describe the format used and the criteria selected for conducting those evaluations. The responses were varied, but none of the respondents included a self-evaluation model in which all status group members answered the same series of perceptual questions.

In September, 1981, a letter was sent to all 31 individuals listed in the 1981 Cooperative Education Division, American Society of Engineering Education Approved Consultants and Evaluators, and to all 35 National Commission for Cooperative Education Trained Evaluators. The letter described the purpose of the research: to develop a cooperative education program self-evaluation model for four-year institutions of higher education with alternating cooperative education programs. The letter requested information on (1) method used in conducting cooperative education program evaluation, (2) specific format used in conducting the evaluation, (3) criteria used for determining program

excellence. The letter also asked for examples of questionnaires, checklists, or other instruments used.

Fifteen (23 percent) of the 66 individuals contacted responded. Only two (3 percent) of those individuals indicated that they used short questionnaires (fewer than 25 items) as a first step to outside evaluation of cooperative education program performance. Neither of the questionnaires used by the two individuals asked the same questions of all status group members. None of the respondents used internal cooperative education program self-evaluation.

The methods of cooperative education program evaluation described by the 23 percent who responded to the letter were not consistent. Only two of the respondents indicated the use of questionnaires. None of the respondents indicated that they used internal cooperative education program self-evaluation. Therefore, it was concluded by the author of this dissertation that the informal survey confirmed the indications of the review of the literature: that there was need to establish criteria for a cooperative education program consensus self-evaluation model (see Appendix A.1 for Letter to Approved and Trained Consultants and Evaluators, with lists of CED/ASEE Approved Consultants

and Evaluators, and National Commission for Cooperative Education Trained Evaluators).

Limitations of the Research

The review of the literature and the informal preliminary search for cooperative education program consensus self-evaluation models indicated that there was no such model in the entire cooperative education community in the United States in 1981. The need for such a model encompassed the entire cooperative education community. However, because of time and budget limitations imposed by the grant, there was a need to focus on a specifically defined population; the research was limited, therefore, to those four-year institutions of higher education with alternating cooperative education programs.

Delphi Technique to Determine Consensus Among Selected Cooperative Education Professionals Concerning National Norms of Excellence for Alternating Cooperative Education Programs at Four-Year Colleges and Universities

In September, 1981, twelve identified cooperative education directors agreed to participate in a four-round Delphi technique to come to consensus on national norms of excellence for alternating cooperative education programs at four-year colleges and universities (see

Chapter I, Method and Procedures, pp. 18-19, for a full description of selection procedures. See Chapter II, Description of the Research Samples, p. 62, for selection criteria).

Delphi Questionnaire Construction and Utilization

Administration of Delphi Questionnaire I

In September, 1981, a pilot questionnaire was written by the author of this dissertation using criteria found in the literature, and administered to three cooperative education coordinators in the Office of Cooperative Education at Old Dominion University, and to one cooperative education coordinator at Tidewater Community College, Virginia Beach, Virginia. After feedback was received from the coordinators, Delphi Questionnaire I was designed after the model first used by Walter L. Gant.¹ This questionnaire was designed so that each of the twelve Delphi participants could anonymously enter value statements for national norms of excellence for four-year alternating cooperative education programs. Four support categories were used for responses: institutional commitment, employer participation, student participation and learning, and program operation. Under each category the participants were asked to complete two sentences with each of four

active verbs: increase, decrease, promote, and develop. Each was asked to construct two additional sentences in each category, using active verbs which each would provide. Individuals were finally asked to state the most important standard for quality in each of the four support categories.

The Delphi questionnaire contained the following instructions:

1. Complete the sentence starting with the word supplied for each of the first eight (8) items under each category. Please supply your own first word for the ninth (9th) and tenth (10th) items in each category. On the eleventh (11th) item, choose the most important standard for that category.
2. Complete the sentence in ten words or fewer with a goal which you consider important for an alternating cooperative education program at a four-year college or university.
3. Do not state more than forty-four (44) goals or fewer than twenty-two (22) goals.
4. Each statement should be specific. Avoid generalities.
5. The statements should deal with what should be accomplished and not why or how something should be accomplished.

On November 25, 1981, Delphi Questionnaire I was sent to the twelve participants, with a cover letter explaining the Delphi process and requesting the return of the completed questionnaire by December 14, 1981, with the understanding that results would be compiled and returned to the participants as Questionnaire

II in early 1982 (see Appendix A.2 for November 25, 1981, Letter to Delphi Participants and Delphi Questionnaire I).

Results of Delphi Questionnaire I

The Delphi participants generated 495 norm statements out of a possible 528. A modification of the Q-sort technique developed by Stephenson (1953)² was used to reduce the 495 norm statements generated by the Delphi participants in Delphi Questionnaire I to 319 generic norm statements, by the following process. Two cooperative education coordinators and two graduate students not familiar with cooperative education were each given the 495 norm statements as decks of cards which were placed in random order. Each assistant was asked to sort the norm statement cards into piles according to similarity of each norm statement. Norm statements were combined only when three of the four participants agreed. This combination occurred with 76 statements which were then eliminated.

Administration of Delphi Questionnaire II

On February 4, 1982, Delphi Questionnaire II was sent to the twelve Delphi participants with the 319 generic norm statements randomized using a table of random numbers.³ In a cover letter, the twelve Delphi

participants were told that their contributions might not appear exactly as they had been written, because related ideas had been synthesized to reduce 495 original statements to 319 generic statements. The participants were also told in the cover letter that the 319 statements were randomized and that the original support categories would follow each norm statement in parentheses. The participants were also given an example of the Likert-type scale⁴ they would use to rate norm statements for the remainder of the Delphi process. The participants were instructed to indicate individually their opinions of the relative importance of each of the 319 items by circling the appropriate number which best expressed their opinions of the value of the item.

The Likert-type scale of importance used was:

High					Low
(1	2	3	4		5)

1 = Highest importance
 2 = Above average importance
 3 = Average importance
 4 = Below average importance
 5 = Lowest or no importance

The Likert-type scale was chosen because it was a summative rating scale which presented a number of positive and negative statements regarding an attitude object. According to Donald Ary:⁵

In responding to the items on this scale the subjects indicate whether they strongly

agree, agree, disagree or strongly disagree with each statement. The numerical value assigned to each response depends on the degree of agreement or disagreement with individual statements. . . .

. . . The main consideration is that responses be scored consistently in terms of the attitude they represent. Of course, whether "strongly approve" or "strongly disapprove" is the favorable attitude depends upon the content of the statement.⁶

Although Likert-type scales have been most frequently used to rate statements chosen by a researcher, in the case of the Delphi Questionnaires to determine national norms of excellence for alternating cooperative education programs at four-year colleges and universities, it was used differently. The "favorable attitude" described by Ary was determined in this case by the Delphi participants' ratings of each statement, rather than by the content of each question chosen by a researcher to gauge a pre-determined favorable or unfavorable attitude.

Delphi Questionnaire participants were requested to return the second questionnaire by February 26, 1982, with the understanding that the results would be compiled and returned to the participants as Delphi Questionnaire III within approximately three weeks of receipt (see Appendix A.3 for February 4, 1982, Letter to Delphi Participants, and Example of Statements 1 through 10, 313 through 319, from Delphi Questionnaire II).

Results of Delphi Questionnaire II

Each of the twelve Delphi Questionnaire participants returned the second questionnaire by the deadline, with all items rated. Responses on 319 individual questionnaire statements ranged on the Likert-type rating scale from (1) Highest importance, to (5) Lowest or no importance.

Administration of Delphi Questionnaire III

On March 30, 1982, Delphi Questionnaire III was sent to the twelve Delphi participants: Delphi Questionnaire III followed the form of Delphi Questionnaire II with the following exceptions:

1. Fifteen additional norm statements were removed because of redundancy. The numeration of the remaining statements was left intact.

2. The most frequent rating of each norm statement was indicated by a black square:

High				Low
(1	2	<input checked="" type="checkbox"/> 3	4	5)

3. The previous rating of each norm statement was indicated to each individual participant by a red circle. The individual saw only his or her previous rating:

High				Low
(1	<input checked="" type="radio"/> 2	3	4	5)

4. Provision was made under each statement for individual respondents to state in one sentence their most important reason

for changing their rating. These sentences were called Minority Opinions.

The participants were given the following instructions:

1. If a norm of excellence is marked with a black square only, do nothing. Your response agrees with the most frequent rating.
2. If a norm of excellence is marked with a red circle and a black square and you are willing to accept the rating marked by the black square, do nothing.
3. If a norm of excellence is marked by a red circle and a black square and you are not willing to accept the rating marked with the black square, please state in one sentence your most important reason for not accepting the rating marked with the black square.
4. If you wish to change your previous response (indicated by the red circle), but you do not wish to change it to the response indicated by the black square, put a black X through the response circled in red and circle your new response in black. Please state in one sentence your most important reason for changing your position.

A cover letter explaining Delphi Questionnaire III to the participants was accompanied by an example sheet outlining the procedure for responding to Delphi Questionnaire III. The cover letter requested the return of the completed questionnaire by April 15, 1982 (see Appendix A.4 for the March 30, 1982, Letter to Delphi Participants, Procedures for Responding to Questionnaire III, and Examples of Statements 1 through 10, 313 through 319, Delphi Questionnaire III).

Results of Delphi Questionnaire III

Each of the twelve Delphi Questionnaire participants returned the third questionnaire by the deadline. The Delphi participants generated 424 reasons for their disagreement with the majority on 197 of the remaining 304 items. That is to say, the participants generated 424 minority opinions for 65 percent of the norm statements. Over 70 percent of the minority opinions expressed unwillingness to move toward the majority position on 197 norm statements (see Appendix A.5 for a complete transcript of Minority Opinions generated by Delphi Questionnaire III).

Administration of Delphi Questionnaire IV

On May 14, 1982, Delphi Questionnaire IV was sent to the twelve Delphi participants. Delphi Questionnaire IV followed the format of Delphi Questionnaire II. The twelve participants were informed that this was their final opportunity to change responses. This questionnaire indicated how many individuals chose the most frequent response for each statement and where each individual's response fell in relation to the most frequent response:

High	8			Low
(1	2	3	4	5)
	most frequent response		one individual's response	

The participants were sent individual copies of the 424 Minority Opinions, which represented the views of those participants whose ratings of individual value statements were different from the most frequent responses.

Providing participants with an indication of the magnitude of agreement for each norm statement and providing them with copies of the Minority Opinions allowed them an opportunity to make their final responses with knowledge of the degree of consensus as well as knowledge of the reasons for disagreement.

The participants were given the following instructions:

1. If you desire to change any of your previous ratings, circle your new rating and return the questionnaire.
2. If you do not desire to change any of your previous ratings, do nothing.
3. Statements numbered 70, 92, 169, and 240 are bi-modal. That means the frequency of response occurs in two places. You may choose one or the other, or retain your present position.

A cover letter accompanied Delphi Questionnaire IV which explained the use of Minority Opinions. The letter requested the return of the completed questionnaire by May 30, 1982, and indicated that a compilation of final results would be sent to the participants in approximately one month (see Appendix A.5 for the May 14, 1982, Letter to Delphi Participants, Minority Opinions, Examples of Statements 1 through 10, 313 through 319, Delphi Questionnaire IV).

Results of Delphi Questionnaire IV

Each of the twelve Delphi Questionnaire participants returned the final questionnaire by the deadline. Participants unanimously agreed that 29 norm statements were of highest importance. Eleven out of twelve agreed that ten norm statements were of highest importance. Participants unanimously agreed that 72 norm statements were of above average importance. Eleven out of twelve participants agreed that 44 norm statements were of above average importance. Thus, 155 of the norm statements were considered either as of highest importance or of above average importance at a consensus level of over 92 percent. Fifty-one percent of the norm statements achieved 92 percent consensus. The 29 norm statements which achieved 100 percent consensus at the highest importance level are each listed below, followed by any Minority Opinions given for those norms in Delphi Questionnaire III:

Statement 3. (Highest Importance)

Maintain close contact and good communication with employers/site supervisors (Program Operation, Employer Participation).

Minority
Opinions: None

Statement 7. (Highest Importance)

Develop an institutional structure reinforcing cooperative education's role in the educational process (Institutional Commitment).

Minority
Opinions: None

Statement 33: (Highest Importance)

Promote the cooperative education program through multiple descriptions in university catalogs, individual academic department brochures, freshman orientation sessions, financial aid brochures, and admissions office staff, written materials, etc. (Institutional Commitment).

Minority
Opinions: 1. OK, I can accept this as important, but not of "highest" importance (in my humble view).

Statement 44: (Highest Importance)

Decrease confusion and misconceptions concerning the definitions of cooperative education among faculty, students, administrators, and employers (Program Operation, Institutional Commitment, Student Participation and Learning).

Minority
Opinions: 1. OK, as long as this means within a specific program--and not among all programs.

Statement 47: (Highest Importance)

Develop quality work placements which meet the needs of a diverse population of students (Student Participation and Learning).

Minority
Opinions: None

Statement 67: (Highest Importance)

Decrease enrollment of students unsuited or uninterested in cooperative education program, who cannot be effectively served (Program Operation, Institutional Commitment, Student Participation and Learning).

Minority
Opinions: None

Statement 103: (Highest Importance)

Decrease use of cooperative education
as a catch-all job shop.

Minority

Opinions: None

Statement 105: (Highest Importance)

Develop curriculum alternations that
do not punish students for missing
quarters or semesters in order to take
a cooperative education assignment, i.e.,
sequential courses (Institutional
Commitment).

Minority

Opinions: None

Statement 117: (Highest Importance)

Increase the number of coordinators to
the point of achieving a reasonable
cooperative education student-to-
coordinator ratio, allowing more
personalized attention and giving
qualitative emphasis (Program Operation,
Institutional Commitment).

Minority

Opinions: None

Statement 119: (Highest Importance)

Increase the relationship of cooperative
education work assignments to a student's
academic major or career goals (Student
Participation and Learning).

Minority

Opinions: 1. Compromise.

Statement 121: (Highest Importance)

Increase discussion time with each
student regarding career interests,
expectations, and professional develop-
ment prior to placement in job assignment
(Program Operation, Student Participation
and Learning).

Minority

Opinions: None

Statement 127: (Highest Importance)

Promote cooperative education as an integral part of an institution's curriculum (Institutional Commitment).

Minority

Opinions: 1. It usually isn't. Why try to make it an integral part? May need definition of integral!

2. Not generally necessary in a large school with all offerings each term.

Statement 140: (Highest Importance)

Promote good relations and interaction with academic departments and administration (Program Operation, Institutional Commitment)

Minority

Opinions: None

Statement 148: (Highest Importance)

Decrease dependence on federal funds for program operation (Program Operation, Institutional Commitment).

Minority

Opinions: 1. Federal money will go away, then what?

Statement 158: (Highest Importance)

Decrease the barrier of curricular conflicts, and develop systems that facilitate alternation between school and cooperative education work terms (Program Operation, Institutional Commitment, Student Participation and Learning).

Minority

Opinions: None

Statement 159: (Highest Importance)

Decrease sole dependence upon cooperative education for affirmative action hiring, i.e., ethnic groups or sex (Employer Participation).

Minority

Opinions: None

Statement 170: (Highest Importance)

The most important standard for quality employer participation is the meaningfulness of jobs as determined by type of duty, increasing levels of responsibility, and the quality of employer supervision (Employer Participation).

Minority

Opinions: None

Statement 175: (Highest Importance)

Increase campus-wide understanding of the goals, values, and purposes of cooperative education (Institutional Commitment).

Minority

Opinions: None

Statement 182: (Highest Importance)

New programs should place the director on hard money immediately to insure security and demonstrate immediate commitment (Institutional Commitment).

Minority

Opinions: 1. Vital (alas!).

Statement 188: (Highest Importance)

Increase financial resources available to cooperative education at the operational level for quality staffing and support equipment (Program Operation, Institutional Commitment).

Minority

Opinions: 1. Again--any educational program must prove itself before dollar support is ideal.

Statement 203: (Highest Importance)

The most important standard for quality institutional commitment is an adequate "hard dollar" budget to employ dedicated professionals and to provide them with quality office space, and to encourage faculty and support staff to promote the cooperative education program (Institutional Commitment).

Minority

Opinions: 1. I am more in agreement.

Statement 204: (Highest Importance)

Develop the use of effective exit interviews (rather than forms alone) to gather student feedback, to discuss the next work term, reporting dates, projected pay, etc. (Employer Participation, Student Participation and Learning).

Minority

Opinions: None

Statement 206: (Highest Importance)

Increase the variety of quality jobs in each major (Program Operation, Student Participation and Learning, Employer Participation).

Minority

Opinions: None

Statement 230: (Highest Importance)

Decrease the faculty attitude of "Don't delay graduation by enrolling in the cooperative education plan" (Institutional Commitment).

Minority

Opinions: 1. This attitude can kill the co-op plan.

Statement 241: (Highest Importance)

Decrease the misconception that cooperative education is primarily a form of financial aid for students--do not use the hard sell of economic advantages (Student Participation and Learning, Employer Participation).

Minority

Opinions: None

Statement 247: (Highest Importance)

The most important standard for quality institutional commitment is a firm, adequate, cost-effective budget (Program Operation, Institutional Commitment).

Minority

Opinions: None

Statement 273: (Highest Importance)

Promote cooperative education as a valid, essential, complementary academic program on an equal basis with other academic programs (Program Operation, Institutional Commitment, Student Participation and Learning).

Minority

Opinions: None

Statement 279: (Highest Importance)

The most important standard for quality program operation is strong, credible leadership, i.e., directors, coordinators--to meet the needs of interested students and employers (Program Operation, Institutional Commitment).

Minority

Opinions: 1. I agree.

Statement 305: (Highest Importance)

Promote the concept of cooperative education as a program and not a service (Student Participation and Learning).

Minority

Opinions: None

Statement 309: (Highest Importance)

Increase the emphasis on giving meaningful experience each work period (Employer Participation).

Minority

Opinions: None

On those norm statements where there was a high percent of agreement, few minority opinions were given. For example, the 29 norm statements where final agreement was 100 percent, generated only ten minority opinions, but four norm statements where the magnitude of agreement was 58 percent generated five minority opinions each:

Statement 82: (Below Average Importance)

The most important standard for quality employer participation is the employer's ability to keep students returning for all planned work terms, and the employer's ability to retain the student as a full-time employee after graduation (Employer Participation).

Minority

- Opinions:
1. Retention is to some degree a measure of the value of the experience to the student.
 2. Otherwise all jobs will be entry level with minimum growth and/or responsibility.
 3. Though I somewhat disagree with retention after graduation as a measure of quality employer participation, I strongly believe that an employer's ability to keep students returning for all planned work terms is a strong indicator of the quality of his program and of his ability to choose the right kinds of students for the first work term.
 4. I think this is the most valid measurement of good employer co-op programs!
 5. If a student returns to an employer it is a measure of the quality of instruction.

Statement 87: (Highest Importance)

Promote the requirement that cooperative education jobs be salaried positions (Program Operation).

Minority

- Opinions:
1. This is an unworkable requirement.
 2. Many of our most valuable co-op assignments have been with non-traditional employers where budget allows only a stipend or fee arrangement. If that is considered "salaried" then I accept.
 3. "Freebies" are degrading to a student and students should be paid no matter what their major.
 4. Not all assignments. Money isn't everything.

5. The experience is of more value than whether the student is paid hourly or as a salaried person.

Statement 173: (Above Average Importance)

Develop physical support in terms of furniture, office space, etc. (Institutional Commitment).

Minority

- Opinions:
1. It isn't placements that impress the people who provide physical support.
 2. Compared to many of the other institutional commitment statements, this one still doesn't hold an "above average" priority for me.
 3. A sign of any program's priority on a campus is the quality of physical space, location, and other facilities.
 4. Furniture does not make a strong program.
 5. This statement doesn't imply institutional commitment at all.

Statement 205: (Below Average Importance)

Maintain a strict calendar for operations each term (Program Operation).

Minority

- Opinions:
1. School and employer need this.
 2. A large program should have a strict calendar.
 3. Without a strict calendar how can plans be made?
 4. Extremely important from an employer perspective and they provide the jobs.
 5. This is essential for an orderly program--minor starting or stopping dates for a work period are desirable.

On August 18, 1982, a final letter was sent to the twelve Delphi participants with intuitive interpretations

of the findings. The letter indicated that the norms developed at the highest level of agreement and at the highest levels of importance would be utilized to develop, field test, and sample a self-evaluation instrument for alternating cooperative education programs at four-year colleges and universities. On August 20, 1982, the 304 final Norm Ratings were sent to the twelve Delphi Participants (See Appendix A.6 for the August 18, 1982, Final Letter to Delphi Participants, the August 20, 1982, Cover Memorandum for the Final Norm Statements and the Final Norm Statements).

Delphi Technique and Stability of Response

Dajani, Sincoff, and Talley pointed out that critics of the Delphi technique object to those studies which used a consensus measure as stopping criteria and dropped statements from successive Delphi rounds whenever it appeared that there was little or no change in response from one round to another.⁷ They indicated that the use of such procedure was arbitrary and subjective.⁸ To avoid this problem in the Delphi technique described above, all statements were retained throughout the four round process. Dajani, Sincoff, and Talley further indicated that there was an explicit distinction between the concepts "stability of response" and "agreement":⁹

Stability refers to the consistency of response between successive rounds of a study. It occurs when the responses obtained in two successive rounds are shown statistically to be not significantly different from each other, irrespective of whether a convergence of opinion occurs. . . . While stability does not necessarily imply a given level of agreement, it is only when a stable answer is reached that an analysis of the level of agreement should be attempted.⁹

To assure that response was stable in the Delphi research discussed above, a post hoc nonparametric right tail χ^2 test of stability was performed on the 304 norm statements to check for independence of Delphi rounds II, III, and IV from responses obtained in them, using the method developed by Dajani, Sincoff, and Talley.¹⁰ The null hypothesis (H_0) was tested against an alternative hypothesis (H_1). The hypotheses were:

H_0 : The Delphi rounds are independent of the responses obtained in them.

H_1 : The Delphi rounds are not independent of (or are dependent on) the responses obtained in them.¹¹

The required statistic was calculated by the following equation:

$$\chi^2 = \sum_{i=1}^2 \sum_{j=1}^n \frac{(O_{ij} - E_{ij})^2}{E_{ij}}$$

Contingency tables were developed for Delphi rounds II, III, and IV for observed frequency of response and expected frequency of response. The χ^2 test indicated that 92 of 304 responses were unstable between rounds II

and III at $p < .05$ level of significance with 2 degrees of freedom. It was concluded that the null hypothesis was not supported: Delphi rounds II and III were not independent of the responses obtained in them in the case of 92 responses. Thus, 92 of the 304 responses were judged to be unsuitable for analysis of consensus.

However, the χ^2 test between rounds III and IV indicated that all 304 responses were stable at the $p < .05$ level of significance with 6 degrees of freedom. It was concluded that the null hypothesis was supported: Delphi rounds III and IV were independent of the responses obtained in them. All 304 responses were judged to be suitable for analysis of consensus.¹²

Criticism of Delphi Technique

The most outspoken critic of the Delphi Technique was Harold Sackman, who stated his objections in his 1975 Delphi Critique. In the introduction Sackman indicated that the Delphi Technique fell short of research standards set by the American Psychological Association, The American Educational Research Association, and the National Council on Measurement in Education in the publication, "Standards Set for Educational and Psychological Tests and Manuals (1966)."¹³ Sackman's major objections to the technique were:

1. Statistical significance is rarely reported in Delphi studies, either for precision of estimates or for . . . standard errors of estimates.¹⁴
2. The full three-dimensional matrix of items versus panelists versus rounds analyzed by a common statistical vehicle, such as analysis of variance, seldom appears to test for main and interaction effects. Nor are items compared for homogeneity of variance, linearity, and type of empirical frequency distributions for applying such tests. Interquartile graphs are not a suitable substitute.¹⁵
3. Factor analysis is seldom done to "prune out" redundant or highly intercorrelated items.¹⁶
4. Most Delphi studies do not utilize direct forms of validity testing (empirical experimentation or real world performance measurement). The results are usually simply aggregations of iterative opinions. Sackman calls this "an act of faith."¹⁷
5. The target domain is rarely clearly defined and seldom is it demonstrated that the selected items comprising the questionnaire represent a systematic sampling of key elements of the target area of inquiry (content validity).¹⁸
6. Social science has abandoned the use of experts as an integral part of scientific methodology, because they are frequently wrong. Delphi uses them anonymously, thus the relevant professional credentials are hidden.¹⁹
7. Independent judgment is destroyed in the second round Delphi questionnaire because:

The second and successive round produce strictly correlated, or biased judgments. The use of standardized statistical techniques for hypothesis testing based on random sampling assumptions, which may offer no major problems for independent first round judgments, becomes difficult and problematic in successive rounds. . . .

All rationalization about reconsidering, incorporating new information, and converging toward consensus cannot hide the fact that independent judgment is destroyed once

the participant knows how others have responded to each item. If Delphi can make no claims concerning independent expert opinion, does Delphi feedback develop insight into the issues for improved collective judgment in successive rounds?²⁰

8. Delphi forecasting results neglect long-term longitudinal validation and systematic comparisons with concurrent criteria, thus these forecasts should be "explicitly presented to potential users as conjectures of undetermined validity."²¹

9. With panelist anonymity, key population characteristics are seldom reported: sex, age, education, geographic distribution. Very few studies use detailed personal data for sampling profiles. "Anonymity can still be honored if panelist characteristics are presented as statistical aggregates."²²

10. Panelist drop-out is a hazard, and the rate is high. Is it lack of commitment because of voluntary participation, or because drop-outs strongly disagree with design and content? Do others "play along" with minimum effort? Is the panel "stacked"? No one answers these questions.²³

11. Construct validity, or the interpretation of theoretical constructs on which tests are based, is ignored by Delphi and "raises the key issue of accountability for the interpretation of Delphi results" (*italics added*). Sackman calls this the descriptive "casual opinionative essence of Delphi."²⁴

12. "Delphi studies invariably ignore . . . 'essential' considerations of test and item reliability." No comparisons of descriptive quantitative data are made re: variances, standard errors of measurement, or product-moment reliability co-efficients.²⁵

13. Few replications of questionnaires over time are reported under Delphi. If the measurement is of "future attitudes" they should be repeated to explain the greater or lesser extent of change. The distinction made by Delphi proponents between "opinions" and

"attitudes" is not logically defensible as a way of explaining away the lack of replication.

"The validity of any testing instrument cannot be greater than its reliability; that is, a test cannot correlate more highly with any external validation criterion than its correlation with itself (reliability). If Delphi results prove unstable in a given area over the short run, as with attitude fluctuation over time, its value as a prognostic instrument is likely to be worthless over the long run. Longitudinal reliability studies of this type are essential for any defensible use of Delphi or its derivatives."²⁶

14. Selection of panelists tends to reflect expediency (because of anonymity).²⁷

15. Delphi investigators should report standard error of estimates for small samples. This would clearly indicate that higher levels of precision, larger samples, and well-defined samples are required.

When Delphi uses the mean rather than the median, standard errors appear smaller.²⁸

16. Delphi assumes that "the whole is axiomatically better than its parts." Delphi should report whether scores vary for groups differing on age, sex, amount of training, etc.²⁹

17. Delphi ignores its historical precursor's findings:

McGregor (1938), Cantril (1938)--forecasting questionnaires project personal values and attitudes--there is no validity in forecasting social events.

Kaplan, Skogstad, Girshick (1950)--the group of predictors, the questions asked, and procedure--cause difficulties in generalization.

Quinn (1971)--surprise events, inadequate on biased data, unpredictable interactions--limit forecasting.

Pill (1971)--human intuition--allies Delphi with metaphysics.

Milkovich, Annoni, Mahoney (1972)--valuable data is lost because of lack of direct interaction.

Weaver (1969, 1970)--Delphi pays inadequate attention to psychological values and attitudes (see Fishkein, 1967, on attitude testing). Weaver further contends that Delphi is "promotional" and caters to the "power structure."

Morris (1971)--Delphi does not capitalize on extensive mathematical theory of subjective probability (Bayesian analysis)--not just in terms of advanced probability analysis, but also elementary treatment of raw Delphi data.

Derian and Morize (1973)--the central tendency of pooled opinion taken at face value as a best estimate of expert opinion is not valid--Factor analysis of subgroups is necessary.³⁰

18. "The roots of [this] criticism for development of Delphi are found in two sources: the isolation of Delphi from the mainstream of relevant behavioral science, and the rapid emergence and growth of futurism."³¹

19. Sackman offered sixteen concluding criticisms of the Delphi technique. He indicated that the Delphi technique was fraught with the following problems:

Crude questionnaire design.

Lack of minimal professional standards for opinion-item analysis and pilot testing.

Highly vulnerable relative to "expert," the selection of panelists.

Abdication of responsibility for item population sampling in relation to the theoretical constructs for the object area of inquiry.

Oblivion to reliability measurement and scientific validation of findings.

Capitalization on the fallacy of the expert halo effect.

Generation of snap answers to ambiguous questions which lead to "inkblot" responses.

Confusion of aggregations of raw opinion with systematic prediction.

Capitalization on forced consensus based on group suggestion.

Inhibition of individuality and any adversary process by overtly and covertly encouraging conformity and penalizing dissent.

Reinforcement of and institutionalization of premature closure, using a highly questionable ritual for conducting opinion studies that tend to inhibit more scientific approaches.

Exaggerated illusion of precision, misleading uninformed users of results.

Indifference to and unawareness of related techniques and findings in behavioral sciences--projective techniques, psychometrics, group problem solving, and experimental design.

No serious critical literature to test basic assumptions and alternative hypotheses.

Denigration of group and face-to-face discussion, claim of superiority of anonymous group opinion over competing approaches without proof.

Encouragement of a short-cut social science method that is lacking in minimum standards of professional accountability.³²

It was beyond the scope of this treatise to address all of Sackman's criticisms of the Delphi technique. However, certain of his criticisms had to be answered in order to legitimize the use of the Delphi methodology.

The following legitimization of the Delphi methodology is stated both in terms of scientific methodology (Exact, objective, factual, systematic, or methodological bases)³³ and rationality (the theory that the exercise of human reason, rather than the acceptance of empiricism, authority, or spiritual revelation, provides the only valid basis for action or belief, and that reason is the prime source of knowledge and spiritual truth).³⁴

Sackman's Objection 1 indicated that "Statistical significance is rarely reported in Delphi studies, either in precision of estimates or for . . . standard errors of estimates." The Delphi technique used in this research was subjected to χ^2 tests which provided precision of estimates and accounted for standard errors of estimates (Scientific Methodology). Sackman's Objections 2 through 5 must be examined in terms of rationality. Sackman's Objections 2 through 5 address the "unscientific approach" of the Delphi technique. Analysis of literature from the computer search of the Delphi Technique (Chapter I, pp. 20-21) led the author of this dissertation to use a modified Delphi technique, that is to say, the research under discussion was not conducted to predict future events, but rather to assess immediate perceptions of the state of the art of

cooperative education program evaluation. Also, the questionnaire construction used in the Delphi technique under discussion is outside of the pervue of Sackman's criticism that "conventional" Delphi studies do not necessarily ask the right questions. In the research under discussion, first round statements were generated by the Delphi participants, rather than the researcher. Put another way, the participants identified the norms rather than responding to norms pre-identified. The Delphi participants did, in fact, create the arena of discussion (Scientific Methodology).

In Objection 6, Sackman indicated that "Social science has abandoned the use of experts as an integral part of scientific methodology, because they are frequently wrong." Sackman was mistaken. Social science had, in fact, moved since 1975 in the direction of identifying experts for pragmatic uses. Two examples suffice: William Ouchi's Theory Z, which convinced the American automotive industry that they should perceive assembly line workers as experts who would improve the industry by the process of stating their concepts in groups called quality circles,³⁵ and Arthur G. Wirth's 1983 Productive Work in Industry and Schools: Becoming Persons Again,³⁶ in which he pointed out that for work to remain democratic, the workers' perceptions of the value of their work must be

considered--as experts, if you will (Scientific Methodology). Also in Objection 6 Sackman indicated that anonymity during the Delphi process hid professional credentials from those who would examine Delphi research results. In the case of the Delphi research under discussion, anonymity was used only to prevent participants from influencing one another on the basis of knowledge of other participants in terms of status in the cooperative education community. However, demographic data were collected and disseminated as soon as the Delphi process was completed (Rationality).

Sackman was concerned, in Objections 7 and 8, that the Delphi process destroyed independent judgment, and that all further efforts toward consensus were biased. No claims were made that the research under discussion was bias-free. The intent of the research was to bring twelve people to consensus. In the real world people either come to consensus or resolve conflict in order to make decisions. The Delphi technique was used as a method to prevent peer pressure only. It was not utilized as "pure" science (Rationality).

Objection 10 addressed panelist drop-out. In the case of the research under discussion there were no drop-outs (Scientific Methodology).

In Objection 11 Sackman was emphatic in his accusation that Delphi research was based on no underlying

theoretical constructs. This objection was addressed by Harold A. Linstone and Murray Turoff in The Delphi Method, 1979. Chapter II.B discussed "Philosophical and Methodological Foundations of Delphi." This chapter addressed the criteria for four philosophical inquiry systems. When these criteria were met, the inquiry system could be considered as valid or true.³⁷ Linstone and Turoff suggested the questions which would have to be answered for the Delphi technique to be acceptable to each philosophical inquiry system:

Leibnizian Inquiry. How can one independently of any empirical or personal consideration give a purely rational justification of the proposed proposition or assertion? Can one build or demonstrate a rational model which underlies the proposition or assertion? How was the result deduced? Was it precise, certain?

Lockean Inquiry. Since . . . data are always prior to the development of formal theory, how can one independently of any formal model justify the assertion by means of some objective data or the consensus of some group of expert judges that bears on the subject matter of the assertions? What are the supporting "statistics"? What is the "probability" that one is right? Are the assertions a good "estimate" of the true empirical state of affairs?

Kantian Inquiry. Since data and theory (models) always exist side by side, does there exist some combination of data that would justify the propositions? What alternative set of propositions exist and which best satisfy my objectives and offer the strongest combination of data plus model?

Hegelian (Dialectical) Inquiry. Since every set of propositions is a reflection of a more general theory or plan about the nature of the world

as a whole system, i.e., a world-view, does there exist some alternate sharply differing world-view that would permit the serious consideration of a completely opposite set of propositions? Why is this opposing view not true or more desirable? Further, does this conflict between the plan and the counterplan allow a third plan or world-view to emerge that is a creative synthesis of the original plan and counterplan?

Singerian Inquiry. Have we taken a broad enough perspective of the basic problem? Have we from the very beginning asked the right questions? Have we focused on the right objectives? To what extent are the questions and the models of each inquirer a reflection of the unique personality of each inquirer as much as they are felt to be a "natural" characteristic or property of the "real" world?³⁸

After examining the various inquiry models Linestone and Turoff concluded that Singerian inquiry gives the broadest possible modeling of an inquiry on any problem, but added:

We certainly no longer seem able to afford the faulty assumption that there is only one philosophical base upon which a technique can rest if it is to be "scientific." Indeed if our conception of inquiry is "fruitful" (notice not "true" or "false" but "productive") then to be "scientific" would demand that we study something (model it, collect data on it, argue about it, etc.) from as many diverse points of view as possible.³⁹

The four philosophical inquiry models described and discussed by Linestone and Turoff in terms of the Delphi technique adequately answered Sackman's Objection 10 (Scientific Methodology).

In Objection 13 Sackman denigrated the value of the Delphi technique as a prognostic tool, e.g., that is a predictive or forecasting tool. In the research

under discussion the technique was used to reveal current norms of excellence in cooperative education not to forecast future values or norms (Rationality). The model developed in the research under discussion can be replicated in longitudinal studies (Scientific Methodology).

Sackman indicated in Objection 14 that selection of panelists was based on expediency. The panelists selected for the research under discussion were chosen by a set of criteria which described successful cooperative education program administrators (Scientific Inquiry).

In Objection 16, Sackman disagreed with the notion that "the whole is axiomatically better than the sum of its parts." Although Sackman appeared to have attributed this notion to Delphi supporters (against their will), it can be shown that the "whole," when it represents consensus among people on a subject of mutual interest, is an important unit of study. Speaking etymologically the "whole," in fact, "comprises the parts; the parts do not comprise the whole, nor is the whole comprised of its parts"⁴⁰ (Scientific Inquiry).

Sackman's other criticisms repeated the notion that the Delphi Technique was not professional or scientific. However, it must be noted that he said, in 1975, ". . . [t]here are virtually no listings of Delphi

studies in the Psychological Abstracts."⁴¹ In 1984 there were 28 Psychological Abstracts listings in which Delphi appeared in the title.⁴²

Richard J. Tersine and Walter E. Riggs disagreed with Sackman's critique of the Delphi technique. Tersine and Riggs reported in the April 1976 issue of Business Horizons that the Delphi technique was a useful tool when necessary group decisions needed to be made and also when information was to be disseminated or instruction given:⁴³

Delphi has many advantages over more conventional means of gathering opinions on matters not subject to precise quantification. . . . A participant finds it much easier to change his mind if he has no ego involvement in defending an original estimate (only he knows if he changes his mind). He is less subject to the halo effect, where the opinions of one highly respected man [sic] influence the opinions of others. Also reduced is the bandwagon effect which encourages agreement with the majority. A significant advantage of Delphi is that it forms a consensus of opinion by requiring justification for any significant deviation from the group average.⁴⁴

Continued research into the reliability and validity of the Delphi technique is in order. However, when this research was conducted there was an appropriate defense provided by proponents of the technique for each criticism leveled.

Summary of Use of Delphi Technique

To summarize, a preliminary informal search was made in 1981 to locate Cooperative Education Programs with self-evaluation models. Five were found. In academic year 1981-1982 twelve cooperative education program administrators, generally perceived by the United States cooperative education community as leaders in the field, participated in a four-round Delphi process. The Delphi participants generated 319 generic norms of excellence for alternating cooperative education programs at four-year colleges and universities in the United States. Participants unanimously agreed that 29 norm statements were of highest importance. Eleven of the twelve agreed that ten norm statements were of highest importance. Participants unanimously agreed that 72 norm statements were of above average importance. Eleven of the twelve agreed that 44 norm statements were of above average importance. A total of 155 norm statements were considered either as of highest importance or as of above average importance.

A post hoc nonparametric right tail χ^2 test of stability of response was performed on the 304 norm statements originally generated by the participants. The χ^2 test between rounds III and IV indicated that the 304 statements were stable at $p < .05$ level of significance with 6 degrees of freedom.

The major objections to the Delphi technique were examined and answered. The next section will describe the use of the Delphi technique results.

Total Design Method for Mailed
Questionnaire Administration

1982-1983 Questionnaire Research

Survey Instrument

In September, 1982, ninety norms of excellence identified by the Delphi consultants, were selected for inclusion in a questionnaire which was to become the self-evaluation instrument for analysis of cooperative education program excellence. The items selected for inclusion were those identified by the Delphi consultants as of highest importance or above average importance. The norm statements were transformed into questions. Thus, one statement, agreed to by all twelve Delphi consultants, became a question in the survey instrument. For example:

Delphi Statement	"The most important standard for quality institutional commitment is a constant, adequate, cost effective budget."
Survey Question	"To what extent do you agree with this statement:

Name of Institution

provides the Cooperative Education Program with a constant, adequate, cost-effective budget?"

The ninety items were assigned randomly to the questionnaire and were coded into support categories which were: institutional commitment, program operation, student participation and learning, and employer participation. A Likert-type scale from one (low) to five (high) was used for responses and the questions were assembled in what is called a "vertical flow," that is, the pattern for answering did not change. The questionnaire was pilot-tested at Old Dominion University and Tidewater Community College among those institutions' respective cooperative education staffs.

Selection of Participating Institutions

In November, 1983, a list of all four-year institutions with alternating cooperative education programs which had received federal funding for academic year 1982-1983 was obtained from Assistance Management and Procurement Services, United States Department of Education. One reason for emphasis on institutions receiving federal funding was to be able to compare the results of the self-evaluation instrument to the results of the outside evaluation required of all grant recipients. This element of the research had to be abandoned, however, because of the fact that in academic year 1982-1983 few institutions received federal funds for outside evaluation. Thus,

because of this change in allocation of federal funds, the comparison could not be made. Interestingly enough, many of the institutions which chose to participate in the self-evaluation project did so because they perceived participation as a workable alternative to outside evaluation.

Letters were sent to twenty-four institutions from the Department of Education list, describing the research and soliciting participation. Of the twenty-four institutions approached, fourteen agreed to participate:

1. University of California--Fresno
2. Central Connecticut State University
3. Southern Technical Institute
4. Wilberforce University
5. University of Arkansas--Pine Bluff
6. Drake University
7. Eastern Kentucky University
8. University of Georgia
9. University of Iowa
10. University of Oregon
11. University of South Dakota
12. Southwest Missouri State University
13. Temple University
14. Western Carolina University

Designated Field-Test Institutions

The first four institutions on the list were designated Field Test Institutions, that is, they participated in the questionnaire process first, and their comments were used to make modifications before the other ten institutions began the process. Each of the four Field Test institutions selected college administrators, faculty, students, employers, and cooperative education coordinators who would receive the questionnaire. The total number of recipients at each institution was 100. The cooperative education staff of each institution involved in the self-evaluation research sent a coded questionnaire with a cover letter from the Director to each potential respondent. The stamped, self-addressed envelope included for questionnaire return was addressed to the researcher at Old Dominion University. By using coding and having the returns sent to Old Dominion University, respondents' anonymity was protected. Also, because of coding, only the researcher knew who had or had not responded. Two follow-up letters, including new copies of the questionnaire and return envelopes, were sent by the researcher only to those who had not previously responded (See Appendix B.1 for examples of Letter to Coordinators at Participating Institutions, Method Used for Choosing Questions, Method of Selection Chart, Target Dates for Cooperative Education

Self-Evaluation, Procedural Directions, Code Sheet
Directions, Cover Letter for Questionnaire, Follow-Up
Letter Number 1, and Example of Follow-Up Letter Number 2).

Application of Methodology

Donald Dillman's Mail and Telephone Surveys: The Total Design Method required that participating institutions follow to the letter a series of rigid process directions. By adherence to these procedures a rate of response to the questionnaire was obtained.⁴⁵ Cooperative Education Directors at four participating field-test institutions and ten participating sample institutions were asked to send a cover letter with each original questionnaire. Each letter was originally typed and personally signed in blue ink. The letter explained what the study was about, and described its social usefulness. It further explained why the recipient was important to the research, promised confidentiality, and explained the identification code on the questionnaire. It also explained the usefulness of the study, offered a "token" reward in the form of a summary of the results of the questionnaire, explained what to do if questions arose, and gave appreciation for participation.

Participating cooperative education program
directors were asked to:

1. a. Remind college or university administrators

of the internal value of the research as well as the fact that the research was national in scope.

b. Make an effort to alert status group members to the fact that they would be receiving the questionnaire.

2. Choose 100 status group members (50 status group members in the case of the sample schools) to include cooperative education staff, faculty, administrators, students, and participating employers.

3. Obtain 200 6½" x 9½" manila envelopes with the institution's address in the upper left corner.

4. Put Old Dominion University's address on the 100 (or 50) stamped self-addressed envelopes.

5. Decide on method of postage. Send a return envelope with every questionnaire.

6. Duplicate the correct number of questionnaires on both sides.

7. Individually type the cover letter on institutional letterhead.

8. Fill out code sheet and mail to the researcher the same day the questionnaire is mailed.

9. Fold the items, insert, and mail all questionnaires on the same day.

10. Be prepared to "gently" pressure status group members to respond.

Three weeks after this process was completed, the first follow-up letters were sent from Old Dominion University to individuals who did not respond to the original questionnaire. A new questionnaire and self-addressed stamped envelope were included. Three weeks after the first follow-up letter was sent from Old

Dominion University, a second follow-up letter was sent to those who had not responded the previous two times. Again, a new questionnaire and self-addressed stamped envelope were included.

Field Test Response Rates

The following rates of response were obtained from the four field test institutions:

<u>Rate of Response</u>	<u>Institution</u>
91%	1
87%	2
77%	3
61%	4
79%	Aggregate Response (321 respondents)

The numbers in the right column above are codes to protect the identity of the Field-Test institutions. They are not the same numbers which were used when the Field-Test institutions were previously identified. Codes will be used throughout the remainder of this dissertation.

Designated Sample Institutions

The ten remaining institutions were designated Sample Institutions and were involved in the same questionnaire process as the previous four field-test

institutions, with one exception: each of the ten institutions sent questionnaires to a total of fifty potential respondents.

Sample Response Rates

The following rates of response were obtained from the ten sample institutions:

<u>Rate of Response</u>	<u>Institution</u>
94%	5
94%	6
90%	7
84%	8
84%	9
82%	10
78%	11
74%	12
70%	13
68%	14
82%	Aggregate Response--409 Respondents 10 Institutions
81%	Aggregate Response--730 Respondents 14 Institutions

Data Analysis

In order to give feedback to each of the participating institutions, the following steps were taken. First, raw scores were tabulated. Second,

weighted mean scores were calculated for each answer given by each responding group at each institution. These groups were called status groups and consisted of administrators, faculty, students, coordinators, and employers. The following example shows the raw score and mean score results for one question at one institution.

Question 15 e. To what extent is cooperative education promoted through:
verbal communications by
Admissions Office Staff?

<u>Raw Scores</u>						<u>Weighted Mean Scores</u>				
A	F	S	C	E		A	F	S	C	E
		3			1 TO A LITTLE OR NO EXTENT		1.20		1.40	
		1	2		2 TO A LITTLE EXTENT	1.50		1.14		
1	2	1	1		3 TO SOME EXTENT					
1					4 TO A GREAT EXTENT					
1				1	5 TO A VERY GREAT EXTENT					
5	3	2	2	10	0 DO NOT KNOW					0.46
8	5	7	5	11						

The weighted mean score was determined by multiplying the number of responses by the questionnaire item numeral. For example, the 1.50 in column A (Administrators) was determined in this way:

$$0 \times 1 = 0$$

$$0 \times 2 = 0$$

$$1 \times 3 = 3$$

$$1 \times 4 = 4$$

$$1 \times 5 = 5$$

$$5 \times 0 = 0$$

$$12 \div 8 = 1.50$$

(the total number of
people in status group A)

The answer Do Not Know was included in the calculations because it was assumed that lack of knowledge weakened or lowered the score of a response. However, means were recalculated, excluding Do Not Know. Using the same example as above, the adjusted mean became:

Adjusted Mean Scores

A	F	S	C	E	
					1 TO A LITTLE OR NO EXTENT
		1.60	2.33		2 TO A LITTLE EXTENT
	3.00				3 TO SOME EXTENT
4.00					4 TO A GREAT EXTENT
				5.00	5 TO A VERY GREAT EXTENT
					0 DO NOT KNOW

For column A (Administrators) the calculation was:

$$0 \times 1 = 0$$

$$0 \times 2 = 0$$

$$1 \times 3 = 3$$

$$1 \times 4 = 4$$

$$1 \times 5 = 5$$

$$12 \div 3 = 4.00 \text{ (the total number of people in status group A who gave an answer other than Do Not Know)}$$

Thus the mean response to question 15e by administrators at one institution indicated that cooperative education was promoted to a little extent by verbal communication if the response Do Not Know was included in the

calculation. But the three administrators who did know the answer chose to indicate that cooperative education was promoted to a great extent by verbal communication.

Two-Way Analysis of Variance

A Two-Way Analysis of Variance was performed for each individual institution, using the mean scores from the ninety-item questionnaire. In each analysis the first independent variable was group status, with five levels: administrators, faculty, students, coordinators, and employers. The second independent variable was support, with four levels: institutional commitment, employer participation, student participation and learning, and program operation. These levels of the two independent variables were selected by the researcher because they were of particular interest. They do not constitute a random sample of all possible levels of either independent variable. In other words, the levels of the independent variables were "fixed" by the researcher for investigation. The dependent variable in the model was the mean score.

Assumptions of Two-Way Analysis of Variance

The assumptions used in the Two-Way Analysis of Variance were that:

1. The samples were independent, random samples from defined populations.
2. The dependent variable was measured on an interval scale.
3. The scores on the dependent variable were normally distributed in the population.
4. The population variance for all of the cells in the design matrix were equal. This assumption of homogeneity of variance provided that the sampled populations had the same shape, means, and variances; that is, they were the same population.⁴⁶

Assumption 1 was violated. The sample was not randomly selected. However, according to Hinkle, Wiersma, and Jurs, Two-Way Analysis of Variance is robust with respect to violations of the assumptions, particularly when there is an equal number of observations in each cell.⁴⁷

Hypotheses Tested

The null hypotheses tested in the research were:

1. That identified status group members (administrators, faculty, students, coordinators, and employers) would perceive the cooperative education program as being of identical quality (either excellent, above average, good, below average, or poor).
2. That identified support categories for quality cooperative education programs were of equal value (institutional commitment, employer participation, student participation and learning, and program operation).
3. That status group members would perceive support categories identically.

These null hypotheses were stated statistically in the following form:

$$H_{01}: \mu_{1.} = \mu_{2.} = \dots = \mu_{r.} \quad (\text{Row Effect})$$

$$H_{02}: \mu_{.1} = \mu_{.2} = \dots = \mu_{.c} \quad (\text{Column Effect})$$

$$H_{03}: \text{all } (\mu_{rc} - \mu_{r.} - \mu_{.c} + \mu) = 0 \quad (\text{Interaction Effect})^{48}$$

Test Statistic

The test statistic used was the F ratio. For hypotheses one and two the test statistic F ratio was expressed:

$$F_R = \frac{MS_R}{MS_W}$$

$$F_C = \frac{MS_C}{MS_W}$$

For hypothesis three the test statistic F ratio was expressed:

$$F_{RC} = \frac{MS_{RC}}{MS_W}$$

Purpose of Two-Way Analysis of Variance

The researcher was seeking, through the Two-Way Analysis of Variance, to determine whether or not the factors status and support interacted to affect the overall mean score on the questionnaire and to see whether or not the interaction between status and support

was statistically significant. Interaction effects were found to be statistically significant at $p < .01$ in six of the fourteen analyses. In non-statistical language, individual Two-Way Analyses of Variance for six of the fourteen institutions indicated that mean scores varied significantly, depending on which status group answered and they also varied in terms of which support category was being addressed.

Multiple Classification Analysis

In order to determine the pattern of variance among status group members and among categories of support, a Multiple Classification Analysis was performed for each institution. Multiple Classification Analysis is useful in determining patterns of variance among levels of independent variables in Analysis of Variance. According to Nie, et al., "It is particularly useful when the factors examined are attribute variables that are not experimentally manipulated and therefore are correlated. Given two or more interrelated factors, it is valuable to know the net effect of each variable when the differences in the other factors are controlled for."⁴⁹ The conditions described by Nie, et al., were fulfilled in the research under discussion. The Multiple Classification Analyses from fourteen institutions indicated deviations from each institution's grand mean

overall or questionnaire response. For example, the grand mean for one institution was 2.74 on a scale from 0 to 5. This score was rated Good using the range of Poor, Fair, Good, Very Good, Excellent. The Multiple Classification Analysis for that institution showed:

Grand Mean = 2.74

1. Coordinators	0.40	ABOVE MEAN
2. Students	0.17	ABOVE MEAN
3. Administrators	0.03	ABOVE MEAN
4. Faculty	-0.07	BELOW MEAN
5. Employers	-0.52	BELOW MEAN
1. Student Participation and Learning	0.67	ABOVE MEAN
2. Employer Participation	0.02	ABOVE MEAN
3. Program Operation	-0.29	BELOW MEAN
4. Institutional Commitment	-0.41	BELOW MEAN

Table 1.a. and 1.b. through 14.a. and 14.b. display the individual results of Two-Way Analysis of Variance and Multiple Classification Analysis for the fourteen institutions which participated in the cooperative education program consensus self-evaluation research.

Results of Tests for Interaction

Six of the institutions involved in the research showed statistically significant interaction between status group and support category. These institutions included two field test institutions and four sample institutions. Eight of the institutions, two field test

Table 1.a. Two-Way Analysis of Variance--Field-Test Institution #1

BY	SCORE	MEAN SCORES ON QUESTIONNAIRE				
	STATUS	STATUS OF RESPONDENTS				
	SUPPORT	SUPPORT FOR COOPERATIVE EDUCATION CATEGORY				
Source of Variance		Sum of Squares	Degrees of Freedom	Mean Square	F	Significance of F
Main Effects		227.495	7	32.499	*26.015	0.000
STATUS		144.366	4	36.091	*28.890	0.000
SUPPORT		83.129	3	27.710	*22.181	0.000
Two-Way Interactions						
STATUS/SUPPORT		61.214	12	5.101	* 4.083	0.000
Explained		288.709	19	15.195	12.163	0.000
Residual		699.591	560	1.249		
TOTAL		988.300	579	1.707		

*In the above Analysis of Variance the joint effects of STATUS and SUPPORT are statistically significant at $p < .01$, as are main effects, and the interaction effect.

Table 1.b. Multiple Classification Analysis--Field-Test Institution #1

	SCORE	MEAN SCORES ON QUESTIONNAIRE	
BY	STATUS	STATUS OF RESPONDENT	
	SUPPORT	SUPPORT OF COOPERATIVE EDUCATION CATEGORY	
<hr/>			
Grand Mean =	2.61		
Independent Variables		Unadjusted Deviation Eta	Adjusted for Independent Variables Deviation Beta
<hr/>			
STATUS			
1	Administrators	-0.27	-0.27
2	Faculty	-0.08	-0.08
3	Student	-0.09	-0.09
4	Coordinator	0.95	0.95
5	Employer	-0.51	-0.51
		0.38	0.38
SUPPORT CATEGORY			
1	Institutional Commitment	-0.33	
2	Employer Participation	-0.04	
3	Student Participation and Learning	0.60	
4	Program Operation	-0.24	
		0.29	0.29
Multiple \underline{R} = .480; Multiple \underline{R}^2 = .230*			

*23% of the variance was explained by the independent variables.

Table 2.a. Two-Way Analysis of Variance--Field-Test Institution #2

BY	SCORE	MEAN SCORES ON QUESTIONNAIRE			
	STATUS	STATUS OF RESPONDENTS			
	SUPPORT	SUPPORT FOR COOPERATIVE EDUCATION CATEGORY			
Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance of F
Main Effects	345.760	7	49.394	*35.060	0.000
STATUS	269.956	4	67.489	*47.903	0.000
SUPPORT	75.803	3	25.268	*17.935	0.000
Two-Way Interactions					
STATUS/SUPPORT	40.919	12	3.410	* 2.420	0.005
Explained	386.679	19	20.352	14.445	0.000
Residual	788.963	560	1.409		
TOTAL	1175.641	579	2.030		

*In the above Analysis of Variance the joint effects of STATUS and SUPPORT are statistically significant at $p < .01$, as are main effects. The interaction effect is not statistically significant at $p < .01$.

Table 2.b. Multiple Classification Analysis--Field-Test Institution #2

SCORE		MEAN SCORES ON QUESTIONNAIRE	
BY	STATUS	STATUS OF RESPONDENT	
	SUPPORT	SUPPORT OF COOPERATIVE EDUCATION CATEGORY	
Grand Mean = 2.99			
Independent Variables		Unadjusted Deviation Eta	Adjusted for Independent Variables Deviation Beta
STATUS			
1	Administrators	0.83	0.83
2	Faculty	-0.36	-0.36
3	Student	-0.43	-0.43
4	Coordinator	0.79	0.79
5	Employer	-0.84	-0.84
		0.48	0.48
SUPPORT CATEGORY			
1	Institutional Commitment	-0.28	-0.28
2	Employer Participation	-0.11	-0.11
3	Student Participation and Learning	0.59	0.59
4	Program Operation	-0.24	-0.24
		0.25	0.25
Multiple \underline{R} = .542; Multiple \underline{R}^2 = .294*			

*29% of the variance was explained by the independent variables.

Table 3.a. Two-Way Analysis of Variance--Field-Test Institution #3

BY	SCORE	MEAN SCORES ON QUESTIONNAIRE			
	STATUS	STATUS OF RESPONDENTS			
	SUPPORT	SUPPORT FOR COOPERATIVE EDUCATION CATEGORY			
Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance of F
Main Effects	318.149	7	45.450	*40.694	0.000
STATUS	151.877	4	37.969	*33.996	0.000
SUPPORT	166.272	3	55.424	*49.624	0.000
Two-Way Interactions					
STATUS/SUPPORT	16.049	12	1.337	* 1.197	0.281
Explained	334.198	19	17.589	15.749	0.000
Residual	625.451	560	1.117		
TOTAL	959.649	579	1.657		

*In the above Analysis of Variance the joint effects of STATUS and SUPPORT are statistically significant at $p < .01$, as are main effects. The interaction effect is not statistically significant at $p < .01$.

Table 3.b. Multiple Classification Analysis---Field-Test Institution #3

SCORE	MEAN SCORES ON QUESTIONNAIRE		
BY	STATUS	STATUS OF RESPONDENT	
	SUPPORT	SUPPORT OF COOPERATIVE EDUCATION CATEGORY	
<hr/>			
Grand Mean =	2.42		
Independent Variables	Unadjusted Deviation Eta	Adjusted for Independent Variables Deviation Beta	
<hr/>			
STATUS			
1	Administrators	0.11	0.11
2	Faculty	-0.38	-0.38
3	Student	-0.22	-0.22
4	Coordinator	0.95	0.95
5	Employer	-0.46	-0.46
		0.40	0.40
<hr/>			
SUPPORT CATEGORY			
1	Institutional Commitment	-0.68	-0.68
2	Employer Participation	0.17	0.17
3	Student Participation and Learning	0.69	0.69
4	Program Operation	-0.01	-0.01
		0.42	0.42
<hr/>			
Multiple <u>R</u> = .576; Multiple <u>R</u> ² = .332*			

*33% of the variance was explained by the independent variables.

Table 4.a. Two-Way Analysis of Variance--Field-Test Institution #4

BY	SCORE	MEAN SCORES ON QUESTIONNAIRE				
	STATUS	STATUS OF RESPONDENTS				
	SUPPORT	SUPPORT FOR COOPERATIVE EDUCATION CATEGORY				
Source of Variance		Sum of Squares	Degrees of Freedom	Mean Square	F	Significance of F
Main Effects		125.220	7	17.889	*14.254	0.000
STATUS		99.214	4	24.804	*19.764	0.000
SUPPORT		26.006	3	8.669	* 6.907	0.000
Two-Way Interactions						
STATUS/SUPPORT		78.867	12	6.572	* 5.237	0.000
Explained		204.087	19	10.741	8.559	0.000
Residual		702.792	560	1.255		
TOTAL		906.879	579	1.566		

*In the above Analysis of Variance the joint effects of STATUS and SUPPORT are statistically significant at $P < .01$, as are main effects, and the interaction effect.

Table 4.b. Multiple Classification Analysis--Field-Test Institution #4

	SCORE	MEAN SCORES ON QUESTIONNAIRE	
BY	STATUS	STATUS OF RESPONDENT	
	SUPPORT	SUPPORT OF COOPERATIVE EDUCATION CATEGORY	
<hr/>			
Grand Mean =	2.71		
Independent Variables		Unadjusted Deviation Eta	Adjusted for Independent Variables Deviation Beta
<hr/>			
STATUS			
1	Administrators	0.23	0.23
2	Faculty	-0.21	-0.21
3	Student	0.08	0.08
4	Coordinator	0.56	0.56
5	Employer	-0.66	-0.66
		0.33	0.33
SUPPORT CATEGORY			
1	Institutional Commitment	-0.05	-0.05
2	Employer Participation	-0.02	-0.02
3	Student Participation and Learning	0.29	0.29
4	Program Operation	-0.36	-0.36
		0.17	0.17
Multiple <u>R</u> = .372; Multiple <u>R</u> ² = .138*			

* 14% of the variance was explained by the independent variables.

Table 5.a. Two-Way Analysis of Variance--Sample Institution #1

BY	SCORE	MEAN SCORES ON QUESTIONNAIRE				
	STATUS	STATUS OF RESPONDENTS				
	SUPPORT	SUPPORT FOR COOPERATIVE EDUCATION CATEGORY				
	Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance of F
	Main Effects	171.787	7	24.541	*23.550	0.000
	STATUS	51.432	4	12.858	*12.339	0.000
	SUPPORT	120.354	3	40.118	*38.499	0.000
Two-Way Interactions						
	STATUS/SUPPORT	27.583	12	2.299	* 2.206	0.010
	Explained	199.369	19	10.493	10.070	0.000
	Residual	583.552	560	1.042		
	TOTAL	782.921	579	1.352		

*In the above Analysis of Variance the joint effects of STATUS and SUPPORT are statistically significant at $p < .01$, as are main effects. The interaction effect is not statistically significant at $p < .01$.

Table 5.b. Multiple Classification Analysis--Sample Institution #1

	SCORE	MEAN SCORES ON QUESTIONNAIRE	
BY	STATUS	STATUS OF RESPONDENT	
	SUPPORT	SUPPORT OF COOPERATIVE EDUCATION CATEGORY	
Grand Mean = 3.18			
Independent Variables		Unadjusted Deviation Eta	Adjusted for Independent Variables Deviation Beta
STATUS			
1	Administrators	-0.01	-0.01
2	Faculty	0.02	0.02
3	Student	0.02	0.02
4	Coordinator	0.47	0.47
5	Employer	-0.47	-0.47
		0.26	0.26
SUPPORT CATEGORY			
1	Institutional Commitment	-0.43	-0.43
2	Employer Participation	0.02	0.02
3	Student Participation and Learning	0.70	0.70
4	Program Operation	-0.29	-0.29
		0.39	0.39
Multiple \underline{R} = .468 ; Multiple \underline{R}^2 = .219*			

*22% of the variance was explained by the independent variables

Table 6.a. Two-Way Analysis of Variance--Sample Institution #2

BY	SCORE	MEAN SCORES ON QUESTIONNAIRE			
	STATUS	STATUS OF RESPONDENTS			
	SUPPORT	SUPPORT FOR COOPERATIVE EDUCATION CATEGORY			
Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance of F
Main Effects	236.086	7	33.727	*29.660	0.000
STATUS	114.394	4	28.599	*25.151	0.000
SUPPORT	121.691	3	40.564	*35.673	0.000
Two-Way Interactions					
STATUS/SUPPORT	42.758	12	3.563	* 3.134	0.000
Explained	278.843	19	14.676	12.907	0.000
Residual	636.775	560	1.137		
TOTAL	915.618	579	1.581		

*In the above Analysis of Variance the joint effects of STATUS and SUPPORT are statistically significant at $p < .01$, as are main effects. The interaction effect is statistically significant at $p < .01$.

Table 6.b. Multiple Classification Analysis--Sample Institution #2

	SCORE	MEAN SCORES ON QUESTIONNAIRE	
BY	STATUS	STATUS OF RESPONDENT	
	SUPPORT	SUPPORT OF COOPERATIVE EDUCATION CATEGORY	
<hr/>			
Grand Mean =	2.68		
Independent Variables		Unadjusted Deviation Eta	Adjusted for Independent Variables Deviation Beta
<hr/>			
STATUS			
1	Administrators	-0.30	-0.30
2	Faculty	-0.14	-0.14
3	Student	-0.14	-0.14
4	Coordinator	0.88	0.88
5	Employer	-0.31	-0.31
		0.35	0.35
SUPPORT CATEGORY			
1	Institutional Commitment	-0.49	-0.49
2	Employer Participation	0.05	0.05
3	Student Participation and Learning	0.68	0.68
4	Program Operation	-0.17	-0.17
		0.36	0.36
Multiple \underline{R} = .508 ; Multiple \underline{R}^2 = .258*			

*26% of the variance is explained by the independent variables

Table 7.a. Two-Way Analysis of Variance--Sample Institution #3

BY	SCORE	MEAN SCORES ON QUESTIONNAIRE			
	STATUS	STATUS OF RESPONDENTS			
	SUPPORT	SUPPORT FOR COOPERATIVE EDUCATION CATEGORY			
Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance of F
Main Effects	308.750	7	44.107	*42.817	0.000
STATUS	165.053	4	41.263	*40.056	0.000
SUPPORT	143.697	3	47.899	*46.498	0.000
Two-Way Interactions					
STATUS/SUPPORT	31.058	12	2.588	* 2.512	0.003
Explained	339.808	19	17.885	17.362	0.000
Residual	576.872	560	1.030		
TOTAL	916.681	579	1.583		

*In the above Analysis of Variance the joint effects of STATUS and SUPPORT are statistically significant at $p < .01$, as are main effects. The interaction effect is not statistically significant at $p < .01$.

Table 7.b. Multiple Classification Analysis--Sample Institution #3

SCORE	MEAN SCORES ON QUESTIONNAIRE		
BY	STATUS	STATUS OF RESPONDENT	
	SUPPORT	SUPPORT OF COOPERATIVE EDUCATION CATEGORY	
<hr/>			
Grand Mean = 2.86			
Independent Variables	Unadjusted Deviation Eta	Adjusted for Independent Variables Deviation Beta	
<hr/>			
STATUS			
1	Administrators	-0.07	-0.07
2	Faculty	-0.07	-0.07
3	Student	-0.24	-0.24
4	Coordinator	0.99	0.99
5	Employer	-0.61	-0.61
		0.42	0.42
<hr/>			
SUPPORT CATEGORY			
1	Institutional Commitment	-0.55	-0.55
2	Employer Participation	0.17	0.17
3	Student Participation and Learning	0.70	0.70
4	Program Operation	-0.23	-0.23
		0.40	0.40
<hr/>			
Multiple \underline{R} = .580 ; Multiple \underline{R}^2 = .337*			
<hr/>			

*34% of the variance was explained by the independent variables.

Table 8.a. Two-Way Analysis of Variance--Sample Institution #4

BY	SCORE	MEAN SCORES ON QUESTIONNAIRE			
	STATUS	STATUS OF RESPONDENTS			
	SUPPORT	SUPPORT FOR COOPERATIVE EDUCATION CATEGORY			
Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance of F
Main Effects	199.367	7	28.481	*26.392	0.000
STATUS	105.914	4	26.479	*24.536	0.000
SUPPORT	93.453	3	31.151	*28.866	0.000
Two-Way Interactions					
STATUS/SUPPORT	51.578	12	4.298	* 3.983	0.000
Explained	250.945	19	13.208	12.239	0.000
Residual	604.325	560	1.079		
TOTAL	855.269	579	1.477		

*In the above Analysis of Variance the joint effects of STATUS and SUPPORT are statistically significant at $p < .01$, as are main effects. The interaction effect is statistically significant at $p < .01$.

Table 8.b. Multiple Classification Analysis---Sample Institution #4

	SCORE	MEAN SCORES ON QUESTIONNAIRE	
BY	STATUS	STATUS OF RESPONDENT	
	SUPPORT	SUPPORT OF COOPERATIVE EDUCATION CATEGORY	
<hr/>			
Grand Mean = 2.67			
Independent Variables		Unadjusted Deviation Eta	Adjusted for Independent Variables Deviation Beta
<hr/>			
STATUS			
1	Administrators	0.40	0.40
2	Faculty	-0.34	-0.34
3	Student	0.01	0.01
4	Coordinator	0.53	0.53
5	Employer	-0.60	-0.60
		0.35	0.35
SUPPORT CATEGORY			
1	Institutional Commitment	-0.40	-0.40
2	Employer Participation	0.05	0.05
3	Student Participation and Learning	0.61	0.61
4	Program Operation	-0.24	-0.24
		0.33	0.33
Multiple \underline{R} = .483; Multiple \underline{R}^2 = .233*			

*23% of the variance was explained by the independent variables.

Table 9.a. Two-Way Analysis of Variance--Sample Institution #5

BY	SCORE STATUS SUPPORT	MEAN SCORES ON QUESTIONNAIRE STATUS OF RESPONDENTS SUPPORT FOR COOPERATIVE EDUCATION CATEGORY				
	Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance of F
Main Effects		189.934	7	27.133	*24.539	0.000
	STATUS	77.306	4	19.327	*17.478	0.000
	SUPPORT	112.627	3	37.542	*33.952	0.000
Two-Way Interactions						
	STATUS/SUPPORT	25.895	12	2.158	* 1.952	0.027
	Explained	215.829	19	11.359	10.273	0.000
	Residual	619.218	560	1.106		
	TOTAL	835.047	579	1.442		

*In the above Analysis of Variance the joint effects of STATUS and SUPPORT are statistically significant at $p < .01$, as are main effects. The interaction effect is not statistically significant at $p < .05$.

Table 9.b. Multiple Classification Analysis--Sample Institution #5

SCORE	MEAN SCORES ON QUESTIONNAIRE	
BY	STATUS	STATUS OF RESPONDENT
	SUPPORT	SUPPORT OF COOPERATIVE EDUCATION CATEGORY
Grand Mean = 2.69		
Independent Variables	Unadjusted Deviation Eta	Adjusted for Independent Variables Deviation Beta
STATUS		
1 Administrators	0.27	0.27
2 Faculty	0.33	0.33
3 Student	-0.60	-0.60
4 Coordinator	0.25	0.25
5 Employer	-0.26	-0.26
	0.30	0.30
SUPPORT CATEGORY		
1 Institutional Commitment	-0.51	-0.51
2 Employer Participation	0.19	0.19
3 Student Participation and Learning	0.59	0.59
4 Program Operation	-0.16	-0.16
	0.37	0.37
Multiple \underline{R} = .477; Multiple \underline{R}^2 = .227*		

*23% of the variance was explained by the independent variables.

Table 10.a. Two-Way Analysis of Variance--Sample Institution #6

BY	SCORE	MEAN SCORES ON QUESTIONNAIRE				
	STATUS	STATUS OF RESPONDENTS				
	SUPPORT	SUPPORT FOR COOPERATIVE EDUCATION CATEGORY				
Source of Variance		Sum of Squares	Degrees of Freedom	Mean Square	F	Significance of F
Main Effects		306.840	7	43.834	*41.926	0.000
STATUS		227.432	4	56.858	*54.383	0.992
SUPPORT		79.409	3	26.470	*25.317	0.000
Two-Way Interactions						
STATUS/SUPPORT		77.352	12	6.446	* 6.165	0.000
Explained		384.192	19	20.221	19.340	0.000
Residual		585.488	560	1.046		
TOTAL		969.680	579	1.046		

*In the above Analysis of Variance the joint effects of STATUS and SUPPORT are statistically significant at $p < .01$, as are main effects. The interaction effect is statistically significant at the $p < .01$ level.

Table 10.b. Multiple Classification Analysis--Sample Institution #6

	SCORE	MEAN SCORES ON QUESTIONNAIRE	
BY	STATUS	STATUS OF RESPONDENT	
	SUPPORT	SUPPORT OF COOPERATIVE EDUCATION CATEGORY	
<hr/>			
Grand Mean =	3.00		
Independent Variables		Unadjusted Deviation Eta	Adjusted for Independent Variables Deviation Beta
<hr/>			
STATUS			
1	Administrators	0.12	0.12
2	Faculty	0.14	0.14
3	Student	-0.45	-0.45
4	Coordinator	1.02	1.02
5	Employer	-0.83	-0.83
		0.48	0.48
SUPPORT CATEGORY			
1	Institutional Commitment	-0.42	-0.42
2	Employer Participation	0.03	0.03
3	Student Participation and Learning	0.54	0.54
4	Program Operation	-0.05	-0.05
		0.29	0.29
Multiple \underline{R} = .563 ; Multiple \underline{R}^2 = .316*			

*32% of the variance was explained by the independent variables.

Table 11.a. Two-Way Analysis of Variance--Sample Institution #7

BY	SCORE	MEAN SCORES ON QUESTIONNAIRE			
	STATUS	STATUS OF RESPONDENTS			
	SUPPORT	SUPPORT FOR COOPERATIVE EDUCATION CATEGORY			
Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance of F
Main Effects	165.051	7	23.579	*18.056	0.000
STATUS	101.599	4	25.400	*19.450	0.000
SUPPORT	63.452	3	21.151	*16.196	0.000
Two-Way Interactions					
STATUS/SUPPORT	22.971	12	1.914	* 1.466	0.133
Explained	188.022	19	9.896	7.578	0.000
Residual	731.297	560	1.306		
TOTAL	919.319	579	1.588		

*In the above Analysis of Variance the joint effects of STATUS and SUPPORT are statistically significant at $p < .01$, as are main effects. The interaction effect is not statistically significant at $p < .01$.

Table 11.b. Multiple Classification Analysis--Sample Institution #7

	SCORE	MEAN SCORES ON QUESTIONNAIRE	
BY	STATUS	STATUS OF RESPONDENT	
	SUPPORT	SUPPORT OF COOPERATIVE EDUCATION CATEGORY	
Grand Mean = 2.84			
Independent Variables		Unadjusted Deviation Eta	Adjusted for Independent Variables Deviation Beta
STATUS			
1	Administrators	0.57	0.57
2	Faculty	0.36	0.36
3	Student	-0.47	-0.47
4	Coordinator	-0.00	-0.00
5	Employer	-0.45	-0.45
		0.33	0.33
SUPPORT CATEGORY			
1	Institutional Commitment	-0.28	-0.28
2	Employer Participation	-0.06	-0.06
3	Student Participation and Learning	0.53	0.53
4	Program Operation	-0.21	-0.21
		0.26	0.26
Multiple \underline{R} = .424; Multiple \underline{R}^2 = .180*			

*18% of the variance was explained by the independent variables.

Table 12.a. Two-Way Analysis of Variance--Sample Institution #8

BY	SCORE	MEAN SCORES ON QUESTIONNAIRE				
	STATUS	STATUS OF RESPONDENTS				
	SUPPORT	SUPPORT FOR COOPERATIVE EDUCATION CATEGORY				
	Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance of F
	Main Effects	166.118	7	23.731	*22.353	0.000
	STATUS	54.286	4	13.572	*12.784	0.000
	SUPPORT	111.831	3	37.277	*35.113	0.000
Two-Way Interactions						
	STATUS/SUPPORT	33.080	12	2.757	* 2.597	0.002
	Explained	199.198	19	10.484	9.875	0.000
	Residual	594.515	560	1.062		
	TOTAL	793.713	579	1.371		

*In the above Analysis of Variance the joint effects of STATUS and SUPPORT are statistically significant at $p < .01$, as are main effects. The interaction effect is not statistically significant at $p < .01$.

Table 12.b. Multiple Classification Analysis--Sample Institution #8

	SCORE	MEAN SCORES ON QUESTIONNAIRE	
BY	STATUS	STATUS OF RESPONDENT	
	SUPPORT	SUPPORT OF COOPERATIVE EDUCATION CATEGORY	
<hr/>			
Grand Mean = 2.74			
Independent Variables		Unadjusted Deviation Eta	Adjusted for Independent Variables Deviation Beta
<hr/>			
STATUS			
1	Administrators	0.03	0.03
2	Faculty	-0.07	-0.07
3	Student	0.17	0.17
4	Coordinator	0.40	0.40
5	Employer	-0.52	-0.52
		0.26	0.26
SUPPORT CATEGORY			
1	Institutional Commitment	-0.41	-0.41
2	Employer Participation	0.02	0.02
3	Student Participation and Learning	0.67	0.67
4	Program Operation	-0.29	-0.29
		0.38	0.38
Multiple \underline{R} = .457 ; Multiple \underline{R}^2 = .209*			

*21% of the variance was explained by the independent variables.

Table 13.a. Two-Way Analysis of Variance--Sample Institution #9

BY	SCORE	MEAN SCORES ON QUESTIONNAIRE				
	STATUS	STATUS OF RESPONDENTS				
	SUPPORT	SUPPORT FOR COOPERATIVE EDUCATION CATEGORY				
Source of Variance		Sum of Squares	Degrees of Freedom	Mean Square	F	Significance of F
Main Effects		167.262	7	23.895	*27.573	0.000
STATUS		99.558	4	24.889	*28.721	0.000
SUPPORT		67.705	3	22.568	*26.043	0.000
Two-Way Interactions						
STATUS/SUPPORT		33.817	12	2.818	* 3.252	0.000
Explained		201.079	19	10.583	12.212	0.000
Residual		485.289	560	.867		
TOTAL		686.368	579	1.185		

*In the above Analysis of Variance the joint effects of STATUS and SUPPORT are statistically significant at $p < .01$, as are main effects. The interaction effect is statistically significant at $p < .01$.

Table 13.b. Multiple Classification Analysis--Sample Institution #9

	SCORE	MEAN SCORES ON QUESTIONNAIRE	
BY	STATUS	STATUS OF RESPONDENT	
	SUPPORT	SUPPORT OF COOPERATIVE EDUCATION CATEGORY	
<hr/>			
Grand Mean =	3.56		
Independent Variables		Unadjusted Deviation Eta	Adjusted for Independent Variables Deviation Beta
<hr/>			
STATUS			
1	Administrators	0.38	0.38
2	Faculty	0.11	0.11
3	Student	0.16	0.16
4	Coordinator	0.15	0.15
5	Employer	-0.81	-0.81
		0.38	0.38
SUPPORT CATEGORY			
1	Institutional Commitment	-0.32	-0.32
2	Employer Participation	0.06	0.06
3	Student Participation and Learning	0.51	0.51
4	Program Operation	-0.25	-0.25
		0.31	0.31
Multiple \underline{R} = .494 ; Multiple \underline{R}^2 = .244*			

*24% of the variance was explained by the independent variables.

Table 14.a. Two-Way Analysis of Variance--Sample Institution #10

BY	SCORE STATUS SUPPORT	MEAN SCORES ON QUESTIONNAIRE STATUS OF RESPONDENTS SUPPORT FOR COOPERATIVE EDUCATION CATEGORY				
	Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance of F
Main Effects		321.272	7	45.896	*34.376	0.000
STATUS		133.322	4	33.330	*24.964	0.000
SUPPORT		187.950	3	62.650	*46.925	0.000
Two-Way Interactions						
STATUS/SUPPORT		33.397	12	2.783	* 2.085	0.000
Explained		354.669	19	18.667		
Residual		747.668	560	1.335		
TOTAL		1102.337	579	1.904		

*In the above Analysis of Variance the joint effects of STATUS and SUPPORT are statistically significant at $p < .01$, as are main effects. The interaction effect is not statistically significant at $p < .01$.

Table 14.b. Multiple Classification Analysis--Sample Institution #10

	SCORE	MEAN SCORES ON QUESTIONNAIRE	
BY	STATUS	STATUS OF RESPONDENT	
	SUPPORT	SUPPORT OF COOPERATIVE EDUCATION CATEGORY	
<hr/>			
Grand Mean =	2.56		
Independent Variables		Unadjusted Deviation Eta	Adjusted for Independent Variables Deviation Beta
<hr/>			
STATUS			
1	Administrators	0.33	0.33
2	Faculty	-0.48	-0.48
3	Student	-0.10	-0.10
4	Coordinator	0.75	0.75
5	Employer	-0.50	-0.50
		0.35	0.35
<hr/>			
SUPPORT CATEGORY			
1	Institutional Commitment	-0.64	-0.64
2	Employer Participation	0.18	0.18
3	Student Participation and Learning	0.80	0.80
4	Program Operation	-0.23	-0.23
		0.41	0.41
Multiple \underline{R} = .540; Multiple \underline{R}^2 = .291*			

*29% of the variance was explained by the independent variables.

and six sample, showed no statistically significant interaction between status group and support category. No pattern of relationship between rates of response or grand means could be found to explain this nearly equal breakout.

Results of Program Ratings by Status Group Members

At ten of the institutions involved in the research cooperative education coordinators gave the cooperative education program the highest rating. At three institutions the highest rating was given by college administrators. At one institution the highest rating was given by the faculty.

Results of Ratings by Support Categories

At each of the fourteen institutions involved in the research Student Participation and Learning was rated highest. Employer Participation received the second highest rating. At thirteen of the institutions Program Operation was in third place, and Institutional Commitment was in fourth place. At one institution these latter two categories were reversed.

Method of Reporting

Each of the fourteen institutions received:

(1) a Summary Letter, (2) a Raw Score Chart, (3) a

Weighted Mean Score Chart, (4) a Two-Way Analysis of Variance, (5) a Multiple Classification Analysis, (6) a copy of Definitions of Cooperative Education given by respondents, and (7) a copy of all Anecdotal Comments written on individual questionnaires by respondents (see Appendix B.2 for examples of 1, 6, and 7).

Three-Way Analysis of Variance--
Four Field-Test Institutions

Data from the four field-test institutions was utilized in a Three-Way Analysis of Variance. The three independent variables were status, support, and institution. The results of that analysis are found in Table 15.a.

Results of Three-Way Analysis
of Variance--Four Field-Test
Institutions

Statistically significant variance of response occurred under these conditions: when different status group members responded to questions from different support categories; when levels of support categories were compared among institutions. When the three variables status, support, and institution were compared, the distinction among institutions was not found to be statistically significant. It can be tentatively stated that the four Field Test institutions appeared to be more alike than different in terms of overall questionnaire response.

Table 15.a. Three-Way Analysis of Variance--Four Field-Test Institutions

BY	SCORE	MEAN SCORES ON QUESTIONNAIRE			Field-Test Institution:	
	STATUS	STATUS OF RESPONDENTS			1. 91% Response Rate	
	SUPPORT	SUPPORT FOR COOPERATIVE EDUCATION CATEGORY			2. 87% Response Rate	
	INSTITUTION	INSTITUTIONS INVOLVED IN ANALYSIS			3. 77% Response Rate	4. 67% Response Rate
	Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance of F
Main effects		931.550	10	93.155	*74.080	0.000
	STATUS	548.329	4	137.082	*109.012	0.000
	SUPPORT	284.981	3	94.994	*75.542	0.000
	INSTITUTION	98.240	3	32.747	*26.041	0.000
2-way interactions		338.708	33	10.264	* 8.162	0.000
	STATUS/SUPPORT	156.085	12	13.007	*10.344	0.000
	STATUS/INSTITUTION	116.297	12	9.691	* 7.707	0.000
	SUPPORT/INSTITUTION	65.540	9	7.282	* 5.791	0.000
3-way interactions		40.964	36	1.138	** 0.905	0.632
	STATUS/SUPPORT/INSTITUTION	40.964	36	1.138	** 0.905	0.632
Explained		1311.222	79	16.598	13.199	0.000
Residual		2816.798	2240	1.257		
Total		4128.020	2319	1.780		

*In the above Three-Way Analysis of Variance the interaction effect was statistically significant at $p < .01$ for main effects, as well as all two-way interactions.

**Three-way interaction effects were not statistically significant at $p < .01$.

Multiple Classification Analysis--
Four Field-Test Institutions

Data from the four field-test institutions were utilized in a Multiple Classification Analysis which is found in Table 15.b.

Results of Multiple Classification
Analysis--Four Field-Test
Institutions

In the Multiple Classification Analysis for Field Test institutions the interaction among the factors status, support, and institution accounted for 23% of the variance, which indicates a moderate positive correlation. Although the correlation was "moderate," using the rule of thumb for calculating the size of a correlation coefficient (Multiple R) in terms of "classical" experiments, it could be considered sufficient in the case of social science research where a high correlation among factors pre-exists. This guarded interpretation is based on Hinkle, Wiersma, Jurs, Applied Statistics for the Behavioral Sciences (Boston: Houghton Mifflin, 1979);⁵⁰ and Nie, Hull, Jenkins, Steinbrenner, and Bent, The Statistical Package for the Social Sciences, 2nd edition (New York: McGraw Hill Book Company, 1975).⁵¹ Three of the four field test institutions rated their cooperative education programs as Good, according to questionnaire response, and as

Table 15.b. Multiple Classification Analysis--Four Field-Test Institutions

BY	SCORE	MEAN SCORES ON QUESTIONNAIRE	Field-Test Institutions:		
	STATUS	STATUS OF RESPONDENTS	1.	91% Response Rate	
	SUPPORT	SUPPORT FOR COOPERATIVE EDUCATION CATEGORY	2.	87% Response Rate	
	INSTITUTION	INSTITUTIONS INVOLVED IN ANALYSIS	3.	77% Response Rate	
			4.	67% Response Rate	
Grand Mean = 2.68					
Independent Variables		Unadjusted Deviation Eta	Adjusted for Independent Variables Deviation Beta		
STATUS					
1	Administrators	0.23		0.23	
2	Faculty	-0.26		-0.26	
3	Student	-0.16		-0.16	
4	Coordinator	0.81		0.81	
5	Employer	-0.62		-0.62	
SUPPORT			0.36		0.36
1	Institutional Commitment	-0.33		-0.33	
2	Employer Participation	0.00		0.00	
3	Student Participation and Learning	0.54		0.54	
4	Program Operation	-0.21		-0.21	
INSTITUTION			0.26		0.26
1		0.31		0.31	
2		0.03		0.03	
3		-0.07		-0.07	
4		-0.26		-0.26	
Multiple <u>R</u> = 0.475; Multiple <u>R</u> ² = 0.226 *			0.15		0.15

*23% of the variance was explained by the three independent variables.

found on the Multiple Classification Analysis, while one rated its program as Fair.

Three-Way Analysis of Variance
and Multiple Classification
Analysis--Ten Sample
Institutions

Data from the ten Sample Institutions was utilized in a Three-Way Analysis of Variance. The three independent variables were status, support, and institution. The results of that analysis are found in Table 16.a.

Results of Three-Way Analysis
of Variance--Ten Sample
Institutions

As with the field-test institutions, the Three-Way Analysis of Variance for the ten sample institutions indicated statistically significant interaction effects at $p < .01$ for main effects and the two-way interactions: status/support, status/institution. Statistically significant interaction did not occur between support/institution. Three-way interactions were not statistically significant at $p < .01$.

Results of Multiple Classification
Analysis--Ten Sample Institutions

In the Multiple Classification Analysis for Sample institutions the interaction among the factors status, support, and institution accounted for 25% of the variance, which indicated a moderate positive

Table 16.a. Three-Way Analysis of Variance--Ten Sample Institutions

BY	SCORE	MEAN SCORES ON QUESTIONNAIRE		Sample Institution--Response Rate	
	STATUS	STATUS OF RESPONDENTS		1. 95%	6. 82%
	SUPPORT	SUPPORT FOR COOPERATIVE EDUCATION CATEGORY		2. 94%	7. 78%
	INSTITUTION	INSTITUTIONS INVOLVED IN ANALYSIS		3. 90%	8. 74%
				4. 84%	9. 70%
				5. 84%	10. 68%
	Source of Variance	Sum of Squares	Degrees of Freedom	Mean Square	Significance of F
	Main effects	2269.190	16	141.824	*128.827
	STATUS	738.247	4	184.562	*167.647
	SUPPORT	1057.457	3	352.486	*320.182
	INSTITUTION	473.486	9	52.610	* 47.788
	2-way interactions	710.472	75	9.473	* 8.605
	STATUS/SUPPORT	274.101	12	22.842	* 20.748
	STATUS/INSTITUTION	391.930	36	10.887	* 9.889
	SUPPORT/INSTITUTION	44.322	27	1.642	** 1.491
	3-way interactions	105.388	108	0.976	** 0.886
	STATUS/SUPPORT/INSTITUTION	105.389	108	0.976	** 0.886
	Explained	3085.050	109	15.503	14.082
	Residual	6165.001	5601	1.101	0.000
	Total	9250.051	5799	1.595	

*In the above Three-Way Analysis of Variance the interaction effect was statistically significant at $p < .01$ for main effects and all 2-way interactions except support/institution. Three-way interactions were not statistically significant.

correlation. The grand mean was 2.88. Nine of the ten sample institutions rated their cooperative education programs as Good, according to questionnaire response, and as found on the Multiple Classification Analysis, while one rated its program as Above Average. The results of the Multiple Classification Analysis are found in Table 16.b.

Demographic Data

Demographic data were collected to assure that the samples used in the research were representative of institutions of higher education in the United States with alternating cooperative education programs. Participating institutions were from twelve states, from the west coast to the east coast, and from all of the seven regions of the United States as defined by the Cooperative Education Association, Inc. Twelve of the participating institutions were predominately white, two were predominately black, which is a higher ratio (14 percent) of black to white than the national average (13 percent). That higher ratio allowed for more input from predominately black institutions.

The demographic data was not analyzed, but is presented for clarification.

Table 16.b. Multiple Classification Analysis--Ten Sample Institutions

BY	SCORE	MEAN SCORES ON QUESTIONNAIRE		Sample Institution--Response Rate	
	STATUS	STATUS OF RESPONDENTS		1. 94%	6. 82%
	SUPPORT	SUPPORT OF COOPERATIVE EDUCATION CATEGORY		2. 94%	7. 78%
	INSTITUTION	INSTITUTIONS INVOLVED IN ANALYSIS		3. 90%	8. 74%
				4. 84%	9. 70%
			5. 84%	10. 68%	

Grand Mean = 2.88			
Independent Variables	Unadjusted Deviation Eta	Adjusted for Independent Variables Deviation Beta	
STATUS			
1 Coordinators	0.54	0.54	
2 Administrators	0.17	0.17	
3 Faculty	-0.01	-0.01	
4 Students	-0.16	-0.16	
5 Employers	-0.54	-0.54	
	0.28		0.28
SUPPORT CATEGORY			
1 Student Participation and Learning	0.63	0.63	
2 Employer Participation	0.07	0.07	
3 Program Operation	-0.21	-0.21	
4 Institutional Support	-0.44	-0.44	
	0.34		0.34
INSTITUTION			
1	0.69	0.69	
2	0.31	0.31	
3	0.12	0.12	
4	-0.02	-0.02	
5	-0.04	-0.04	
6	-0.14	-0.14	
7	-0.19	-0.19	
8	-0.20	-0.20	
9	-0.21	-0.21	
10	-0.32	-0.32	
	0.23		0.23

Multiple \underline{R} = .495; Multiple \underline{R}^2 = .245

*25% of the variance was explained by the three independent variables.

Status Groups

The aggregate response from four Field-Test Institutions was 321. The aggregate response from ten Sample Institutions was 409. The grand total response was 730. Breakout of responses to the questionnaire by status is displayed in Table 17, which indicates that 29 percent of the respondents were students, 28 percent of the respondents were employers, 19 percent of the respondents were faculty, 13 percent of the respondents were administrators, and 11 percent of the respondents were coordinators.

Gender Groups

More than half of all respondents were male, with faculty having the highest percent (79 percent) and students having the lowest percent (58 percent). The breakout on gender is displayed in Table 18.

Status by Ethnic Groups

Five hundred-sixty of the 730 respondents (78 percent) reported that they were white, non-Hispanic. Eighty-one percent of the coordinators were white, non-Hispanic; 80 percent of administrators and students were white, non-Hispanic; 75 percent of Employers were white, non-Hispanic; and 73 percent of the faculty were white, non-Hispanic. The full breakout is displayed in Table 19.

Table 17. Breakout of Responses to Cooperative Education
Program Questionnaire by Status Group

	Administrators	Faculty	Students	Coordinators	Employers
Field-Test Institutions					
1	13	13	29	4	18
2	16	16	33	2	24
3	2	16	51	1	17
4	5	12	10	1	38
Total (321)	36	57	123	8	97
Sample Institutions					
1	4	6	7	6	19
2	10	4	3	18	4
3	4	3	7	16	12
4	3	9	15	2	12
5	6	14	10	4	11
6	8	5	8	5	11
7	11	10	8	9	9
8	4	15	5	5	6
9	3	5	14	1	11
10	11	12	10	5	9
Total (409)	64	83	87	71	104
Grand Total (14 Institutions) (100%)	100 (13%)	140 (19%)	210 (29%)	79 (10%)	201 (28%)

Table 18. Breakout of Respondents to Cooperative Education Program
Questionnaire by Gender Group

	Administrators	Faculty	Students	Coordinators	Employers
Males (N=490)	78 (78%)	111 (79%)	128 (61%)	46 (58%)	127 (63%)
Females (N=235)	22 (22%)	29 (21%)	79 (38%)	33 (42%)	72 (36%)
Unknown (N=5)			3 (1%)		2 (1%)
Total of All Respondents (100%) (N=730)	100	140	210	79	201

Table 19. Breakout of Respondents to Cooperative Education Program
Questionnaire by Status by Ethnic Group*

	Administrators	Faculty	Students	Coordinators	Employers
American Indian or Native Alaskan (N=2) (1%)		1 (1%)	1 (1%)		
Black Non- Hispanic (N=95) (13%)	14 (14%)	20 (14%)	21 (10%)	9 (12%)	31 (15%)
Asian or Pacific Islander (N=17) (2%)	1 (1%)	4 (3%)	5 (2%)	1 (1%)	6 (3%)
Hispanic (N=12) (2%)	2 (2%)	3 (2%)	7 (3%)		
White Non- Hispanic (N=560) (78%)	80 (80%)	102 (73%)	165 (80%)	64 (81%)	149 (75%)
Other (N=11) (2%)	2 (2%)	3 (2%)	2 (1%)	1 (1%)	3 (2%)
Unknown (N=28) (4%)	1 (1%)	7 (5%)	6 (3%)	4 (5%)	10 (5%)
Total (N=725) (99.3%)	100 (100%)	140 (100%)	207 (100%)	79 (100%)	199 (100%)

*5 respondents do not appear on this chart because gender data was not available (00.6%)

Complete Breakouts by Status by Ethnic Group by Gender

Complete breakouts of demographic data by status by ethnic group by gender are displayed in Tables 20 and 21.

Problems with Questionnaire

Of 730 respondents who answered the 90-item questionnaire, 36 found the questionnaire unclear, too lengthy, or both. The number of respondents in this category are found in Table 22.

Certain individual questions were deemed inappropriate by individual respondents. The individual questions deemed inappropriate are found in Table 23.

Summary of Data Analysis

A preliminary informal search for cooperative education program consensus self-evaluation models was conducted in September, 1981. When none were found, a four-round Delphi technique was used with twelve cooperative education program administrators with exemplary programs in order to develop national norms of excellence for alternating cooperative education programs at four-year colleges and universities. The Delphi technique was begun in November, 1981, and was completed in August, 1982. One hundred fifty-five norms of excellence which were rated as of highest importance and

Table 20. Breakout of Respondents to Cooperative Education Program Questionnaire
by Status by Ethnic Group by Gender--Male

	Administrators	Faculty	Students	Coordinators	Employers
American Indian or Native Alaskan (N=1) (1%)			1 (1%)		
Black Non- Hispanic (N=59) (12%)	12 (15%)	12 (11%)	17 (13%)	2 (4%)	16 (13%)
Asian or Pacific Islander (N=9) (1%)	1 (1%)	4 (4%)	3 (2%)	1 (2%)	
Hispanic (N=6) (1%)	2 (3%)		4 (3%)		
White Non-Hispanic (N=387) (79%)	60 (77%)	87 (78%)	99 (77%)	39 (85%)	102 (80%)
Other (N=10) (2%)	2 (3%)	3 (2%)	1 (1%)	1 (2%)	3 (2%)
Unknown (N=18) (4%)	1 (1%)	5 (5%)	3 (3%)	3 (7%)	6 (5%)
Total (N=490) (100%)	78 (16%)	111 (23%)			127 (26%)

*5 Respondents appear on neither male nor female chart because gender data was not available.

Table 21. Breakout of Respondents to Cooperative Education Program
Questionnaire by Status by Ethnic Group by Gender--Female *

	Administrators	Faculty	Students	Coordinators	Employers
American Indian or Native Alaskan (N=1) (.5%)		1 (3%)			
Black Non- Hispanic (N=36) (15%)	2 (9%)	8 (28%)	4 (5%)	7 (21%)	15 (21%)
Asian or Pacific Islander (N=8) (3%)			2 (3%)		6 (8%)
Hispanic (N=6) (3%)		3 (10%)	3 (4%)		
White Non- Hispanic (N=173) (74%)	20 (91%)	15 (52%)	66 (84%)	25 (76%)	47 (65%)
Other (N=1) (.5%)			1 (1%)		
Unknown (N=10) (4%)		2 (7%)	3 (3%)	1 (3%)	4 (6%)
Total (N=235) (100%)	22 (9%)	29 (12%)	79 (34%)	33 (14%)	72 (31%)

*5 Respondents appear on neither male nor female chart because gender data was not available.

Table 22. Critical Comments on Back Cover and Critical Anecdotal Comments

	Administrators	Faculty	Students	Coordinators	Employers
Total Number of Respondents	100	140	210	79	201
Total Percentage Critical of Questionnaire	3%	9%	2%	8%	4%

*Average percent dissatisfied with questionnaire = 5%

Table 23. Questions Considered Inappropriate from Anecdotal Comments

	Administrators	Faculty	Students	Coordinators	Employers
Total Number Respondents to Questionnaire (N=730)	100	140	210	79	201
Question Number	Questions from 90-Item Questionnaire Considered Inappropriate				
9 (N=1)			1		
10 (N=1)				1	
13 (N=2)				1	1
16 (N=1)		1			
21 (N=1)		1			
24 (N=4)	1		2		1
27 (N=1)	1				
28b (N=2)		1			1
38 (N=1)				1	
45 (N=2)	1			1	
68 (N=1)				1	
71* (N=17)				3	
81 (N=1)		2			
82 (N=1)	1				
90a (N=1)				1	
Grand Total (N=37)	4	5	3	9	16

* Question number 71 appears to be the only one with enough objections (17) to be considered inappropriate.

of above average importance were generated by the twelve Delphi participants.

A χ^2 test for stability of response was conducted to assure that stability of response had been reached on each Delphi Questionnaire Statement. Criticism of the Delphi technique was addressed. The 155 norm statements were transposed to a 90-item cooperative education self-evaluation questionnaire.

The Total Design Method was used to administer the 90-item self-evaluation questionnaire at 14 institutions of higher education with alternating cooperative education programs.

The institutions were divided into four Field-Test institutions and ten Sample institutions. Out of 900, 730 responded to the questionnaire, an 81 percent response rate.

The responses from individual institutions were subjected to Two-Way Analyses of Variance and Multiple Classification Analyses. According to questionnaire response and data analyses, ten of the programs were rated as Good, one as Fair, and one as Above Average. Reports of individual results were sent to individual institutions.

Three-Way Analyses of Variance and Multiple Classification Analyses were conducted with data from

the four Field-Test institutions and the ten Sample institutions. Individual institutions also received the results of these analyses.

Demographic data were collected regarding status, gender, and ethnic groups. Problems with the questionnaire were reported.

Conclusions

Three null hypotheses were tested in the research. The Three-Way Analysis of Variance provided the following conclusions.

Null Hypothesis 1 was not supported. Identified status group members perceived the cooperative education program differently from one another.

Null Hypothesis 2 was not supported. Support categories for quality cooperative education programs were not found to be of equal value.

Null Hypothesis 3 was not supported in the case of status group members and support categories. Interaction occurred between these variables. That is to say, the status of the respondent interacted with support category of the question when the respondent answered the question. Null Hypothesis 3 was not supported in the case of status group members and institutions. That is to say that status and institution interacted as the questions were answered by respondents. Null hypothesis

3 was supported in three-way interactions among status, support, and institution.

Interpretations and implications of the findings will be fully discussed in Chapter IV.

Chapter III

ENDNOTES

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³Kerlinger, pp. 715-718.

⁴R. Likert, "A Technique for the Measurement of Attitudes," Archives of Psychology, No. 140, (1983). This is Likert's original monograph.

⁵Donald Ary, Lucy Cheser Jacobs, and Asghar Razavieh, Introduction to Research in Education (New York: Holt, Rinehart and Winston, 1972), p. 179.

⁶Ibid., pp. 179-180.

⁷Dajani, Sincoff, and Talley, p. 84.

⁸Ibid.

⁹Ibid.

¹⁰Ibid., p. 87.

¹¹Ibid.

¹²Dennis E. Hinkle, William Wiersma, Stephen G. Jurs, Applied Statistics for the Behavioral Sciences (Boston: Houghton Mifflin, 1979), pp. 188-189, 333-338, 467.

¹³Sackman, pp. i-vi.

¹⁴Ibid., p. 15.

¹⁵Ibid.

¹⁶Ibid., p. 16.

¹⁷Ibid., p. 17.

¹⁸Ibid.

¹⁹Ibid., p. 19.

²⁰Ibid.

²¹Ibid., p. 20.

²²Ibid., p. 21.

²³Ibid., p. 22.

²⁴Ibid., p. 23.

²⁵Ibid., p. 24.

²⁶Ibid., pp. 25-26.

²⁷Ibid., p. 25.

²⁸Ibid., p. 26.

²⁹Ibid., p. 27.

³⁰Ibid., pp. 29-32.

³¹Ibid., pp. 69-70.

³²Ibid., pp. 73-74.

³³William Morris, ed., The American Heritage Dictionary of the English Language (Boston: American Heritage Publishing Co., and Houghton Mifflin, 1971), p. 1162.

³⁴Ibid., p. 1083. Also, G. H. Mueller, "The Notion of Rationality in the Works of Max Weber," European Journal of Sociology, Vol. XX, No. 1 (1979), pp. 149-171.

³⁵William Ouchi, Theory Z: How American Business Can Meet the Japanese Challenge (Reading, Mass.: Addison Wesley, 1981).

³⁶Arthur G. Wirth, Productive Work in Industry and Schools: Becoming Persons Again (Lanham, Maryland: University Press of America).

³⁷Harold A. Linstone and Murray Turoff, eds., The Delphi Method: Techniques and Applications (Reading, Mass.: Addison-Wesley, 1979), pp. 17-36.

³⁸Ibid., p. 19.

³⁹Ibid., pp. 35-36.

⁴⁰Morris, p. 274.

⁴¹Sackman, p. iv.

⁴²Psychological Abstracts, Vol. 70 Index (July-December 1983 issues) (Washington, D.C.: The American Psychological Association, 1927 to date).

⁴³Richard J. Tersine and Walter E. Riggs, "The Delphi Technique: A Long Range Planning Tool," Business Horizons IX, No. 2 (1976): 51.

⁴⁴Ibid., pp. 51-52.

⁴⁵Dillman, pp. 119-198.

⁴⁶Hinkle, et al., pp. 315, 261.

⁴⁷Ibid., p. 316.

⁴⁸Ibid., pp. 304-307.

⁴⁹Nie, et al., p. 409.

⁵⁰Hinkle, et al., p. 85.

⁵¹Nie, et al., pp. 409-410.

Chapter IV

FINDINGS FROM DATA ANALYSIS

The Three-Way Analysis of Variance, using aggregated data from 730 respondents at 14 four-year colleges and universities, indicated that there appeared to be significant differences among college administrators, faculty, students, cooperative education coordinators, and participating employers as they answered 90 questions about cooperative education program quality.

The pattern of variance of response from the four Field Test institutions and ten Sample institutions is displayed in Figure 1:

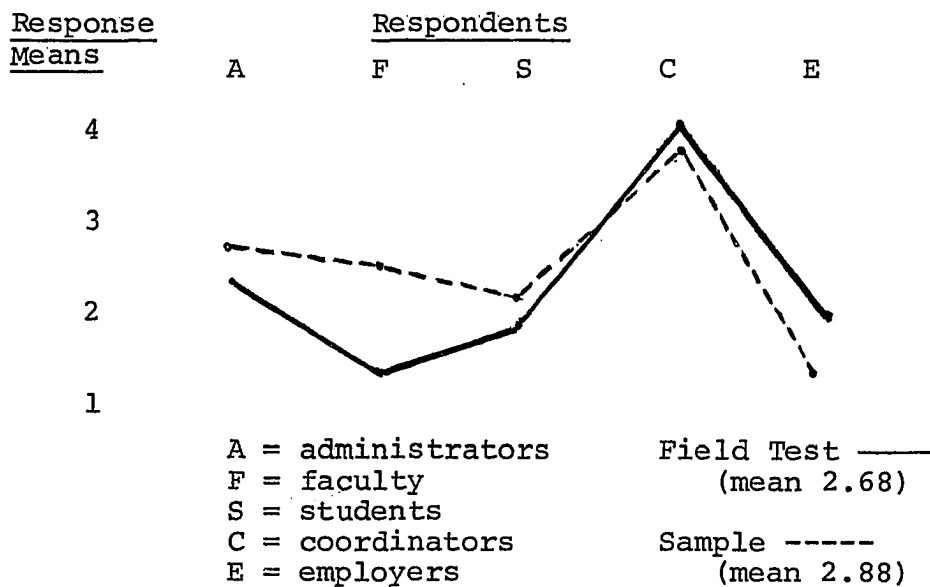


Figure 1. Pattern of Variance of Response

The pattern of variance in Figure 1 indicated that cooperative education coordinators from both Field Test and Sample institutions perceived the quality of the program as highest. College administrators had the next highest perception of program quality in both cases. Faculty and students varied between the two sets of institutions, but in each case employers had the lowest perception of program quality.

Before conclusions could be drawn regarding these perceptual differences, it was necessary to make a systematic effort to "disconfirm" the obtained results. Francis W. Hoole suggested, in Evaluation Research and Development Activities, that:

In any test of an impact hypothesis there will be alternative explanations for the results that are observed. Many of these explanations form the basis for rival hypotheses that utilize the same dependent variable as the impact hypothesis but employ alternative independent variables. Thomas D. Cook and Donald T. Campbell have identified thirty-five potential rival explanations. They have classified them into four categories: (1) internal validity; (2) statistical conclusion validity; (3) external validity; and (4) construct validity. Internal validity is most important and "the priority ordering of the other . . . [types of validity] varies with the type of research being conducted."¹

Internal Validity

Hoole's Model was used to systematically search for plausible rival explanations of research results. The

results were examined using the fourteen challenges to internal validity delineated by Hoole:²

1. History. Specific events occurring at the same time as the activity being evaluated might account for the observed impact.³

Because the 14 institutions involved administered the questionnaire during different time frames, it was highly unlikely that history was a rival explanation for the difference in perceptions of cooperative education program quality among the different status group members.

2. Maturation. The maturation explanation suggested that "processes within the respondents or observed social units producing changes [in the impact variable] as a function of the passage of time per se, such as growth, fatigue [or] secular trends" might have caused the observed impact.⁴

The author of this dissertation could not know all of the trends which might have occurred at each of the 14 institutions which could have affected the perceptions of status group members regarding the quality of an individual cooperative education program. However, one institution involved in the research was undergoing an administrative reorganization and the cooperative education program was without a director at the time the research was conducted. One evidence of these phenomena was that the response rate to the questionnaire was lowest

at this institution. A second institution used a decentralized cooperative education program model and found the questionnaire less appropriate than the other institutions, as judged by anecdotal remarks on the returned questionnaires. Therefore, maturation could be considered a challenge to the internal validity of questionnaire response.

3. Testing. The effect of earlier tests upon the scores obtained on later tests of the impact variable might have produced the observed impact.⁵

Because none of the status group members from fourteen institutions had ever participated in cooperative education program self-evaluation, testing was not considered to be a challenge to the internal validity of the questionnaire results.

4. Instrumentation. The observed impact may be due to a change in the means of measuring the impact variable.⁶

Because identical means were used to measure the cooperative education self-evaluation questionnaires from every institution, instrumentation was not considered to be a threat to the internal validity of the questionnaire results. However, were the data to be subsequently analyzed omitting the response "do not know," quite different results would be obtained, and scores would be substantially higher.

5. Statistical regression. This explanation is concerned with a statistical artifact:

If the group was selected because it was extreme on some measure [of the impact variable], statistical reasoning indicates that it will appear less extreme on subsequent tests of the impact variable, even though the intervening treatment may be completely ineffectual.⁷

In the case of the research under discussion, no status group members were understood to be "extreme," although employers could be thought of as "extreme" in that they could be expected to know less about some elements of cooperative education program performance. If response to questionnaire items were considered to be the "test," then no measure of statistical regression would be available until the test was replicated.

6. Selection. The differential selection of cases for treatment and control groups may have produced the observed difference between groups.⁸

Because this research did not utilize experimental groups and control groups, it could be legitimately argued that selection criteria posed a challenge to the internal validity of the questionnaire results. The participation in the research by 14 institutions could be understood as a partial corrective to that challenge.

7. Mortality. The differential loss of cases for treatment may have produced the observed difference between groups.⁹

Again, the research under discussion was not a classic experimental group and control group design. However, only 170 of the original 900 cases (people to whom the questionnaire was originally sent) were lost to the research. This rate, 19 percent, was within the acceptable range of non-response, according to several authors. Donald T. Ary, et al., suggested that "The goal in questionnaire study is typically 70-80 percent returns. If there are more than 30 percent nonreturns, one would question the worth of the results."¹⁰ Walter R. Borg and Meredith Damien Gall indicated that:

If only a small percentage of your subjects failed to respond this question is not critical. If more than 20 percent are missing, however, it is very likely that most of the findings of the study could have been altered considerably if the nonresponding group had returned the questionnaire and had answered in a markedly different manner than the responding group.¹¹

L. R. Gay suggested that "If your percentage of returns is not at least 70 percent, the validity of your conclusions will be weak."¹² Fred N. Kerlinger held the most conservative view: "If [mailed questionnaires] are used, every effort should be made to obtain results of at least 80 to 90 percent or more, and lacking such returns, to learn something of the characteristics of the non-respondents."¹³ Finally, William Wiersma concluded that "The researcher should decide in advance what percentage of nonresponse can be tolerated. This will be determined

somewhat by the variables and the population under study, but generally 75 percent is considered a minimum rate of return.¹⁴

Because the rate of nonresponse was in the acceptable range according to five reputable authors in the field of behavioral research, mortality was not considered to be a challenge to the internal validity of the questionnaire results.

8. Interaction with Selection. One of the aforementioned explanations might have interacted with selection to produce the observed impact.¹⁵

Because it was concluded in this research that history, testing, instrumentation, statistical regression, and mortality were not likely threats to the internal validity of the questionnaire results, only maturation was left to be considered.

There was some likelihood that at two of the 14 institutions which participated in the research certain trends, i.e., administrative reorganization, loss of a cooperative education program director, and program decentralization could have interacted with selection criteria to alter the questionnaire results.

9. Ambiguity about the Direction of Causal Inference. It may not be possible to tell which variable is actually the cause and which is the effect. This explanation is a

threat especially when a cross-sectional correlational study is undertaken.¹⁶

In the case of the research under discussion mean scores were considered to be the effect when status group members gave perceptions of cooperative education support categories. Although analysis of variance indicated interaction between status groups and support categories, that analysis did not locate the areas of interaction. Further research, specifically plotting of cell means, could refine the research and reduce ambiguity about the effect of causal inference. Therefore, any conclusions as to why, for example, cooperative education coordinators and college administrators viewed program quality more highly than did other status group members would have to remain tentative.

10. Diffusion or Imitation of the Treatment. The cases in the control group may have received the treatment through diffusion or imitation and thus the treatment may have been a possible cause of the difference in impact observed for the groups.¹⁷

Because this research was not a true experimental design with an experimental and a control group, the diffusion challenge to internal validity does not apply. But it must again be pointed out that all 14 institutions received the same "treatment," the questionnaire.

11. Compensatory Equalization of Treatment. The treatment may have been given to both treatment and control groups, thereby eliminating the treatment as a possible cause for the difference in impact observed for the groups.¹⁸

In the case of this research, compensatory equalization of treatment was not a threat to the internal validity of questionnaire results because, in fact, the treatment (the questionnaire) should not have been the possible cause for observed differences in groups.

12. Compensatory Rivalry. A competitive spirit may have developed in the control group and motivated an effort which clouds the real difference between it and the treatment group on the impact variable.¹⁹

Although it was stated before that this research did not use the classic research design with an experimental and a control group, nonetheless, compensatory rivalry was a threat to the internal validity of the questionnaire results in one known instance. At one of the participating institutions all questionnaires sent to employers were altered with the statement "Not Appropriate" beside each question about internal academic operations. Thus, the resulting data from one institution was considered inappropriate for comparison to the 13 remaining institutions and the results from that institution more than likely skewed the results by altering the response pattern.

13. Resentful Demoralization of Respondents Receiving Less Desirable Treatment. The respondents in the control group may have become resentful and demoralized because they did not receive the treatment. They may have acted in such a way that created a bias in the observed results.²⁰

Although resentful demoralization of respondents receiving less desirable treatment was not a direct challenge to the cooperative education program self-evaluation questionnaire results, it had indirect implications. Because employers answered "Do not know" more frequently than members of other status groups, and because their anecdotal comments addressed the issue of lack of information, it could be concluded that the self-evaluation questionnaire was not as suitable for employer respondents as it was for other status group members. That is to say that from the employer respondents' point of view a series of questions for which they had no answers was, in fact, demoralizing and posed a challenge to the internal validity of questionnaire results as those results applied to employers.

14. Local History. The "different treatments . . . [may] be associated with all the unique historical experiences that each group has" and the treatment may not be responsible for observed differences between groups.²¹

As held true in the case of compensatory equalization of treatment, it also held true in terms of local history

that the questionnaire which was administered (the treatment) was not intended to be responsible for observed differences between groups. In the case of local history, there was no challenge to internal validity of questionnaire responses because the questionnaire was intended, in part, to discover just those observed differences.

In summary, of the fourteen challenges to internal validity suggested by Hoolie, six needed to be addressed in terms of this research because plausible rival hypotheses might have explained questionnaire results:

1. Maturation. Administrative reorganization and absence of a cooperative education director at one institution, and a decentralized cooperative education program at a second, might have affected questionnaire results.

2. Selection. Because a true experimental design with experimental and control groups was not utilized in the research, selection could remain a threat to the internal validity of questionnaire results.

3. Interaction of Maturation with Selection. Trends at certain institutions could have interacted with selection criteria to challenge the internal validity of questionnaire results.

4. Ambiguity of Causal Inference. It is possible that questionnaire design could be a rival plausible explanation of variance in responses from status group members, and pose a challenge to the internal validity of questionnaire results.

5. Compensatory Rivalry. At one institution a written direction on the questionnaire led to ambiguous results and challenged the internal validity of questionnaire results.

6. Resentful Demoralization. Questionnaire results indicated that employers were less satisfied with the questionnaire instrument than other status group members. This dissatisfaction posed a challenge to the internal validity of questionnaire results.

External Validity

External validity of a test instrument describes the degree to which test results are generalizable, or applicable to groups and environments outside of the research setting.²² Glenn Bracht and Gene Glass identified two types of external validity: population validity and ecological validity.²³ Using the categories of Bracht and Glass, Donald Ary, et al., suggested that in terms of population validity the researcher should be able to generalize research results in two stages: (1) from the sample to the experimentally accessible population, and (2) from the accessible population to the target population.²⁴ Ary, et al., also emphasized that these generalizations were defensible only if the principle of randomization had been followed in the selection of the sample.²⁵

In the case of ecological validity, according to Ary, et al., the researcher must be able to say that the same findings would be obtained under other environmental conditions.²⁶

This research violated the population validity assumption first described by Bracht and Glass, and discussed by Ary, et al. The institutions which

participated in the research were not randomly selected from the target population of all four year institutions in the United States with alternating cooperative education programs. In order to test the external validity of this research in terms of population validity, the same questionnaire should be administered to a random sample of four year institutions in the United States with alternating cooperative education programs.

In the case of ecological validity, further research is also necessary. It cannot be stated, based on the results of this research, that the same findings would necessarily be obtained under other environmental conditions.

Suggested Replications to Establish External Validity

According to Hoole, external validity "focuses on whether the observed results can be expected to be the same at a later time, such as next year, in a different setting . . . , or when other persons are involved. Hoole listed six "explanations" for external validity which were applied to this research.²⁷

1. Interaction of Treatment and Treatments. It may not be valid to generalize to a situation where only one treatment is given if the cases in the treatment group received more than one treatment.²⁸

In this research the cases (status group members) received only one treatment (the questionnaire). In order

to establish generalizability the questionnaire should be administered at 14 other randomly selected four-year institutions of higher education in the United States with alternating cooperative education programs.

2. Interaction of Testing and Treatment. It may not be valid to generalize to situations where the testing is not identical.²⁹

In the case of this research the testing method was identical at each of the 14 participating institutions. To establish generalizability this same method should be replicated at other institutions with the same profile.

3. Interaction of Selection and Treatment. It may not be valid to generalize to situations where the categories of respondents are not identical.³⁰

This research should be replicated only if and when all status group members (administrators, faculty, students, coordinators, employers) at a given institution are involved. Only under these circumstances could generalizability be established.

4. Interaction of Setting and Treatment. It may not be valid to generalize to situations where the setting is not identical.³¹

This research would not be generalizable to two-year postsecondary institutions with parallel cooperative education programs. Nor would the questions be appropriate

for use where the cooperative education program is decentralized.

5. Interaction of History and Treatment. It may not be valid to generalize to situations in the past and the future because they are not identical.³²

Because this research was conducted at four-year colleges and universities which received federal funding for cooperative education program administration, the research should be replicated at similar colleges and universities which have not received federal funding in order to establish generalizability.

6. Generalizing across Effect Constructs. The observed impact might not hold for other impact variables and constructs.³³

This research was conducted to assess whether or not the status of those persons directly involved with alternating cooperative education programs at four-year institutions of higher education caused them to react differently in perceptual responses to questions about program support. No generalization could be made to other variables or constructs about cooperative education. For example, the questionnaire would not be suitable to assess the opinions of the general public regarding cooperative education.

Summary of Discussion of Internal and External Validity

Following the evaluation research model of Hoole, an effort was made to use a falsification, or "disconfirmation" strategy in testing whether or not questionnaire results explained the difference of perceptions of status group members in assessing alternating cooperative education program excellence at colleges and universities in the United States. An effort was made to distinguish correlation from causation of results. No claim was made that varying perceptions of status group members caused the resulting program assessment. Systematic effort was made to disconfirm the observed results, by examination of rival explanations for observed results. The rival explanations for each possible result were made explicit and suggestions for future control of those rival explanations were made.³⁴

Definition and Explication of Construct Validity

Many conflicting definitions of construct were extant when this research was conducted. For the sake of clarity, construct was used in this research as defined by Allan Bullock in The Harper Modern Dictionary of American Thought.³⁵ A social construct, according to Bullock, is:

A construct devised to aid in the analysis and understanding of social phenomena. It is a

deliberate abstraction . . . from reality which focuses on particular aspects and ignores others in order to open up new lines of thought and new areas of investigation. Its function is heuristic, not descriptive. Examples are the concepts of status and role.³⁶

Three cooperative education constructs were used in this research. They were that:

1. Cooperative education work experience has validity as a method of education,
2. Cooperative education work experience programs at four-year institutions of higher education can be evaluated based on the perceptions of the persons directly involved (administrators, faculty, students, coordinators, employers),
3. Four areas of support are essential for cooperative education program success (institutional commitment, employer participation, student participation and learning, and program operation).

To determine whether or not these cooperative education constructs had construct validity, it was necessary to define construct validity. According to Julian C. Stanley and Kenneth D. Hopkins, "Construct validity pertains to the extent to which a test reflects an abstract psychological trait or ability. Both logical and empirical means are used to establish the validities of a test."³⁷ Ary, et al. put it slightly differently: "Construct validity refers to the extent to which a test reflects constructs presumed to

underlie the test performance and also the extent to which it is based on theories regarding these constructs."³⁸

Kerlinger gave yet another emphasis: "Construct validity, particularly, since it is concerned with the nature of 'reality' and the nature of the properties being measured, is heavily philosophical."³⁹ Gay suggested that construct validity was "The degree to which a test measures an intended hypothetical construct, or nonobservable trait, which explains behavior."⁴⁰ Borg and Gal added that "If the test does, in fact differentiate . . . groups, then we have some evidence that it measures the construct. . . . Construct validity is a particularly important factor to consider in planning a research study that proposes to test a hypothesis."⁴¹

The three cooperative education constructs used in this research (the validity of cooperative education as a method of education; the understanding that perceptions of status group members can be used to evaluate program performance; and the identification of four support categories to assess program performance) were heuristic, in that they were used as working hypotheses which were not intended to describe or explain facts, but to suggest possible explanations or eliminate others.⁴² The three cooperative education constructs were abstract to the extent that they were chosen by the author as the variables,

among many others, to be studied. The three constructs were considered to be both logical and empirical in that they appeared frequently in the literature of cooperative education. The three constructs were theoretical in that they addressed the nature of reality concerning cooperative education as well as its philosophical base.

Demonstration of Construct Validity

In order to demonstrate that this research had construct validity, the author re-examined the discussions in the literature on whether cooperative education programs were meeting program objectives. The literature provided discussions by van der Vorm, et al., Tyler, Keeton, Chase, Gordon and Heinemann, McGhee, Barbeau, Wilson, McKenna, et al., Stull, et al., Gotlieb, and Korngold and Dubé (see Chapter II, pp. 38-59). The discussions by the authors cited above were transposed into a series of thirty-seven questions about cooperative education program excellence. The questions follow:

1. Are students thoroughly prepared for the actual work experience?
2. Do students understand the function of the faculty coordinator?
3. Are academic expectations made clear to students?
4. Do faculty coordinators understand their role and responsibilities?

5. Do employers understand their role with respect to performance evaluations of students?
6. Do program coordinating staff perceive the other populations as having conflicting goals?⁴³
7. Which program objectives are being reached and which are being only partially attained?
8. Which parts of the program are implemented as planned?
9. What kinds of students are developing desirable work habits?⁴⁴
10. Whose educational objectives are to govern the cooperative education experience: students', faculty's, department heads', or some combination of all?⁴⁵
11. Can cooperative education program coordinators gather the useful program information needed by competent managers?⁴⁶
12. Are employers satisfied with the performance of student workers?
13. Is changing technology shifting the knowledge and skills needed by employers?
14. Are cooperative education program policies and procedures effective?
15. Is the record-keeping system of the program effective?
16. Is the program cost-effective?
17. Are students' educational experiences being strengthened?
18. Are the institutional goals for the cooperative education program being met?⁴⁷
19. Is the philosophy of the cooperative education program related to the institutional mission and goals of the college or university?
20. Are the skills of the cooperative education program staff adequate?⁴⁸

21. Can the level of commitment to and support of a cooperative education program be accurately assessed?
22. Can the degree of institutionalization of a cooperative education program be determined?
23. Can cooperative education program problem areas be discovered?
24. Are there problems related to the college calendar when scheduling cooperative education work terms?
25. Are the perceptions of all cooperative education program constituents consistent?
26. Is the cooperative education program staff positively perceived by faculty in all departments?
27. What is the source of reluctance for those faculty members who do not perceive cooperative education positively?⁴⁹
28. Can the cooperative education program demonstrate that it will grow and develop?
29. Is the cooperative education program reaching as many students as possible?⁵⁰
30. Do administrative services support the cooperative education program?⁵¹
31. Can the proper amount of structure be built into the students' work experiences?
32. Do cooperative education coordinators and their administrative supervisors agree as to the critical issues of program administration?⁵²
33. Are cooperative education programs economical to participating employers?
34. Is cooperative education attracting and retaining career oriented students?
35. Do cooperative education programs carefully document program outcomes to all constituents?
36. Are cooperative education programs effective with students concentrating in non-career specific disciplines?

37. Are college presidents and first line administrators committed to cooperative education program goals?⁵⁴

The thirty-seven questions summarized from the cooperative education literature were used to examine the construct validity of the cooperative education self-evaluation model. These questions raised in the literature addressed heuristic, sometimes abstract, logical, empirical, theoretical, and philosophical goals and objectives of cooperative education programs. The questions were compared with questionnaire items from the self-evaluation model used in this research. Conclusions were made, based on this comparison, about the construct validity of the questionnaire. That comparison follows, using this code for Items in the Self-Evaluation Model.

IC = Institutional Commitment
 EP = Employer Participation
 SPL = Student Participation and Learning
 PO = Program Operation

Comparison of Questions Raised
in the Literature to Items
in Self-Evaluation Model

Question Raised in the Literature:

1. Are students thoroughly prepared for the actual work experience?

Items in Self-Evaluation Model:

(9) To what extent are you familiar with employer needs when employers are selecting Cooperative Education students for work assignments? (PO)

(31) Do you agree with this statement: "Adequate time is spent by Cooperative Education coordinators with each Cooperative Education student, discussing career interests, expectations, and professional development, prior to the work experience assignment."? (SPL)

(39) How good a job does the Cooperative Education Program do in preparing students for their Cooperative Education work experiences? (SPL)

(59) How good a job does the Cooperative Education Program do in providing orientation sessions for:

a. New students (PO)

(90) Do you agree with the following statement: "The Cooperative Education Program has a clear, precise, quality handbook for students, in order that (1) they understand policies regarding critical issues such as: housing, financial aid, social security, scholarships, and other issues, and (2) they have realistic goals which can be met."? (PO)

Question Raised in the Literature:

2. Do students understand the role of the faculty coordinator?

Items in Self-Evaluation Model:

(3) How good a job does the Cooperative Education Program do of promoting open communication and good relations between:

b. Student and Faculty (SPL)

d. Cooperative Education Program staff and faculty (SPL)

Question Raised in the Literature:

3. Are academic expectations made clear to students?

Items in Self-Evaluation Model:

(8) Are you satisfied that the Cooperative Education Program has standards which meet employer and college requirements, but which are also flexible enough to meet student needs? (SPL)

(15) To what extent is Cooperative Education promoted through:

- a. Multiple descriptions in the catalog (IC)
- b. Individual Academic Department brochures (IC)
- c. Freshman orientation sessions (IC)
- d. Financial aid brochures (IC)
- e. Verbal communication by Admissions Office staff (IC)
- f. Brochures available from the Cooperative Education Office (IC)

(16) How much influence does Cooperative Education have in the academic structure of _____?
Name of Institution (IC)

(30) To what extent are Cooperative Education work assignments at your institution directly related to students' academic majors and career goals? (SPL)

(63) Do you agree with this statement: "Cooperative Education is a valid, essential, complementary academic program on an equal basis with other academic programs at _____."?
Name of Institutions (IC)

(64) Do you agree with this statement: "The Cooperative Education student's work experience is a learning laboratory which is educationally broadening."? (SPL)

Question Raised in the Literature:

4. Do faculty coordinators understand their role and responsibilities?

Items in Self-Evaluation Model:

(1) To what extent does the Cooperative Education Program reinforce its role as a part of the educational process at _____?
Name of Institution (IC)

(3) How good a job does the Cooperative Education Program do of promoting open communication and good relations between:

a. Student and faculty (SPL)

d. Cooperative education program staff and faculty (SPL)

(4) To what extent is Cooperative Education listed in the catalog an integral part of _____'s curriculum? Name of Institution (IC)

(5) How much interaction does the Cooperative Education Program have with:

a. Academic departments? (IC)

(7) To what extent do you agree with this statement: "Don't delay graduation by enrolling in the Cooperative Education Program."? (IC)

(17) To what extent are sequential curricula offerings available to the student who alternates between on-campus course work and Cooperative Education work assignments? (IC)

(66) In an alternating Cooperative Education Program students may need five years before graduation. In general, how satisfied are you with the five year plan? (SPL)

Question Raised in the Literature:

5. Do employers understand their role with respect to performance evaluations of students?

Items in Self-Evaluation Model:

(47) In general, what is your best estimate of the number of contacts a Cooperative Education student has with the work-site supervisor each term? (EP)

(57) In general, are you satisfied that work-site supervisors provide quality performance evaluations of Cooperative Education students each work term? (EP)

(59) How good a job does the Cooperative Education Program do in providing orientation sessions for:

b. Work-site supervisors? (PO)

(61) To what extent are work-site training stations closely screened for quality by the Cooperative Education Program? (EP)

(67) Cooperative Education is generally understood to work best when the program is accepted corporate-wide by participating employers. Do you agree that employers who participate in Cooperative Education at this institution have total acceptance of the program within their firms? (EP)

(69) Do you agree with this statement: "Cooperative Education's greatest advantage to employers is the provision of cheap labor."? (PO)

(88) Are the rules and regulations of the Cooperative Education Program clear to participating employers? (PO)

Question Raised in the Literature:

6. Do program coordinating staff perceive the other populations as having conflicting goals?

Items in the Self-Evaluation Model:

No individual item in the self-evaluation model directly addressed this issue, although the entire self-evaluation instrument was aimed, in part, at making this discovery.

Question Raised in the Literature:

7. Which program objectives are being reached and which are being only partially obtained?

Items in Self-Evaluation Model:

Again, no individual item in the self-evaluation model directly addressed this issue, but the entire instrument was aimed in part at making this discovery.

Question Raised in the Literature:

8. Which parts of the program are implemented as planned?

Items in Self-Evaluation Model:

Again, the entire model was aimed at this assessment.

Question Raised in the Literature:

9. What kinds of students are developing desirable work habits?

Items in Self-Evaluation Model:

Although no items in the model addressed this question specifically, several items about student performance evaluation allowed answers that would give supportive information to records kept on student performance.

Question Raised in the Literature:

10. Whose educational objectives are to govern the cooperative education experience: students', faculty's, department heads', or some combination of all?

Items in Self-Evaluation Model:

All items in this self-evaluation model assumed that in a well run cooperative education program the educational objectives of administrators, faculty, students, coordinators, and employers would coalesce.

Question Raised in the Literature:

11. Can cooperative education program coordinators gather the useful information needed by competent managers?

Items in Self-Evaluation Model:

All 90 items in this model were intended to gather that

useful information, based on consensus of the Delphi consultants on issues of highest importance and above average importance to quality alternating cooperative education programs.

Question Raised in the Literature:

12. Are employers satisfied with the performance of student workers?

Items in Self-Evaluation Model:

(2) To what extent does the Cooperative Education Program maintain close communication with employers and work-site supervisors? (EP)

(3) How good a job does the Cooperative Education Program do of promoting open communication and good relations between:

a. Student and Employer? (SPC)

(10) How good a job does the Cooperative Education Program do in providing employers with a selection of reasonably qualified and motivated students? (EP)

(29) In general, do you agree with this statement: "The Cooperative Education Program should carefully screen students for job suitability and interest in the program."? (SPL)

(58) To what extent does the Cooperative Education Program recruit from a diverse pool of private and public sector employers? (EP)

(70) Currently many firms conduct in-house training programs for new hires. Cooperative Education assignments can be used as an alternative training method. Do you agree that Cooperative Education assignments should be used in place of in-house training for new personnel? (EP)

(This question was a leading question, but if employers were to perceive cooperative education training as an alternative to training for new hires then, in fact,

their opinion of that alternative would indicate employer satisfaction with student worker performance.)

(72) It is generally assumed that employers benefit from hiring Cooperative Education students. Do you agree that Cooperative Education students are an asset to the firm? (EP)

(75) After several terms of Cooperative Education, students should be better prepared for jobs in the firms where they have had work experiences. In general, how good a job is done by employers in considering the previous work experience when they hire Cooperative Education students for full-time employment after graduation? (EP)

(77) In general, how much influence do participating employers have upon Cooperative Education Program development? (EP)

(81) How good a job does the Cooperative Education Program do in promoting the value of work experience concepts with employers? (IC)

(87) How much influence does the success of Cooperative Education at a participating firm have upon employers who have never used the program? (EP)

Question Raised in the Literature:

13. Is changing technology shifting the knowledge and skills needed by employers?

Items in Self-Evaluation Model:

No item in the model addressed this critical question.

Question Raised in the Literature:

14. Are cooperative education program policies and procedures effective?

Items in the Self-Evaluation Model:

(11) Do you agree that the Cooperative Education Program fully uses students to help build good relations between the faculty and employers? (EP)

(The intent of this question was to suggest that student input could build bridges between other status group members. However, the use of the verb "uses" appeared exploitive to some respondents.)

(12) How good a job does the Cooperative Education Program do in making long-range plans for new work-site opportunities? (EP)

(14) To what extent does the Cooperative Education Program provide opportunity for employers to exchange ideas for effective program operation? (EP)

(15) To what extent is Cooperative Education promoted through:

- a. Multiple descriptions in the category? (IC)
- b. Individual Academic Department brochures? (IC)
- c. Freshman orientation sessions? (IC)
- d. Financial aid brochures? (IC)
- e. Verbal communications by Admissions Office staff?
- f. Brochures available from the Cooperative Education office? (IC)

(Several academic respondents objected to "d" because of their strong belief that financial remuneration for work experience should not be confused with needs-based financial aid.)

(18) To what extent does _____ depend on federal funds for Cooperative Education Program Operation? (EP)
Name of Institution

(20) To what extent are the staff of the Cooperative Education Program supported by funds from the institutional budget? (IC)

(22) To what extent do you agree with this statement:
 "_____ provides the Cooperative

Name of Institution
 Education Program with a constant, adequate, cost
 effective budget."? (IC)

(23) In general, how would you rate the institutional
 support given to the Cooperative Education Program at
 _____? (IC)

Name of Institution

(32) It is generally understood that meaningful
 Cooperative Education jobs are determined by: type
 of duty, increasing levels of responsibility, and the
 quality of employer supervision. To what extent do
 participating employers provide meaningful job slots?
 (SPL)

(33) To what extent are the concepts, processes, goals,
 values, and purposes of Cooperative Education under-
 stood campus-wide? (IC)

(35) In general, are you satisfied that employers offer
 meaningful experiences for students each work period?
 (EP)

(36) How frequently are program standards for
 Cooperative Education evaluated internally? (PO)

(40) Do you agree that the goals and objectives of
 the Cooperative Education Program are reasonable,
 achievable, and measurable? (PO)

(41) How satisfied are you with the quality of student
 work placements provided by the Cooperative Education
 Program? (SPL)

(45) Some employers offer Cooperative Education
 students repetitive work assignments during their
 second and third cooperative education terms. Do
 you feel these assignments should be: (Circle number)

- 1 Decreased Greatly
- 2 Decreased Slightly
- 3 Stay the Same
- 4 Increased Slightly
- 5 Increased Greatly
- 0 Do Not Know (SPL)

(50) In general, what is your best estimate of the number of contacts a student has with his/her Cooperative Education coordinator each work term? (SPL)

(56) How good a job does the Cooperative Education staff do in administering the standards of the program consistently? (PO)

(62) To what extent should Cooperative Education serve as a job placement office? (PO)

(73) Do you agree with this statement: "Cooperative Education is a program, not a service."? (SPL)

(74) How much influence does the Cooperative Education Program have on:

- a. College policy? (IC)
- c. College operation? (IC)

(84) Good communications between the Cooperative Education Program and various support services, i.e., academic counseling, admissions, placement, registration, and student affairs, is essential to good program operation. To what extent does the Cooperative Education Program have good communications with:

- a. Academic counseling (IC)
- b. Admissions (IC)
- c. Placement (IC)
- d. Registration
- e. Student affairs (IC)

(85) To what extent are employers convinced that Cooperative Education provides an opportunity to pre-screen qualified students for permanent employment in the future? (SPL)

(86) How good a job does the Cooperative Education Program do in explaining the program to all new students at the college? (SPL)

Question Raised in the Literature:

15. Is the record-keeping system of the program

effective?

Items in the Self-Evaluation Model:

(34) To what extent does the Cooperative Education staff use effective exit interviews to gather student feedback, discuss the next work term, pay rates, and career plans? (SPL)

(43) To what extent does the Cooperative Education Program follow-through with commitments made to students? (SPL)

(46) How good a job does the Cooperative Education Program do in offering a variety of jobs for students in each of the various academic majors? (IC)

(51) Many believe that recordkeeping is a useful tool toward program success. That is, it helps to know what percent of Cooperative Education students go to work for their employers after graduation; what is the difference in starting salaries for students who have participated in Cooperative Education versus those who have not; what are the reasons a student might drop out of Cooperative Education after only one work term. All in all, how good a job does the Cooperative Education Program do in keeping these kinds of records? (PO)

(52) Many agree that Cooperative Education Degree Plans or Work/Study Plans, which allow students to plan courses and anticipate graduation dates, are useful to both students and employers. Do you agree that degree plans are worthwhile? (PO)

(60) How good a job does the Cooperative Education Program do in providing a method for estimating the overall satisfaction of students with the total program? (PO)

Question Raised in the Literature:

16. Is the program cost-effective?

Items in the Self-Evaluation Model:

(19) Do you agree that the Cooperative Education Program has adequate support equipment (typewriters, duplicating equipment, computer terminals and access)? (IC)

(48) To what extent does the Cooperative Education Program waste time on:

- a. Internal administration (PO)
- b. External administration (PO)

(49) How efficient is the referral of students to employers by the Cooperative Education Program? (EP)

(53) Do you agree with this statement: "As the number of students enrolled in the Cooperative Education Program increases, the quality of the program decreases."? (PO)

(54) In order to allow Cooperative Education coordinators to give personal attention to students' needs there must be enough staff members for a reasonable coordinator-to-student ratio. Do you agree that the Cooperative Education Program has enough coordinators for the size of the program? (IC)

Question Raised in the Literature:

17. Are students' educational experiences being strengthened?

Items in the Self-Evaluation Model:

(1) To what extent does the Cooperative Education Program reinforce its role as a part of the educational process at _____? (IC)
Name of Institution

(4) To what extent is Cooperative Education listed in the catalog as an integral part of _____
Name of _____'s curriculum? (IC)
Name of Institution

(5) How much interaction does the Cooperative Education Program have with:

- a. Academic Departments (IC)
- b. Administrative Offices (IC)

(16) How much influence does Cooperative Education have in the academic structure of _____? (IC)
Name of Institution

(30) To what extent are Cooperative Education work assignments at your institution directly related to students' academic majors and career goals? (SPL)

(63) Do you agree with this statement: "Cooperative Education is a valid, essential, complementary academic program on an equal basis with other academic programs at _____"? (IC)
Name of Institution

(64) Do you agree with this statement: "The Cooperative Education students' work experience is a learning laboratory which is educationally broadening."? (SPL)

Question Raised in the Literature:

18. Are the institutional goals for the cooperative education program being met?

Items in the Self-Evaluation Model:

(24) To what extent do you agree that administrative officers (presidents, vice presidents, provosts, deans) at _____ support the Cooperative Education Program by both words and actions? (IC)
Name of Institution

(25) Please rate the visibility of the location of the Cooperative Education Program on campus. (IC)

(38) Do you agree with this statement: "Although Cooperative Education can be a strong incentive for choosing a particular school, its value is not limited to recruitment for the school."? (EP)

(55) How do you rate the job done by the Cooperative Education Program in offering strong, credible leadership on campus? (PO)

(78) In general, what degree of influence do Cooperative Education Program administrators have upon relevant decision-making processes at the college? (IC)

(79) To what extent do you understand the organizational model of Cooperative Education within _____? (IC)
Name of Institution

(80) Do you agree with this statement: "Administrative officers at the school are fully aware of the financial and personnel needs of the Cooperative Education Program."? (IC)

Question Raised in the Literature:

19. Is the philosophy of the cooperative education program related to the institutional mission and goals of the college or university?

Items in Self-Evaluation Model:

(74) How much influence does the Cooperative Education Program have on:

- a. College policy (IC)
- b. College mission (IC)
- c. College operation (IC)

(82) How well is _____ known as a
Name of Institution
Cooperative Education institution? (IC)

(83) To what extent are the Board of Trustees of the college aware of the Cooperative Education Program? (IC)

Question Raised in the Literature:

20. Are the skills of the cooperative education program staff adequate?

Items in Self-Evaluation Model:

No item in the self-evaluation model directly addressed this issue.

Question Raised in the Literature:

21. Can the level of commitment to and support of a cooperative education program be accurately assessed?

Items in Self-Evaluation Model:

All items in the self-evaluation model were intended to increase the accurate assessment of program commitment and support.

Question Raised in the Literature:

22. Can the degree of institutionalization of a cooperative education program be determined?

Items in the Self-Evaluation Model:

(13) On the average, how frequently do individual employer representatives visit the campus to recruit cooperative education students? (EP)

(27) To what extent do you understand the definition of Cooperative Education? (EP)

(68) How much commitment do Cooperative Education alumni have to the program and the institution? (IC)

(74) How much influence does the cooperative education program have on:

- a. College policy (IC)
- b. College mission (IC)
- c. College operation (IC)

(82) How well is _____ known as
Name of Institution
a Cooperative Education institution? (IC)

(83) To what extent are the Board of Trustees of the college aware of the Cooperative Education Program? (IC)

Question Raised in the Literature:

23. Can cooperative education program problem areas be discovered?

Items in the Self-Evaluation Model:

(6) To what extent do you agree with this statement:
"Cooperative Education is primarily a form of financial
aid."? (SPL)

(21) To what extent do participating Cooperative
Education employers depend on Cooperative Education
solely for affirmative action hiring? (EP)

(26) Do you agree with this statement: "The Cooperative
Education Program should place students in non-
traditional assignments, i.e., arts and sciences majors
placed in engineering firms."? (EP)

(28) To what extent should Cooperative Education use:

- a. Non-paying work experience slots (SPL)
- b. Financial aid, work-study slots (SPL)

(71) Do you agree with this statement: "Cooperative
Education coordinators should vary placement objectives
for students enrolled in several different disciplines,
so long as overall program objectives are consistent."?
(PO)

Question Raised in the Literature:

24. Are there problems related to the college calendar
when scheduling cooperative education work terms?

Items in the Self-Evaluation Model:

(7) To what extent do you agree with this statement:
"Don't delay graduation by enrolling in the
Cooperative Education Program."? (IC)

(17) To what extent are sequential curricula offerings
available to the student who alternates between on-
campus course work and Cooperative Education work
assignments? (IC)

(66) In an alternating Cooperative Education Program
students may need five years before graduation. In
general, how satisfied are you with the five-year
plan? (SPL)

Question Raised in the Literature:

25. Are the perceptions of all cooperative education program constituents consistent?

Items in the Self-Evaluation Model:

All items in the self-evaluation model were intended to assess whether the perceptions of all constituents were consistent.

Question Raised in the Literature:

26. Is the cooperative education program positively perceived by faculty in all departments?

Items in the Self-Evaluation Model:

(4) To what extent is Cooperative Education listed in the catalog as an integral part of _____
 _____'s curriculum? (IC)
 Name of Institution

(5) How much interaction does the Cooperative Education Program have with:

a. Academic Departments? (IC)

(7) To what extent do you agree with this statement: "Don't delay graduation by enrolling in the Cooperative Education Program".? (IC)

(16) How much influence does Cooperative Education have in the academic structure of _____?
 (IC) Name of Institution

(17) To what extent are curricular offerings available to the student who alternates between on-campus coursework and Cooperative Education work assignments? (IC)

(30) To what extent are Cooperative Education work assignments at your institution directly related to students' academic majors and career goals? (SPL)

(40) Do you agree that the goals and objectives of the Cooperative Education Program are reasonable, achievable, and measurable? (PO)

(52) Many agree that Cooperative Education Degree Plans or Work/Study Plans, which allow students to plan courses and anticipate graduation dates, are useful to both students and employers. Do you agree that degree plans are worthwhile? (PO)

(63) Do you agree with this statement: "Cooperative Education is a valid, essential, complementary academic program on an equal basis with other academic programs at _____."? (IC)
Name of Institution

(64) Do you agree with this statement: "The Cooperative Education student's work experience is a learning laboratory which is educationally broadening."? (SPL)

(66) In an alternating Cooperative Education Program students need five years before graduation. In general, how satisfied are you with the five year plan? (SPL)

Question Raised in the Literature:

27. What is the source of reluctance for those faculty members who do not perceive cooperative education positively?

Items in Self-Evaluation Model:

The questionnaire provided space for comments from all status group members. Many faculty expressed problems they had with the program in this space (See Anecdotal Comments, Appendix B.1).

Question Raised in the Literature:

28. Can the cooperative education program demonstrate that it will grow and develop?

- c. Freshman orientation sessions? (IC)
- d. Financial aid brochures? (IC)
- e. Verbal communication by Admissions Office staff? (IC)
- f. Brochures available from the Cooperative Education Office? (IC)

(84) Good communications between the Cooperative Education Program and various support services, i.e., academic counseling, admissions, placement, registration, and student affairs, is essential to good program operation. To what extent does the Cooperative Education Program have good communications with:

- a. Academic counseling? (IC)
- b. Admissions? (IC)
- c. Placement? (IC)
- d. Registration? (IC)
- e. Student Affairs? (IC)

Questions Raised in the Literature:

31. Can the proper amount of structure be built into the students' work experience?

Items in the Self-Evaluation Model:

(2) To what extent does the Cooperative Education Program maintain close communication with employers and work site supervisors? (EP)

(3) How good a job does the Cooperative Education Program do of promoting open communication and good relations between:

- a. Student and Employer? (EP)
- b. Cooperative Education Program staff and employers? (EP)

(32) It is generally understood that meaningful Cooperative Education jobs are determined by: type of duty, increasing levels of responsibility, and the

quality of employer supervision. To what extent do participating employers provide meaningful job slots? (SPL)

(42) How satisfied are you that the Cooperative Education Program solicits student feedback on all phases of program development? (SPL)

(44) In general, what is your best estimate of student satisfaction with Cooperative Education off campus work experiences? (SPL)

(45) Some employers offer Cooperative Education students repetitive work assignments during their second and third cooperative education terms. Do you feel these assignments should be:

- 1 Decreased Greatly
- 2 Decreased Slightly
- 3 Stay the Same
- 4 Increased Slightly
- 5 Increased Greatly
- 0 Do Not Know (SPL)

(47) In general, what is your best estimate of the number of contacts a Cooperative Education student has with the work-site supervisor each term? (EP)

(57) In general, are you satisfied that the work-site supervisors provide quality performance evaluations of Cooperative Education students each work term? (EP)

(59) How good a job does the Cooperative Education Program do in providing orientation sessions for:

- a. New students? (PO)
- b. Work-site supervisors? (PO)

(88) Are the rules and regulations of the Cooperative Education Program clear to participating employers? (PO)

Question Raised in the Literature:

32. Do cooperative education coordinators and their administrative supervisors agree as to the critical issues of program administrators?

Estimate of Construct Validity

Twelve of the 37 questions raised by authors concerned with cooperative program excellence were not directly addressed by a Self-Evaluation Questionnaire Item (Questions 6, 7, 8, 10, 11, 13, 20, 25, 27, 28, 32, 35). However, in only two cases were the issues raised in the literature absent in the questionnaire:

Question 13. Is changing technology shifting the knowledge and skills needed by employers?

Question 28: Can the cooperative education program demonstrate that it will grow and develop?

Based on the comparison of 37 questions raised in the cooperative education literature to 90 items used in the cooperative education self-evaluation model, it was concluded that the questionnaire model fulfilled the assumptions of construct validity.

Interpretations of Results

Summary of Research

This research was conducted at 14 four-year colleges and universities which used the alternating cooperative education plan. The research was conducted between 1981 and 1983 in response to an expressed need for a method to conduct internal cooperative education program self-evaluation.

An informal survey of selected cooperative education

coordinators was conducted in 1981 to discover existent cooperative education program self-evaluation models. None were found. Sixty-six cooperative education program trainers and evaluators were contacted by letter in 1981 to determine whether any cooperative education program self-evaluation model had been developed. No model had been developed.

The theoretical formulation of the research was based on three cooperative education constructs: (1) cooperative education work experience has validity as a method of education, (2) cooperative education work experience programs at four-year institutions of higher education can be evaluated based on the perceptions of the persons directly involved, (3) four areas of support (institutional commitment, employer participation, student participation and learning, and program operation) are essential for cooperative education program success.

The theoretical formulation of the research was also based on action evaluation, that branch of research that assumed that evaluation was the determination of results attained by some activity designed to accomplish some valued goal or objective.⁵⁵ The theoretical formulation of the research had the following operational definitions: the research would be used for decision making; questions used would be program derived; the research would

be used for decision making; the research would necessarily have a judgmental quality; the research would take place in an action setting, where the most important thing going on is the program; the research would take into account the possibility of role conflicts; the research should be publishable; and the principal investigator in the research project would have obligations to both the program and efforts toward social change.⁵⁶

The primary purpose of the research was to develop national norms of excellence for alternating cooperative education programs at four-year colleges and universities in the United States. The secondary purposes were to (1) develop a standardized consensus-based self-evaluation instrument for alternating cooperative education programs at four-year colleges and universities in the United States, and (2) test whether the variables status and support interacted to affect the manner in which individuals involved in the program perceived it.

The research was essentially aggregative and summative. Conclusions were based on norm perceptions of research participants. Therefore the research was descriptive rather than prescriptive.

A four-round Delphi technique was used with 12 participants to establish national norms of excellence for

alternating cooperative education programs at four-year colleges and universities. Norms developed by the 12 Delphi participants were used in a 90-item questionnaire administered to 730 people directly involved with cooperative education programs at 14 four-year colleges and universities which used the alternating cooperative education plan. The 730 people were college administrators, faculty, students, cooperative education coordinators, and participating employers.

The 90-item cooperative education program self-evaluation questionnaire was field-tested at four colleges and universities, refined, then sampled at ten four-year colleges and universities. Data from both groups were subjected to Analyses of Variance and Multiple Classification Analyses.

A review of the relevant literature was conducted which indicated that theory had been established for cooperative education program evaluation, structure for such evaluation had been established, criteria were in place, and ethical guidelines were available.

Summary of Conclusions

The national norms of excellence for alternating cooperative education programs at four-year colleges and universities identified by a four-round Delphi technique during academic year 1981-1982 were considered appropriate

by 12 of the 14 colleges and universities which used those norms of excellence to conduct internal self-evaluation of alternating cooperative education program performance. In two cases the norms were considered less appropriate because (1) the program at one institution was decentralized, and (2) employers at another institution were not asked to answer all questionnaire items.

The response rate (81 percent) to the 90-item cooperative education program self-evaluation questionnaire from 14 colleges and universities was considered to be at the acceptable level for behavioral science research. Statistically significant conclusions were drawn: that the status of respondents to the questionnaire interacted with support categories to affect perceptions of program performance.

Feedback from cooperative education directors at participating institutions indicated that the cooperative education program self-evaluation questionnaire had been useful in the following ways:

1. College and university administrators responded favorably to the fact that cooperative education program coordinators were willing to subject their programs to anonymous review.
2. College and university cooperative education coordinators were able to use questionnaire results to pin-point areas where relationships with faculty, students,

employers, and administrators needed to be strengthened.

3. College and university cooperative education coordinators were able to discover areas where lack of essential information led to poor perceptions of cooperative education program performance.

4. Respondents, according to feedback from coordinators, appeared to be more candid in their remarks than they might have been had anonymity not been provided.

5. College and university cooperative education coordinators reported that the anecdotal comments written on individual questionnaires were useful in understanding perceptions of cooperative education program performance by different status group members.

6. Definitions of cooperative education by respondents provided an unanticipated useful by-product. In two cases, cooperative education coordinators used the definitions provided in new program brochures and in radio and television public service announcements.

Cooperative education program coordinators from six participating institutions pointed out that the questionnaire was not as useful in assessing perceptions of program performance by employers as it was in assessing perceptions by other status group members. In these six cases, employers were at some geographic distance from the colleges and universities from which they

received cooperative education students. This geographic distance from the colleges and universities appeared to lead to lack of knowledge of internal program policies and procedures.

Based on the understanding that the self-evaluation model developed was most appropriate for assessing perceptions of college and university administrators, faculty, cooperative education coordinators, and students, it is suggested that further research be conducted to develop appropriate norms of excellence from the perspective of employers. One method could be to conduct a four round Delphi technique with twelve participating cooperative education employers at four-year colleges and universities with the alternating plan. The resulting developed norms of excellence could be incorporated into this research model.

The 90-item cooperative education self-evaluation model developed in this research met the criteria for internal validity described by Hoole.⁵⁷ The model also met Hoole's criteria for construct validity.⁵⁸

To establish external validity, it is recommended that the cooperative education program self-evaluation model described in this dissertation should be administered at 14 other four-year colleges and universities in the United States with alternating cooperative education programs.

To gather further information it is recommended that results from analyses of variance should be further investigated by plotting cell means, in order to specifically locate points of interaction between status and support at the alternating cooperative education programs utilized in this study.

In summary, this research was the first effort to develop a consensus self-evaluation model of national norms of excellence for alternating cooperative education programs at four-year colleges and universities in the United States. The results of this research could be useful to individuals who wish to conduct cooperative education program self-evaluation. The results should be subjected to further statistical analysis. The model developed should be replicated at other four-year colleges and universities with alternating cooperative education programs in order to further refine definitions of norms of excellence for cooperative education program goals and objectives.

Chapter IV

ENDNOTES

¹Hoole, p. 31. The types of validity, rival explanations, and research designs discussed by Hoole were originally presented in Thomas D. Cook and Donald T. Campbell, "The Design and Conduct of Quasi-Experiments and True Experiments in Field Settings," in M. D. Dunnette, ed., Handbook of Industrial and Organizational Research (Chicago: Rand McNally, 1976), pp. 223-326; and Donald T. Campbell and Julian C. Stanley, Experimental and Quasi-Experimental Designs for Research (Chicago: Rand McNally, 1963). The terminology used is that of the authors.

²Ibid., p. 32.

³Ibid.

⁴Ibid. The quote is from Donald T. Campbell, "Reforms as Experiments," American Psychologist, Vol. 24 (1969), p. 411.

⁵Ibid.

⁶Ibid.

⁷Ibid., H. Laurence Ross, Donald T. Campbell, and Gene V. Glass, "Determining the Social Effects of a Legal Reform: The British Breathalyzer Crackdown of 1967," American Behavioral Scientist, Vol. 13 (1970), p. 495.

⁸Ibid.

⁹Ibid.

¹⁰Ary, et al., p. 171.

¹¹Walter R. Borg and Meredith Damien Gall, Educational Research: An Introduction, 3rd ed. (New York: Longman, 1979), p. 308.

¹²L. R. Gay, Educational Research: Competencies for Analysis and Application, 2nd ed. (Columbus: Charles E. Merrill, 1981), p. 164.

¹³Kerlinger, p. 414.

¹⁴William Wiersma, Research Methods in Education: An Introduction, 3rd ed. (Itasca, Ill.: F. E. Peacock, 1980), p. 157.

¹⁵Hoole, p. 32.

¹⁶Ibid.

¹⁷Ibid., p. 33.

¹⁸Ibid.

¹⁹Ibid.

²⁰Ibid.

²¹Ibid. Also Cook and Campbell, "The Design and Conduct of Quasi-Experiments and True Experiments in a Field Setting," p. 229.

²²Gay, p. 431.

²³Glenn Bracht and Gene Glass, "The External Validity of Experiments," American Educational Research Journal, Vol. 5 (November, 1968), p. 438.

²⁴Ary, et al., p. 234.

²⁵Ibid.

²⁶Ibid., p. 235.

²⁷Hoole, p. 34.

²⁸Ibid.

²⁹Ibid.

³⁰Ibid.

³¹Ibid.

³²Ibid.

- ³³Ibid.
- ³⁴Ibid., pp. 35-36.
- ³⁵Alan Bullock and Oliver Stallybrass, eds., The Harper Dictionary of American Thought (New York: Harper & Row, 1977), p. 578.
- ³⁶Ibid.
- ³⁷Julian C. Stanley and Kenneth D. Hopkins, Educational and Psychological Measurement and Evaluation (Englewood Cliffs, N.J.: Prentice Hall, 1972), p. 112.
- ³⁸Ary, et al., p. 197.
- ³⁹Kerlinger, p. 473.
- ⁴⁰Gay, p. 430.
- ⁴¹Borg and Gall, p. 216.
- ⁴²Bullock, p. 282.
- ⁴³Questions 1-6, van der Vorm, Jones, and Ferren, pp. 22, 24, 27.
- ⁴⁴Questions 7-9, Tyler, p. 14.
- ⁴⁵Question 10, Keeton, p. 21.
- ⁴⁶Question 11, Chase, p. 45.
- ⁴⁷Questions 12-18, Gordon and Heinemann, p. 47.
- ⁴⁸Questions 19, 20, McGhee, pp. 64-65.
- ⁴⁹Questions 21-27, Barbeau, p. 88.
- ⁵⁰Questions 28-29, Wilson, Journal, p. 104.
- ⁵¹Question 30, McKenna, Spilde, and Nieves-Squires, pp. 8-17.
- ⁵²Questions 31-32, Stull, Boal, and Homer, p. 21.
- ⁵³Questions 33-36, Gotlieb, pp. 26-28.
- ⁵⁴Question 37, Korngold and Dubé, p. 70.

⁵⁵Suchman, pp. 31-32.

⁵⁶Weiss, pp. 6-8.

⁵⁷Hoole, pp. 31-36.

⁵⁸Ibid.

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APPENDIX A.1.

LETTER TO APPROVED AND TRAINED
CONSULTANTS AND EVALUATORS

LIST OF CED/ASEE APPROVED
CONSULTANTS AND
EVALUATORS

NATIONAL COMMISSION FOR COOPERATIVE EDUCATION
TRAINED EVALUATORS

During academic year 1981-1982, I am coordinating a cooperative education research project at Old Dominion University. The research (funded through the Cooperative Education Branch, U.S. Department of Education) is designed to develop a cooperative education evaluation model for four year institutions of higher education with alternating programs.

I am writing to you because of your expertise in cooperative education evaluation--as indicated by the inclusion of your credentials among the thirty-four cooperative education professionals listed in the Cooperative Education Division Directory: Approved Consultants and Evaluators, First Edition, 1981-1982, or as indicated by your inclusion on the list of cooperative education professionals who received training in program evaluation through the National Commission for Cooperative Education.

The research would be greatly enhanced by your willingness to share information regarding your methods of conducting cooperative education program evaluations. I am particularly interested in (1) the specific format you use, and (2) the criteria you set for determining program excellence (this latter might include assessment questionnaires, check lists, or other instruments).

If you will be good enough to write me a short note describing your technique, or to send examples of your format and criteria, that information will be credited in the final research results. These results will, of course, be sent to you for your information and retention.

Presentation regarding this research project will be made at both the American Society for Engineering Education College and Industry Education Conference (ASEE/CED), to be held in San Diego in February, 1982, and at the 18th International Cooperative Education Conference to be held in Las Vegas in April, 1982.

Title VIII research guidelines properly mandate that a thorough review of extant procedures and methods be made during the course of inquiry, but beyond that mandate lies a responsibility for all cooperative education professionals to contribute to the documentation of the positive outcomes from quality programs. Without such documentation, during times of higher education recession, our very existence as a part of academe could be in jeopardy.

Page 2

Information you share, which becomes part of the effort to develop an exemplary cooperative education model, is one means of documenting the positive outcomes for which the entire cooperative education community strives. Please be generous with your successful techniques.

Thank you for your help.

Sincerely,

Constance F. Brothers
Research Coordinator

CFB:bns

cc: James L. Antonick
Director
Cooperative Education Programs

[Responses were received from 15 of the persons contacted.]

CED/ASEE Approved Consultants and Evaluators

October 1, 1981, to September, 1982

Northeast

1. Laura R. Foxx
2. Paul M. Pratt

Mid-Atlantic

3. James L. Antonick
4. H. E. Bowling
5. John L. Campbell
6. Stewart B. Collins
7. Donald W. Lyon

Southeast

8. Faye Collett
9. Elizabeth M. Corlew
10. Luther B. Epting
11. John V. Hamme
12. James Odell Jones
13. Glenda F. Lentz
14. J. William Morris
15. Joseph H. Pierce
16. John A. Selter
17. Robert M. Turner
18. Frank Vandegrift

Midwest

19. Richard J. Abel
20. John P. Bradish
21. Richard Neal Houze
22. Donald C. Hunt
23. David R. Opperman
24. John A. Crusoe

Southwest

25. Everett J. Lanik
26. Irvin B. Miller
27. Steven A. Yates

West

28. William F. Cone
29. Robert L. Heyborne
30. Laurence A. Hill

Canada

31. Raymond J. Wieser
32. James C. Wilson

National Commission for Cooperative Education
Trained Evaluators
1980

- | | |
|--------------------------|---------------------------|
| 1. Dr. Mary Bacon | 21. D. Keith Lupton |
| 2. Dr. Joseph Barbeau | 22. Marshall McGhee |
| 3. Constance F. Brothers | 23. James Osborne |
| 4. Hank Bennett | 24. Bernard J. Raphael |
| 5. Irvan V. P. Chelly | 25. Patrick J. Russell |
| 6. A. Gene Crago | 26. James M. Snyder |
| 7. Richard P. Dedic | 27. E. Sam Sovilla |
| 8. Charles L. Dowburd | 28. Donald F. Starkey |
| 9. Paul E. Dubé | 29. Arden Travis |
| 10. Warren B. Enos | 30. William D. Weston |
| 11. Maurice P. Hartley | 31. Dorothy E. McNutt |
| 12. Harry N. Heineman | 32. Maxwell McDew Stevens |
| 13. Charles A. Hulet | 33. William A. Stull |
| 14. Donald C. Hunt | 34. Dick Gritts |
| 15. Edmund A. Hunter | 35. William C. Wilson |
| 16. Bernard L. Hyink | |
| 17. Elaine B. Ironfield | |
| 18. Carl R. Johnson | |
| 19. Samuel H. Lamb, II | |
| 20. Freyda C. Lazarus | |

APPENDIX A.2.

NOVEMBER 25, 1981
LETTER TO DELPHI PARTICIPANTS

DELPHI QUESTIONNAIRE

November 25, 1981

Thank you very much for promptly returning the Letter of Agreement indicating your willingness to assist in Old Dominion University's Cooperative Education Research Project designed to determine consensus concerning national norms of excellence for cooperative education programs utilizing the alternating plan at four-year colleges and universities. Further thanks for the return of the biographical data sheet. It will prove useful when we report on our research at various professional meetings as well as when we submit the final report of the project.

You will notice that your name and address are included on the enclosed form. This inclusion is for correspondence purposes only. As we consolidate the Delphi technique rounds, you will be anonymous and your name will not be included in any report. I might also point out that, should you have occasion to talk with another Delphi Consultant on cooperative education business (keeping your names secret from one another is virtually impossible), you would assist in keeping the research reliable by avoiding any conversation about the questionnaires until the rounds are completed. It has been said that "The only way to keep a secret is to tell no one." Please follow that advice for the next few months for the sake of good research.

We are ready to begin. Remember, please, that what we want to get at is your personal judgment based on your experience. If you will take twenty minutes from your busy schedule to complete the enclosed form, we will be taking our first step toward consensus.

It would be most helpful if we could receive the completed form by December 14, 1981. A self-addressed stamped envelope is enclosed for your convenience. A compilation of the results will be mailed to you, immediately after the Winter break (approximately January 8, 1982).

November 25, 1981

Page 2

Thank you for your time and effort.

Sincerely,

Constance F. Brothers
Research Coordinator

CFB:bn

Enclosures: Questionnaire I
Self-Addressed Stamped Envelope

cc: James L. Antonick

LAST NAME _____

DELPHI QUESTIONNAIRE I
November 25, 1981

PROJECT ON THE DEVELOPMENT OF A CONSENSUS ON NATIONAL NORMS
OF EXCELLENCE FOR ALTERNATING COOPERATIVE EDUCATION PROGRAMS
AT FOUR-YEAR COLLEGES AND UNIVERSITIES

INSTRUCTIONS

1. Complete the sentence starting with the word supplied for each of the first eight (8) items under each category. Please supply your own first word for the ninth (9th) and tenth (10th) items in each category. On the eleventh (11th) item, choose the most important standard for that category.
2. Complete the sentence in ten words or fewer with a goal which you consider important for an alternating cooperative education program at a four-year college or university.
3. Do not state more than forty-four (44) goals or less than twenty-two (22) goals.
4. Each statement should be specific. Avoid generalities.
5. The statements should deal with what should be accomplished and not why or how something should be accomplished.

TO PROVIDE THE HIGHEST QUALITY ALTERNATING COOPERATIVE
EDUCATION PROGRAMS AT FOUR-YEAR COLLEGES AND UNIVERSITIES IN
THE UNITED STATES EFFORT AND ENERGY SHOULD BE EXPENDED TO:

A. PROGRAM OPERATION

1. Increase _____

2. Increase _____

Delphi Questionnaire I
Page 2

3. Decrease _____

4. Decrease _____

5. Promote _____

6. Promote _____

7. Develop _____

8. Develop _____

9. () _____

10. () _____

Delphi Questionnaire I
Page 3

11. The most important standard for quality Program Operation
is: _____

TO PROVIDE THE HIGHEST QUALITY ALTERNATING COOPERATIVE
EDUCATION PROGRAMS AT FOUR-YEAR COLLEGES AND UNIVERSITIES IN
THE UNITED STATES EFFORT AND ENERGY SHOULD BE EXPENDED TO:

B. INSTITUTIONAL COMMITMENT

1. Increase _____

2. Increase _____

3. Decrease _____

4. Decrease _____

5. Promote _____

6. Promote _____

Delphi Questionnaire I
Page 4

7. Develop _____

8. Develop _____

9. () _____

10. () _____

11. The most important standard for quality Institutional
Commitment is: _____

TO PROVIDE THE HIGHEST QUALITY ALTERNATING COOPERATIVE
EDUCATION PROGRAMS AT FOUR-YEAR COLLEGES AND UNIVERSITIES IN
THE UNITED STATES EFFORT AND ENERGY SHOULD BE EXPENDED TO:

C. STUDENT PARTICIPATION AND LEARNING

1. Increase _____

2. Increase _____

Delphi Questionnaire I
Page 5

3. Decrease _____

4. Decrease _____

5. Promote _____

6. Promote _____

7. Develop _____

8. Develop _____

9. () _____

10. () _____

Delphi Questionnaire I
Page 6

11. The most important standard for quality Student Participi-
pation and Learning is: _____

TO PROVIDE THE HIGHEST QUALITY ALTERNATING COOPERATIVE
EDUCATION PROGRAMS AT FOUR-YEAR COLLEGES AND UNIVERSITIES IN
THE UNITED STATES EFFORT AND ENERGY SHOULD BE EXPENDED TO:

D. EMPLOYER PARTICIPATION

1. Increase _____

2. Increase _____

3. Decrease _____

4. Decrease _____

5. Promote _____

6. Promote _____

Delphi Questionnaire I
Page 7

7. Develop _____

8. Develop _____

9. () _____

10. () _____

11. The most important standard for quality Employer
Participation is: _____

APPENDIX A.3.

FEBRUARY 4, 1982, LETTER TO DELPHI PARTICIPANTS

EXAMPLES OF STATEMENTS 1 THROUGH 10,
313 THROUGH 319, DELPHI
QUESTIONNAIRE II

February 4, 1984

Thank you very much for participation in Old Dominion University's Cooperative Education Research Project designed to determine consensus concerning national norms of excellence for cooperative education programs utilizing the alternating plan at four-year colleges and universities. The enclosed form is a summarization of the statements of norms of excellence submitted by the twelve Delphi consultants who completed the first instrument. Your contributions may not appear exactly as you wrote them, because it was necessary to combine related ideas into synthesized statements (there were 495 original statements which have been synthesized into 319 generic statements). You will also note that the 319 generic statements are now randomized. The areas of concern in which each originally appeared follow in parentheses: program operation, institutional commitment, student participation and learning, employer participation.

On enclosed Questionnaire II, you will find items numbered 1 through 319. Each item is preceded, on the left hand column of the questionnaire, by a scale:

High					Low
(1	2	3	4	5)	

The scale of importance should be used as follows:

- 1 = Highest importance
- 2 = Above average importance
- 3 = Average importance
- 4 = Below average importance
- 5 = Lowest or no importance

Please indicate your opinion of the relative importance of each item as a norm of excellence on which effort and energy should be expended to provide quality cooperative education programs at four-year institutions utilizing the alternating plan. You will indicate your opinion by circling the appropriate number

February 4, 1982
Page 2

which best expresses your opinion of the value of the item.

Example:

High				Low	
(1	2	3	4	5)	1. Increase salary levels of cooperative education professionals.

Circling the numeral one (1) indicates that you find increasing salaries of highest importance.

Your reaction to all of the items on the enclosed questionnaire will be greatly appreciated. You will notice that certain of the statements submitted are exact opposites. They have been left in the questionnaire in order to be faithful to each Delphi consultant's original intent. Because you may find yourself choosing between opposites, you will need to be discriminating in your ratings. It would not be helpful, for example, if all statements were assigned highest ratings.

Questionnaire II is headed with your name and address, as was Questionnaire I. This heading is for the purpose of correspondence only. Your name will be removed when the results are compiled, and will not be included in any report.

Thank you for the time you will be taking from your busy schedule, to complete the questionnaire. It would be most helpful if the completed form be returned to Old Dominion University by February 26. A self-addressed, stamped envelope is enclosed for your convenience. Approximately three weeks after the forms are received here, you will be sent a compilation of the results.

Again, many thanks for your cooperation.

Sincerely,

Constance F. Brothers
Research Coordinator

CFB:bns

Enclosures: Questionnaire II
Self-addressed stamped envelope

cc. James L. Antonick

LAST NAME _____

DELPHI QUESTIONNAIRE II

PROJECT ON THE DEVELOPMENT OF A CONSENSUS ON NATIONAL NORMS
OF EXCELLENCE FOR ALTERNATING COOPERATIVE EDUCATION PROGRAMS
AT FOUR-YEAR COLLEGES AND UNIVERSITIES

TO PROVIDE THE HIGHEST QUALITY ALTERNATING COOPERATIVE
EDUCATION PROGRAMS AT FOUR-YEAR COLLEGES AND UNIVERSITIES IN THE
UNITED STATES, EFFORT AND ENERGY SHOULD BE EXPENDED TO:

High Low

- | | |
|-------------|---|
| (1 2 3 4 5) | 1. Set realistic goals and stick to them.
(Institutional Commitment) |
| 1 2 3 4 5 | 2. Decrease the tendency to accept meaningless
cooperative education jobs because they provide
numbers. (Institutional Commitment) |
| 1 2 3 4 5 | 3. Maintain close contact and good communication
with employers/site supervisors. (Program
Operation, Employer Participation) |
| 1 2 3 4 5 | 4. Increase familiarity with employer needs.
(Program Operation) |
| 1 2 3 4 5 | 5. Decrease the degree of academic involvement in
the work environment. (Employer Participation) |
| 1 2 3 4 5 | 6. Develop suggested wage guidelines with annual
salary surveys to assist employers and insti-
tutions in setting cooperative education wages.
(Program Operation) |
| 1 2 3 4 5 | 7. Develop an institutional structure reinforcing
cooperative education's role in the educational
process. (Institutional Commitment) |
| 1 2 3 4 5 | 8. Limit growth in institutions with no track record
of commitment or success. (Program Operation) |
| 1 2 3 4 5 | 9. Increase student awareness of job opportunities
and the benefits of participation in the
cooperative education program. (Student
Participation and Learning) |

- 1 2 3 4 5 10. Develop a thorough and effective management information system (including records, budget, planning, evaluation and information for employers). (Program Operation, Employer Participation)
- 1 2 3 4 5 313. The most important standard for quality employer participation is the satisfaction of the employer with the cooperative education program. (Employer Participation)
- 1 2 3 4 5 314. The most important standard for quality employer participation is the institution's ability to place all qualified students interested in cooperative education on jobs that provide discipline-related learning. (Employer Participation)
- 1 2 3 4 5 315. Eliminate the practice of granting students' requests to get out of the cooperative education program and transfer to the employer's "summer job" program, or to withdraw once involved. (Institutional Commitment, Employer Participation)
- 1 2 3 4 5 316. Increase student's level of effort in securing proper placement. (Student Participation and Learning)
- 1 2 3 4 5 317. Develop a broad geographic and economic base of available job assignments. (Student Participation and Learning)
- 1 2 3 4 5 318. Promote use of work as a learning laboratory, educationally broadening. (Student Participation and Learning)
- 1 2 3 4 5 319. The most important standard for quality student participation is the availability of quality work placements which meet the needs of a diverse population of students. (Student Participation and Learning)

APPENDIX A.4.

MARCH 30, 1982, LETTER TO DELPHI PARTICIPANTS

PROCEDURES FOR RESPONDING
TO QUESTIONNAIRE III

EXAMPLES OF STATEMENTS 1 THROUGH 10,
313 THROUGH 319, DELPHI
QUESTIONNAIRE III

March 30, 1982

Thank you very much for your continued participation in Old Dominion University's Cooperative Education Research Project designed to determine consensus concerning national norms of excellence for cooperative education programs utilizing the alternating plan at four-year colleges and universities. The enclosed form is a duplicate of Questionnaire II, except that 15 statements have been deleted because of redundancy. The purpose of Questionnaire III is to increase consensus and define areas of disagreement.

On the enclosed questionnaire, the most frequent rating of each norm of excellence is indicated by a black square: ☐ . Your previous rating is indicated by a red circle: . If your previous rating was the same as the most frequent rating, then your previous rating is superimposed on the black square.

Directions for marking your ratings on Questionnaire III are given at the beginning of the questionnaire and an Example Sheet is attached to this letter.

The questionnaire is headed with your name for the purpose of correspondence. Your name will be removed when the results are compiled, and will not be included in any report.

Thank you for taking time from your busy schedule to complete Questionnaire III. It would be most helpful for the completed form to be returned to Old Dominion University by April 15, 1982. A self-addressed, stamped envelope is included for your convenience.

Again, many thanks.

Sincerely,

Constance F. Brothers
Research Coordinator

CFB:lah

Enclosures: Example Sheet, Questionnaire III,
Self-addressed stamped envelope
cc: James L. Antonick

PROCEDURE FOR RESPONDING TO QUESTIONNAIRE III
EXAMPLE SHEET

- 1 = Highest importance
2 = Above average importance
3 = Average importance
4 = Below average importance
5 = Lowest or no importance

High Low

☐ Consensus ☐ Your Response

- (1 2 3 4 5) 1. Increase salary levels of cooperative
education professionals.

REASON:

The example indicates that of highest importance was the most frequent response to statement #1. Your rating is within that group. Do nothing to statement #1.

- (1 2 3 4 5) 1. Increase salary levels of cooperative
education professionals.

REASON:

This example indicates that of average importance was the most frequent response to statement #1. You rated #1 as of above average importance. If you are willing to accept the rating marked with the black square, do nothing to statement #1. If you are not willing to accept the rating marked with the black square, please state in one sentence your most important reason for not accepting the majority rating in the space provided below statement #1.

- (1 2 3 4 5) 1. Increase salary levels of cooperative
education professionals.

REASON:

This example indicates that of lowest or no importance was the most frequent response to statement #1. You rated #1 of highest importance. If you wish to change your previous rating (1)

from of highest importance, but do not wish to change to the most frequent rating (5), indicated by the black square, then put a black X through the red circle, and a black circle around your new response. Please state in one sentence your most important reason for the rating change.

LAST NAME: _____

DELPHI QUESTIONNAIRE III

PROJECT ON THE DEVELOPMENT OF A CONSENSUS ON NATIONAL NORMS OF
EXCELLENCE FOR ALTERNATING COOPERATIVE EDUCATION PROGRAMS AT
FOUR-YEAR COLLEGES AND UNIVERSITIES

INSTRUCTIONS

1. If a norm of excellence is marked with a black square only, do nothing. Your response agrees with the most frequent rating.
2. If a norm of excellence is marked with a red circle and a black square and you are willing to accept the rating marked by the black square, do nothing.
3. If a norm of excellence is marked with a red circle and a black square and you are not willing to accept the rating marked with the black square, please state in one sentence your most important reason for not accepting the rating marked with the black square.
4. If you wish to change your previous response (indicated by the red circle), but you do not wish to change it to the response indicated by the black square, put a black X through the response circled in red and circle your new response in black. Please state in one sentence your most important reason for changing your position.

TO PROVIDE THE HIGHEST QUALITY COOPERATIVE EDUCATION PROGRAM
AT FOUR-YEAR COLLEGES AND UNIVERSITIES IN THE UNITED STATES EFFORT
AND ENERGY SHOULD BE EXPENDED TO:

High Low

☐

Consensus

☐

Your Response

(1 2 3 4 5)

1. Set realistic goals and stick to them.
(Institutional Commitment)

REASON:

High Low

(1 ☒ 2 3 4 5)

2. Decrease the tendency to accept meaningless cooperative education jobs because they provide numbers. (Institutional Commitment)

REASON:

☒ 1 2 3 4 5

3. Maintain close contact and good communication with employers/site supervisors. (Program Operation)

REASON:

1 ☒ 2 3 4 5

316. Increase student's level of effort in securing proper placement. (Student Participation and Learning)

REASON:

1 ☒ 2 3 4 5

317. Develop a broad geographic and economic base of available job assignments. (Student Participation and Learning)

REASON:

☒ 1 2 3 4 5

318. Promote use of work as a learning laboratory, educationally broadening. (Student Participation and Learning)

REASON:

1 ☒ 2 3 4 5

319. The most important standard for quality student participation is the availability of quality work placements which meet the needs of a diverse population of students. (Student Participation and Learning)

REASON:

APPENDIX A.5.

MAY 14, 1982, LETTER TO DELPHI PARTICIPANTS

EXAMPLES OF STATEMENTS 1 THROUGH 10,
313 THROUGH 319, DELPHI
QUESTIONNAIRE IV

MINORITY OPINIONS

May 14, 1982

Dear

Thank you very much for your continued participation in Old Dominion University's Cooperative Education Research Project designed to determine consensus concerning national norms of excellence for cooperative education programs utilizing the alternating plan at four-year colleges and universities. This is the last phase of the project, and your cooperation throughout has been extremely helpful. Your continued cooperation through the enclosed fourth and final round will also be gratefully appreciated. The enclosed form is, again, a duplicate of Questionnaire II, except that 15 statements have been deleted because of redundancy.

On Questionnaire IV the most frequent rating of each norm of excellence is again indicated by a black square ☐. Your previous response is again marked by a red circle ☐ --unless your previous response from Questionnaire III is now the same as the most frequent response. If your response in Questionnaire III was the same as the norm, your individual response will not be indicated on Questionnaire IV.

You will note that on Questionnaire IV the number of individuals who chose the most frequent response is indicated directly below the black square ☐. Therefore, on Questionnaire IV you are able to see the magnitude of agreement for each value statement.

In addition, you will find included with Questionnaire IV a Minority Opinion document which represents the views of those participants whose ratings of individual value statements were different from the most frequent response. The purpose of this step is to provide you with a final opportunity to rate each value statement with a knowledge of the degree of consensus and minority opinions.

Directions for marking your ratings on Questionnaire IV are given at the beginning of the questionnaire. The directions are slightly different from those on the previous round, so please read them carefully.

May 14, 1982

Page 2

Again, thank you for taking time from your busy schedule to complete Questionnaire IV. It would be most helpful for the completed form to be returned to Old Dominion University by May 30, 1982. A self-addressed, stamped envelope is enclosed for your convenience.

Approximately one month after the stated completion date, a compilation of the final results will be sent to you.

Sincerely,

Constance F. Brothers
Research Coordinator

lah

Enclosures: Questionnaire IV, Minority Opinions
Document, Self-addressed, stamped
envelope

cc: James L. Antonick

LAST NAME: _____

DELPHI QUESTIONNAIRE IV

PROJECT ON THE DEVELOPMENT OF A CONSENSUS ON NATIONAL NORMS OF
EXCELLENCE FOR ALTERNATING COOPERATIVE EDUCATION PROGRAMS AT
FOUR-YEAR COLLEGES AND UNIVERSITIES

INSTRUCTIONS

1. If you desire to change any of your previous ratings, circle your new rating and return the questionnaire.
2. If you do not desire to change any of your previous ratings, DO NOTHING.
3. Statements numbered 70, 92, 169 and 240 are bi-modal. That means the frequency of response occurs in two places. You may choose one or the other, or retain your present position.

TO PROVIDE THE HIGHEST QUALITY COOPERATIVE EDUCATION PROGRAM
AT FOUR-YEAR COLLEGES AND UNIVERSITIES IN THE UNITED STATES,
EFFORT AND ENERGY SHOULD BE EXPENDED TO:

- | High Low | <input type="checkbox"/> Consensus <input type="radio"/> Your Response |
|------------------------------|--|
| ¹⁰
(1) 2 3 4 5 | 1. Set realistic goals and stick to them.
(Institutional Commitment) |
| ⁹
1 2 3 4 5 | 2. Decrease the tendency to accept meaningless cooperative education jobs because they provide numbers. (Institutional Commitment) |
| ¹¹
1 2 3 4 5 | 3. Maintain close contact and good communication with employers/ site supervisors. (Program Operation, Employer Participation) |
| ⁸
1 2 3 4 5 | 4. Increase familiarity with employer needs. (Program Operation) |
| ¹⁰
1 2 3 4 5 | 5. Decrease the degree of academic involvement in the work environment. (Employer Participation) |
| ⁸
1 2 3 4 5 | 6. Develop suggested wage guidelines with annual salary surveys to assist employers and institutions in setting cooperative education wages. (Program Operation) |

High 10	Low	<input type="checkbox"/> Consensus	Your Response
(1) 2 (3) 4 5)			7. Develop an institutional structure reinforcing cooperative education's role in the educational process. (Institutional Commitment)
1 2 3 (4) 5	7		8. Limit growth in institutions with no track record of commitment or success. (Program Operation)
1 (2) 3 4 5	9		10. Develop a thorough and effective management information system (including records, budget, planning, evaluation and information for employers). (Program Operation, Employer Participation)
1 2 (3) 4 (5)	8		313. The most important standard for quality employer participation is the satisfaction of the employer with the cooperative education program. (Employer Participation)
1 2 (3) 4 5	8		314. The most important standard for quality employer participation is the institution's ability to place all qualified students interested in cooperative education on jobs that provide discipline-related learning. (Employer Participation)
1 2 (3) 4 5	7		315. Eliminate the practice of granting students' requests to get out of the cooperative education program and transfer to the employer's "summer job" program, or to withdraw once involved. (Institutional Commitment, Employer Participation)
1 (2) 3 4 5	8		316. Increase student's level of effort in securing proper placement. (Student Participation and Learning)
(1) 2 (3) 4 5	9		317. Develop a broad geographic and economic base of available job assignments. (Student Participation and Learning)
1 (2) 3 4 5	8		318. Promote use of work as a learning laboratory, educationally broadening. (Student Participation and Learning)
1 (2) 3 (4) 5	9		319. The most important standard for quality student participation is the availability of quality work placements which meet the needs of a diverse population of students. (Student Participation and Learning)

COOPERATIVE EDUCATION
Questionnaire IV

MINORITY OPINIONS

(NOTE: The opinions are reported exactly as submitted on Questionnaire III).

The following value statements are those which each of the twelve consultants listed in defense of their responses on Questionnaire III.

Statement #1

1. Ill defined.
2. This statement is not unique to co-op, but applicable to any program. Thus do not view it as more than average importance as a co-op norm.

Statement #2

1. There can be no educational justification of co-op unless we avoid meaningless work!
2. The wording of #2 is inappropriate as a statement of a standard. If the statement were "provide cooperative education jobs that are consistent with the institution's written objectives for the program" - then I would be willing to change my rating.
3. "Meaningless" is a relative term and would vary with different majors (i.e. psychology vs. engineering).
4. Meaningless jobs should not be acceptable.

Statement #5

1. Have trouble with this. I find increasing numbers of employers who feel that numerous visits by co-op coordinators, coupled with various forms to complete, are an intrusion on their time, and are based more on academic tradition than need.
2. To me "Academic Involvement" implies an ivory tower approach which generally doesn't exist!
3. This is valid still but merits a decrease from previous answer.

Statement #7

1. Co-op is an educational program - thus this norm must be of the highest importance.

APPENDIX D

1. Why allow anything without commitment or success to increase? I yield somewhat!
2. Still committed to previous answer.
3. Negative effect on public image; reverse "halo."
4. Why finance failure.
5. Waste of money.

1. I'm thoroughly convinced that technology cannot help a program that is improperly planned and administered.
2. Records are mere vital factor base.

1. You have to have the tools!
2. Perhaps this indicates committment to some degree.
3. Facilities and materials of an academic program reflect the program's priority on the campus - thus this is of above average importance, but not of highest importance or average importance.

1. Why? If a Mechanical Engineer declares "metallurgy option" in his freshman year and then later changes his mind and elects the "manufacturing" or "terbomachinery" option, we do not try to penalize him by saying that he should "stick it out" with the metallurgy option. Though I would hope that all new co-ops would complete their planned work terms. I believe that withholding the Co-op Certificate and possible job recommendations would be ample "punishment."

1. I have found that more co-ops need further explanation of program.
2. This is important for the long-range success of the program and should be ranked very important.

Statement#15

1. Yes, I agree with this. However, "career pathing" may need a better definition/description.
2. Perhaps we can influence but we can't establish something for/in industry.

Statement#16

1. Too vague to be meaningful; its like saying if we all drink orange juice we'll feel better.

Statement#17

1. I am always leery of standards of success that are based upon retention. Retention is an employer factor.
2. Evaluation of student learning is certainly a measure of quality, but return to the same employer is not a significant measure.
3. I buy this until the and. There are many disciplines where returning to the same employer would not be in either the student or employer's best interests. For example, students in Design disciplines would benefit from exposure to several different design offices. Liberal arts students can benefit from several experiences.
4. The "and" is the problem - I don't agree that co-ops must return to the same employer.

Statement #18

1. Students are, after all, the clients, and should be included in the communications pipeline.
2. Communications via media is essential to bridge gaps in information to students.

Statement #20

1. Our alternating semester program requires only 3 semesters (12 months) to complete the program and earn the co-op certificate; thus students can and do graduate in 4 years and only 1 extra summer session (assuming 3 work terms). This is very surprising to students and parents who have been told that most co-op programs require 5 years.
2. This is very important for continued administrative support of the program.

Statement#22

1. While many factors contribute to "institutional commitment," nothing is a more important demonstration of that commitment than the amount and source of institutional funding.
2. Without provisions for funding a cooperative education program cannot grow but will move into an appendage status.

Statement#24

1. Because of the important role played by faculty members in helping students to consider co-op particularly those involved in academic counseling and teaching freshman and sophomore courses, I believe that top priority should be given to increasing liaison with these academic departments.

Statement#25

1. A campus-wide program cannot evolve without department support.
2. If not initially - very early in the process - change theory and research supports this stand.
3. Whether all of the departments decide to have a co-op program or not, it is important to include all in the planning.
4. If it is to be a "campus-wide" program, it would seem to be politically expedient to consult all departments, even if they do not ultimately choose to participate.

Statement#26

1. If a co-op coordinator (either school or employer) makes a commitment to a student and does not follow through, we have just developed a lot of negative publicity for the school and/or employer. Word of mouth is our best and worst advertising.

Statement#27

1. I believe doing a job well earns the respect of all faculty and administrators. Deeds come before the respect.

Statement#28

1. After all, the students are not all superstars!
2. Important, but not "the most" important.

5

3. Agree in principle, but not with the wording. "Marginal experience" is not easy to assess - it is a value judgment. Could accept a statement along these lines -- "On an ongoing basis take steps to provide co-op assignments that are consistent with program placement objectives."
4. Does this mean assignments offer marginal experience? I read it to mean companies have marginal experience with co-op, which I find a low priority.
5. A university is also obligated to help develop a company's co-op experience.

Statement#29

1. This is not a properly constructed question. I'm not sure what you're after. Is it accessibility?
2. If this refers to increasing the number of campus interviewing of co-ops by employers, then I strongly oppose this position since we prefer to counsel with and refer student's applications on a one-to-one basis. However, if this refers to encouraging employers to invite students to their location for a personal, on-site interview after they have been referred by the school coordinator, then I can agree with a rating of "2", but would prefer a "1".
3. Not possible with large programs.

Statement#31

1. Who is making statements? Talk is cheap.
2. This is more important to newer programs. Once firmly established, it is only of average importance.

Statement#33

1. OK, I can accept this as important, but not of "highest" importance (in my humble view).

Statement#34

1. A solid program is one that is managed professionally. Organizational charts, models, statistical charts, etc... all reflect what the program is about and how it operates. This information helps in the orientation of the various publics. It is certainly of average importance.
2. You must understand what you have before you can develop some sort of a strategy for the future!

6

3. This helps to inform the administration of the status of the program and this promotes administrative support.
4. Committed to previous answer.
5. This is essential to ⁽¹⁾ have an understanding for one's own benefit
(2) to be able to explain to others.

Statement#36

1. If you expand from the last two words "career interests" I would be willing to accept the #1 rating. I could accept this if the statement concluded....."student's career interests, academic discipline and/or other learning objectives established for the institution's co-op program."
2. I take exception to "pre-screened;" and also believe that many students can benefit from non-related jobs.

Statement#38

1. The greater the faculty involvement, the greater will be the administrative support.

Statement#39

1. This is similar to #36. An assignment need not be discipline-related to be a learning experience.
2. This is very important, however, I believe the co-op placement may be used for exploration of other career options.
3. For liberal arts students co-op may be an opportunity for exploration and they may select an option not closely related to major (and perhaps change major later on).

Statement #40

1. I am of the opinion that students now have ample opportunities.
2. A nice thought - but applicable to any academic program. I do not see this as a norm of excellence for co-op.

Statement #41

1. Strong leadership is essential, but if the program can't stand on its own merits, it will fall when "the leader" leaves.

Statement#43

1. Gives a good sense of direction.
2. "Learning shouldn't be left totally to chance - it should be promoted by some measures.
3. Co-op is more valuable if individual can demonstrate learning, not just experience for the sake of experience.
4. Learning objectives are very vital to insure student outcomes.

Statement#44

1. OK, as long as this means within a specific program - and not among all programs.

Statement#45

1. Strong Institutional Commitment starts with faculty and staff.
2. Again, I believe that recruitment of co-op students would be greatly enhanced if faculty members, academic advisors, assistant deans, financial aid and admissions staff members constantly promoted the co-op program to new and current students.
3. Lack of faculty support can be nearly as disastrous as limited administrative support.

Statement#48

1. Our program requires students to be in the upper half of their class, academically. Thus co-op is, in effect, an honor program, and our students have and are encouraged to have pride in their participation.
2. Absolutely! (Thats whats wrong with people, they don't give a damn!)
3. This is important in order to perpetuate interest in and zeal for promoting the co-op concept.

Statement#50

1. Would change my rating if the statement began..."Provide for student, faculty, etc....," instead of "Increase."

Statement#51

1. The people at "Yuhangem" Community College don't pull much weight in Title VIII or any state level.

8

2. This is important in maintaining administrative support and elevates opinions of the co-op concept.

Statement#52

1. While employers should not pay for housing for co-ops, if they want to attract a diverse population of quality co-op students from various schools, then extra efforts should be considered by the employer in providing assistance to co-op students with housing problems.
2. Do not agree. Housing assistance is a student service, but has little to do with the quality of the co-op program. Perhaps students locating housing is a valuable real world learning experience - which is part of co-op.

Statement#53

1. Willing to compromise.

Statement#54

1. Ours is an educational program. If I was at "Yuhangem Community College" I wouldn't want faculty control either.
2. Render unto Caesar that which is Caesar's.
3. Co-op is an academic program and as such require faculty input!

Statement#55

1. A professional attitude is a prime goal of co-op.
2. Pride.

Statement#56

1. Students at major schools are not at home generally anyway; so relocation is no big deal.
2. Willing to compromise, but I don't see this as above average.

Statement#57

1. Yes.

Statement#58

1. There should be more; we're in this thing together; or aren't we?
2. Promotion of cooperation between the co-op office and dormitory housing office is essential in a primarily residential campus (as opposed to a commuter school); however, close cooperation between co-op and the placement office, while desirable, is not essential.
3. This will enable the school→ work transition to be more acceptable to students.

Statement#59

1. Some programs should not promote - due to resource base or other. Do not see this statement as a norm of excellence as written. My concern is with the word "promote."

Statement#63

1. Students have enough distractions now.
2. Many student bodies do not reflect the need or desire social cohesiveness this statement implies.
3. I have some minor problems with this. In a mature program where co-op is fully integrated in the academic structure - co-ops are fully involved in regular student organizations and societies, which increase the co-op influence. On the other hand, is a good idea for newer programs.
4. I don't understand the statement. See 61 above.

Statement#64

1. You will have employer enthusiasm when you have good student placement, but employer support must be built on much more, e.g. philosophical commitment, assistance to students, cost benefits over the long haul, etc.

Statement#65

1. A significant proportion of our co-op assignments are arranged with non-profit work-study employers who provide some of the most valuable co-op assignments available.
2. Good-bye human services!

Statement#66

1. I must have misread this one - 2.5/3 is OK.

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2. If this refers to the practice of letting students be "on co-op" with jobs that they already have and the school coordinator has not discussed the co-op program with the employer, then I think that decreasing this practice is of the highest importance.

Statement #69

1. Co-ordinator judgment, for each case, is needed here.
2. I agree with the concept - but cannot relate this statement to the others in this questionnaire. This relates to some type of a national position rather than to a norm of excellence for the guidance of individual programs.
3. Agree - I misread this one.

Statement #70

1. I agree with either 1 or 2.
2. If the norm is 1, I cannot agree with the assumption that all employers enter co-op on a "term" basis - many offer valuable seasonal jobs or short-term assignments based on funding.
3. Employers should have a policy that they will keep a student during the course of one complete work term (barring dishonesty or other relevant reasons for firing a student). However, students should be told that they have to earn invitations to return for subsequent work terms which are based on job and academic performance and the employer's economic climate.
4. I could not disagree more with the group. The greater the schools ability to provide continuity in coverage of the positions provided by employers, the greater is the employer's support of the school's program. This is a key measure of quality - and can be achieved while maintaining fairness to students.

Statement #71

1. The "word" must get out to parents, community, etc.
2. Has been very successful for us in the past years!
3. We need to capitalize on the current economic and student financial aid situations or create an awareness.

Statement #73

1. Deeds earn support. We're our own worst enemies.

Statement #75

1. Eliminate "Increase" and replace with "Encourage."

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Statement#77

1. That's not what they're there for.

Statement#79

1. It is very important for employers to act promptly on applications for the efficient placement of students especially when school programs are large.

Statement#82

1. Retention is to some degree a measure of the value of the experience to the student.
2. Otherwise all jobs will be entry level with minimum growth and/or responsibility.
3. Though I somewhat disagree with retention after graduation as a measure of quality employer participation, I strongly believe that an employer's ability to keep students returning for all planned work terms is a strong indicator of the quality of his program and of his ability to choose the right kinds of students for the first work term.
4. I think this is the most valid measurement of good employer co-op programs!
5. If a student returns to an employer it is a measure of the quality of instruction.

Statement#83

1. If you change "relationship to student goals" to "relationship to meeting the goals of the program for serving students," then I can buy it. A program based on the variety of individual goals is not as sound as one that advises students in advance of what the program will provide for them, and then produce it.

Statement#86

1. Important, but not so high among other things.

Statement#87

1. This is an unworkable requirement.
2. Many of our most valuable co-op assignments have been with non-traditional employers where budget allows only a stipend or fee arrangement. If that is considered "salaried" then I accept 1.
3. "Freebies" are degrading to a student and students should be paid no matter what their major.
4. Not all assignments - money isn't everything.
5. The experience is of more value than whether the student is paid hourly or as a salaried person.

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Statement#88

1. One of the major advantages of Co-op Ed.

Statement#90

1. Repetitive work assignments may be good learning experiences, but for only one work term. You should retain "one work term" assignments that are of quality, and simply move the student to another job after one work term. Some jobs of high quality for a term, but are repetitive if the same student returns.

Statement#92

1. Number 1 - mandatory for the life of the program.

Statement#93

1. Continuity is of paramount importance to the employer.

Statement#94

1. I do not think this is at all related to commitment in an "old" co-op program.

Statement#95

1. A quality co-op program (by either a school or employer) demands top priority in terms of orientation to students and direct supervisors on co-op goals and procedures.

Statement#96

1. To quite an extent this is an indication of the quality of the program.
2. This is one of the most valid measures of a good co-op program that is voluntary.

Statement# 97

1. Maybe it should say periodically inform...
2. Important for support of the program.
3. We do want them to promote co-op; don't we?

Statement#98

1. Utilization of experienced co-op students for both recruiting and counseling prospective co-op students has been one of the best things we have done, and I urge its top priority development in other schools.
2. This is a nice idea - but not a norm of excellence. There are many effective ways to provide information and counsel to freshmen.

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3. This is one of the most effective methods of promoting co-op to freshmen.

Statement #99

1. Untrained staff is one of our problems.
2. This is very important for efficient operation.
3. Often times turnover is a good thing.
4. Turnover at the school co-op coordinator level is not quite so prevalent as at the employer coordinator level. A high priority should be given to decreasing industry practice of assigning the co-op coordinator role to a young, entry level college relations or recruiting specialist who moves on in 1-2 years. This causes lack of continuity and understanding.

Statement #101

1. This is a common "copout" for co-op programs that are not effective in serving a greater number of students.

Statement #102

1. Lack of support from faculty and administrators is the surest way to kill a program.

Statement #104

1. Yes. Faculty might, for example, have better rationale for curriculum design.

Statement #106

1. Distant second to coordinator evaluation of the assignment.
2. Willing to compromise.

Statement #107

1. The bottom line of commitment is the adequate support of a program.
2. Again, I am bent toward proving the worth of the program first. You can't expect Cadillac treatment if you have a Honda program.

Statement #108

1. Each of our students may choose to work for several different employers and there is no evidence of a correlation between quality of assignment and later work terms.
2. Not always.
3. Willing to compromise.

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4. Perhaps my initial response was too harsh.

Statement#109

1. Of course!

Statement#110

1. Keep supply lines open.

Statement#111

1. Students also have a responsibility to the program.

2. I have trouble with the word "loyalty." How about "sense of appreciation and understanding of the goals of the program?"

3. This is important not only to facilitate program operation but to also teach a sense of responsibility.

Statement#112.

1. Compromise.

Statement#114

1. This is a "sacred cow" in the field with little evidence that such on-site evaluations actually improve anything. There are many other ways to evaluate work experiences. On-site evaluations are a good methodology, but the above statement does not provide for other alternatives to achieve the same result.

2. While on-site evaluation of employer's co-op program may be desirable, I place a low priority due to budgetary limitations.

3. Not practical or possible in large co-op program. Is program goal or student goal utmost?

Statement#115

1. Institutions can't fund. I may yield if employer pays for travel.

2. Integral portion of the coordinator's job.

3. This is too expensive and time consuming and can be effectively accomplished by the coordinator being familiar with the fields of placement.

Statement#118

1. The greater the enrollment the greater the variability of different employers. "Student" goals should be considered.

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Statement #119

1. Compromise.

Statement #120

1. This statement has nothing to do with the quality of programs.
2. You can tell that co-op is dominated by placement jocks!
3. A good marketing program will help in this area. Most universities are pressed for funding.
4. There are too many subsidies - the program should bear a fair share of expenses through appropriate fees.

Statement #123

1. Humanities control most of the better schools; the sooner we realize it the better off we'll be.
2. I was too harsh in my initial response.
3. Let's not overlook the other 50% of our student population.
4. While engineering, business, and computer science account for the largest percentage of active co-op students, school co-op coordinators should be assigned other disciplines to coordinate to ensure that they do try to promote support for hiring other kinds of students as well.
5. We don't have other areas.

Statement #125

1. I do not feel that liberal arts training and co-op are highly compatible.
2. People are people, no matter how small!

Statement #126

1. Of course!
2. I can't envision making any kind of "promises".
3. Promises must be kept to maintain credibility; co-op coordinator should not make promises that they cannot keep (they should always "hedge their bet" with statements that give them an "out.")

Statement #127

1. It usually isn't. Why try to make it an integral part? May need definition of integral!
2. Not generally necessary in a large school with all offerings each term.

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Statement#129

1. Too easy! This would eliminate that portion of the student population which stands to benefit most.
2. OK - just as long as those standards are flexible - there are few of us "students" who are perfect.

Statement#130

1. Most employers want interaction to achieve recruiting advantage. Why push it further?
2. This is a good thing to do - but unto itself is not a measure of the excellence of a co-op program in serving students and employers.

Statement#131

1. Co-op must earn its way like any other educational program. Administrative decree will not make it.
2. Being an "integral part" and having quality are not necessarily related.

Statement#132

1. It should be.

Statement#133

1. This is a most effective tool for creating interest in co-op.
2. This is one of our most effective recruiting techniques and I urge other schools to give it top priority.

Statement#135

1. With the percent of student participation it is not practical nor necessary.
2. Unrealistic in a State University.

Statement#137

1. Perhaps not as important as I initially thought.

Statement#138

1. I prefer "provide for faculty/administrator/student input into program planning," rather than the specific "advisory committees."

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Statement#139

1. Students do not typically realize the full advantages that co-op affords unless they live up to their commitment of completing the work terms planned.
2. To what?

Statement#141

1. This varies with the maturity of the program and the model. "Provide for faculty involvement" is better wording in my view.
2. Not necessary.

Statement#143

1. Very necessary for large programs.
2. A well defined program does not imply lack of flexibility to meet individual needs. The group rating of "3" is probably due to the assumption that "structured" implies lack of individual consideration-- which is not so.
3. Other quality programs (engineering schools, universities, etc.) have structured programs and precise policies, why should a quality co-op program be different?
4. Structure normally meets the needs of school instead of students.

Statement#144

1. The more information the employer provides to university coordinator and students, the better. Requiring employer to put this in writing requires them to do some advance planning and policy development.
2. These should be very specific rather than general. That's when we get dissatisfied students.

Statement#148

1. Federal money will go away then what?

Statement#149

1. Individual schools must determine their recruitment needs, thus to imply "Increase" and "through all available means" does not seem appropriate as a norm of excellence for all.
2. All seems a bit strong.

Statement#152

1. The university co-op community has to date, done a poor job of orienting direct supervision. Top priority should be given to developing quality materials that co-op students can take to direct supervisors as they go on their work assignments.

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Statement#153

1. How can a school coordinator get feedback unless she uses required debriefing sessions for every co-op student. Either debriefings or evaluations for me must be provided to have a quality co-op program.
2. This seems to me to be so basic that it has to qualify as of highest importance.

Statement#155

1. I misread this.
2. For many employers this is a primary reason for participating in co-op and has no negative impact on quality of program.

Statement#156

1. This should not be a major element in Co-operative Education.
2. How can co-op be academic without the aforementioned trappings!

Statement#157

1. This is important in any endeavor.
2. Teams play better, yea best, when all the players hear firsthand ungarbled signals.

Statement #161

1. Top-level institutional funding has to be priority #1 to demonstrate commitment.
2. Hand-to-mouth techniques don't speak all that well for institutional commitment.

Statement #163

1. Ill defined. Already possible everywhere I've been.

Statement #164

1. Let's be more understanding of the care and feeding of our employers.

Statement #166

1. Co-ops are future professionals and for the benefit of the student and employer treatment as such is important.

Statement #167

1. I do not completely understand what is meant by the "institution's contribution to the extra university community."

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Statement#168

1. Yea team!
2. Communication is vital to any program.
3. This is a high priority item for a good program.

Statement#169

1. Committed to previous answer.
2. I agree with 1.5.
3. I buy 5 - not 1.5.
4. No system is needed. Programs which "fail" will simply disappear, without outside pressure.
5. I don't understand this statement.
6. The college should be responsible for any "eliminations" or "system."

Statement#172

1. Certainly.
2. This isn't a standard. It's too vague.

Statement#173

1. It's quality placements that impress the people who provide physical support.
2. Compared to many of the other institutional commitment statements, this one still doesn't hold an "above average" priority for me.
3. A sign of any program's priority on a campus is the quality of physical space, location, and other facilities.
4. Furniture does not make a strong program.
5. This statement doesn't imply Institutional Commitment at all.

Statement#174

1. Hard to imagine any measure that is more important.
2. OK as long as program goals reflect student goals.

Statement#176

1. This is vital to avoid one and two-time work periods as much as possible.
2. Let all the players know what the rules of the game are.

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3. Some expectation should be expressed in quantitative terms.
4. A co-op program has to be a defined activity, thus some minimum requirement should be determined in advance.

Statement#177

1. This is very important to maintain high quality.
2. I can't imagine this not being done.
3. I'm very concerned by the lack of sensitivity shown to employers and their needs in this and other items!

Statement#179

1. You can't get good administrative support without faculty support!

Statement#182

1. Vital (alas!)

Statement#183

1. Arts and Sciences Education; Engineering; Business; Allied Health; Nursing; Law; Medicine; Criminal Justice; etcetera, etcetera, etcetera.
2. To expand and provide enhanced opportunities I think this is necessary.
3. It is important to offer co-op to all who are qualified.

Statement#184

1. With the proliferation of paperwork and regulations, it's very important to keep unnecessary paper to a minimum.

Statement#184

1. A must to grow with a limited staff.
2. Let's begin to prepare for a move into the 20th Century - before the 21st is upon us.
3. Too many programs are inundated with paper and as such forget their primary objectives.

Statement#186

1. Are we acting in students' best interest to apply any pressure in this regard?
2. This has nothing to do with a quality co-op program and may detract from it.
3. Compromise.

Statement#188

1. Again - any educational program must prove itself before dollar support is ideal.

Statement#189

1. Quality handbooks are essential for students to understand, and should be a #1 priority.

Statement#190

1. Co-op is jointly meeting the needs of employers, students, and the institution.

Statement#191

1. You'll never know until you've been there.
2. We can mislead these students if we are not very careful.
3. Recruitment of international students has little impact on program quality and for some schools international students are a significant population to be served.

Statement#192

1. I contend that quantity is a function of quality in co-operative education. I think employers would agree.

Statement#193

1. You can't try, but I find it difficult to assess this if established as a norm of excellence.

Statement#195

1. Most important is financial support.

Statement#196

1. There have to be some basic policies and objectives that all can agree to - and co-op people should work toward developing consensus where possible.
2. Mandatory.

Statement#198

1. I don't see how this could not have a high rating.
2. Companies will not set up training programs for marginal students.
3. The marginal student requires an inordinant amount of time to place.

22

4. If schools have minimal grade point requirements (i.e. 2.5 or above or top 1/2 of class) then they should stick to the requirements, as much as professional judgement allows.

Statement#200

1. Not a primary function of a co-op coordinator, more the responsibility of others in the school.
2. This will improve college-employer relations.
3. Accrediting agencies should do this.

Statement#203

1. I am more in agreement.

Statement#205

1. School and employer need this.
2. A large program should have a strict calendar.
3. Without a strict calendar how can plans be made?
4. Extremely important from an employer perspective and they provide the jobs.
5. This is essential for an orderly program - minor starting or stopping dates for a work period are desirable.

Statement#207

1. I have trouble relating this to a norm of excellence for co-op programs.
2. I do not understand this statement. What does this have to do with individual program quality?
3. OK you win! Maybe we should keep spreading the funds but look at the net results.

Statement#208

1. A key factor in program growth is winning faculty.
2. Maybe there is some fear of certain aspects. Very little though!
3. Very important. How else can you win faculty support? (and faculty are threatened by co-op).

Statement#209

1. Are we a profession? If we are, let's act like professionals.

23

Statement#210

1. Basic tenet.

Statement#211

1. I support a strong central co-op department with reasonable standards, equitably applied.

Statement#211

1. Either don't have an "approved" model or follow it.
2. I can agree with some variance, but feel strongly that a campus that can reach a consensus on important policies and practices will have a more effective program. Variance in requirements, grading policies, objectives, etc., create a confused picture to employers and raise questions in the minds of students as to fairness of treatment.
3. This is important for compatability and homogeneity from the employer viewpoint.

Statement#212

1. For schools who do not use this practice, they should consider it a #1 priority to help students gain as much info as possible about prospective employers.

Statement#214

1. An excellent way for a new employer to learn of the advantages of co-op.
2. Peers talk to each other.

Statement#216

1. Employer involvement is valuable, but "to serve on advisory councils" is overly specific in defining how employers should be involved.
2. Useful to some programs but not essential.

Statement#218

1. For large companies and federal government this may be feasible, but for many small companies and associations, which provide excellent assignments, this is not possible.

Statement#220

1. Most important is the quality of student learning related to the discipline and career area, not the vague standard of student satisfaction.

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Statement#221

1. Absolute necessity.
2. Most corporate structures have accountability, why shouldn't educational programs?

Statement#222

1. The employer is responsible for providing a worthwhile job consistent with the understandings at the time of the employment commitment, not to fulfill all of the student's goals or to receive a good evaluation.

Statement#223

1. Clarifying areas of responsibility with key program participants is more than of average importance.
2. Pre-requisite for a good program.
3. Most employers, particularly new employers, need some well written, specific guidelines to help them develop their programs.
4. Keep the lines open; no program or placement is so ideal that it couldn't be improved upon.

Statement#224

1. Only as needed - an individual institution decision.
2. Never! What do they know about what constitutes a reasonable assignment?

Statement#227

1. A strong incentive.
2. Co-op is cost effective to the employer as it is - so why should the taxpayer subsidize it?
3. Seems that a profit making organization could see this advantage easily.

Statement#228

1. Would buy this if it said career and/or discipline-related work, instead of just career related.
2. This is the basis for the greatest benefit to the student and to the employer.

Statement#229

1. Responsibilities are appropriate, but request from each department may be impractical and excessive (general disciplines such as Humanities, Social Sciences, General Business, etc. may include several departments).

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2. We have ± 93 departments - at last count.

Statement#230

1. This attitude can kill the co-op plan.
2. Probably impossible while jobs are so plentiful for Accounting, Business, Computer, Engineering, Chemistry, etc.

Statement#233

1. This mandates that co-op and training programs have the same goal. They don't.

Statement#234

1. Central budgets are not necessarily desirable.
2. This is an excessive demand for many employers and has not even been successful in federal government (with the exception of Navy which must be reviewed each year by Congress).
3. Not a good idea for all employers - plus in bad economic times a central budget may be more vulnerable to cutbacks. Since there are mixed views on this, should not be more than of average importance as currently written.

Statement#235

1. I am not sure I understand this statement.
2. Faculty should not be given these kinds of benefits for co-op.

Statement#238

1. This is not a problem.
2. There are those who won't be convinced.

Statement#239

1. It would seem that the group would want students to be guided by people who "know the ropes" rather than those who are just learning themselves.
2. Employer supervision is a key element to the success or failure of the co-op plan and should be of high caliber.
3. Just when they begin to understand they move on and we're back to square 1.

26

Statement #240

1. Support #1 as best answer.
2. This question should be eliminated inasmuch as the standards for placement relate to program objectives - which is covered in other statements in this questionnaire.
3. Any job is beneficial. However, co-op programs need to match students with jobs related to their academic major and/or career choice.

Statement #244

1. Necessary to maintain administrative support.
2. Would still prefer "Encourage" rather than "Promote."

Statement #245

1. Must do this to have administrative support.

Statement #246

1. Academic rank, tenure, and more pay are for educational programs and instruction. The consensus has been against educational goals since page 1.
2. This would be appropriate when referring to faculty coordinators.

Statement #249

1. I don't like "do as I did" stories.

Statement #250

1. In programs where students are primarily placed locally, it is often preferable and more useful to have students interview at employers' location.

Statement #251

1. Cooperative education administrators need to place a high priority on selling co-op to state-level policy-making budget control bodies and to business and industry for their support.
2. This is vital for public supported schools and very important for private schools.

Statement #252

1. Needed for faculty support.

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Statement #253

1. Do not buy this as "The most important standard." "Knowledge of" is one thing, actual performance is another.

Statement #254

1. Makes the student better informed.

Statement #257

1. Compromise.
2. I am opposed to this.
3. This is a Bad idea.

Statement #259

1. This is true in all walks of life.
2. Sounds like a reasonable work ethic to me. What are we selling, an excellent or a marginal product?

Statement #260

1. I disagree that this develops report writing skills to any significant degree.
2. Developing report writing skills can be enhanced via co-op, but the teaching of writing skills is more a responsibility of the English Department than co-op. The co-op program is involved with a variety of learning, thus to single out writing as an important standard does not seem appropriate.

Statement #262

1. I can't understand why the group doesn't rate this higher. The above statement does not deal with the issues of cost or practicality, it simply suggests a commitment that would facilitate co-op participation by students.
2. Schedule problems → unbalanced sections → poorer assignments.

Statement #265

1. What is this?
2. Outside funding may actually assist in improving quality of program; however extended dependence is unwise.

Statement#266

1. To maintain quality, adequate staff is essential.

Statement#269

1. What is that sense?

Statement#270

1. Agreed that it can be used. Can all be placed?
2. My institution tends to oversell, overburdening the delivery system.
3. Is this really a standard of excellence for co-op, or is it an Admissions Office standard?

Statement#271

1. Excessive schedule changes are time consuming and are adverse to the employer.

Statement#272

1. This is necessary to help assure an orderly, efficiently operated program.
2. We have strong sanctions for failure to comply in all other academic programs, so why should co-op be exempt -- that is unless one considers it nonacademic.
3. With rights and benefits come responsibilities.

Statement#278

1. No! No! No! Should be funded as other academic programs.
2. Not a valid question for many programs.

Statement#279

1. I agree.

Statement#280

1. This is not only time consuming but irritating to the busy employer.

Statement#282

1. Supervision on-location is the responsibility of the employer.
2. I object to the word "supervision." Yes, provide for good supervision by the employer, but monitoring is a far better term to describe the school's role.

Statement#284

1. I'm not sure that this is a misunderstanding.

Statement#285

1. Discrimination is not fair for the student and should be avoided.
2. I don't think this is a problem.
3. University co-op coordinators should not place students with employers who specify their acceptance of students of a certain race, sex, etc.

Statement#286

1. It is not a major function but a useful function.
2. Coordinators fulfill many functions.
3. Too many coordinators just visit. I think visitation is a luxury we can do without.
4. This practice is expensive and time consuming and can be handled via telephone in most cases.
5. There is no evidence of the actual value of this -- some employers have a problem with this -- and it is not a practical standard for schools that have many students working outside of the local area. There are other effective monitoring plans.

Statement#287

1. Come on, you guys, we live in a changing world!

Statement#288

1. Students should enter co-op with their eyes wide open and recognize that initial jobs are at the beginning level of the career track. Schools have a responsibility to explain this to students in advance.
2. Students should be informed regarding expectations - many understand anyway, but for those who don't, it is important.
3. Student expectations need to be lowered concerning their "high" expectations about a first or second work term assignment.

Statement#289

1. The same institutions who have not been co-ops.
2. I would like to see some research evidence to support this.
3. This is a low priority for school administrators. It should, however, be a high priority for employer personnel administrators.

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Statement#291

1. Where is the evidence that these dollars are not well spent?
2. There should be some justification for spending taxpayer dollars.
3. Training serves a legitimate need, and has played a major role in the expansion and strengthening of co-op.
4. Hell, there is a lot of evidence that "administrative" funds are not well spent. Why should we decrease support just because there isn't positive evidence that research and training funds are. Seriously, there should be better research on all accounts!

Statement#292

1. Let's educate the whole person.

Statement#294

1. Please!
2. Vital for the success and growth of the program.
3. University co-op programs must be self-supporting (from "hard" university dollars) after a reasonable period of time.

Statement#297

1. Without these, how can you place students in good assignments?

Statement#300

1. This statement says nothing.
2. This is a bit general, for me.

Statement#302

1. Student "needs" OK, but not student desires!

Statement#303

1. The student's interpersonal skills may be sharpened to the extent his technical skills can't compete.

Statement#306

1. Commitment to what? - return of grad philosophy, taking students regularly?

31

Statement#308

1. This is a meaningless statement. As previous norms indicate, specific job descriptions (with specific tasks) are important to quality co-op assignments even for liberal arts students.

Statement#310

1. A properly publicized program has no need for this.

Statement#313

1. Student satisfaction is of equal importance.
2. Compromise - however, the statement seems to diminish (by absence) the importance of student/program goals and satisfaction.

Statement#314

1. This is a very good indication of quality but maybe not the most important.
2. The larger the number of employers the greater the chances of good placements.
3. The ideal program would be one that could provide quality jobs for all interested - because employers are sold on the school and the program. Few if any could meet this standard, but it does establish a target-even though not likely a norm of excellence.

Statement#315

1. A co-op is not a marine, or an indentured servant.
2. Cannot do so without infringing upon our responsibilities to the students first.
3. Co-op programs should be flexible enough to allow students some choice regarding employers and cannot be beneficial if there are no allowances for withdrawing if appropriate cause can be presented.

Statement#317

1. For some programs it may be more productive and economically feasible to operate only in their immediate geographic area.
2. This is important to meet a wide variety of student interests and needs.

Statement#319

1. This is a basic aspect for high quality.

APPENDIX A.6.

AUGUST 18, 1982, FINAL LETTER TO
DELPHI PARTICIPANTS

AUGUST 20, 1982, COVER MEMORANDUM FINAL
NORM STATEMENTS

FINAL NORM STATEMENTS



Professional Experience Programs
Cooperative Education/Internships • (804) 440-4396 • Norfolk, VA 23506-8507

August 18, 1982

Thank you for your continued involvement in Old Dominion University's research to establish national norms of excellence for alternating cooperative education programs at four-year institutions of higher education. This letter includes your honorarium for that participation. Thank you!

Under separate cover you will receive a complete summary of what you said to each other during the four rounds of the Delphi Technique. That summary is raw data, or put another way, it shows every instance of agreement and disagreement. Although I am sure that you are glad that the Delphi process is over, I am equally sure that you will be interested in examining the completed process. I would appreciate it if you would share with me (and the other consultants) any intuitive comments you have about the results. Statistical analysis of the data will follow in a final report to the Cooperative Education Branch of the U.S. Department of Education.

Let me give you a brief, albeit intuitive, interpretation of what I think you were saying:

First, let me remind you that each of you were selected because you were perceived by the cooperative education community to be directors who lead quality programs. Although, as a researcher, I might have wanted your dialogue to lead to daring debate or brilliantly innovative challenges of one another (most researchers think that is what they are supposed to discover), it is my judgment that you have honed in on the very practical, business-like issues that make for solid, workable cooperative education programs--or for that matter, solid, workable programs, period. Here is what I see:

All twelve of you agreed that 29 of the 300+ ideas you gave each other were of highest importance to facilitate sound cooperative education programs. Some of these 29 items of agreement were slight variations on certain strong themes. In shorthand they are:

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 August 18, 1982

Good communications make for sound cooperative education programs. That concept of good communications includes employers, students, faculty, and administrators. There is nothing startlingly new about this information, but it shows that you know that when communications break down so does good programming.

Next, and related to the above issue, you dealt with credibility. You were very aware that you have an ongoing challenge to make your own institutions aware that work experience education--as epitomized by cooperative education--is a valid form of learning. You talked of decreasing faculty sabotage; promoting the goals and values we represent; showing the validity of our role in the educational enterprise; indicating that cooperative education is established in the various curricula; and finally, of attempting to make it clear that we are a program, not a service. You also spoke of the ongoing need to patiently state again and again, to our own folk in higher education, the clear definition of the aims and objectives of cooperative education.

That definition of cooperative education drew strong agreement from you with no apologies. You said that: employers should offer quality placements for a diverse student clientele; cooperative education means bona fide paid jobs for students; students who are uninterested in or unsuited for our kind of educational experience should be dropped; cooperative education should not become the university's vehicle for affirmative action, financial aid, or a job placement "catch-all."

Having said what we are not, you then said what we are--or perhaps what we are when we do what we do best. You agreed about very practical, yet difficult, matters:

You agreed that we need to make the college calendar work for the student. The cooperative education student should not be punished by the college bureaucracy for the extra effort that the student is making. Along the same lines, you affirmed that cooperative education works best when the student's major, career goals, and work experience all jell or blend. Again, you have not discovered some new idea, but you have verified that good cooperative education experiences for students require hard pounding away at good basic principles.

Then you addressed what I would term "housekeeping" issues. You dealt with simple mathematics: the student/coordinator ratio must be such that we can manage quality programs (you did not define that ratio, but that was not what we were doing here). You were certain that the time spent with a student before placement was critical to a quality cooperative education experience. That showed this researcher that you had not forgotten that providing a positive learning experience does require that we counsel with the student.

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Finally, in your first priorities, you hit "the bottom line." Yes, money. You said that we should be able to run good cooperative education programs without federal largess. But you had, at the same time, strong concerns regarding institutional support. You demanded that new directors/ coordinators be put on "hard money" immediately as a sign of good faith by institutions. You defined a critical issue: Will higher education "fish or cut bait" when it comes to supporting cooperative education? You are looking for a firm, cost-effective budget.

You are not that happy with the way industry deals with cooperative education students. You want "meaningful" jobs, better supervision. You either wish that industry would wake up, or feel frustrated that you cannot get the point across that cooperative education works best when the employer offers a variety of jobs in each major academic field you service.

You also believe that cooperative education is charismatic. You talk, correctly, about the "evangelical" nature of the task. Again, no apologies. If one does not believe in the product one cannot sell it. The twelve of you correctly perceive that there is yet a selling job to be done--both internally and externally.

Finally, you remembered something about fallibility. Also something about the larger higher educational enterprise. All twelve of you were certain that you wanted clear-cut standards, but you wanted flexibility within those standards--a chance to make exceptions to rules.

In my judgement, the issues described above are those that you were in total agreement upon as the issues necessary to successfully running exemplary cooperative education programs at four year institutions with alternating cooperative education programs.

Briefly and summarily, eleven of you agreed that employers should be dropped if the work situation is repetitive; and that none of you should sacrifice quality of experience in order to get numbers of students in the program.

You were quite agreeable about those issues which were of above average importance. All of you, or eleven of you, agreed that some 121 issues were in that category! I will not at this time try to interpret your "back-up" statements. However, I think we should all pay some mind to whether or not that consensus is real. Statistical analysis will verify your consensus, but some time spent on your parts with the completed survey will allow you to consider whether or not you continue to strongly agree that 121 issues are of above average importance.

Last, but not least, you did not always agree. On two issues you disagreed. They were those to: "Develop institutional standards which facilitate coverage of jobs from term to term," and "Develop a better system to eliminate those programs which fail after federal funds disappear."

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On these issues half of you thought they were very important, the other half thought they were of little importance.

Again, thanks to each of you for your willingness to participate in this project. During academic year 1982-1983 Old Dominion University's Cooperative Education Program will utilize the norms of excellence you have established to develop, field-test, and sample a self-evaluation instrument which can be utilized to see whether or not a particular cooperative education program is, in fact, attending to those issues which you have defined, and which make this rather wonderful idea called cooperative education work.

Again, thank you.

Sincerely,

Constance F. Brothers
Research Coordinator

lah

cc: James L. Antonick

Norm Ratings of Questionnaire IV are being sent under separate cover.

!



Cooperative Education Programs • (804) 440-4396 • Norfolk, VA 23508

MEMORANDUM

TO: Delphi Consultants

FROM: Constance F. Brothers, Research Coordinator
Cooperative Education Programs
Old Dominion University

DATE: August 20, 1982

SUBJECT: Norm Ratings on Questionnaire IV

Attached please find the Norm Ratings on Questionnaire IV which indicate the degree of consensus among the Twelve Delphi Consultants who participated in the Project on Development of a Consensus on National Norms of Excellence for Alternating Cooperative Education Programs at Four Year Colleges and Universities.

Again, many thanks for your participation and cooperation.

lah

APPENDIX F

Old Dominion University is an affirmative action/equal opportunity institution.

NORM RATINGS ON QUESTIONNAIRE IV

PROJECT ON THE DEVELOPMENT OF A CONSENSUS ON NATIONAL NORMS OF EXCELLENCE FOR ALTERNATING COOPERATIVE EDUCATION PROGRAMS AT FOUR YEAR COLLEGES AND UNIVERSITIES

	Norm Statement	Distribution of Ratings						Total	No. People in Consensus
		High	1	2	3	4	5	Low	
APPENDIX F	1. Set realistic goals and stick to them. (Institutional Commitment)			10	2			12	10 (83%)
	2. Decrease the tendency to accept meaningless cooperative education jobs because they provide numbers. (Institutional Commitment)	2		8	2			12	8 (67%)
	3. Maintain close contact and good communication with employers/site supervisors. (Program Operation, Employer Participation)	12						12	12 (100%)
	4. Increase familiarity with employer needs. (Program Operation)			12				12	12 (100%)
	5. Decrease the degree of academic involvement in the work environment. (Employer Participation)			2		10		12	10 (83%)
	6. Develop suggested wage guidelines with annual salary surveys to assist employers and institutions in setting cooperative education wages. (Program Operation)					12		12	12 (100%)
	7. Develop an institutional structure reinforcing cooperative education's role in the educational process. (Institutional Commitment)	12						12	12 (100%)
	8. Limit growth in institutions with no track record of commitment or success. (Program Operation)	1	2	1	7	1		12	7 (58%)
	10. Develop a thorough and effective management information system, (including records, budget, planning, evaluation, and information for employers). (Program Operation, Employer Participation)	1	10		1			12	10 (83%)
	11. Decrease the obstacles between the institution's academic calendar and employment calendars. (Employer Participation)					12		12	12 (100%)

Norm Statement	Distribution of Ratings						Total	No. People in Consensus	
	High	1	2	3	4	5 Low			
12. The most important standard for quality program operation is increased facilities and materials at a level commensurate with student population. (Program Operation)			2	9	1		12	9	(75%)
13. Promote cooperative education as part of the degree requirement once a student elects participation. (Student Participation and Learning)				11		1	12	11	(92%)
14. Increase student awareness of the part played by cooperative education students in developing good jobs. (Student Participation and Learning)		1		11			12	11	(92%)
15. Establish career pathing for cooperative education students that takes into consideration the work experience they have upon conversion to full-time. (Employer Participation)			12				12	12	(100%)
16. Promote open communication and good relations among all components of cooperative education program (student, employer, faculty, staff). (Student Participation and Learning, Employer Participation)		11	1				12	11	(92%)
17. The most important standard for quality student participation and learning is positive feedback from the student's evaluation of the learning he received from his cooperative education job and by the fact that he continues to return to the employer until he completes the program. (Student Participation and Learning)			8		4		12	8	(67%)
18. Increase communications with students via media, orientation programs, etc. (Student Participation and Learning)		2	1	9			12	9	(75%)
19. Increase employer time allotment for permanent supervision of cooperative education program. (Employer Participation)			12				12	12	(100%)
20. Decrease the misconception that cooperative education is an expensive add-on option to the curriculum. (Institutional Commitment)				12			12	12	(100%)
21. The most important standard for quality employer participation is the provision of a good selection of reasonably qualified and motivated candidates. (Employer Participation)		12					12	12	(100%)

Norm Statement	Distribution of Ratings					Total	No. People in Consensus	
	High	1	2	3	4	5		
22. The most important standard for quality institutional commitment is the amount and source of institutional funding for cooperative education. (Institutional Commitment)	2	10					12	10 (83%)
23. Increase faculty training through workshops and seminars. (Instit. Commitment)				12			12	12 (100%)
24. Develop close liaison between the cooperative education office and the academic departmental offices. (Institutional Commitment)	1	11					12	11 (92%)
25. Include all departments in the initial planning of the campus-wide program. (Institutional Commitment)			3		9		12	9 (75%)
26. Follow through with commitments made to students. (Student Partic. and Learning)	1	11					12	11 (92%)
27. Develop credibility with faculty and administrators by appropriate organizational alignments and academic-like operational methods. (Program Operation, Institutional Commitment)	11	1					12	11 (92%)
28. Decrease the number of assignments with companies which have only marginal experience. (Employer Participation)	8	2	1		1		12	8 (67%)
29. Increase the facility with which employers can gain access to students, via interviews, etc. (Employer Participation)		10	1		1		12	10 (83%)
30. Increase awareness to employers of benefits to them. (Program Operation, Employer Participation)		12					12	12 (100%)
31. Make strong public statements of top administration's support of cooperative education. (Institutional Commitment)		9	2	1			12	9 (75%)
32. The most important standard for quality program operation is consistency in the administration of all standards. (Program Operation)		12					12	12 (100%)
33. Promote the cooperative education program through multiple descriptions in university catalogs, individual academic department brochures, freshman orientation sessions, financial aid brochures, and admissions office staff, written materials, etc. (Institutional Commitment)	12						12	12 (100%)

Norm Statement	Distribution of Ratings					Total	No. People in Consensus	
	High	1	2	3	4	5		
34. Conceptualize program's structure via pert charts, graphs, and models. (Program Operation)	1	1	2	1	7	12	7	(58%)
35. Develop a process for internal program evaluation based on internal standards. (Program Operation)		12				12	12	(100%)
36. The most important standard for student participation and learning is the opportunity for participation in a well-supervised, pre-screened work assignment which is relevant to the student's career interests. (Student Participation and Learning)	10		1	1		12	10	(83%)
37. Promote administrative understanding of the financial and personnel needs of cooperative education program. (Institutional Commitment)		12				12	12	(100%)
38. Promote the discussion of cooperative education assignments within the classroom and by having faculty advertise the program. (Instit. Commitment, Student Participation & Learning)			12			12	12	(100%)
39. The most important standard for student participation and learning is the degree of relationship between the cooperative education job and the discipline studied by the student. (Student Partic. & Learning)	9		1	2		12	9	(75%)
40. Increase the opportunities for students to participate in professional organizations. (Student Participation & Learning)			11		1	12	11	(92%)
41. The most important standard for quality program operation is dedicated, full-time directors/coordinators who have an evangelistic approach to developing a quality program (Program Operation)		11		1		12	11	(92%)
43. Promote use of learning contracts or similar controls to encourage learning. (Student Participation and Learning)		2	2		8	12	8	(67%)
44. Decrease confusion and misconceptions concerning the definitions of cooperative education among faculty, students, administrators, and employers. (Program Operation, Inst. Commitment, Student Participation and Learning)	12					12	12	(100%)

Norm Statement	Distribution of Ratings						Total	No. People in Consensus
	High	1	2	3	4	5 Low		
45. Promote the advantages with faculty and staff continually. (Institutional Commitment)		2	10				12	10 (83%)
46. Promote the effective use of cooperative education students' talents by employers. (Employer Participation)			12				12	12 (100%)
47. Develop quality work placements which meet the needs of a diverse population of students. (Studd. Partic. & Learning)		12					12	12 (100%)
48. Promote student pride in their participation in the program. (Student Participation and Learning)		1	1	10			12	10 (83%)
49. Promote closer academic-employer relations through the cooperative education students. (Institutional Commitment, Employer Partic.)			12				12	12 (100%)
50. Increase student, faculty, and administrator input into the development of the program. (Inst. Commit., Studd. Partic. & Learning)			11	1			12	11 (92%)
51. Promote cooperative education philosophically by encouraging the more prestigious universities to meaningfully participate. (Program Operation)			1	1	10		12	10 (83%)
52. Provide as much assistance as possible with housing problems. (Employer Participation)			1	10		1	12	10 (83%)
53. The most important standard for quality student participation and learning is clear, easy student/coordinator communications. (Student Participation and Learning)			11	1			12	11 (92%)
54. Develop faculty support by involving them in the cooperative education job approval mechanism. (Stud. Partic. & Learning)		1	1		10		12	10 (83%)
55. The most important standard for quality employer participation is a desire to develop a professional attitude in each cooperative education student. (Employer Participation)		1	1	10			12	10 (83%)
56. Decrease student apprehension regarding distant work opportunities. (Studd. Partic. & Learning)			12				12	12 (100%)

Norm Statement	Distribution of Ratings						Total	No. People in Consensus	
	High	1	2	3	4	5 Low			
57. Develop close working relationships with participating employers, especially on-line supervisors. (Studt. Participation and Learning)	1	11					12	11	(92%)
58. Promote cooperation between cooperative education institutions in areas such as housing and placement. (Program Operation)			1	1	10		12	10	(83%)
59. Promote constantly to the student body the advantage of cooperative education. (Studt. Partic. & Learning)		11	1				12	11	(92%)
60. Decrease student reluctance to a five year program. (Studt. Participation & Learning)		12					12	12	(100%)
61. Promote the concept of cooperative education internally and externally. (Institutional Commitment)		12					12	12	(100%)
62. Develop the student's skill in interacting with direct supervisors to develop general learning objectives at the beginning of each work term. (Studt. Partic. & Learning)		12					12	12	(100%)
63. Promote cooperative education scholastic and social organizations. (Studt. Partic. & Learning)				8	2	2	12	8	(67%)
64. Develop employer enthusiasm via good student placement. (Employer Participation)		11		1			12	11	(92%)
65. Decrease involvement with any non-paying or work-study employers. (Studt. Partic. & Learning)	11			1			12	11	(92%)
66. Decrease the number of job placements made with minimal coordinator participation. (Institutional Commitment)		12					12	12	(100%)
67. Decrease enrollment of students unsuited or uninterested in cooperative education program, who cannot be effectively served. (Program Operation, Inst. Commitment, Studt. Partic. & Learning)	12						12	12	(100%)
68. Promote corporate-wide cooperative education program acceptance. (Employer Participation)		12					12	12	(100%)

Norm Statement	Distribution of Ratings						Total	No. People in Consensus
	High	1	2	3	4	5 Low		
69. Protect students from employer abuse through minimal national standards for quality work assignments. (Studd. Partic. & Learning)	10				1	1	12	10 (83%)
70. Develop institutional standards which facilitate coverage of jobs from term to term. (Employer Participation)	4		1	1	6		12	6 (50%)
71. Promote the concept over media (T. V., etc.) more extensively. (Program Operation)			1	2	9		12	9 (75%)
72. Increase employer support and participation in cooperative education program development, operation, and decision-making. (Empl. Partic.)			12				12	12 (100%)
73. Increase the commitment by administrators both verbally and by action. (Institutional Commitment)			12				12	12 (100%)
74. Decrease time devoted to non-productive internal and external administration. (Program Operation)			12				12	12 (100%)
75. Increase support and understanding from faculty at all levels within post-secondary institutions in order to serve students' total needs. (Program Oper., Instit. Commitment)		11		1			12	11 (92%)
76. Promote the employer cooperative education program by providing school cooperative education offices with better information on expenses, schools in local areas for night courses, etc. (Employer Participation)			12				12	12 (100%)
77. Develop opportunities for cooperative education students to make oral presentations while at work. (Employer Participation)				11	1		12	11 (92%)
79. Decrease inattention to cooperative education applications on file. (Employer Participation)			1	11			12	11 (92%)
80. Promote employer assistance in providing career guidance and performance evaluation for cooperative education students. (Empl. Partic.)			12				12	12 (100%)
81. Increase the number and diversity of private and public sector employer participation in cooperative education programs. (Prog. Operation, Employer Participation)			12				12	12 (100%)

Norm Statement	Distribution of Ratings						Total	No. People in Consensus
	High	1	2	3	4	5 Low		
82. The most important standard for quality employer participation is the employer's ability to keep students returning for all planned work terms, and the employer's ability to retain the student as a full-time employee after graduation. (Empl. Partic.)	1		2	2	7		12	7 (58%)
83. The most important standard for quality student participation and learning is the quality of cooperative education work assignments and their relationship to student goals. (Stud. Partic. & Learning)			11	1			12	11 (92%)
84. The most important standard for quality program operation is efficient and effective student placement. (Program Operation)			12				12	12 (100%)
85. Increase employer understanding of the concept, process, philosophy, and goals of the cooperative education program. (Empl. Participation)			12				12	12 (100%)
86. Develop commitment among the cooperative education alumni to both the cooperative education program and to the institution. (Institutional Commitment)			12				12	12 (100%)
87. Promote the requirement that cooperative education jobs be salaried positions. (Program Operation)	7	1	3	1			12	7 (58%)
88. Increase students' knowledge of long-range goals and career planning. (Student Participation & Learning)				12			12	12 (100%)
89. Increase time available for coordinator/student contact. (Program Operation)			12				12	12 (100%)
90. Decrease participation with employers offering only repetitive work assignments. (Studt. Partic. & Learning)	11			1			12	11 (92%)
91. The most important standard for quality institutional commitment is the priority of the cooperative education program in the institution evidenced by funding, support for policies, and level of academic credibility. (Institutional Commitment)			12				12	12 (100%)
92. Develop mutual respect between the college and the corporate world. (Employer Participation)	6	3	3				12	6 (50%)

Norm Statement	Distribution of Ratings					Total	No. People in Consensus
	High	1	2	3	4		
93. Develop continuity in placement schedule and supply of students. (Employer Participation)	1	11				12	11 (92%)
94. Decrease the practice of placing the cooperative education offices in low visibility locations on campus. (Inst. Commitment)		12				12	12 (100%)
95. Increase the quality of initial, detailed orientation sessions to prospective cooperative education students as well as direct supervisors at work sites. (Prog. Oper., Stud. Partic. & Learn., Empl. Partic.)		12				12	12 (100%)
96. The most important standard for student participation and learning is the percentage of students entering and completing the program. (Student Participation and Learning)		1		11		12	11 (92%)
97. Constantly inform executive level administrators of positive significant events. (Inst. Commitment)		2	10			12	10 (83%)
98. Set up means for advanced cooperative education students to counsel freshmen. (Student Participation & Learning)		1	10		1	12	10 (83%)
99. Decrease cooperative education staff turnover. (Prog. Operation)		3	8	1		12	8 (67%)
100. Promote better student supervision by articulating cooperative education goals to work site supervisors and department heads in order that they have a complete understanding of cooperative education. (Empl. Partic.)		12				12	12 (100%)
101. Decrease temptation to go for numbers of students or employers at the risk of sacrificing quality. (Prog. Oper., Inst. Commitment)	11			1		12	11 (92%)
102. Develop credibility with faculty and administrators. (Prog. Oper.)	1	11				12	11 (92%)
103. Decrease use of cooperative education as a catch-all job shop. (Institutional Commitment)		12				12	12 (100%)
104. Promote programs which interface employers with teaching faculty. (Employer Participation)	1		11			12	11 (92%)
105. Develop curriculum alternatives that do not punish students for missing quarters or semesters in order to take a cooperative education assignment, i.e. sequential courses. (Inst. Commitment)		12				12	12 (100%)

		Distribution							10	
		of Ratings								
Norm Statement		High	1	2	3	4	5	Low	Total	No. People in Consensus
106.	The most important standard for quality employer participation is student evaluations of the employer's work assignment. (Empl. Participation)			11		1			12	11 (92%)
107.	The most important standard for quality institutional commitment is that resources, both personal and financial, be made available to the operating department. (Institutional Commitment)	10		1	1				12	10 (83%)
108.	Increase the student's commitment to completing the cooperative education program as planned, since quality learning assignments most frequently occur in the later work terms. (Studd. Partic. & Learning)		8	3		1			12	8 (67%)
109.	Involve cooperative education administrators in relevant decision-making processes at the college. (Inst. Commitment)		1	11					12	11 (92%)
110.	Increase information about the cooperative education program to high school and community college students. (Program Operation, Studd. Participation & Learning)		1	11					12	11 (92%)
111.	Promote students' sense of loyalty to the program. (Stud. Partic. & Learning)			2	9	1			12	9 (75%)
112.	Promote cooperative education to achievement-oriented students. (Student Participation and Learning)			11		1			12	11 (92%)
114.	Develop strong on-site evaluation program as a means to evaluate each work experience as it relates to program goals. (Studd. Partic. & Learning)			10		1	1		12	10 (83%)
115.	Increase the number of site visits by cooperative education directors and coordinators to help them better understand the learning opportunities for the students and the needs of the employers. (Program Operation, Inst. Commitment, Employer Participation)		1	9	1	1			12	9 (75%)
116.	The most important standard for quality employer participation is permanent and precise supervision and planning. (Empl. Partic.)			12					12	12 (100%)

Norm Statement	Distribution of Ratings						Total	No. People in Consensus	
	High	1	2	3	4	5 Low			
117. Increase the number of coordinators to the point of achieving a reasonable cooperative education student-to-coordinator ratio, allowing more personalized attention and giving qualitative emphasis. (Prog. Operation, Inst. Commitment)	12						12	12	(100%)
118. The most important standard for quality student participation and learning is increased enrollment and fulfillment of student goals. (Studt. Participation & Learning)	1		11				12	11	(92%)
119. Increase the relationship of cooperative education work assignments to a student's academic major or career goals. (Student Participation and Learning)	12						12	12	(100%)
120. Increase the ability of cooperative education to pay its way by implementing student and employer fees for participation that will cover most costs. (Institutional Commitment)	1		2	9			12	9	(75%)
121. Increase discussion time with each student regarding career interests, expectations, and professional development prior to placement in job assignment. (Prog. Operation, Studt. Partic. & Learning)	12						12	12	(100%)
122. Develop an institutional position dealing with affirmative action and non-discrimination. (Employer Participation)			12				12	12	(100%)
123. Promote employer support for hiring students in areas other than engineering, business, and computer science. (Studt. Partic. & Learning)	2	2	7		1		12	7	(58%)
124. Decrease job turnover resulting from poor student orientation. (Program Operation)		12					12	12	(100%)
125. Promote cooperative education as a training mode for students in the liberal arts. (Studt. Partic. & Learning)		1	10		1		12	10	(83%)
126. Decrease making promises that cannot be backed up by delivery systems. (Studt. Participation and Learning)	2	10					12	10	(83%)

		Distribution of Ratings						No. People in Consensus	
Norm Statement		High	1	2	3	4	5 Low	Total	
127.	Promote cooperative education as an integral part of an institution's curriculum. (Inst. Commitment)	12						12	12 (100%)
128.	The most important standard for quality student participation and learning is work experiences that give the students correct work activities that enhance their career objectives. (Student Participation and Learning)	12						12	12 (100%)
129.	Establish criteria to insure qualified student participation-- i.e. standards for eligibility and remaining in the program. (Prog. Operation, Employer Participation)	10	1	1				12	10 (83%)
130.	Facilitate employer involvement with the overall campus community. (Employer Participation)	10	1	1				12	10 (83%)
131.	The most important standard for quality program operation is the degree of direct identification of cooperative education as an integral part of the institution's academic commitment. (Program Operation, Institutional Commitment)	10	1	1				12	10 (83%)
132.	Develop integration of cooperative education into the college philosophy, mission, policy, and operation, at a proper level of importance. (Institutional Commitment)	11	1					12	11 (92%)
133.	Ask cooperative education students to speak on programs for prospective students. (Studd. Partic. & Learning)	2	10					12	10 (83%)
134.	Continue to involve employers in program and curriculum evaluation. (Studd. Partic. & Learning)	12						12	12 (100%)
135.	Sharpen school's profile as a cooperative education oriented school. (Institutional Commitment)	12						12	12 (100%)
136.	Decrease employer attitudes that cooperative education offers cheap labor. (Program Operation, Employer Participation)	12						12	12 (100%)
137.	Develop institutional publicity releases about the merits of cooperative education. (Institutional Commitment)	1	11					12	11 (92%)

Norm Statement	Distribution of Ratings					Total	No. People in Consensus
	High	1	2	3	4 5 Low		
138. Develop the use of faculty/administrator/student internal advisory committees. (Inst. Commit, Studt. Partic. & Learning, Empl. Partic.)			11		1	12	11 (92%)
139. The most important standard for quality student participation and learning is long-range commitment. (Studt. Partic. & Learning)				12		12	12 (100%)
140. Promote good relations and interaction with academic departments and administration. (Program Operation, Institutional Commit.)		12				12	12 (100%)
141. Increase faculty involvement with the cooperative education process. (Institutional Commitment)			10	1	1	12	10 (83%)
142. Promote the use of Cooperative Education Degree Plans (work/study schedules) which allow students to plan their course, anticipate graduation dates (and send them to employers so they can see what courses the students have completed and when they will work). (Program Operation)			12			12	12 (100%)
143. The most important standard for quality program operation is the development of a thoroughly structured program, accompanied by precise policies. (Program Operation)	2			9	1	12	9 (75%)
144. Increase the use of general cooperative education job descriptions, including pay ranges, locations, availability of housing, special requirements. (Employer Participation)	1		11			12	11 (92%)
145. Develop an efficient referral system which can respond to employer needs. (Employer Participation)			12			12	12 (100%)
146. Maintain contact with students during their placements. (Student Participation and Learning)			12			12	12 (100%)
148. Decrease dependence on federal funds for program operation. (Prog. Operation, Institutional Commitment)	12					12	12 (100%)
149. Increase student recruitment into the cooperative education program through all available means. (Program Operation)			10	1	1	12	10 (83%)
150. Promote programs which will strengthen institutional ties with prospective employers. (Institutional Commitment)			12			12	12 (100%)

		Distribution of Ratings								
Norm Statement		High	1	2	3	4	5	Low	Total	No. People in Consensus
151.	Promote a feeling of allegiance toward the school via aggressive professional service on the part of the school. (Empl. Partic.)					12			12	12 (100%)
152.	Develop clear and precise materials for direct supervisors and personnel representatives so that they can better understand their critical roles in the cooperative education program. (Prog. Oper., Studt. Partic. & Learning, Empl. Partic.)	1		11					12	11 (92%)
153.	Require students to submit evaluation forms to the coordinator on the quality of the learning received from the cooperative education job assignment. (Studt. Partic. & Learning)	2		10					12	10 (83%)
154.	Develop an evaluation of the overall satisfaction of cooperative education students with their total cooperative education experience and identify problem areas. (Studt. Partic. & Learning)			12					12	12 (100%)
155.	Decrease any tendency to treat cooperative education as <u>only</u> a recruitment tool. (Employer Participation)			12					12	12 (100%)
156.	Promote academic orientation via credit, appropriate units, scholarly assignments, etc. (Stud. Partic. & Learning)	1			10		1		12	10 (83%)
157.	Develop more direct chains of communication. (Inst. Commit.)			2	10				12	10 (83%)
158.	Decrease the barrier of curricular conflicts, i.e. scheduling conflicts; and develop systems that facilitate alternation between school and cooperative education work terms. (Program Oper., Inst. Commitment, Student Partic. & Learning)	12							12	12 (100%)
159.	Decrease sole dependence upon cooperative education for affirmative action hiring, i.e. ethnic groups or sex. (Empl. Participation)	12							12	12 (100%)
160.	Develop a better system for program evaluation. (Prog. Operation)			12					12	12 (100%)
161.	Promote realistic, long-range funding at a level commensurate with growth and increased efficiency. (Inst. Commit.)	1		11					12	11 (92%)
163.	Develop easy ways for all cooperative education students to express their views and ask questions. (Studt. Partic. & Learning)			10	1	1			12	10 (83%)

Norm Statement	Distribution of Ratings						Total	No. People in Consensus	
	High	1	2	3	4	5 Low			
164. Decrease campus bureaucracy with which employers must deal. (Empl. Partic.)			1	11			12	11	(92%)
165. Increase understanding among employers of the variety and content of academic programs being offered at four year academic institutions. (Employer Participation)				12			12	12	(100%)
166. Promote a semi-professional character of cooperative education student utilization at the work site. (Empl. Partic.)		1		11			12	11	(92%)
167. Promote public awareness of the institution's contribution to the extra university community. (Inst. Commitment)			11		1		12	11	(92%)
168. Promote a willingness to communicate, under all circumstances, with students, faculty, and employers. (Inst. Commitment)		2	1	9			12	9	(75%)
169. Develop a better system to eliminate those programs which fail after federal funds disappear. (Program Operation)		6			1	5	12	6	(50%)
170. The most important standard for quality employer participation is the meaningfulness of the jobs as determined by type of duty, increasing levels of responsibility, and the quality of employer supervision. (Employer Participation)		12					12	12	(100%)
171. Establish career pathing for cooperative education students that takes into consideration the work experience they have upon conversion to full time. (Employer Participation)			12				12	12	(100%)
172. Develop a friendly, helpful attitude among all participants--students, employers, staff. (Program Operation)		1	11				12	11	(92%)
173. Develop physical support in terms of furniture, office space, etc. (Institutional Commitment)		1	7		1	3	12	7	(58%)
174. Develop measures to evaluate appropriateness of student jobs to program goals. (Studt. Partic. & Learning)		1	10	1			12	10	(83%)
175. Increase campus-wide understanding of the goals, values, and purposes of cooperative education. (Institutional Commitment)		12					12	12	(100%)

Norm Statement	Distribution of Ratings					Total	No. People in Consensus	
	High	1	2	3	4	5 Low		
176. Develop definition of minimum amount of work requirement for cooperative education participation. (Program Operation)	2	2	8			12	8	(67%)
177. Develop an efficient system through which employers may evaluate both program and students. (Employer Participation)	1	2	9			12	9	(75%)
178. The most important standard for quality employer participation is a thorough understanding of the cooperative education concept and recognition of the employer benefits which result from providing quality work assignments to students. (Employer Partic.)			12			12	12	(100%)
179. Develop a cooperative education philosophy consistent with the desire of the faculty. (Institutional Commitment)			1	11		12	11	(92%)
181. Increase the amount of federal evaluation. (Program Operation)					12	12	12	(100%)
182. New programs should place the director on hard money immediately to insure security and demonstrate immediate commitment. (Inst. Commitment)	12					12	12	(100%)
183. Promote broad-based student participation/placement. (Prog. Oper.)	1	2	9			12	9	(75%)
184. Decrease unnecessary paper flow via streamlined applications, resumes. (Program Operation)	2	2	8			12	8	(67%)
185. Increase long-range planning of new cooperative education openings. (Employer Participation)			12			12	12	(100%)
186. The most important standard for quality employer participation is student interest in full-time employment after graduation and the employer increasing the number of cooperative education students. (Employer Participation)		10			2	12	10	(83%)
187. Increase faculty and administrative awareness of the advantages of the cooperative education program. (Institutional Commitment)		12				12	12	(100%)
188. Increase financial resources available to cooperative education at the operational level for quality staffing and support equipment. (Program Operation, Institutional Commitment)	12					12	12	(100%)

Norm Statement	Distribution of Ratings						Total	No. People in Consensus	
	High	1	2	3	4	5 Low			
189. Develop clear, precise quality handbooks for students so that they specifically understand the school's cooperative education policies and how cooperative education affects critical issues such as dorms, financial aid, social security, scholarships, etc., and so that student expectations are realistic and met. (Program Operation, Student Participation and Learning)	1	11					12	11	(92%)
190. New employer (training station) development should emphasize cooperative education students meeting employer needs. (Employer Participation)			11		1		12	11	(92%)
191. Decrease recruitment of international students who are particularly difficult to place. (Program Operation)	1		10		1		12	10	(83%)
192. The most important standard for quality program operation is emphasis on qualitative rather than quantitative program aspects. (Program Operation)			11		1		12	11	(92%)
193. Promote greater student/work supervisor interaction. (Program Operation)			11		1		12	11	(92%)
195. The most important standard for quality institutional commitment is tangible philosophical support by top administration. (Inst. Commitment)			11		1		12	11	(92%)
196. Increase institutional level of consensus on common program policies and objectives. (Program Operation)	2	10					12	10	(83%)
197. Promote the use of cooperative education students who are currently working to go to local high schools to make presentations on cooperative education to key classes, counselors, etc. (Employer Participation)					12		12	12	(100%)
198. Decrease the practice of accepting academically marginal students into the program who may not have the ability to complete a degree or the cooperative education job related to his/her present major. (Student Participation and Learning)	2	1	2	7			12	7	(58%)

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Norm Statement	Distribution of Ratings					Total	No. People in Consensus	
	High	1	2	3	4 5 Low			
200. Involve employers in college curriculum review and evaluation. (Employer Participation)			1	10	1	12	10	(83%)
201. Promote understanding of cooperative education at all levels of the institutional community, from academic advisors to the board of trustees. (Institutional Commitment)			12			12	12	(100%)
202. Increase quality of cooperative education work assignments through specificity of involved duties. (Student Participation and Learning, Employer Participation)			12			12	12	(100%)
203. The most important standard for quality institutional commitment is an adequate "hard dollar" budget to employ dedicated cooperative education professionals and to provide them with quality office space; and to encourage faculty and support staff to promote the cooperative education program. (Inst. Commitment)			12			12	12	(100%)
204. Develop the use of effective exit interviews (rather than forms alone) to gather student feedback, to discuss the next work term, reporting dates, projected pay, etc. (Employer Participation, Student Participation and Learning)			12			12	12	(100%)
205. Maintain a strict calendar for operations each term. (Prog. Oper.)		2	3	7		12	7	(58%)
206. Increase the variety of quality jobs in each major. (Program Operation, Student Partic. & Learning, Employer Participation)			12			12	12	(100%)
207. Decrease Title VIII support to the colleges that have tended to demonstrate at other's expense. (Program Operation)		10			1 1	12	10	(83%)
208. Decrease fear factors within faculty. (Institutional Commitment)		2		10		12	10	(83%)
209. Increase professionalism of cooperative education staff members. (Program Operation)		1	11			12	11	(92%)
210. Promote a variety of related assignments with increasing substance and responsibility. (Studt. Participation & Learning, Employer Participation)		1	11			12	11	(92%)

Norm Statement	Distribution of Ratings					Total	No. People in Consensus	
	High	1	2	3	4	5		
211. Decrease unilateral variance in cooperative education models and practices by individual units on the same campus from the approved cooperative education model. (Program Operation, Institutional Commitment)		1	3	8		12	8	(67%)
212. Promote the use of filing employer job descriptions and student cooperative education reports so that prospective cooperative education students can make better job selections. (prog. Oper.)		1	11			12	11	(92%)
213. Require that majority financial support originate from continuing appropriated budgets. (Institutional Commitment)			12			12	12	(100%)
214. Promote new employer involvement by having experienced employers talk with them. (Employer Participation)		2		10		12	10	(83%)
215. Decrease placement of students with employers who are unwilling to provide specific data on work assignments. (Student Partic. and Learning)			12			12	12	(100%)
216. Invite employers to serve on advisory councils. (Empl. Partic.)			10	1	1	12	10	(83%)
217. The most important standard for quality program operation is commitment to cooperative education as an educational model. (Program Operation)			12			12	12	(100%)
218. Develop a comprehensive "Personnel" plan that maximizes the use of cooperative education students. (Employer Participation)			12			12	12	(100%)
219. Increase employer knowledge of college curriculum. (Empl. Partic.)			12			12	12	(100%)
220. The most important standard for quality student participation and learning and employer participation is the satisfaction of the student with the work experience. (Studd. Partic. & Learning, Employer Participation)			11	1		12	11	(92%)
221. Increase accountability of all personnel involved in cooperative education placement process. (Program Operation)		2	10			12	10	(83%)

Norm Statement	Distribution of Ratings					Total	No. People in Consensus
	High	1	2	3	4		
222. The most important standard for quality employer participation is fulfillment of student goals and good student evaluation of employers. (Employer Participation)			11	1		12	11 (92%)
223. Develop a strong set of employer information guidelines and methods by which to inform employers of their participation responsibilities. (Employer Participation)	1	2	9			12	9 (75%)
224. Enlist job development assistance to the program from the faculty, top administration, and trustees. (Inst. Commit.)		10	1	1		12	10 (83%)
226. Promote good communications between various support services, i.e. counseling, admissions, placement, registration, student affairs. (Prog. Oper., Inst. Commitment)		12				12	12 (100%)
227. Promote employer participation at all levels by providing meaningful business tax credits for foundation type tax breaks to participating companies. (Prog. Oper., Inst. Commitment)	2			9	1	12	9 (75%)
228. The most important standard for quality program operation is the placement of students in satisfying career-related work needed by the employer. (Program Operation)	1	10	1			12	10 (83%)
229. Develop the practice of designating at least one Faculty Cooperative Education Advisor in each participating academic department to: 1) approve degree plans; 2) read/grade reports; 3) provide academic counseling to students; 4) occasionally visit students at their job sites. (Inst. Commitment)		10	1	1		12	10 (83%)
230. Decrease faculty attitude of "Don't delay graduation by enrolling in the cooperative education plan." (Inst. Commitment)	12					12	12 (100%)
231. Decrease dependence on general lists of jobs; develop each job separately. (Institutional Commitment)			12			12	12 (100%)
232. Increase recognition of cooperative education as an opportunity to pre-screen qualified candidates for permanent employment in the future. (Employer Participation)	12					12	12 (100%)

Norm Statement	Distribution of Ratings					Total	No. People in Consensus	
	High	1	2	3	4	5		
233. Increase the use of cooperative education assignments to replace in-house training programs used for new college hires. (Employer Participation)			12				12	12 (100%)
234. Enhance viability of cooperative education student hiring by providing central budgets for such investments. (Empl. Partic.)			9	1	1	1	12	9 (75%)
235. Decrease barriers to faculty participation in the program, i.e. workload problems, tenure demands, etc. (Inst. Commitment)			10		2		12	10 (83%)
236. Develop intake programs for potential cooperative education students, explaining the program. (Studt. Partic. & Learning)			12				12	12 (100%)
238. Decrease the skepticism of those who see cooperative education as a vocational program for "working class" students and unrelated to academic pursuits. (Program Operation, Inst. Commitment)	10			1	1		12	10 (83%)
239. Decrease the tendency to rotate cooperative education supervision at the work site among several entry level staff personnel. (Employer Participation)		2	1	9			12	9 (75%)
240. Reject the notion that any job is beneficial to a student. (Studt. Partic. & Learning)		6	2	4			12	6 (50%)
241. Decrease the misconception that cooperative education is primarily a form of financial aid for students--do not use the hard sell of economic advantages. (Stud. Partic. & Learning, Empl. Partic.)	12						12	12 (100%)
242. Develop tracking systems to insure program and work experience quality. (Studt. Partic. & Learning)			12				12	12 (100%)
243. Promote better coordination with university administrative facilities. (Institutional Commitment)			12				12	12 (100%)
244. Promote grass roots support by faculty and students. (Inst. Comm.)	1	11					12	11 (92%)
245. Promote an understanding of true cooperative education operations among university administrators. (Prog. Oper., Inst. Commitment)	1	11					12	11 (92%)

		Distribution of Ratings							22	
Norm Statement		High	1	2	3	4	5	Low	Total	No. People in Consensus
246.	Increase stature of cooperative education coordinators by appropriate academic rank, pay, and related authority. (Institutional Commitment)	10			1		1		12	10 (83%)
247.	The most important standard for quality institutional commitment is a firm, adequate, cost-effective budget. (Program Operation, Inst. Commitment)	12							12	12 (100%)
248.	Increase communications with faculty, students, administration. (Institutional Commitment)			12					12	12 (100%)
249.	Increase employer awareness through success stories of other experienced employers. (Employer Participation)			12					12	12 (100%)
250.	Encourage employer representatives to visit the campus. (Employer Participation)			12					12	12 (100%)
251.	Promote cooperative education to policy-making budget control bodies, i.e. legislators, business, industry, as an investment in the future. (Inst. Commitment, Employer Participation)	1			11				12	11 (92%)
252.	Promote greater interaction and rapport with faculty by the cooperative education staff. (Program Operation)	1		11					12	11 (92%)
253.	The most important standard for quality program operation is an absolute knowledge of the cooperative education job descriptions and the relationship between these jobs and the expectations of students and employers. (Program Operation)			11	1				12	11 (92%)
254.	Develop job research methods and materials. (Stud. Partic.)			1	11				12	11 (92%)
255.	Increase amount of federal funding. (Program Operation)						12		12	12 (100%)
256.	Increase preparation of students for their placements. (Studt. Partic. & Learning)			12					12	12 (100%)
257.	Promote use of students in non-traditional assignments, i.e. Arts and Science majors placed in engineering firms. (Employer Participation)			11			1		12	11 (92%)

Norm Statement	Distribution of Ratings						Total	No. People in Consensus	
	High	1	2	3	4	5 Low			
258. Promote effective follow-up techniques by staff. (Prog. Oper.)			12				12	12	(100%)
259. Promote the concept of excelling on the job through positive work attitudes/habits (continuity, dependability). (Student Participation and Learning)		2	10				12	10	(83%)
260. Develop report writing skills by insisting on quality cooperative education work reports/research papers, etc. (Student Participation and Learning)			10	2			12	10	(83%)
262. Increase course offerings to provide for comparable study opportunities for each cooperative education section. (Prog. Oper.)		2		10			12	10	(83%)
264. Allocate some Title VIII funds to be used on a "matching basis" to pay students for up to 2 years with a given company or governmental agency. (Program Operation)						12	12	12	(100%)
265. Decrease dependence upon grant type funding from private sources. (Institutional Commitment)		10			1	1	12	10	(83%)
266. Decrease attempts to add to the operational scope of the program without commensurate staff. (Inst. Commitment)		1	11				12	11	(92%)
267. Promote cooperative education committees and hold cooperative education group meetings at companies with large programs. (Employer Participation)					12		12	12	(100%)
268. Solicit student feedback on all phases of program development. (Student Participation & Learning)			12				12	12	(100%)
269. Increase institutional support, in the fullest sense of that term. (Program Operation)		11	1				12	11	(92%)
270. Increase the use of cooperative education as a viable part of college recruitment program. (Employer Participation)			12				12	12	(100%)
271. Decrease routine administrative problems, created by excessive schedule changes. (Student Participation and Learning)		1	11				12	11	(92%)

		Distribution of Ratings					24	
Norm Statement		High	1	2	3	4	5	Low
							Total	No. People in Consensus
272.	Develop rules and regulations for student participants supported by sanctions for non-compliance. (Prog. Oper., Inst. Commitment)	1	2	9			12	9 (75%)
273.	Promote cooperative education as a valid, essential, complementary academic program on an equal basis with other academic programs. (Prog. Operation, Inst. Commitment, Studt. Partic. & Learning)	12					12	12 (100%)
274.	Promote opportunities for cooperative education students to meet people in upper management at the work site. (Employer Partic.)			12			12	12 (100%)
275.	Promote a program of visitation to all programs that are federally funded to ensure quality program operation. (Program Operation)			12			12	12 (100%)
277.	Develop achievable goals which are evaluated at least annually. (Program Operation)		12				12	12 (100%)
278.	Develop funding alternatives early in the program's life. (Institutional Commitment)	10	1	1			12	10 (83%)
279.	The most important standard for quality program operation is strong, credible leadership, i.e. directors, coordinators--to meet the needs of interested students and employer. (Program Operation, Institutional Commitment)	12					12	12 (100%)
280.	Decrease duplication of contacts by several staff members with employers. (Employer Participation)	1		11			12	11 (92%)
281.	Develop better communication among cooperative education students themselves. (Stud. Partic.)			12			12	12 (100%)
282.	Provide good supervision during the work assignment from both employer and institution. (Stud. Partic. & Learning)		10	2			12	10 (83%)
284.	Decrease the misunderstanding that cooperative education is strictly for business and technical fields. (Inst. Commitment)		11			1	12	11 (92%)
285.	Decrease discrimination in selection and placement process. (Student Participation and Learning)	1	1	9		1	12	9 (75%)

Norm Statement	Distribution of Ratings					Total	No. People in Consensus	
	High	1	2	3	4 5 Low			
286. Decrease the emphasis on coordinator employer visitations as a major coordinator function. (Employer Participation)	2	3			7	12	7	(58%)
287. Investigate non-traditional applications, i.e. graduate cooperative education students and adult population. (Program Operation)	1		11			12	11	(92%)
288. Decrease students' expectations for "high level" assignments in first and second cooperative education work terms. (Student Partic. and Learning)			3	9		12	9	(75%)
289. The most important standard for quality student participation and learning is how graduates compare with peers from non-cooperative education institutions (the end product). Studt. Partic. & Learning)			9	1	2	12	9	(75%)
290. Decrease the time involved in reviewing proposals and changing guidelines. (Program Operation)				12		12	12	(100%)
291. Decrease support through Title VIII to training and research activities because of lack of evidence that these dollars are well spent. (Program Operation)	8	2	1	1		12	8	(67%)
292. Develop an integrated Life/Career Planning Program: beyond mere "job placement." (Student Participation & Learning)		1	11			12	11	(92%)
293. Develop definitions that distinguish cooperative education from other forms of non-classroom learning, i.e. internships. (Institutional Commitment)		12				12	12	(100%)
294. Develop financial support to move into a self-support mode. (Institutional Commitment)	3	9				12	9	(75%)
295. Increase the quality of cooperative education work experiences by close screening of training stations. (Studt. Partic. & Learn.)		12				12	12	(100%)
296. Provide the opportunity to employers for selection among prescreened, motivated, qualified candidates. (Employer Participation)		12				12	12	(100%)

Norm Statement	Distribution of Ratings						Total	No. People in Consensus
	High	1	2	3	4	5 Low		
297. Develop logical contacts throughout the business world. (Inst. Commitment)	1		11				12	11 (92%)
298. Develop rules and regulations for employer participation. (Program Operation)			12				12	12 (100%)
300. The most important standard for quality program operation is evaluations and programs which meet the objectives of cooperative education. (Program Operation)			10		2		12	10 (83%)
301. Develop comprehensive record-keeping procedures to provide answers to such questions as: 1) What percent of your students go to work for their cooperative education employers? 2) What is the difference in starting salaries for students who have participated in cooperative education versus those who have not? 3) Why did those students drop out of cooperative education after only 1 work term? (Program Operation)			12				12	12 (100%)
302. Develop standards that meet employer and college requirements, but stay flexible enough to meet student needs. (Stud. Partic. & Learn.)	11		1				12	11 (92%)
303. Develop the student's interpersonal skills by encouraging him to be "tactfully aggressive" in asking questions and requesting more challenging learning assignments. (Stud. Partic. & Learning)		11			1		12	11 (92%)
304. Decrease dependence on a single employer or industry, especially in a volatile market-place. (Employer Participation)			12				12	12 (100%)
305. Promote the concept of cooperative education as a program and not a service. (Stud. Partic. & Learning)		12					12	12 (100%)
306. The most important standard for quality program operation is to promote an understanding of commitment among students and employers. (Program Operation)		11		1			12	11 (92%)
307. Provide for variance in coordinator placement objectives for students in different disciplines--objectives that are consistent with overall program objectives. (Program Operation)			12				12	12 (100%)
308. Promote the use of non-specifically trained students in areas of the organization where specifics are not required. (Empl. Partic.)		11			1		12	11 (92%)

		Distribution of Ratings						No. People in Consensus	
Norm Statement		High	1	2	3	4	5	Low	Total
309.	Increase the emphasis on giving meaningful experience each work period. (Employer Participation)	12							12
310.	Decrease misconceptions about cooperative education's mode of operation within a school. (Institutional Commitment)	11			1				12
311.	Promote employer exchange of ideas for effectively operating cooperative education programs. (Employer Participation)		12						12
312.	Increase the efficiency of cooperative education office operations, i.e. student screening, placement, etc. (Program Operation)		12						12
313.	The most important standard for quality employer participation is the satisfaction of the employer with the cooperative education program. (Employer Participation)		10			1			11
314.	The most important standard for quality employer participation is the institution's ability to place all qualified students interested in cooperative education on jobs that provide discipline-related learning. (Employer Participation)	1		2	8				11
315.	Eliminate the practice of granting students' requests to get out of the cooperative education program and transfer to the employer's "summer job" program, or to withdraw once involved. (Institutional Commitment, Employer Participation)	8			2	1			11
316.	Increase student's level of effort in securing proper placement. (Student Participation and Learning)		11						11
317.	Develop a broad geographic and economic base of available job assignments. (Stud. Partic. & Learning)		10		1				11
318.	Promote use of work as a learning laboratory, educationally broadening. (Student Participation and Learning)	11							11
319.	The most important standard for quality student participation is the availability of quality work placements which meet the needs of a diverse population of students. (Stud. Partic. & Learning)		11						11

APPENDIX B.1.

LETTER TO COORDINATORS AT
PARTICIPATING INSTITUTIONS

METHOD USED FOR CHOOSING QUESTIONS

METHOD OF SELECTION CHART

TARGET DATES FOR COOPERATIVE EDUCATION
SELF-EVALUATION

PROCEDURAL DIRECTIONS

CODE SHEET DIRECTIONS

COVER LETTER FOR QUESTIONNAIRE

FOLLOW-UP LETTER NUMBER 1

FOLLOW-UP LETTER NUMBER 2



Professional Experience Programs
Cooperative Education/Internships • (804) 440-4396 • Norfolk, VA 23508-8507

November 23, 1982

Thank you for your willingness to participate in Research to Develop a Cooperative Education Self-Evaluation Instrument by conducting a field-test of the draft questionnaire at _____. The research, as you will recall, is being conducted by the Research Department, Cooperative Education/Professional Experience Programs, Old Dominion University, Norfolk, Virginia. It is funded through a grant for academic year 1982-1983 by the Cooperative Education Branch, U.S. Department of Education.

Your institution is one of four four-year colleges and universities with alternating Cooperative Education Programs which will field-test the instrument. When this process is completed (we hope in no more than eight weeks) the results will be analyzed and shared with you. Your comments and criticisms will be used to further refine the instrument before it is sampled by fourteen participating four-year universities and colleges with alternating Cooperative Education Programs. The result will be a free self-evaluation instrument for use by all Cooperative Education Professionals who find it suitable to their purposes.

The 90 questions in the Cooperative Education Self-Evaluation Instrument were developed first as National Norms of Excellence for Alternating Cooperative Education Programs at Four-Year Institutions of Higher Education. The norms were submitted and rated by twelve Cooperative Education Professionals through a four-round Delphi Technique designed to reach consensus on norms of excellence. Those norms considered "of highest importance" and "of above average importance" were transposed to questions which appear on the Cooperative Education Self-Evaluation Instrument.

Enclosed with this letter you will find rather detailed instructions for conducting the research. The reason for such detail is that we are using the "Total Design Method" set forth by Don A. Dillman in Mail and Telephone Surveys: The Total Design Method (New York: John Wiley & Sons, 1978):

This term is a result of the premise on which it is based, namely, [that] to maximize both quantity and quality of responses, attention must be given to every detail that might affect response behavior. (p. viii)

November 23, 1982

Page 2

You will find enclosed samples of the cover letter, the questionnaire instructions, the return mail envelope, the code sheet, and the questionnaire booklet. In addition, you will find instructions for conducting the research, as well as an explanation of the derivation of the questions and a grid which shows which qualities and activities each question addresses.

In order that we can compare the utility of the self-evaluation instrument with the results of your outside evaluation, we ask that you request that the outside evaluator use the same qualities and categories found on the Questionnaire Grid. That is, we need to be sure that the outside evaluator also clearly addresses: program operation, employer participation, institutional commitment, and student participation and learning. These activities should be examined by the outside evaluator with the intent of measuring these organizational qualities: Managerial leadership, interaction processes, organizational climate, program satisfaction, work facilitation, supervisory leadership, attitude, decision-making, and communication flow. When the outside evaluator uses these categories you will be able to compare and contrast the results of the two distinct methods of program evaluation.*

You have a lot of material here and my directions may not be as clear as I hope. Please call me at 804-440-4396 if you have any questions before proceeding.

Again, many thanks for your willingness to participate in what we hope to be an extremely useful study for the entire Cooperative Education Community.

Cordially,

Constance F. Brothers
Research Coordinator

lah
Enclosures

*This element of the research had to be eliminated because outside evaluation was not funded by the U.S. Department of Education for a majority of the institutions in the sample for academic year 1982-1983.

COOPERATIVE EDUCATION EVALUATION QUESTIONNAIRE

Method Used for Choosing Questions

During Academic Year 1981-1982, twelve Cooperative Education Professionals from four-year institutions with successful alternating programs participated in a four-round Delphi Technique to arrive at group consensus on national norms of excellence for such programs. On the first round of the Delphi Technique the participants created 495 norm statements which began with the active verbs increase, decrease, develop, promote, and others of their choice (the norm statements also included the phrase "The most important standard for . . .").

The 495 norm statements were reduced to 319 statements when redundancy was eliminated. The 319 statements became Round Two of the Delphi Technique. On the second round the participants rated each norm on a Likert type scale from highest to lowest importance. Round three allowed the participants to see where the most frequent responses fell and how their own responses compared to the most frequent response. The participants were asked to either (1) change their earlier response and agree with the most frequent response, or (2) write in one sentence their reason for maintaining their previous point of view.

On the fourth and final round, participants were given a complete list of minority responses, again shown where their responses fell in relation to the most frequent response, and given an opportunity to change.

Participants unanimously agreed that 29 norm statements were of HIGHEST IMPORTANCE. Eleven out of twelve agreed that 10 norm statements were of HIGHEST IMPORTANCE. Participants unanimously agreed that 72 norm statements were of ABOVE AVERAGE IMPORTANCE. Eleven out of twelve participants agreed that 44 norm statements were of ABOVE AVERAGE IMPORTANCE. From this pool of 155 statements the researcher utilized all of the statements from the of HIGHEST IMPORTANCE category, all of the unanimous statements from the of ABOVE AVERAGE IMPORTANCE category, and several from the latter category on which eleven agreed. After further eliminations for redundancy, a 93-item questionnaire was constructed which examined the following qualities necessary in exemplary Cooperative Education Programs which are organized around the original Delphi categories:

- Institutional Commitment
- Program Operation
- Student Participation and Learning
- Employer Participation

Attached is a METHOD OF SELECTION CHART which shows how the final 93 items were selected from the original 319 items generated by the participants in the Delphi Technique. Please note that items which were norm statements in the Delphi Study have been transposed to questions which must be rated on the Cooperative Education Evaluation Questionnaire.

The final attachment is the entire NORM RATING OF QUESTIONNAIRE IV which shows all of the norm statements generated by the Delphi consultants.

EXAMPLES OF NORM STATEMENTS:

1. Increase discussion time with each student regarding career interests, expectations, and professional development prior to placement in job assignment (this statement was #121 on the Delphi Technique and was utilized as question #31 on the self-evaluation questionnaire).
2. Decrease confusion and misconceptions concerning the definitions of cooperative education among faculty, students, administrators, and employers (Delphi statement #44, question #27).
3. Develop an institutional structure reinforcing cooperative education's role in the educational process (Delphi statement #7, question #1).
4. Promote the concept of cooperative education as a program and not a service (Delphi statement #305, question #73).
5. The most important standard for quality employer participation is the meaningfulness of the jobs as determined by type of duty, increasing levels of responsibility, and the quality of employer supervision (Delphi statement #170, question #32).

COOPERATIVE EDUCATION EVALUATION QUESTIONNAIRE

METHOD OF SELECTION CHART

Norm Ratings from Delphi Technique <u>Questionnaire IV</u>				The Ninety Items Selected for Questions	Items as They Appear on the Completed Cooperative Education <u>Evaluation</u> <u>Questionnaire</u>	
Item	Percent	-----		Question:	-----	
3	100%	Highest Importance		1	2	Employer Participation
7	100	" "		2	1	Institutional Commitment
16	100	" "		3	3	Student Participation and Learning
27	100	" "		4	16	Institutional Commitment
33	100	" "		5	15	Institutional Commitment
44	100	" "		6	27	Employer Participation
47	100	" "		7	41	Student Participation and Learning
65	100	" "		8	28	Student Participation and Learning
67	100	" "		9	29	Student Participation and Learning
90	92	" "		10	45	Student Participation and Learning
101	92	" "		11	53	Program Operation
103	100	" "		12	62	Program Operation
105	100	" "		13	17	Institutional Commitment
117	100	" "		14	54	Institutional Commitment
119	100	" "		15	30	Student Participation and Learning
121	100	" "		16	31	Student Participation and Learning
127	100	" "		17	4	Institutional Commitment

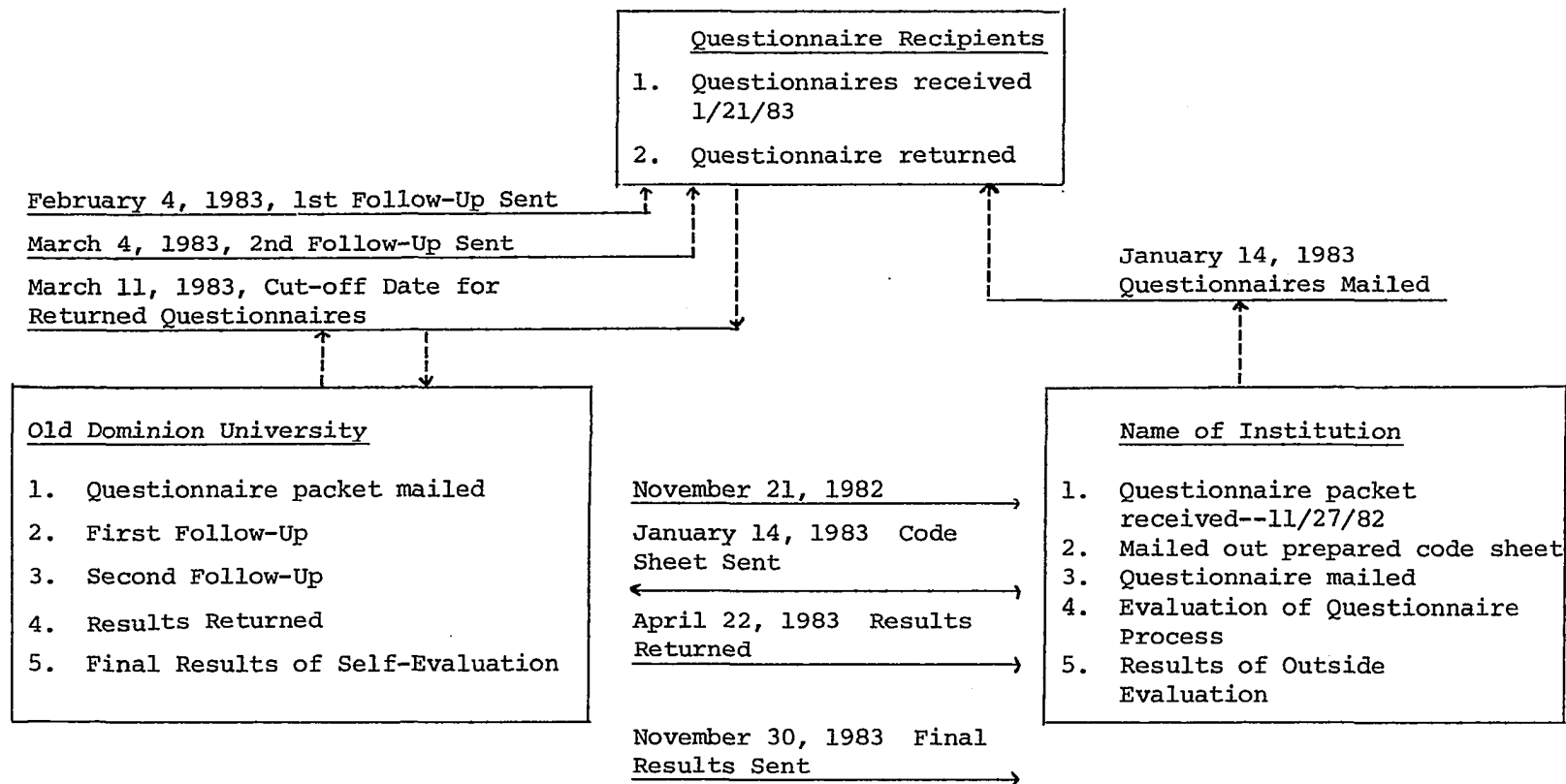
Norm Ratings from Delphi Technique Questionnaire IV		The Ninety Items Selected for Questions		Items as They Appear on the Completed Cooperative Education Evaluation Questionnaire	
Item	Percent	Question:			
132	100	Highest Importance	18	74	Institutional Commitment
140	100	" "	19	5	Institutional Commitment
148	100	" "	20	18	Employer Participation
159	100	" "	21	21	Employer Participation
170	100	" "	22	32	Student Participation and Learning
175	100	" "	23	33	Institutional Commitment
182	100	" "	24	20	Institutional Commitment
188	100	" "	25	19	Institutional Commitment
204	100	" "	26	34	Student Participation and Learning
206	100	" "	27	46	Institutional Commitment
230	100	" "	28	7	Institutional Commitment
241	100	" "	29	6	Student Participation and Learning
247	100	" "	30	22	Institutional Commitment
269	92	" "	31	23	Institutional Commitment
273	100	" "	32	63	Institutional Commitment
279	100	" "	33	55	Program Operation
302	92	" "	34	8	Student Participation and Learning
305	100	" "	35	73	Student Participation and Learning
309	100	" "	36	35	Employer Participation
310	92	" "	37	79	Institutional Commitment

Norm Ratings from Delphi Technique <u>Questionnaire IV</u>					The Ninety Items Selected for Questions				Items as They Appear on the Completed Cooperative Education <u>Evaluation</u> <u>Questionnaire</u>
Item	Percent				Questions:				
318	92	Highest Importance			38	64	Student Participation and Learning		
4	100	Above Average Importance			39	9	Program Operation		
15	100	"	"	"	40	75	Employer Participation		
19	100	"	"	"	41	47	Employer Participation		
21	100	"	"	"	42	10	Employer Participation		
30	100	"	"	"	43	72	Employer Participation		
32	100	"	"	"	44	56	Program Operation		
35	100	"	"	"	45	36	Program Operation		
37	100	"	"	"	46	80	Institutional Commitment		
49	100	"	"	"	47	11	Employer Participation		
56	100	"	"	"	48	65	Student Participation and Learning		
60	100	"	"	"	49	66	Student Participation and Learning		
61	100	"	"	"	50	81	Institutional Commitment		
66	100	"	"	"	51	76	Institutional Commitment		
68	100	"	"	"	52	67	Employer Participation		
72	100	"	"	"	53	77	Employer Participation		
73	100	"	"	"	54	24	Institutional Commitment		
74	100	"	"	"	55	48	Program Operation		
80	100	"	"	"	56	57	Employer Participation		

Norm Ratings from Delphi Technique Questionnaire IV			The Ninety Items Selected for Questions		Items as They Appear on the Completed Cooperative Education <u>Evaluation</u> Questionnaire	
Item	Percent		Questions:			
81	100	Above Average Importance	57	58	Employer Participation	
86	100	" " "	58	68	Institutional Commitment	
94	100	" " "	59	25	Institutional Commitment	
95	100	" " "	60	59	Program Operation	
128	100	" " "	61	37	Student Participation and Learning	
135	100	" " "	62	82	Institutional Commitment	
136	100	" " "	63	69	Program Operation	
142	100	" " "	64	52	Program Operation	
145	100	" " "	65	49	Employer Participation	
146	100	" " "	66	50	Student Participation and Learning	
154	100	" " "	67	60	Program Operation	
155	100	" " "	68	38	Employer Participation	
185	100	" " "	69	12	Employer Participation	
201	100	" " "	70	83	Institutional Commitment	
226	100	" " "	71	84	Institutional Commitment	
232	100	" " "	72	85	Student Participation and Learning	
233	100	" " "	73	70	Employer Participation	
236	100	" " "	74	86	Student Participation and Learning	
249	100	" " "	75	87	Employer Participation	
250	100	" " "	76	13	Employer Participation	

Norm Ratings from Delphi Technique <u>Questionnaire IV</u> -----					The Ninety Items Selected <u>for Questions</u> -----	Items as They Appear on the Completed Cooperative Education <u>Evaluation</u> <u>Questionnaire</u>
Item	Percent	Above Average Importance			Questions:	
256	100				77	39 Student Participation and Learning
268	100	"	"	"	78	42 Student Participation and Learning
277	100	"	"	"	79	40 Program Operation
295	100	"	"	"	80	61 Employer Participation
298	100	"	"	"	81	88 Program Operation
301	100	"	"	"	82	51 Program Operation
307	100	"	"	"	83	71 Program Operation
311	100	"	"	"	84	14 Employer Participation
26	100	"	"	"	85	43 Student Participation and Learning
109	100	"	"	"	86	78 Institutional Commitment
110	100	"	"	"	87	89 Program Operation
189	100	"	"	"	88	90 Student Participation and Learning
220	100	"	"	"	89	44 Student Participation and Learning
257	100	"	"	"	90	26 Employer Participation

TARGET DATES FOR COOPERATIVE EDUCATION SELF-EVALUATION



COOPERATIVE EDUCATION EVALUATION QUESTIONNAIRE

PROCEDURAL DIRECTIONS

The directions which follow are extensive and may appear formidable at first glance. Please take time to go over them thoroughly, for they are intended to make the Cooperative Education Self-Evaluation process work as smoothly as possible and also make for success both quantitatively and qualitatively.

This process is modified from Mail and Telephone Surveys: the Total Design Method (Don A. Dillman, New York: John Wiley and Sons, 1978) in order to make sure that each element of the self-evaluation process is accounted for logically. We have attempted to: identify all the tasks to be accomplished; show how each task is dependent on other tasks; show the order in which tasks are to be performed; and illustrate the means by which tasks are to be accomplished. The elements of the Total Design Method which, of necessity, are not included in this model have been omitted because of prohibitive cost. Thus we suggest manila envelopes with mailing labels (rather than the preferred business envelopes with individually typed addresses; two follow-ups rather than three, and duplicated rather than printed questionnaires. We have, however, conscientiously followed the Total Design Method as it is structured to view questionnaire responses as a form of social exchange. That is, we have kept the number of questions within the "good response" limits (no more than 12 pages, not more than 120 questions); designed the questionnaire as an attractive booklet; been straightforward about identifying codes; provided descending order vertical flow both in terms of format and concept; primarily used closed-end ordered response choices; and positioned demographic items at the end after the respondent has invested in answering the items.

We have made every effort to provide questions which address issues of importance to the respondents by transposing the ninety questions from items rated "Of Highest Importance" and "Of Above Average Importance" by twelve expert consultants responding to a four round Delphi Technique. We have provided for you in this packet examples of each item to be utilized and a flow chart of target dates. It is our hope that if the following directions are followed the entire process will work smoothly.

- | | |
|--------------------------|---|
| November 1982
through | 1. a. Remind college or university administrators of the internal value of the research, particularly its cost effectiveness. Further remind them that the research is part of a national research project of which yours is one of four field-test institutions. |
| January 13, 1983 | b. If possible, alert faculty, students, and employers to whom you plan to send the questionnaire to their role in the process. |

APPENDIX I

SE-CE-ODU-11/82

2. Choose within the constraints of your program 100 respondents to whom the questionnaire will be sent. Be certain that they include: your own Cooperative Education Staff, institutional administrators, faculty members, students in the program, and participating employers.
 3. Obtain 200 6 1/2" X 9 1/2" manila envelopes. Make certain that the 6 1/2" X 9 1/2" envelopes have your return address in the upper left-hand corner.
 4. Affix Old Dominion University's address on the center front of 100 of the 6 1/2" x 9 1/2" manila envelopes. Enclosed are 100 return mailing address labels for this purpose.
 5. Decide whether you will use postage stamps or metered postage on the 100 self-addressed (Old Dominion University) postage prepaid envelopes. If you choose metered postage, DO NOT affix the metered postage until the day you plan to mail the questionnaire. You may choose to save money with your on campus questionnaires by hand delivering them or using inter-campus mail. But in every case a self-addressed postage prepaid envelope must be included with the questionnaire.
 6. Duplicate 100 (plus extras for your files) copies of the model questionnaire included in this packet. This will require duplication on both sides of the paper.
 7. Duplicate 100 (plus extras for your files) copies of the questionnaire cover letter on your letterhead. Individually type the names, addresses, and salutations on each letter (and correspondingly on labels for manila envelopes). Type in the date that you plan to mail the questionnaires. Sign each letter individually with pressed blue ball-point pen.
 8. Fill out the Code Sheet and simultaneously affix the corresponding code within the circle in the upper right hand corner of the first page of the questionnaire. Date the Code Sheet with the same date you plan to mail the questionnaire.
 9. Fold the postage prepaid return envelope in half and insert in the middle of the questionnaire booklet. Fold the cover letter in half and insert the questionnaire booklet. Put all three in manila mail envelope. Send out all 100 questionnaires on the same date.
 10. The first follow-up letter will be sent to non-respondents by Old Dominion University. You may be called to put "gentle" pressure on any non-respondents.
- January 14, 1983
- February 4, 1983

SE-CE-ODU-11/82

- | | |
|--|---|
| March 4, 1983 | 11. The second follow-up letter will be sent by Old Dominion University. You may be asked again to contact any non-respondents. |
| March 11, 1983 | 12. Cut-off date for return of questionnaires. |
| April 22, 1983 | 13. The results of the questionnaire will be returned to you for your information, use, and evaluation. |
| May 20, 1983 | 14. Send your evaluation of the entire questionnaire process to Old Dominion University. |
| May 21, 1983
through
July 31, 1983 | *15. During this time frame most federally funded Cooperative Education projects have their projects assessed by outside evaluators. Ask your outside evaluator to use the <u>same categories</u> for evaluation which were used in the questionnaire. |
| August 31, 1983 | 16. Send a copy of the outside evaluator's report to Old Dominion University. Please <u>do not</u> identify the evaluator on the report. |
| November 30, 1983 | *17. Final results of comparisons between outside evaluations and self-evaluation questionnaires at four field-test institutions (of which yours is one) will be sent to you. In addition, you will receive the results of the comparison which will be made when 10 additional institutions use the instrument after we adjust it according to your evaluation of its utility. |
| Anytime | 18. Call Constance F. Brothers, 804-440-4396, if you have any questions. Thank you for your help and cooperation in this research. |

*This element was eliminated because outside evaluation was not funded for a majority of the institutions in the sample for academic year 1982-1983.

COOPERATIVE EDUCATION EVALUATION QUESTIONNAIRE
CODE SHEET

Directions

The proper use of the attached two (2) copies of the Code Sheet is essential to the success of this study. Because Old Dominion University will be responsible for two (2) follow-up letters to those people who do not return their questionnaires, we must have addresses to which the questionnaires were sent. In addition, the code information is essential in order that we can separate responses by the following categories:

1. The college or university from which the response comes.
2. The status of the individual respondent (employer, student, faculty member, cooperative education coordinator, college administrator).
3. The individual respondent, for follow-up purposes.

Please:

1. Date the code sheet with the same date that the questionnaire is sent out.
2. Enter the name and correct address of each respondent in the blanks provided.
3. Enter the Status Code letter in the left-hand box.
Either:

E Employer
S Student
F Faculty member
C Cooperative education coordinator
A College administrator
4. Note that the center and right hand boxes have already been coded. PLEASE BE SURE THAT THE ENTIRE CODE SEQUENCE IS ENTERED IN THE CIRCLE ON THE FIRST PAGE OF THE QUESTIONNAIRE.

SE-CE-ODU-11 /82

Examples:

CODE SHEET

QUESTIONNAIRE

	Status Code	Individual Code	Institution Code	
1. Mary Jones 110 Apple Way Jonesboro, AL 23426	<div>S</div>	<div>1</div>	<div>E</div>	<div>S1E</div>
50. Jacqueline Baklava 313 Rosepark Crescent Jonesboro, AL 23426	<div>F</div>	<div>50</div>	<div>E</div>	<div>F50E</div>
100. Dr. A. Einstein Office of the President Xenox University Jonesboro, AL 23426	<div>A</div>	<div>100</div>	<div>E</div>	<div>A100E</div>

Please Note: Mary Jones is No. 1 on the Code Sheet, she is a student (code S) and her Institution Code (E). S1E (the complete code) should be put in the circle on the first page of the questionnaire sent to her.

Jacqueline Baklava is No. 50 on the Code Sheet, a faculty member (F), and the Institution Code (E). F50E should be on her questionnaire.

Dr. A. Einstein is No. 100 on the Code Sheet, he is a college administrator (A), and the Institution Code (E). The number in the circle on the first page of his questionnaire - A100E.

- Send one copy of the completed code sheet to this address. Retain your copy for future reference in case we need to confer by telephone.

THANK YOU!

EXAMPLE OF COVER LETTER FOR QUESTIONNAIRE

Official Letterhead	Xenox State University Cooperative Education Program Suite 400, Jones Hall Anderson, Maine 23400
Date Mailed	January 14, 1983
Inside address in matching type	Samantha Jones Vice-President for Marketing Technonics Unlimited 300 Cambridge Drive Boston, MA 02100
Salutation in matching type	Dear Ms. Jones:
What study is it; its social usefulness	<p>In the past few years there has been a lot of discussion about what the policies of alternating Cooperative Education Programs at four year institutions of higher education should be. Some of the questions being asked include these: is the Cooperative Education Program meeting the needs of students who participate; should more attention be given to students' career objectives; are employers satisfied with the motivational level and academic preparation of students who participate in the program; are institutions of higher education supporting Cooperative Education Programs adequately; and are teaching faculty convinced that Cooperative Education is a worthwhile learning experience? We are conducting this study because we feel that all participants in Cooperative Education (students, employers, faculty, Cooperative Education staff members, and college administrators) should have their opinions heard on these important matters.</p>
Why recipient is important	<p>You are being asked to participate in this study as a member of one of the participating groups necessary to the success of Cooperative Education at <u>(Insert name of your institution)</u>. In order that the results will truly represent the thinking of all participants it is important that each questionnaire be completed and returned before March 11, 1983.</p>
Promise of confidentiality explanation of identification number	<p>You may be assured of complete confidentiality. The questionnaire has an identification number for mailing purposes only. This is in order that we may check your name off the mailing list where your questionnaire is returned. Your name will never be placed on the questionnaire and the tabulations will be done by an independent researcher at another university.</p>

CE-ED-0011-11/82

Samantha Jones
 Page 2
 January 14, 1983

Usefulness of
 study

The results of this research will be made available to the Cooperative Education Program at your college or university and to the Cooperative Education Branch of the United States Department of Education. You may receive a summary of the results from your participating Cooperative Education Program after April 22, 1983.

"Token" reward
 for participation

What to do if
 questions arise

I would be most happy to answer any questions you might have. Please write or call. The telephone number is ()
 (Insert your number).

Appreciation

Thank you for your assistance.

Sincerely,

Pressed blue ball-
 point signature

Title

Adam Smith
 Cooperative Education
 Coordinator



Professional Experience Programs
Cooperative Education/Internships • (804) 440-4396 • Norfolk, VA 23508-8507

EXAMPLE OF COOPERATIVE EDUCATION EVALUATION
QUESTIONNAIRE FOLLOW-UP LETTER NUMBER 1

Date Mailed

February 4, 1983

Samantha Jones
Vice-President for Marketing
Technonics Unlimited
300 Cambridge Drive
Boston, MA 02100

Dear Ms. Jones:

Tie to
previous
communi-
cation

About three weeks ago you received a questionnaire seeking your opinion on Cooperative Education. As of today we have not received your completed questionnaire.

Usefulness
of study

We have undertaken this study because of the belief that your opinion should be taken into account in the formation of Cooperative Education goals, objectives, and planning strategies.

Why
recipient
is
important

I am writing to you again because of the significance of each questionnaire to the usefulness of this study. In order for the results of this study to be truly representative of the opinions of all who are concerned with Cooperative Education, it is essential that each person contacted return the questionnaire.

In the event that your questionnaire has been misplaced, a replacement is enclosed.

Apprecia-
tion

Your cooperation is greatly appreciated.

Cordially,

Pressed blue
ball-point
signature

Constance F. Brothers
Research Coordinator

lah



Professional Experience Programs
Cooperative Education/Internships • (804) 440-4396 • Norfolk, VA 23508-8507

EXAMPLE OF COOPERATIVE EDUCATION EVALUATION
QUESTIONNAIRE FOLLOW-UP LETTER NUMBER 2

Date Mailed

March 4, 1983

Samantha Jones
Vice-President for Marketing
Technonics Unlimited
300 Cambridge Drive
Boston, MA 02100

Dear Ms. Jones:

Tie to
previous
communica-
tion

I am writing to you about our study of Cooperative Education. We have not yet received your completed questionnaire.

Recognize
the
importance
of
recipient

The large number of questionnaires received is very encouraging. But, whether we will be able to describe accurately how everyone concerned with Cooperative Education feels on these important issues depends upon you and the others who have not yet responded. This is because past experiences suggest that those of you who have not yet sent in your questionnaires may hold quite different opinions on Cooperative Education from those who have.

Why
recipient
is
important

If this Cooperative Education Self-Evaluation Study is successful, it will be available through the Cooperative Education Branch of the United States Department of Education as a model for other colleges and universities. The usefulness of the results depends on how accurately we can report all opinions concerning Cooperative Education.

Importance
of recipient
to study's
usefulness:
Reminder

May I urge you to complete and return the enclosed questionnaire as quickly as possible. A copy of the results will be available from the Cooperative Education Program after April 22, 1983.

Appreciation

Your contribution to the success of this study will be appreciated greatly.

Pressed blue
ball-point
signature
Title

Most sincerely,

Constance F. Brothers
Research Coordinator

Old Dominion University is an affirmative action equal opportunity institution.

APPENDIX B.2.

COOPERATIVE EDUCATION SELF-EVALUATION QUESTIONNAIRE

EXAMPLE OF FINAL LETTER TO PARTICIPATING INSTITUTIONS

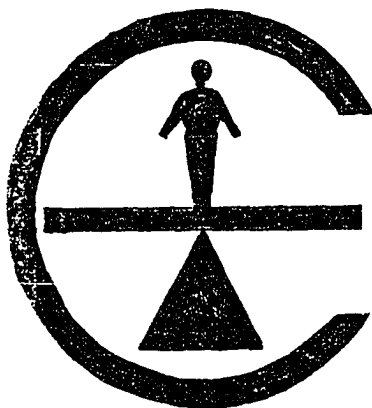
COOPERATIVE EDUCATION DEFINITIONS

ANECDOTAL COMMENTS FROM QUESTIONNAIRE

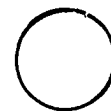
COOPERATIVE EDUCATION

SELF-EVALUATION

RESEARCH TO DEVELOP NATIONAL NORMS
OF EXCELLENCE FOR ALTERNATING
COOPERATIVE EDUCATION PROGRAMS AT
FOUR YEAR COLLEGES AND UNIVERSITIES
IN THE UNITED STATES, FUNDED BY A
GRANT FROM THE COOPERATIVE EDUCATION
BRANCH, UNITED STATES DEPARTMENT OF
EDUCATION



Research Department
Cooperative Education
Old Dominion University
Norfolk, VA 23508



COOPERATIVE EDUCATION EVALUATION QUESTIONNAIRE

NOTE: Read each answer category over carefully, then answer the questions by circling the number next to the answer you want to give.

1. To what extent does the Cooperative Education Program reinforce its role as a part of the educational process at _____?
(Circle number) Name of Institution

1 TO A VERY LITTLE EXTENT
2 TO A LITTLE EXTENT
3 TO SOME EXTENT
4 TO A GREAT EXTENT
5 TO A VERY GREAT EXTENT
0 DO NOT KNOW

2. To what extent does the Cooperative Education Program maintain close communication with employers and work-site supervisors? (Circle number)

1 TO A VERY LITTLE EXTENT
2 TO A LITTLE EXTENT
3 TO SOME EXTENT
4 TO A GREAT EXTENT
5 TO A VERY GREAT EXTENT
0 DO NOT KNOW

3. How good a job does the Cooperative Education Program do of promoting open communication and good relations between:

- a. Student and Employer (Circle number)

1 RATHER POOR JOB
2 FAIR
3 GOOD
4 VERY GOOD
5 EXCELLENT
0 DO NOT KNOW

- b. Student and Faculty (Circle number)

1 RATHER POOR JOB
2 FAIR
3 GOOD
4 VERY GOOD
5 EXCELLENT
0 DO NOT KNOW

c. Student and Cooperative Education Program staff
(Circle number)

- 1 RATHER POOR JOB
- 2 FAIR
- 3 GOOD
- 4 VERY GOOD
- 5 EXCELLENT
- 0 DO NOT KNOW

d. Cooperative Education Program staff and faculty
(Circle number)

- 1 RATHER POOR JOB
- 2 FAIR
- 3 GOOD
- 4 VERY GOOD
- 5 EXCELLENT
- 0 DO NOT KNOW

e. Cooperative Education Program staff and employers
(Circle number)

- 1 RATHER POOR JOB
- 2 FAIR
- 3 GOOD
- 4 VERY GOOD
- 5 EXCELLENT
- 0 DO NOT KNOW

4. To what extent is Cooperative Education listed in the catalog an integral part of _____'s curriculum? (Circle number)

Name of Institution

- 1 TO A VERY LITTLE EXTENT
- 2 TO A LITTLE EXTENT
- 3 TO SOME EXTENT
- 4 TO A GREAT EXTENT
- 5 TO A VERY GREAT EXTENT
- 0 DO NOT KNOW

5. How much interaction does the Cooperative Education Program have with:

a. Academic Departments (Circle number)

- 1 NEVER
- 2 ONCE A TERM
- 3 TWICE A TERM
- 4 ONCE PER MONTH
- 5 MORE THAN ONCE PER MONTH
- 0 DO NOT KNOW

b. Administrative Offices (Circle number)

- 1 NEVER
- 2 ONCE A TERM
- 3 TWICE A TERM
- 4 ONCE PER MONTH
- 5 MORE THAN ONCE PER MONTH
- 0 DO NOT KNOW

6. To what extent do you agree with this statement: "Cooperative Education is primarily a form of financial aid."? (Circle number)

- 1 STRONGLY DISAGREE
- 2 SOMEWHAT DISAGREE
- 3 NEITHER AGREE NOR DISAGREE
- 4 SOMEWHAT AGREE
- 5 STRONGLY AGREE
- 0 DO NOT KNOW

7. To what extent do you agree with this statement: "Don't delay graduation by enrolling in the Cooperative Education Program."? (Circle number)

- 1 STRONGLY DISAGREE
- 2 SOMEWHAT DISAGREE
- 3 NEITHER AGREE NOR DISAGREE
- 4 SOMEWHAT AGREE
- 5 STRONGLY AGREE
- 0 DO NOT KNOW

8. Are you satisfied that the Cooperative Education Program has standards which meet employer and college requirements, but which are also flexible enough to meet student needs? (Circle number)

- 1 VERY DISSATISFIED
- 2 SOMEWHAT DISSATISFIED
- 3 NEITHER SATISFIED NOR DISSATISFIED
- 4 FAIRLY SATISFIED
- 5 VERY SATISFIED
- 0 DO NOT KNOW

9. To what extent are you familiar with employer needs when employers are selecting Cooperative Education students for work assignments? (Circle number)

- 1 TO A VERY LITTLE EXTENT
- 2 TO A LITTLE EXTENT
- 3 TO SOME EXTENT
- 4 TO A GREAT EXTENT
- 5 TO A VERY GREAT EXTENT
- 0 DO NOT KNOW

10. How good a job does the Cooperative Education Program do in providing employers with a selection of reasonably qualified and motivated students? (Circle number)
- 1 RATHER POOR JOB
 - 2 FAIR
 - 3 GOOD
 - 4 VERY GOOD
 - 5 EXCELLENT
 - 0 DO NOT KNOW
11. Do you agree that the Cooperative Education Program fully uses students to help build good relations between the faculty and employers? (Circle number)
- 1 STRONGLY DISAGREE
 - 2 SOMEWHAT DISAGREE
 - 3 NEITHER AGREE NOR DISAGREE
 - 4 SOMEWHAT AGREE
 - 5 STRONGLY AGREE
 - 0 DO NOT KNOW
12. How good a job does the Cooperative Education Program do in making long-range plans for new work-site opportunities? (Circle number)
- 1 RATHER POOR JOB (No organized plan)
 - 2 FAIR (one year ahead)
 - 3 GOOD (two years ahead)
 - 4 VERY GOOD (three years ahead)
 - 5 EXCELLENT (five year plan)
 - 0 DO NOT KNOW
13. On the average, how frequently do individual employer representatives visit the campus to recruit cooperative education students? (Circle number)
- 1 NEVER
 - 2 ONCE A TERM
 - 3 TWICE A TERM
 - 4 ONCE PER MONTH
 - 5 MORE THAN ONCE PER MONTH
 - 0 DO NOT KNOW
14. To what extent does the Cooperative Education Program provide opportunity for employers to exchange ideas for effective program operation? (Circle number)
- 1 TO A VERY LITTLE EXTENT
 - 2 TO A LITTLE EXTENT
 - 3 TO SOME EXTENT
 - 4 TO A GREAT EXTENT
 - 5 TO A VERY GREAT EXTENT
 - 0 DO NOT KNOW

15. To what extent is Cooperative Education promoted through:

a. Multiple descriptions in the catalog (Circle number)

- 1 TO A LITTLE OR NO EXTENT
- 2 TO A LITTLE EXTENT
- 3 TO SOME EXTENT
- 4 TO A GREAT EXTENT
- 5 TO A VERY GREAT EXTENT
- 0 DO NOT KNOW

b. Individual Academic Department brochures (Circle number)

- 1 TO A LITTLE OR NO EXTENT
- 2 TO A LITTLE EXTENT
- 3 TO SOME EXTENT
- 4 TO A GREAT EXTENT
- 5 TO A VERY GREAT EXTENT
- 0 DO NOT KNOW

c. Freshman orientation sessions (Circle number)

- 1 TO A LITTLE OR NO EXTENT
- 2 TO A LITTLE EXTENT
- 3 TO SOME EXTENT
- 4 TO A GREAT EXTENT
- 5 TO A VERY GREAT EXTENT
- 0 DO NOT KNOW

d. Financial aid brochures (Circle number)

- 1 TO A LITTLE OR NO EXTENT
- 2 TO A LITTLE EXTENT
- 3 TO SOME EXTENT
- 4 TO A GREAT EXTENT
- 5 TO A VERY GREAT EXTENT
- 0 DO NOT KNOW

e. Verbal communication by Admissions Office staff
(Circle number)

- 1 TO A LITTLE OR NO EXTENT
- 2 TO A LITTLE EXTENT
- 3 TO SOME EXTENT
- 4 TO A GREAT EXTENT
- 5 TO A VERY GREAT EXTENT
- 0 DO NOT KNOW

f. Brochures available from the Cooperative Education Office (Circle number)

- 1 TO A LITTLE OR NO EXTENT
- 2 TO A LITTLE EXTENT
- 3 TO SOME EXTENT
- 4 TO A GREAT EXTENT
- 5 TO A VERY GREAT EXTENT
- 0 DO NOT KNOW

16. How much influence does Cooperative Education have in the academic structure of _____? (Circle number)
Name of Institution

- 1 LITTLE OR NO INFLUENCE
- 2 SOME
- 3 QUITE A BIT
- 4 A GREAT DEAL
- 5 A VERY GREAT DEAL OF INFLUENCE
- 0 DO NOT KNOW

17. To what extent are sequential curricula offerings available to the student who alternates between on campus course work and Cooperative Education work assignments? (Circle number)

- 1 TO A VERY LITTLE EXTENT
- 2 TO A LITTLE EXTENT
- 3 TO SOME EXTENT
- 4 TO A GREAT EXTENT
- 5 TO A VERY GREAT EXTENT
- 0 DO NOT KNOW

18. To what extent does _____ depend on federal funds for Cooperative Education Program Operation?
Name of Institution

a. How it is now: (Circle number)

- 1 TO A VERY LITTLE EXTENT
- 2 TO A LITTLE EXTENT
- 3 TO SOME EXTENT
- 4 TO A GREAT EXTENT
- 5 TO A VERY GREAT EXTENT
- 0 DO NOT KNOW

b. This is how I would like it to be: (Circle number)

- 1 TO A VERY LITTLE EXTENT
- 2 TO A LITTLE EXTENT
- 3 TO SOME EXTENT
- 4 TO A GREAT EXTENT
- 5 TO A VERY GREAT EXTENT
- 0 DO NOT KNOW

19. Do you agree that the Cooperative Education Program has adequate support equipment (typewriters, duplicating equipment, computer terminals and access)? (Circle number)

1 STRONGLY DISAGREE
2 SOMEWHAT DISAGREE
3 NEITHER AGREE NOR DISAGREE
4 SOMEWHAT AGREE
5 STRONGLY AGREE
0 DO NOT KNOW

20. To what extent are the staff of the Cooperative Education Program supported by funds from the institutional budget? (Circle number)

1 TO A VERY LITTLE EXTENT (supplies, space)
2 TO A LITTLE EXTENT (one coordinator)
3 TO SOME EXTENT (one coordinator, one secretary)
4 TO A GREAT EXTENT (director, coordinator, secretary)
5 TO A VERY GREAT EXTENT (entire staff)
0 DO NOT KNOW

21. To what extent do participating Cooperative Education employers depend on Cooperative Education solely for affirmative action hiring?

a. This is how it is now: (Circle number)

1 TO A VERY LITTLE EXTENT
2 TO A LITTLE EXTENT
3 TO SOME EXTENT
4 TO A GREAT EXTENT
5 TO A VERY GREAT EXTENT
0 DO NOT KNOW

b. This is how I would like it to be: (Circle number)

1 TO A VERY LITTLE EXTENT
2 TO A LITTLE EXTENT
3 TO SOME EXTENT
4 TO A GREAT EXTENT
5 TO A VERY GREAT EXTENT
0 DO NOT KNOW

22. To what extent do you agree with this statement: " _____
Name of Institution
provides the Cooperative Education Program with a constant, adequate,
cost effective budget."? (Circle number)

1 TO A VERY LITTLE EXTENT
2 TO A LITTLE EXTENT
3 TO SOME EXTENT
4 TO A GREAT EXTENT
5 TO A VERY GREAT EXTENT
0 DO NOT KNOW

23. In general, how would you rate the institutional support given to the Cooperative Education Program at _____?
(Circle number) _____ Name of Institution
- 1 RATHER POOR
 - 2 FAIR
 - 3 GOOD
 - 4 VERY GOOD
 - 5 EXCELLENT
 - 0 DO NOT KNOW
24. To what extent do you agree that administrative officers (presidents, vice presidents, provosts, deans) at _____ support the Cooperative Education Program by both words and actions? _____
(Circle number) _____ Name of Institution
- 1 STRONGLY DISAGREE
 - 2 SOMEWHAT DISAGREE
 - 3 NEITHER AGREE NOR DISAGREE
 - 4 SOMEWHAT AGREE
 - 5 STRONGLY AGREE
 - 0 DO NOT KNOW
25. Please rate the visibility of the location of the Cooperative Education Program on campus. (Circle number)
- 1 LITTLE OR NO VISIBILITY
 - 2 SOME
 - 3 QUITE A BIT
 - 4 A GREAT DEAL
 - 5 A VERY GREAT DEAL OF VISIBILITY
 - 0 DO NOT KNOW
26. Do you agree with this statement: "The Cooperative Education Program should place students in non-traditional assignments, i.e. arts and sciences majors placed in engineering firms."? (Circle number)
- 1 STRONGLY DISAGREE
 - 2 SOMEWHAT DISAGREE
 - 3 NEITHER AGREE NOR DISAGREE
 - 4 SOMEWHAT AGREE
 - 5 STRONGLY AGREE
 - 0 DO NOT KNOW
27. To what extent do you understand the definition of Cooperative Education? (Circle number)
- a. 1 TO A VERY LITTLE EXTENT
 - 2 TO A LITTLE EXTENT
 - 3 TO SOME EXTENT
 - 4 TO A GREAT EXTENT
 - 5 TO A VERY GREAT EXTENT
 - 0 DO NOT KNOW

b. Please write your definition of Cooperative Education here: _____

28. To what extent should Cooperative Education use: (Circle number)

a. Non-paying work experience slots

- 1 NEVER
- 2 TO A LITTLE EXTENT
- 3 TO SOME EXTENT
- 4 TO A GREAT EXTENT
- 5 TO A VERY GREAT EXTENT
- 0 DO NOT KNOW

b. Financial aid, work-study slots (Circle number)

- 1 NEVER
- 2 TO A LITTLE EXTENT
- 3 TO SOME EXTENT
- 4 TO A GREAT EXTENT
- 5 TO A VERY GREAT EXTENT
- 0 DO NOT KNOW

29. In general, do you agree with this statement: "The Cooperative Education Program should carefully screen students for job suitability and interest in the program."? (Circle number)

- 1 STRONGLY DISAGREE
- 2 SOMEWHAT DISAGREE
- 3 NEITHER AGREE NOR DISAGREE
- 4 SOMEWHAT AGREE
- 5 STRONGLY AGREE
- 0 DO NOT KNOW

30. To what extent are Cooperative Education work assignments at your institution directly related to students' academic majors and career goals? (Circle number)

a. Students' academic majors, the way it is now:

- 1 TO A VERY LITTLE EXTENT
- 2 TO A LITTLE EXTENT
- 3 TO SOME EXTENT
- 4 TO A GREAT EXTENT
- 5 TO A VERY GREAT EXTENT
- 0 DO NOT KNOW

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b. This is how I would like it to be: (Circle number)

- 1 TO A VERY LITTLE EXTENT
- 2 TO A LITTLE EXTENT
- 3 TO SOME EXTENT
- 4 TO A GREAT EXTENT
- 5 TO A VERY GREAT EXTENT
- 0 DO NOT KNOW

c. Students career goals, the way it is now: (Circle number)

- 1 TO A VERY LITTLE EXTENT
- 2 TO A LITTLE EXTENT
- 3 TO SOME EXTENT
- 4 TO A GREAT EXTENT
- 5 TO A VERY GREAT EXTENT
- 0 DO NOT KNOW

d. This is how I would like it to be: (Circle number)

- 1 TO A VERY LITTLE EXTENT
- 2 TO A LITTLE EXTENT
- 3 TO SOME EXTENT
- 4 TO A GREAT EXTENT
- 5 TO A VERY GREAT EXTENT
- 0 DO NOT KNOW

31. Do you agree with this statement: "Adequate time is spent by Cooperative Education coordinators with each Cooperative Education student, discussing career interests, expectations, and professional development, prior to the work experience assignment."? (Circle number)

- 1 STRONGLY DISAGREE
- 2 SOMEWHAT DISAGREE
- 3 NEITHER AGREE NOR DISAGREE
- 4 SOMEWHAT AGREE
- 5 STRONGLY AGREE
- 0 DO NOT KNOW

32. It is generally understood that meaningful Cooperative Education jobs are determined by: type of duty, increasing levels of responsibility, and the quality of employer supervision. To what extent do participating employers provide meaningful job slots? (Circle number)

- 1 TO A VERY LITTLE EXTENT
- 2 TO A LITTLE EXTENT
- 3 TO SOME EXTENT
- 4 TO A GREAT EXTENT
- 5 TO A VERY GREAT EXTENT
- 0 DO NOT KNOW

33. To what extent are the concepts, processes, goals, values, and purposes of Cooperative Education understood campus-wide? (Circle number)

1 TO A VERY LITTLE EXTENT
2 TO A LITTLE EXTENT
3 TO SOME EXTENT
4 TO A GREAT EXTENT
5 TO A VERY GREAT EXTENT
0 DO NOT KNOW

34. To what extent does the Cooperative Education staff use effective exit interviews to gather student feedback, discuss the next work term, pay rates, and career plans? (Circle number)

1 TO A VERY LITTLE EXTENT
2 TO A LITTLE EXTENT
3 TO SOME EXTENT
4 TO A GREAT EXTENT
5 TO A VERY GREAT EXTENT
0 DO NOT KNOW

35. In general, are you satisfied that employers offer meaningful experiences for students each work period? (Circle number)

1 VERY DISSATISFIED
2 SOMEWHAT DISSATISFIED
3 NEITHER SATISFIED NOR DISSATISFIED
4 FAIRLY SATISFIED
5 VERY SATISFIED
0 DO NOT KNOW

36. How frequently are program standards for Cooperative Education evaluated internally? (Circle number)

1 NEVER
2 ONCE A YEAR
3 ONCE A TERM
4 TWICE A TERM
5 MORE THAN TWICE A TERM
0 DO NOT KNOW

37. To what extent do the work experiences provided to Cooperative Education students enhance students' career objectives? (Circle number)

1 TO A VERY LITTLE EXTENT
2 TO A LITTLE EXTENT
3 TO SOME EXTENT
4 TO A GREAT EXTENT
5 TO A VERY GREAT EXTENT
0 DO NOT KNOW

38. Do you agree with this statement: "Although Cooperative Education can be a strong incentive for choosing a particular school, its value is not limited to recruitment for the school."? (Circle number)

1 STRONGLY DISAGREE
2 SOMEWHAT DISAGREE
3 NEITHER AGREE NOR DISAGREE
4 SOMEWHAT AGREE
5 STRONGLY AGREE
0 DO NOT KNOW

39. How good a job does the Cooperative Education Program do in preparing students for their Cooperative Education work experiences? (Circle number)

1 RATHER POOR JOB (No preparation)
2 FAIR (One conference with coordinator)
3 GOOD (Required orientation)
4 VERY GOOD (Two conferences with coordinator)
5 EXCELLENT (Required orientation & 3 conferences)
0 DO NOT KNOW

40. Do you agree that the goals and objectives of the Cooperative Education Program are reasonable, achievable, and measurable? (Circle number)

1 STRONGLY DISAGREE
2 SOMEWHAT DISAGREE
3 NEITHER AGREE NOR DISAGREE
4 SOMEWHAT AGREE
5 STRONGLY AGREE
0 DO NOT KNOW

41. How satisfied are you with the quality of student work placements provided by the Cooperative Education Program? (Circle number)

1 VERY DISSATISFIED
2 SOMEWHAT DISSATISFIED
3 NEITHER SATISFIED NOR DISSATISFIED
4 FAIRLY SATISFIED
5 VERY SATISFIED
0 DO NOT KNOW

42. How satisfied are you that the Cooperative Education Program solicits student feedback on all phases of program development? (Circle number)

1 VERY DISSATISFIED
2 SOMEWHAT DISSATISFIED
3 NEITHER SATISFIED NOR DISSATISFIED
4 FAIRLY SATISFIED
5 VERY SATISFIED
0 DO NOT KNOW

43. To what extent does the Cooperative Education Program follow-through with commitments made to students? (Circle number)

1 TO A VERY LITTLE EXTENT
2 TO A LITTLE EXTENT
3 TO SOME EXTENT
4 TO A GREAT EXTENT
5 TO A VERY GREAT EXTENT
0 DO NOT KNOW

44. In general, what is your best estimate of student satisfaction with Cooperative Education off campus work experiences? (Circle number)

1 VERY DISSATISFIED
2 SOMEWHAT DISSATISFIED
3 NEITHER SATISFIED NOR DISSATISFIED
4 FAIRLY SATISFIED
5 VERY SATISFIED
0 DO NOT KNOW

45. Some employers offer Cooperative Education students repetitive work assignments during their second and third cooperative education terms. Do you feel these assignments should be: (Circle number)

1 DECREASED GREATLY
2 DECREASED SLIGHTLY
3 STAY THE SAME
4 INCREASED SLIGHTLY
5 INCREASED GREATLY
0 DO NOT KNOW

46. How good a job does the Cooperative Education Program do in offering a variety of jobs for students in each of the various academic majors? (Circle number)

1 RATHER POOR JOB
2 FAIR
3 GOOD
4 VERY GOOD
5 EXCELLENT
0 DO NOT KNOW

47. In general, what is your best estimate of the number of contacts a Cooperative Education student has with the work-site supervisor each term? (Circle number)

1 NEVER
2 ONCE A TERM
3 TWICE A TERM
4 ONCE PER MONTH
5 MORE THAN ONCE PER MONTH
0 DO NOT KNOW

48. To what extent does the Cooperative Education Program waste time on:

a. Internal administration (Circle number)

1 TO A VERY LITTLE EXTENT
2 TO A LITTLE EXTENT
3 TO SOME EXTENT
4 TO A GREAT EXTENT
5 TO A VERY GREAT EXTENT
0 DO NOT KNOW

b. External administration (Circle number)

1 TO A VERY LITTLE EXTENT
2 TO A LITTLE EXTENT
3 TO SOME EXTENT
4 TO A GREAT EXTENT
5 TO A VERY GREAT EXTENT
0 DO NOT KNOW

49. How efficient is the referral of students to employers by the Cooperative Education Program? (Circle number)

1 NOT AT ALL EFFICIENT
2 NOT VERY EFFICIENT
3 SOMEWHAT EFFICIENT
4 MORE THAN ADEQUATELY EFFICIENT
5 VERY EFFICIENT
0 DO NOT KNOW

50. In general, what is your best estimate of the number of contacts a student has with his/her Cooperative Education coordinator each work term? (Circle number)

1 NEVER
2 ONCE A TERM
3 TWICE A TERM
4 ONCE PER MONTH
5 MORE THAN ONCE PER MONTH
0 DO NOT KNOW

51. Many believe that recordkeeping is a useful tool toward program success. That is, it helps to know what per cent of Cooperative Education students go to work for their employers after graduation; what is the difference in starting salaries for students who have participated in Cooperative Education versus those who have not; what are the reasons a student might drop out of Cooperative Education after only one work term. All in all, how good a job does the Cooperative Education Program do in keeping these kinds of records? (Circle number?)

1 RATHER POOR JOB
2 FAIR
3 GOOD
4 VERY GOOD
5 EXCELLENT
0 DO NOT KNOW

52. Many agree that Cooperative Education Degree Plans or Work/Study Plans, which allow students to plan courses and anticipate graduation dates, are useful to both students and employers. Do you agree that degree plans are worth while? (Circle number)

1 STRONGLY DISAGREE
2 SOMEWHAT DISAGREE
3 NEITHER AGREE NOR DISAGREE
4 SOMEWHAT AGREE
5 STRONGLY AGREE
0 DO NOT KNOW

53. Do you agree with this statement: "As the number of students enrolled in the Cooperative Education Program increases, the quality of the program decreases."? (Circle number)
- 1 STRONGLY DISAGREE
 - 2 SOMEWHAT DISAGREE
 - 3 NEITHER AGREE NOR DISAGREE
 - 4 SOMEWHAT AGREE
 - 5 STRONGLY AGREE
 - 0 DO NOT KNOW
54. In order to allow Cooperative Education coordinators to give personal attention to students needs there must be enough staff members for a reasonable coordinator-to-student ratio. Do you agree that the Cooperative Education Program has enough coordinators for the size of the program? (Circle number)
- 1 STRONGLY DISAGREE
 - 2 SOMEWHAT DISAGREE
 - 3 NEITHER AGREE NOR DISAGREE
 - 4 SOMEWHAT AGREE
 - 5 STRONGLY AGREE
 - 0 DO NOT KNOW
55. How do you rate the job done by the Cooperative Education Program in offering strong, credible leadership on campus? (Circle number)
- 1 RATHER POOR JOB
 - 2 FAIR
 - 3 GOOD
 - 4 VERY GOOD
 - 5 EXCELLENT
 - 0 DO NOT KNOW
56. How good a job does the Cooperative Education staff do in administering the standards of the program consistently? (Circle number)
- 1 RATHER POOR JOB
 - 2 FAIR
 - 3 GOOD
 - 4 VERY GOOD
 - 5 EXCELLENT
 - 0 DO NOT KNOW
57. In general, are you satisfied that work-site supervisors provide quality performance evaluations of Cooperative Education students each work term? (Circle number)
- 1 VERY DISSATISFIED
 - 2 SOMEWHAT DISSATISFIED
 - 3 NEITHER SATISFIED NOR DISSATISFIED
 - 4 FAIRLY SATISFIED
 - 5 VERY SATISFIED
 - 0 DO NOT KNOW

58. To what extent does the Cooperative Education Program recruit from a diverse pool of private and public sector employers? (Circle number)

1 TO A VERY LITTLE EXTENT
2 TO A LITTLE EXTENT
3 TO SOME EXTENT
4 TO A GREAT EXTENT
5 TO A VERY GREAT EXTENT
0 DO NOT KNOW

59. How good a job does the Cooperative Education Program do in providing orientation sessions for:

a. New students (Circle number)

1 RATHER POOR JOB
2 FAIR
3 GOOD
4 VERY GOOD
5 EXCELLENT
0 DO NOT KNOW

b. Work-site supervisors (Circle number)

1 RATHER POOR JOB
2 FAIR
3 GOOD
4 VERY GOOD
5 EXCELLENT
0 DO NOT KNOW

60. How good a job does the Cooperative Education Program do in providing a method for estimating the overall satisfaction of students with the total program? (Circle number)

1 RATHER POOR
2 FAIR
3 GOOD
4 VERY GOOD
5 EXCELLENT
6 DO NOT KNOW

61. To what extent are work-site training stations closely screened for quality by the Cooperative Education Program? (Circle number)

1 TO A VERY LITTLE EXTENT
2 TO A LITTLE EXTENT
3 TO SOME EXTENT
4 TO A GREAT EXTENT
5 TO A VERY GREAT EXTENT
0 DO NOT KNOW

62. To what extent should Cooperative Education serve as a job placement office? (Circle number)
- 1 TO A VERY LITTLE EXTENT
 - 2 TO A LITTLE EXTENT
 - 3 TO SOME EXTENT
 - 4 TO A GREAT EXTENT
 - 5 TO A VERY GREAT EXTENT
 - 0 DO NOT KNOW
63. Do you agree with this statement: "Cooperative Education is a valid, essential, complementary academic program on an equal basis with other academic programs at _____."? (Circle number)
- Name of Institution
- 1 STRONGLY DISAGREE
 - 2 SOMEWHAT DISAGREE
 - 3 NEITHER AGREE NOR DISAGREE
 - 4 SOMEWHAT AGREE
 - 5 STRONGLY AGREE
 - 0 DO NOT KNOW
64. Do you agree with this statement: "The Cooperative Education student's work experience is a learning laboratory which is educationally broadening."? (Circle number)
- 1 STRONGLY DISAGREE
 - 2 SOMEWHAT DISAGREE
 - 3 NEITHER AGREE NOR DISAGREE
 - 4 SOMEWHAT AGREE
 - 5 STRONGLY AGREE
 - 0 DO NOT KNOW
65. In general, how would you rate student satisfaction with Cooperative Education work opportunities which are located some distance away from the school? (Circle number)
- 1 VERY DISSATISFIED
 - 2 SOMEWHAT DISSATISFIED
 - 3 NEITHER SATISFIED NOR DISSATISFIED
 - 4 FAIRLY SATISFIED
 - 5 VERY SATISFIED
 - 0 DO NOT KNOW
66. In an alternating Cooperative Education Program students may need five years before graduation. In general, how satisfied are you with the five year plan? (Circle number)
- 1 VERY DISSATISFIED
 - 2 SOMEWHAT DISSATISFIED
 - 3 NEITHER SATISFIED NOR DISSATISFIED
 - 4 FAIRLY SATISFIED
 - 5 VERY SATISFIED
 - 0 DO NOT KNOW

67. Cooperative Education is generally understood to work best when the program is accepted corporate-wide by participating employers. Do you agree that employers who participate in Cooperative Education at this institution have total acceptance of the program within their firms? (Circle number)

1 STRONGLY DISAGREE
2 SOMEWHAT DISAGREE
3 NEITHER AGREE NOR DISAGREE
4 SOMEWHAT AGREE
5 STRONGLY AGREE
0 DO NOT KNOW

68. How much commitment do Cooperative Education alumni have to the program and the institution? (Circle number)

1 LITTLE OR NO COMMITMENT
2 SOME
3 QUITE A BIT
4 A GREAT DEAL
5 A VERY GREAT DEAL OF COMMITMENT
0 DO NOT KNOW

69. Do you agree with this statement: "Cooperative Education's greatest advantage to employers is the provision of cheap labor."? (Circle number)

1 STRONGLY DISAGREE
2 SOMEWHAT DISAGREE
3 NEITHER AGREE NOR DISAGREE
4 SOMEWHAT AGREE
5 STRONGLY AGREE
0 DO NOT KNOW

70. Currently many firms conduct in-house training programs for new hires. Cooperative Education assignments can be used as an alternative training method. Do you agree that Cooperative Education assignments should be used in place of in-house training for new personnel? (Circle number)

1 STRONGLY DISAGREE
2 SOMEWHAT DISAGREE
3 NEITHER AGREE NOR DISAGREE
4 SOMEWHAT AGREE
5 STRONGLY AGREE
0 DO NOT KNOW

71. Do you agree with this statement: "Cooperative Education coordinators should vary placement objectives for students enrolled in several different disciplines, so long as overall program objectives are consistent."? (Circle number)

1 STRONGLY DISAGREE
2 SOMEWHAT DISAGREE
3 NEITHER AGREE NOR DISAGREE
4 SOMEWHAT AGREE
5 STRONGLY AGREE
0 DO NOT KNOW

72. It is generally assumed that employers benefit from hiring Cooperative Education students. Do you agree that Cooperative Education students are an asset to the firm? (Circle number)

1 STRONGLY DISAGREE
2 SOMEWHAT DISAGREE
3 NEITHER AGREE NOR DISAGREE
4 SOMEWHAT AGREE
5 STRONGLY AGREE
0 DO NOT KNOW

73. Do you agree with this statement: "Cooperative Education is a program, not a service."? (Circle number)

1 STRONGLY DISAGREE
2 SOMEWHAT DISAGREE
3 NEITHER AGREE NOR DISAGREE
4 SOMEWHAT AGREE
5 STRONGLY AGREE
0 DO NOT KNOW

74. How much influence does the Cooperative Education Program have on:

a. College policy (Circle number)

1 LITTLE OR NO INFLUENCE
2 SOME
3 QUITE A BIT
4 A GREAT DEAL
5 A VERY GREAT DEAL OF INFLUENCE
0 DO NOT KNOW

b. College mission (Circle number)

- 1 LITTLE OR NO INFLUENCE
- 2 SOME
- 3 QUITE A BIT
- 4 A GREAT DEAL
- 5 A VERY GREAT DEAL
- 0 DO NOT KNOW

c. College operation (Circle number)

- 1 LITTLE OR NO INFLUENCE
- 2 SOME
- 3 QUITE A BIT
- 4 A GREAT DEAL
- 5 A VERY GREAT DEAL
- 0 DO NOT KNOW

75. After several terms of Cooperative Education, students should be better prepared for jobs in the firms where they have had work experiences. In general, how good a job is done by employers in considering the previous work experience when they hire Cooperative Education students for full-time employment after graduation? (Circle number)

- 1 RATHER POOR JOB
- 2 FAIR
- 3 GOOD
- 4 VERY GOOD
- 5 EXCELLENT
- 0 DO NOT KNOW

76. Work-site placements are generally made by the Cooperative Education coordinator. How satisfied are you that coordinators participate to the maximum in job placement? (Circle number)

- 1 VERY DISSATISFIED
- 2 SOMEWHAT DISSATISFIED
- 3 NEITHER SATISFIED NOR DISSATISFIED
- 4 FAIRLY SATISFIED
- 5 VERY SATISFIED
- 0 DO NOT KNOW

77. In general, how much influence do participating employers have upon Cooperative Education Program development? (Circle number)

- 1 LITTLE OR NO INFLUENCE
- 2 SOME
- 3 QUITE A BIT
- 4 A GREAT DEAL
- 5 A VERY GREAT DEAL OF INFLUENCE
- 0 DO NOT KNOW

78. In general, what degree of influence do Cooperative Education Program administrators have upon relevant decision-making processes at the college? (Circle number)
- 1 LITTLE OR NO INFLUENCE
 - 2 SOME
 - 3 QUITE A BIT
 - 4 A GREAT DEAL
 - 5 A VERY GREAT DEAL OF INFLUENCE
 - 0 DO NOT KNOW
79. To what extent do you understand the organizational model of Cooperative Education within _____? (Circle number)
- Name of Institution
- 1 TO A VERY LITTLE EXTENT
 - 2 TO A LITTLE EXTENT
 - 3 TO SOME EXTENT
 - 4 TO A GREAT EXTENT
 - 5 TO A VERY GREAT EXTENT
 - 0 DO NOT KNOW
80. Do you agree with this statement: "Administrative officers at the school are fully aware of the financial and personnel needs of the Cooperative Education Program."? (Circle number)
- 1 STRONGLY DISAGREE
 - 2 SOMEWHAT DISAGREE
 - 3 NEITHER AGREE NOR DISAGREE
 - 4 SOMEWHAT AGREE
 - 5 STRONGLY AGREE
 - 0 DO NOT KNOW
81. How good a job does the Cooperative Education Program do in promoting the value of work experience concepts with employers? (Circle number)
- 1 RATHER POOR JOB
 - 2 FAIR
 - 3 GOOD
 - 4 VERY GOOD
 - 5 EXCELLENT
 - 0 DO NOT KNOW
82. How well is _____ known as a Cooperative Education institution? _____ (Circle number)
- Name of Institution
- 1 NOT AT ALL
 - 2 BY THOSE INVOLVED IN THE PROGRAM
 - 3 BY THE ENTIRE INSTITUTION AND LOCAL EMPLOYERS
 - 4 BY THE ENTIRE LOCAL COMMUNITY
 - 5 THROUGHOUT THE STATE AND NATION
 - 0 DO NOT KNOW

83. To what extent are the Board of Trustees of the college aware of the Cooperative Education Program? (Circle number)

- 1 TO A VERY LITTLE EXTENT
- 2 TO A LITTLE EXTENT
- 3 TO SOME EXTENT
- 4 TO A GREAT EXTENT
- 5 TO A VERY GREAT EXTENT
- 0 DO NOT KNOW

84. Good communications between the Cooperative Education Program and various support services, i.e. academic counseling, admissions, placement, registration, and student affairs, is essential to good program operation. To what extent does the Cooperative Education Program have good communications with:

a. Academic counseling (Circle number)

- 1 TO A VERY LITTLE EXTENT
- 2 TO A LITTLE EXTENT
- 3 TO SOME EXTENT
- 4 TO A GREAT EXTENT
- 5 TO A VERY GREAT EXTENT
- 0 DO NOT KNOW

b. Admissions (Circle number)

- 1 TO A VERY LITTLE EXTENT
- 2 TO A LITTLE EXTENT
- 3 TO SOME EXTENT
- 4 TO A GREAT EXTENT
- 5 TO A VERY GREAT EXTENT
- 0 DO NOT KNOW

c. Placement (Circle number)

- 1 TO A VERY LITTLE EXTENT
- 2 TO A LITTLE EXTENT
- 3 TO SOME EXTENT
- 4 TO A GREAT EXTENT
- 5 TO A VERY GREAT EXTENT
- 0 DO NOT KNOW

d. Registration (Circle number)

- 1 TO A VERY LITTLE EXTENT
- 2 TO A LITTLE EXTENT
- 3 TO SOME EXTENT
- 4 TO A GREAT EXTENT
- 5 TO A VERY GREAT EXTENT
- 0 DO NOT KNOW

e. Student affairs (Circle number)

- 1 TO A VERY LITTLE EXTENT
- 2 TO A LITTLE EXTENT
- 3 TO SOME EXTENT
- 4 TO A GREAT EXTENT
- 5 TO A VERY GREAT EXTENT
- 0 DO NOT KNOW

85. To what extent are employers convinced that Cooperative Education provides an opportunity to pre-screen qualified students for permanent employment in the future? (Circle number)

- 1 TO A VERY LITTLE EXTENT
- 2 TO A LITTLE EXTENT
- 3 TO SOME EXTENT
- 4 TO A GREAT EXTENT
- 5 TO A VERY GREAT EXTENT
- 0 DO NOT KNOW

86. How good a job does the Cooperative Education Program do in explaining the program to all new students at the college? (Circle number)

- 1 RATHER POOR JOB
- 2 FAIR
- 3 GOOD
- 4 VERY GOOD
- 5 EXCELLENT
- 0 DO NOT KNOW

87. How much influence does the success of Cooperative Education at a participating firm have upon employers who have never used the program? (Circle number)

- 1 LITTLE OR NO INFLUENCE
- 2 SOME
- 3 QUITE A BIT
- 4 A GREAT DEAL
- 5 A VERY GREAT DEAL OF INFLUENCE
- 0 DO NOT KNOW

88. Are the rules and regulations of the Cooperative Education Program clear to participating employers? (Circle number)

- 1 NOT AT ALL CLEAR
- 2 CLEAR TO A VERY LITTLE EXTENT
- 3 CLEAR TO SOME EXTENT
- 4 FAIRLY CLEAR
- 5 VERY CLEAR
- 0 DO NOT KNOW

89. How frequently is information about the Cooperative Education Program given to high school and community college students?

a. High School students (Circle number)

- 1 NEVER
- 2 ONCE A YEAR
- 3 ONCE A TERM
- 4 TWICE A TERM
- 5 MORE THAN TWICE A TERM
- 0 DO NOT KNOW

b. Community college students (Circle number)

- 1 NEVER
- 2 ONCE A YEAR
- 3 ONCE A TERM
- 4 TWICE A TERM
- 5 MORE THAN TWICE A TERM
- 0 DO NOT KNOW

90. Do you agree with the following statement: "The Cooperative Education Program has a clear, precise, quality handbook for students, in order that 1) they understand policies regarding critical issues such as: housing, financial aid, social security, scholarships, and other issues, and 2) they have realistic goals which can be met."?

a. This is how it is now: (Circle number)

- 1 STRONGLY DISAGREE
- 2 SOMEWHAT DISAGREE
- 3 NEITHER AGREE NOR DISAGREE
- 4 SOMEWHAT AGREE
- 5 STRONGLY AGREE
- 0 DO NOT KNOW

b. This is how I would like it to be: (Circle number)

- 1 STRONGLY DISAGREE
- 2 SOMEWHAT DISAGREE
- 3 NEITHER AGREE NOR DISAGREE
- 4 SOMEWHAT AGREE
- 5 STRONGLY AGREE
- 0 DO NOT KNOW

91. Respondent Category: (Circle letter)

- E EMPLOYER
- C COOPERATIVE EDUCATION COORDINATOR
- S STUDENT
- F FACULTY MEMBER
- A COLLEGE ADMINISTRATOR

92. Sex: (Circle letter)

- M MALE
- F FEMALE

93. Ethnic Background: (Circle letter)

- A AMERICAN INDIAN OR NATIVE ALASKAN
- B BLACK, NON-HISPANIC
- O ASIAN, OR PACIFIC ISLANDER
- S HISPANIC
- W WHITE, NON-HISPANIC
- Z OTHER

Thank you for your cooperation in completing the Cooperative Education Evaluation Questionnaire.

Is there anything else you would like to tell us about your experience with Cooperative Education? If so, please use this space for that purpose. Also give any comments you wish to make that you think may improve Cooperative Education in the future. Please put them here or in a separate letter.

Your contribution to this effort is very greatly appreciated. If you would like a summary of results, you may obtain one from the Cooperative Education Office of your participating institution.

EXAMPLE OF FINAL LETTER TO PARTICIPATING INSTITUTIONS

November 12, 1983

Dear :

Enclosed you will find the results of University of _____ participation in Research to Develop In-House Self-Evaluation at Institutions of Higher Education with Alternating Cooperative Education Programs, funded by a grant from the Cooperative Education Branch, United States Department of Education. You will recall that the Self-Evaluation Questionnaire was sent out in February, 1983, to _____ administrators, faculty, students, coordinators, and employers. Out of the 50 people contacted, 35 responded: 4 administrators, 15 faculty members, 5 students, 5 cooperative education coordinators, and 6 employers. Your institution's response rate to the questionnaire was 70 % .

The enclosures with this letter are:

- 1 Copy of the Raw Scores on the questionnaire
- 1 Copy of the Weighted Mean Scores on the questionnaire
- 1 Copy of a 2-Way Analysis of Variance
- 1 Copy of a Multiple Classification Analysis
- 1 Copy of Definitions of Cooperative Education supplied by different status group members
- 1 Copy of Remarks made on back page of questionnaire by different status group members

Please note that both the Raw Score Chart and the Weighted Mean Score Chart are coded as to type of support category. Those support categories are:

IC = Institutional Commitment
 EP = Employer Participation
 SPL = Student Participation and Learning
 PO = Program Operation

Also, arrows indicate the direction of each question on both charts. This will be discussed more fully below. On the Raw Score Chart are typed in all remarks made by different status group members. Also, if any status group member chose not to answer a question, that fact is shown under "no response."

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The second enclosure, Weighted Mean Scores, needs full explanation. Of the 90 items in the questionnaire, 71 follow the same pattern of scoring; that is, the score 5 is the highest or "best" score in ascending order from 1 through 5. Also the scores are weighted, which will be explained.

Example--Weighted Mean Scores

1. To what extent does the Cooperative Education Program reinforce its role as a part of the educational process at _____?

A	F	S	C	E	
					1 TO A VERY LITTLE EXTENT
					2 TO A LITTLE EXTENT
				3.00	3 TO SOME EXTENT
4.25	4.40			3.75	4 TO A GREAT EXTENT
	4.60	5.00			5 TO A VERY GREAT EXTENT
					0 DO NOT KNOW

The weighted means on the black scores were determined utilizing DO NOT KNOW, the assumption being that if many members of a given status group do not know the answer to the question, then the total response by that status group is weakened, or, put another way, the score is lowered. Look at Item 1, Column E-Employers. In this case, the weighted mean was determined in this manner:

$$\begin{array}{l}
 0 \times 1 = 0 \\
 0 \times 2 = 0 \\
 2 \times 3 = 6 \\
 1 \times 4 = 4 \\
 1 \times 5 = 5 \\
 1 \times 0 = 0 \\
 \hline
 15 \div 5 = 3.00
 \end{array}
 \begin{array}{l}
 \swarrow \searrow \\
 \text{(the weights are from the} \\
 \text{scale as it appears on} \\
 \text{the questionnaire)} \quad \text{(the total number in} \\
 \text{status group E)}
 \end{array}$$

Thus, 3.00 is the weighted mean score for Employers in response to Item 1 when DO NOT KNOW is included. Note also in Item 1 that the Employer status group is the only group where DO NOT KNOW was used.

* In order to give you an idea of the effect of DO NOT KNOW upon the responses, the mean was recalculated, showing the responses of those who did know (mathematically it is a matter of dividing the weighted mean by 4 rather than 5 in this example). The weighted mean then becomes 3.75 and appears in red. This pattern will appear throughout the Mean Score Chart and is intended to help you see at a glance the effect of the answer DO NOT KNOW upon mean responses, as well as to show you the mean responses when they are calculated excluding DO NOT KNOW. A good example of this is ITEM 15 e. :

* You will find this information on the Raw Score Chart. You will note that The response category DO NOT KNOW is frequently used by various status groups on subsequent items.

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15 e. To what extent is cooperative education promoted through: Verbal Communications by Admissions Office Staff?

A	F	S	C	E		A	F	S	C	E
					1	TO A LITTLE OR NO EXTENT				
					2	TO A LITTLE EXTENT	1	1	2	1
					3	TO SOME EXTENT	1	4	1	1
					4	TO A GREAT EXTENT	1	2	1	1
					5	TO A VERY GREAT EXTENT	1	4		2
					0	DO NOT KNOW		4	1	5
							4	15	5	5

The original weighted mean scores as well as raw scores show that there was a good deal of ignorance about the verbal communication from the Admissions Office staff regarding cooperative education. However, the mean scores in red indicate where the mean response fell among those who did choose to estimate that issue, rather than indicating DO NOT KNOW.

As you will note from the arrows on the mean score chart, Items 21 b., 28 a., 45, 48 a., 48 b., and 53 are reversed. By "reversed" I mean that in those items the most acceptable answer is the first answer. For example, in 21 b. the "best" answer is TO A VERY LITTLE EXTENT.

You will also note that Items 6, 7, 26, 29, 38, 52, 62, 63, 64, 69, 70, 71, and 73 are considered for the purposes of the questionnaire to be "philosophical," that is to say that status group respondents could disagree as to what is "best". A good example of such disagreement is Item 70, where administrators are "split"; faculty, students, and coordinators somewhat or strongly agree that co-op assignments should be used in place of in-house training, but employers strongly disagree.

I hope that with this explanation you will be able to compare raw scores with mean scores to get a sense of the strengths of your program. One obvious example is Item 54, where students strongly agree that there are enough co-op staff members, yet coordinators somewhat disagree. The question is--who is right? Of course, only you can decide how important Item 54 is to your program, but I believe that you can examine the raw scores and mean scores and get some useful information.

A Two-Way Analysis of Variance was performed using the mean scores from the 90 item questionnaire. The first independent variable was group status, with five levels: administrators, faculty, students, coordinators, and employers. The second independent variable was support, with four levels: institutional commitment, student participation and learning, employer participation, and program operation. These levels of the two independent variables were selected by the researcher because they are of particular interest. They do not constitute a random sample of all possible levels of either independent variable. In other words, the levels of the independent variables described above were "fixed" by the researcher for investigation. The dependent variable in this model was the mean score.

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In the simplest terms, the researcher is seeking through an Analysis of Variance to determine whether or not the factors status and support interact to affect the overall mean score on the questionnaire and whether or not that interaction is statistically significant. The table for the Analysis of Variance for _____ is enclosed with this letter.

In non-statistical language, what the Analysis of Variance Table shows is that mean scores vary significantly depending on which members of the status groups answer and the mean scores also vary in terms of which category of support is being addressed.

In order to determine the pattern of variance among status members and among categories of support a Multiple Classification Analysis was performed, which is also included with this letter.

_____ grand mean for the questionnaire was _____ and falls within the range of VERY GOOD in terms of perceptions of the program as seen by the respondents. The Multiple Classification Analysis indicates that status group respondents deviated from the overall, or grand mean in the following manner:

1. Administrators	0.38	ABOVE
2. Students	0.16	ABOVE
3. Coordinators	0.15	ABOVE
4. Faculty	0.11	ABOVE
5. Employers	-0.81	BELOW

These deviations from the grand mean indicate that, based on questionnaire response, the Cooperative Education Program at _____ should examine relationships with employers in order to strengthen those relationships.

In terms of support categories, the deviation from the grand mean was:

1. Student Participation & Learning	0.51	ABOVE
2. Employer Participation	0.06	ABOVE
3. Program Operation	-0.25	BELOW
4. Institutional Commitment	-0.32	BELOW

Because institutional commitment fell markedly below the grand mean, based on questionnaire response, it is suggested that this is the area which needs most improvement. Conversely, it is important to note that student participation & learning deviated markedly above the grand mean, according to questionnaire response, and it must be remembered by this researcher and all involved that student participation and learning is our primary goal.

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The Multiple R Squared, which is found on the Multiple Classification Analysis Chart, is .244, and indicates that 24% of the variance in response can be attributed to the interaction between the status of the respondents and the support category of the question answered. Although this percent indicates moderate positive correlation, using the "rule of thumb" for calculating the size of a correlation coefficient (Multiple R) in terms of "classical" experiments, it could be considered sufficient on the case of social science research of this type where there is a high correlation between the status groups and the support categories. This guarded interpretation is based on Hinkle, Wiersma, Jurs, Applied Statistics for the Behavioral Sciences, Boston, MA: Houghton Mifflin, 1979; and Nie, Hull, Jenkins, Steinbrenner, Bent, The Statistical Package for the Social Sciences, Second Edition, New York: McGraw-Hill Book Company, 1975.

Of the ten sample schools, the _____ ranked 9th in response rate (70%). The other response rates were 94%, 94%, 90%, 82%, 82%, 78%, 78%, and 68%. From four field test schools the response rates were: 91%, 87%, 70%, and 61%. You might want to think about what caused 15 of your people to ignore the questionnaire. It is my hope that the process itself was a valuable one for _____ and that participating in the questionnaire process allowed different people an opportunity to reflect on the program. Because this is the first such effort that I know of in the cooperative education community, I can assure you that comments made by those who took the time to become involved will be addressed in the final report which will discuss strengths and weaknesses of this self-evaluation research.

Data from your institution was utilized in a 3 Way Analysis of Variance and a Multiple Classification Analysis involving the ten sample institutions, using statistical analyses similar to the ones described in the tables which are enclosed with this letter. In that Multiple Classification Analysis, the grand mean was 2.88, slightly lower than that of _____, but within the range of GOOD. With ten institutions involved, the deviations from the grand mean fell out as shown below:

STATUS 10 Schools	1. Coordinators	0.54	ABOVE
	2. Administrators	0.17	ABOVE
	3. Faculty	-0.01	BELOW
	4. Students	-0.16	BELOW
	5. Employers	-0.54	BELOW

STATUS _____	1. Coordinators	0.25	ABOVE
	2. Administrators	0.38	ABOVE
	3. Faculty	0.11	ABOVE
	4. Students	0.16	ABOVE
	5. Employers	-0.81	BELOW

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Deviations from Grand Mean

SUPPORT 10 Schools	1. Student Participation & Learning	0.63	ABOVE
	2. Employer Participation	0.07	ABOVE
	3. Program Operation	-0.21	BELOW
	4. Institutional Support	-0.44	BELOW
SUPPORT _____	1. Student Participation & Learning	0.51	ABOVE
	2. Employer Participation	0.06	ABOVE
	3. Program Operation	-0.25	BELOW
	4. Institutional Support	-0.32	BELOW
INSTITUTION Grand Mean= <u>2.88</u>	1. _____	0.69	ABOVE
	2. _____	0.31	ABOVE
	3. _____	0.12	ABOVE
	4. _____	-0.02	BELOW
	5. _____	-0.04	BELOW
	6. _____	-0.14	BELOW
	7. _____	-0.19	BELOW
	8. _____	-0.20	BELOW
	9. _____	-0.21	BELOW
	10. _____	-0.32	BELOW

In this Multiple Classification Analyses, the factors status, support, and institution accounted for 25% of the grand mean variance, which indicates a moderate positive relationship among factors. A Multiple Classification Analysis utilizing scores from 4 field institutions yielded a grand mean of 2.68, with 23% of the variation accounted for by the three factors. You will receive more information about these comparisons in the final report of this project. But I can summarize that only one institution (yours), among the 14 involved, rated their program higher than GOOD as reported on the questionnaire. Obviously, the structure of the questionnaire could account for these responses, but so also could the perceptions of the respondents.

Finally, thanks to you and all involved for your patience during this effort to establish national norms of excellence to improve cooperative education program self-evaluation.

Cordially,

Constance F. Brothers
Research Coordinator

CFB:dae

Encl: 2 Way Analysis of Variance
Multiple Classification Analysis
Raw Score Chart
Weighted Mean Score Chart
Status Group Definitions
Status Group Comments

cc: James L. Antonick, Project
Director
Karan Pal Singh, Statistical
Assistant

#27.b. DEFINITION OF COOPERATIVE EDUCATION

FACULTY

1. Cooperative Education is a combined effort of coupling theory application with practical application of education.
2. Cooperative Education is that part of a school's curriculum which provides the student to utilize those concepts acquired in the classroom by alternating their time between a job site and the classroom.
3. It is the type of education which integrates the theory and job experience.
4. A program through which students actively participate in the job market while obtaining an education that is consistent with that job field.
5. Cooperative Education is a hands on working and learning experience for students to put into practice classroom or formal theory in private industry, public agencies and other academic institutions.
6. Cooperative Education is a formal approach to enhancing the education and marketability of students by providing job experiences, motivation and communication skills.
7. A program that provides the student with job experiences at the job site under supervision.
8. Cooperative Education is a method of providing a learning experience in concert with classroom theory in assisting students toward attaining career goals.
9. Cooperative Education is an individualized work experience program that stimulates and enhances participants to strive for upward mobility.
10. Cooperative Education is the combination of academic study with on-the-job experience organized and coordinated so that benefits from learning opportunities in business, industry, and public agencies become available to students.
11. Cooperative Education is a program which blends classroom theory and practical experience by convincing employers in the private sector and in government to hire students for a prescribed period of time. The student, the employer, and the university benefit mutually; students receive training, experience, and pay; employer receives manpower at reduced rate; university receives input about needs for a marketable student.
12. Cooperative Education is earning as you learn. Find the experiences, come back to the campus to learn and return to work.

13. Cooperative Education is the cooperation of industry, institutions of higher education and the students in realizing the student's educational goals.

EMPLOYERS

1. Cooperative Education is an outstanding program which provides valuable training and enhanced job opportunities to students, effective manpower sources for employers and strengthened educational systems for educational institutions.
2. Cooperative Education allows the student to get on-the-job training experience in the work world and help provide supplemental finances. It also gives the employers an opportunity to evaluate students' performance.
3. Work experiences directly related to academic studies that occur on an alternating basis.
4. A working partnership in which an educational institution joins with an employer in a structured relationship. Classroom study combined with closely related, supervised work experience.
5. Alternating periods of education and practical work experience to prepare a student for a professional career.

COORDINATORS

1. Cooperative Education is a carefully designed and supervised program of experimental learning which enriches the academic program through alternating periods of work related directly to studies.
2. Cooperative Education is the total interaction of classroom theory with practical "on the job" related experiences. "Doing it with confidence."
3. Cooperative Education is a carefully organized and supervised program of "experimental learning" in which the participating student enriches his education by alternating periods of study with periods of meaningful work with a cooperating employer.
4. A partnership between student, employer and university in a cooperative effort to educate and train a student to successfully function in the world of work and at the same time fulfill employer needs.
5. Cooperative Education is a program that allows students to enhance their learning by integrating classroom theory with practical work experience.

ADMINISTRATORS

1. Cooperative Education is a means by which the students earn and learn, determine career choices, and get hands on work experience outside of the classroom.

2. A process which provides students with on the job experiences aimed at assisting the student to gain a better perspective of life long job responsibilities.
3. The enrichment and complementing of classroom learning experiences through real world opportunities.
4. A cooperative relationship between educational institutions of higher learning and private, state, and federal agencies which allows internship opportunities for undergraduates prior to completion of their academic career goals.

STUDENTS

1. Cooperative Education is an educational process which correlates on the job work experience with school studies. This learning process not only enables the student to have a broad view of his career option but also have a good chance for employment after graduation.
2. My definition of cooperative education is that it gives each student the chance to gain on the job experience which ends in permanent employment after graduation.
3. A combining of classroom training and practical on-the-job training designed to familiarize students with the work force what is expected of them and what to expect from an employer.
4. Cooperative Education is where you work and get on the job experience in your major, while still in school.

#27.b. DEFINITION OF COOPERATIVE EDUCATION

ADMINISTRATORS

1. Cooperative Education is the application, reinforcement, and extension of classroom work into an industrial or business environment under supervision of an appropriate supervisor and of a faculty/academic advisor.
2. A program where students take time off from academic studies to gain experience in the work world relevant to their academic or career area of interest.
3. Opportunity to test, expand, refine classroom learning through application in nonclassroom settings - maybe primarily "practical" or primarily "academic" learning but is ultimately an extension of the classroom.
4. Alternating periods of formal study and employment in a related occupation, under the guidance of faculty advisors who help plan and evaluate the work experience.
5. A program to enable students to combine classroom and vocational education during their college educational experience; a combination of experiential and academic learning.
6. Alternating classes with On-the-job training assignments (minimum of 2 periods). Requires cooperating employers who are committed to providing meaningful developmental "hands-on" work assignments (preferably for 3 periods).
7. Work experience (under supervision) which provides students with an opportunity to apply their educational background and goals while at the same time adhering to the philosophy of the university.
8. A program allowing students to assume a responsible position in an organization for a limited period of time to gain experience relevant to their goals and practical to the organization.
9. Alternating, parallel, or summer positions which give students experience in their areas of study. These are professional, hands-on positions, not make-work or "shadow" assignments.
10. A student leaves school and works full-time.

FACULTY

1. Cooperative Education is a joint effort between university and industry to provide educational working experiences for students.
2. Opportunities for on-the-job learning that is coordinated with courses and student's academic work (education).

3. Opportunity for student to learn while practicing and to practice while learning; "cooperation" stems from acceptance of educational responsibility by both employer and institution.
4. Where you supplement your academic education by working in related areas in industry - allowing you to practice what you are taught and experience first hand the work place.
5. A means of linking a student's academic learning with the learning and performance possibilities of the work place in order to foster a better understanding of both academics and work.
6. A program which enables students to combine academic training with valuable, broadening, programmatic and conceptual work experiences in their chosen field.
7. Periods of a semester or more working in an area which gives useful professional experience and one in which the student uses what he has already learned.

COORDINATORS

1. Cooperative Education provides students an opportunity to test old knowledge and gain new knowledge in a non-classroom setting - a work site. The student plays the dual role of students and employee during this experience. During this time, work functions as an educational tool/method of gaining knowledge.
2. To provide each student the opportunity to further his/her career goals by working in a professional setting which supplements his/her classroom experience.
3. An educational method that combines academic study with work experiences that are supervised - and relevant to the student's academic majors.
4. Working in your field of study before graduation, making sure this is really what you want to do. A learning experience you cannot receive from a textbook.
5. "Real world" experience.
6. Professional work experiences related to a student's field of academic study.
7. Cooperative Education is a program of multiple work experiences integrated into the student's academic studies.

EMPLOYERS

1. Cooperative Education provides a student the opportunity to learn about what they study in books and gain valuable practical experience while earning money to further their education.

2. Cooperative Education allows students to gain practical field experience in their chosen major while providing a valuable work resource to employers.
3. A plan by which selected students alternate between periods in school and employment in their fields of study.
4. Alternate work study periods of at least four work sessions involving the student in increasing complex work sessions related to their major.
5. An alternating work - study program which provides a student an opportunity to see the "real work" environment.
6. A program affording a student an opportunity to practically apply skills learned in college to the work environment.
7. As an employer - it means to me - an opportunity for us to hire a student, train them and have them be able to become full-time employees after graduation. Also it is a program that assists students financially.
8. Provides students with practical work experience in an environment similar to the work environment preferred after graduation.

STUDENTS

1. Cooperative Education is a program designed to place a student in a professional atmosphere which best suits his/her needs in the working field.
2. An alternating job/school situation where one can receive pre-grad experience which helps one stabilize/change future goals while being helped financially. A "taste" of the working world.
3. A work plan that enables the student to integrate work experience with the theoretical classroom experience to aid in academic guidance as well as career direction.
4. An educational program in which students receive exposure to the working world in their area of interest and employers in turn benefit from the work the students perform.
5. An opportunity for students to get experience in their chosen major before graduation and for employers to get a qualified employee at a reduced rate of pay.
6. A program whereby the employer works with (cooperates) the university to educate the student about the working world in his/her related field.

COOPERATIVE EDUCATION
SELF-EVALUATION 1983

Anecdotal Responses

The responses found on the following pages were written in the margins by A) administrators, F) faculty members, S) students, C) coordinators, and E) employers from the 14 colleges and universities which participated in the Cooperative Education Research during 1983. The last item represents those comments which were solicited on the outside back cover of the questionnaire.

There are two comments which must be explained. "Not Applicable" appears frequently from E) employers because one university pre-marked certain responses in that manner. Also, the remarks about illegibility all came from one university, where the duplication was poor. This was corrected in the first follow-up.

COOPERATIVE EDUCATION EVALUATION QUESTIONNAIRE

Anecdotal Responses

1. To what extent does the Cooperative Education Program reinforce its role as a part of the educational process at _____?
 "Not pertinent." (A)
2. To what extent does the Cooperative Education Program maintain close communication with employers and work-site supervisors?
 "This is not a major function here- NA" (C)
3. How good a job does the Cooperative Education Program do of promoting open communication and good relations between:
 - b. Student and Faculty
 "Too many questions--many questions vague." (E)
 "Because the communication is so poor, I am assuming #1 (F)
 - d. Cooperative Education Program staff and faculty
 "Not Coop. Ed. staff's fault - faculty not interested." (C)
4. To what extent is Cooperative Education listed in the catalog an integral part of _____'s curriculum?
 "It just began its pilot project this year." (E)
 "It is not part of curricula." (A)
 "Thank God!" (F) (TO A VERY LITTLE EXTENT)
 "This question is badly phrased." (F)
5. How much interaction does the Cooperative Education Program have with:
 - a. Academic Departments
 "Once a year." (F)
 "Depends on the Department." (A)
 "Difficult"
 "Much more then once per month." (A)
 "So far we have had one contact. Sometimes we go all year without any." (F)
 - b. Administrative Offices
 "A supplement." (S)
6. To what extent do you agree with this statement: "Cooperative Education is primarily a form of financial aid."?
 "Interesting question, especially to ask the Director of Financial Aid!" (A)
7. To what extent do you agree with this statement: "Don't delay graduation by enrolling in the Cooperative Education Program."?
 "Depends on specific circumstances." (C)
 "Depending on program." (C)
 "Ours is required." (C)
 "I'm assuming that the program is carried out properly." (F)

2.

9. To what extent are you familiar with employer needs when employers are selecting Cooperative Education students for work assignments?
 - "There is a question in my mind as to whether some employers know what they are looking for." (C)
 - "If they are my students." (C)
 - "Very unclear question." (S)
10. How good a job does the Cooperative Education Program do in providing employers with a selection of reasonably qualified and motivated students?
 - "Two questions." (C)
 - "Depends on students applying. Not very many yet." (E)
 - "Do not know other than placing myself." (S)
 - "This is done by faculty in departments." (C)
 - "Depends on area or major." (A)
11. Do you agree that the Cooperative Education Program fully uses students to help build good relations between the faculty and employers?
 - "Not pertinent." (A)
 - "I, as a faculty coordinator do - but Coop. Ed. has little opportunity." (C)
12. How good a job does the Cooperative Education Program do in making long-range plans for new work-site opportunities?
 - "Results, not 'plans' (O) or poor." (C)
13. On the average, how frequently do individual employer representatives visit the campus to recruit cooperative education students?
 - "Continuous assigned here." (F)
 - "In same town--use telephone--students and faculty visit work place." (E)
 - "4-5 times a term." (C)
 - "Do not know but very infrequent." (C)
 - "Never in my field." (C)
 - "Once a year." (C)
 - "Probably less than once a term." (E)
 - "Vague--If this means how often does specific firm come, i.e. #1. If you are asking how often does employer in general come, #5." (C)
 - "Once or twice per year." (E)
 - "Once a year." (E)
14. To what extent does the Cooperative Education Program provide opportunity for employers to exchange ideas for effective program operation?
 - "To a very little extent in my field." (C)
 - "With who?" (F)
 - "Question is poorly worded." (E)

3.

15. To what extent is Cooperative Education promoted through:
- a. Multiple descriptions in the catalog
 - "One department." (F)
 - "There is nothing in the catalog even the index, that lists a page #." (A)
 - "I don't have a current catalog." (E)
 - e. Verbal communication by Admissions Office staff
 - "Or advising staff-answer would be different." (C)
16. How much influence does Cooperative Education have in the academic structure of _____ ?
- "Quite a bit in one department."
 - "Semantic differential would have been better here." (F)
 - "Question 16a.: What influence does the academic program have on Co-op? Less than none." (F)
17. To what extent are sequential curricula offerings available to the student who alternates between on campus course work and Cooperative Education work assignments?
- "Major problem is with foreign languages." (A)
18. To what extent does _____ depend on federal funds for Cooperative Education Program Operation?
- a. How it is now:
 - "Not applicable." (E)
 - b. This is how I would like it to be:
 - "It would be more stable if self-supporting. Wouldn't have to worry about budget cuts." (S)
 - "Should not be high federal priority at this point." (C)
 - "Not applicable." (E)
 - "What will make it work well!" (F)
19. Do you agree that the Cooperative Education Program has adequate support equipment (typewriters, duplicating equipment, computer terminals and access)?
- "Not applicable." (E)
 - "We're supposed to get more this summer, though." (S)
20. To what extent are the staff of the Cooperative Education Program supported by funds from the institutional budget?
- "Best guess." (C)
 - "This does not describe structure here." (C)
 - "Not applicable." (E)
21. To what extent do participating Cooperative Education employers depend on Cooperative Education solely for affirmative action hiring?

4.

a. This is how it is now:

- "To a very little extent this setting." (E)
- "Feds more so than others." (C)
- "To a very little extent in my shop, which is all I know about." (E)
- "Too vague!" (F)

22. To what extent do you agree with this statement. "_____ provides the Cooperative Education Program with a constant, adequate, cost effective budget."?

- "Given available non-institutional funds." (A)
- "Budget is all federal funds, not _____ funds." (S)

24. To what extent do you agree that administrative officers (presidents, vice presidents, provosts, deans) at _____ support the Cooperative Education Program by both words and actions?

- "Rephrase this. Is it a question?" (S)
- "Varies from position to position." (A)
- "Answers don't fit question." (S)
- "Doesn't make sense." (A)
- "None of these answer question." (E)

25. Please rate the visibility of the location of the Cooperative Education Program on campus.

- "Very poor. Took me 30 minutes to find. No one else knew either." (S)
- "Currently under construction." (C)

26. Do you agree with this statement: "The Cooperative Education Program should place students in non-traditional assignments, i.e. arts and sciences majors placed in engineering firms."?

- "Of this assignment still. Bind together goals of education. If they can benefit from non-tradition." (S)

- 27.a To what extent do you understand the definition of Cooperative Education?

- "A very poorly worded question." (A)

b. Please write your definition here.

- "I'm not sure." (A)
- "This is difficult to do in the space allocated!" (F)

28. To what extent should Cooperative Education use:

a. Non-paying work experience slots

- "This is "interning" not Co-op." (C)
- "Never, unless it is to start a program, i.e. proof to the employer." (C)
- "If they are a significant source of potential internships to some extent." (F)

5.

"Why?" (S)
 "For some type of credit." (S)
 "I don't understand what a work slot is." (F)
 "Only if academic credit is offered in lieu of." (S)
 "To some extent when Fed. funds are not available." (E)
 "Can it work?" (F)

b. Financial aid, work-study slots

"Almost always below the student's level of knowledge or ability." (C)
 "If applicable to major/minor." (C)
 "Employer is happy to pay salary of a good co-op student." (E)
 "I assume you mean governmental aid. Don't understand question." (E)
 "I can't understand what this might mean." (F)

29. In general, do you agree with this statement: "The Cooperative Education Program should carefully screen students for job suitability and interest in the program."?

"But potential should also be considered. One role is to help prepare the student for job suitability." (E)
 "This failure has cost us some good accounts." (F)

30. To what extent are Cooperative Education work assignments at your institution directly related to students' academic majors and career goals?

a. Students' academic majors, the way it is now:

"My institution is the Des Moines Register, an employer." (E)
 "Personally to a great extent." (S)
 "Do not know overall." (S)
 "The data on _____ charts is the first news I've seen." (F)

b. This is how I would like it to be:

"To the extent possible." (E)

c. Students career goals, the way it is now:

"To a very great extent this year." (F)
 "High in my area."
 "Career goals at this point are usually academic majors." (S)

31. Do you agree with this statement: "Adequate time is spent by Cooperative Education coordinators with each Cooperative Education student, discussing career interests, expectations, and professional development, prior to the work experience assignment."?

6.

"Dr. _____ never even fully explained the program to me.
Just signed me up." (S)
"Strongly agree in my own case, don't know about others." (E)
"Could only speak to my area-we are a large institution." (C)
"With our department programs." (C)
"Strongly agree in our company." (E)
"Do not know for others." (E)

32. It is generally understood that meaningful Cooperative Education jobs are determined by: type of duty, increasing levels of responsibility, and the quality of employer supervision. To what extent do participating employers provide meaningful job slots?

"To a great extent in my particular case." (S)
"To a great extent in my experience." (S)
"Do not know in general." (S)
"In my own case, don't know about others." (E)
"There is a wide range-some are to a very little extent, some are to a very great extent." (C)
"I had to find a job myself." (S)
"To a very great extent in our company." (E)
"Do not know for others." (E)
"I'd like to know more." (F)

34. To what extent does the Cooperative Education staff use effective exit interviews to gather student feedback, discuss the next work term, pay rates, and career plans?

"I had an exit interview the 1st assignment, but not my latest one. My COA did interview me both times, though." (S)

35. In general, are you satisfied that employers offer meaningful experiences for students each work period?

"Very satisfied this setting." (E)
"We do." (E)
"Very satisfied in my own case-Don't know about others." (E)
"We do." (E)
"Very satisfied with our company." (E)
"Do not know for others." (E)

36. How frequently are program standards for Cooperative Education evaluated internally?

"More than twice a term our setting." (E)
"Continually." (A)
"We try!" (S)
"Constantly." (C)
"Where?" referring to internally (E)
"No set pattern." (F)
"Not applicable." (E)
"Whose standards, employer or school?" (E)

37. To what extent do the work experiences provided to Cooperative Education students enhance students' career objectives?

"To some extent at our place." (S)

7.

"To a very great extent at our setting." (E)
 "To a very great extent in my case. Don't know about others." (E)
 "To a great extent personally." (S)
 "Do not know generally." (S)

38. Do you agree with this statement: "Although Cooperative Education can be a strong incentive for choosing a particular school, its value is not limited to recruitment for the school."?

"Poor question." (C)

39. How good a job does the Cooperative Education Program do in preparing students for their Cooperative Education work experiences?

"Depends on college." (A)
 "My coordinator plus co-op main office." (C)
 "I found my job myself." (S)
 "Based on student occasional reports." (A)
 "2 orientations. 1 conference." (S)
 "I have no knowledge that required orientation is good." (F)

40. Do you agree that the goals and objectives of the Cooperative Education Program are reasonable, achievable, and measurable?

"It's hard to measure accurately." (S)
 "Not sure about measurable." (C)
 "Isn't this difficult?" (E)
 "Whose goals, schools or employers?" (E)

41. How satisfied are you with the quality of student work placements provided by the Cooperative Education Program?

"Quantity is poor." (E)
 "We provide our own." (C)
 "Very satisfied with ours--first co-op student in this office." (E)
 "I found my job myself." (S)

42. How satisfied are you that the Cooperative Education Program solicits student feedback on all phases of program development?

"Very dissatisfied. Feedback--I received none." (S)

43. To what extent does the Cooperative Education Program follow-through with commitments made to students?

"With the 15 whom I had contact, to a very great extent." (A)

44. In general, what is your best estimate of student satisfaction with Cooperative Education off campus work experiences?

"Jobs are few otherwise." (F)
 "Very satisfied with this setting." (E)
 "Very satisfied in my case, don't know about others." (A)
 "Impression is very satisfied." (E)
 "Fairly satisfied from answer to question I ask in class." (F)

8.

45. Some employers offer Cooperative Education students repetitive work assignments during their second and third cooperative education terms. Do you feel these assignments should be:

"Hopefully new knowledge will be gained by student." (E)
 "Decreased slightly. Need more experiences." (S)
 "Increased greatly-if possible." (F)
 "Students should be encouraged to choose their environment for new experiences." (S)
 "Question not clear." (A)
 "Responsibility and challenge would increase greatly." (C)
 "Do not know. Does not apply to our use of co-op." (A)
 "We use one experience." (C)
 "I am more concerned with funding the initial assignment, a difficult enough task." (F)
 "Only started Co-op this quarter." (S)
 "Should be what?" (F)
 "Depends on the student's desires." (E)
 "Increased greatly. i.e., need more variety." (A)
 "Changes each term!" (F)

46. How good a job does the Cooperative Education Program do in offering a variety of jobs for students in each of the various academic majors?

"Applies to job developers not to our department efforts." (A)
 "Depends on major." (A)

47. In general, what is your best estimate of the number of contacts a Cooperative Education student has with the work-site supervisor each term?

"Daily." (E)
 "Once a term at least and usually more frequent." (A)
 "Do not know for majority of students." (C)
 "Frequent." (E)
 "When they're at work everyday." (E)
 "Daily." (E)
 "Immediate supervisor at work." (E)
 "Do not know. Co-op Coordinator." (E)

48. To what extent does the Cooperative Education Program waste time on:

a. Internal administration

"No time wasted." (E)
 "Note: Any effort devoted towards co-op program is worthwhile as it helps the youth of the nation and the agencies that provide that opportunity." (E)
 "No time wasted." (E)
 "Could be more attention to this." (A)
 "Not sure-lean toward to a very little extent." (C)

b. External administration

"No time wasted." (E)

9.

"Not sure-lean toward to a very little extent." (C)

49. How efficient is the referral of students to employers by the Cooperative Education Program?

"Very efficient this setting." (E)
 "Not at all efficient my particular coordinator, i.e." (S)
 "Not very efficient for central staff-I am satisfied with department." (A)
 "Very efficient in my case." (S)
 "Do not know generally." (S)

50. In general, what is your best estimate of the number of contacts a student has with his/her Cooperative Education coordinator each work term?

"Or as needed. (S)
 "More than twice a term but maybe not as much as once per month." (C)
 "Once a term at least and normally more." (A)
 "Minimum." (E)
 "Twice a term is average." (S)
 "Referring to company Coordinator." (E)
 "A sheer guess!" (F)

51. Many believe that recordkeeping is a useful tool toward program success. That is, it helps to know what per cent of Cooperative Education students go to work for their employers after graduation; what is the difference in starting salaries for students who have participated in Cooperative Education versus those who have not; what are the reasons a student might drop out of Cooperative Education after only one work term. All in all, how good a job does the Cooperative Education Program do in keeping these kinds of records?

"Would like this info.!" (F)
 "Have not seen any literature on these items." (S)
 "New program!" (A)
 "Not appropriate question." (C)

52. Many agree that Cooperative Education Degree Plans or Work/Study Plans, which allow students to plan courses and anticipate graduation dates, are useful to both students and employers. Do you agree that degree plans are worth while?

"As long as they are flexible." (S)

53. Do you agree with this statement: "As the number of students enrolled in the Cooperative Education Program increases, the quality of the program decreases."?

"In our institution funding for faculty is a severe problem." (C)
 "To a certain growth level o.k.-then statement is probably true." (C)
 "Because choice of word would become more difficult, I would strongly disagree. Note: Scope of selection expands, thus providing better candidates." (E)

10.

54. In order to allow Cooperative Education coordinators to give personal attention to students needs there must be enough staff members for a reasonable coordinator-to-student ratio. Do you agree that the Cooperative Education Program has enough coordinators for the size of the program?
- "Too many." (F)
 - "Too many." (A)
 - "Too many probabilities." (A)
 - "Point is-many are not really paid for work-it's volunteer." (C)
 - "We use faculty as part-time coordinators." (C)
 - "For now." (F)
 - "How could most of us have any idea of the internal operations of the CE?" (F)
 - "But it does not seem there are enough." (E)
55. How do you rate the job done by the Cooperative Education Program in offering strong, credible leadership on campus?
- "I have no idea!" (F)
 - "In what?" (F)
 - "Very good." (A)
 - "Excellent in our dept." (F)
56. How good a job does the Cooperative Education staff do in administering the standards of the program consistently?
- "What are the standards?" (E)
57. In general, are you satisfied that work-site supervisors provide quality performance evaluations of Cooperative Education students each work term?
- "Immediate supervisors." (E)
 - "From what I get from students (by my own efforts) I rate it somewhat dissatisfied." (F)
 - "Because they are aware of student performance." (S)
58. To what extent does the Cooperative Education Program recruit from a diverse pool of private and public sector employers?
- "Probably poor." (C)
 - "Job situation now makes it difficult to get balance we should have." (A)
59. How good a job does the Cooperative Education Program do in providing orientation sessions for:
- a. New students
 - "Excellent for freshmen but I don't know of a program for others." (A)
 - "Not applicable." (E)
 - b. Work-site supervisors
 - "I'm going to my first on 4/20/83." (E)

11.

"No orientation on our work site by co-op program." (E)

60. How good a job does the Cooperative Education Program do in providing a method for estimating the overall satisfaction of students with the total program?

"Where are numbers?" (F)

"Rather poor good example." (S)

61. To what extent are work-site training stations closely screened for quality by the Cooperative Education Program?

"We do our own (Dept.)" (C)

"One visit per year by Dr. Winston." (E)

"Company co-op program or school co-op program?" (E)

62. To what extent should Cooperative Education serve as a job placement office?

"Sounds like an excellent idea, if it can work." (F)

"After graduation no!" (C)

"Should work in close cooperation with the job placement office." (A)

63. Do you agree with this statement: "Cooperative Education is a valid, essential, complimentary academic program on an equal basis with other academic programs at _____."?

"Strongly agree in my own case. Don't know about others." (E)

"Essential." (A)

"Needs improvement 'tho." (S)

"Did you mean complementary?" (F)

"We don't get credit or recognition." (S)

"Answered strongly agree or do not know," underlined equal (F)

"It should be." (S)

"Am not aware of other academic programs." (E)

"It should be if it isn't." (E)

64. Do you agree with this statement: "The Cooperative Education student's work experience is a learning laboratory which is educationally broadening?"

"I don't know enough about it, except what I have discovered by my own efforts." (F)

"Can't be." (A)

"It can be." (A)

"Usually." (F)

"Could be better, like informing the student and working more closely with him." (S)

65. In general, how would you rate student satisfaction with Cooperative Education work opportunities which are located some distance away from the school?

"Some students travel 50-100 miles." (F)

"No reason to believe that there is a difference based on distance."

12.

66. In an alternating Cooperative Education Program students may need five years before graduation. In general, how satisfied are you with the five year plan?
- "As long as I get the experience." (S)
 "We have a 4½ year plan." (C)
 "Ours is a 4 year program-1 term for Co-op. Ed." (C)
 "This is a question that only the individual student can answer." (E)
 "Do not know, we don't use it." (A)
67. Cooperative Education is generally understood to work best when the program is accepted corporate-wide by participating employers. Do you agree that employers who participate in Cooperative Education at this institution have total acceptance of the program within their firms?
- "We can only know this if you tell us or if we ask the employer." (F)
 "Strongly agree this setting." (E)
 "We do!" (E)
 "Most do." (A)
 "Rest of university? Agriculture-Hort strongly agree." (C)
 "Cannot read this!" (S)
 "Cannot read." (S)
 "Can't read statement." (E) (reference to quality of print)
 "Can't read statement." (E)
68. How much commitment do Cooperative Education alumni have to the program and the institution?
- "N/A" (F)
 "Two questions." (C)
69. Do you agree with this statement: "Cooperative Education's greatest advantage to employers is the provision of cheap labor."?
- "It isn't cheap! Takes a lot of time to supervise." (E)
 "This labor is by no means cheap!" (E)
 "Shouldn't be, and if a school goes along with it, it shouldn't co-op." (C)
71. Do you agree with this statement: "Cooperative Education coordinators should vary placement objectives for students enrolled in several different disciplines, so long as overall programs objectives are consistent."?
- "Not outside of discipline." (C)
 "This makes no sense!" (C)
 "The fog content of this question is horrendous. Write in simple English." (F)
 "Minimum." (S)
 "Question is very vague." (C)
 "Do not understand question." (E)
 "Poor question." (C)
 "What does that mean?" (E)
 "Poor question." (F)
 "May" O.K. (F)

13.

72. It is generally assumed that employers benefit from hiring Cooperative Education students. Do you agree that Cooperative Education students are an asset to the firm?

"P.S. If I strongly agree, then one might think I am conceited." (S)

"Slows down operation to explain. But employees are a benefit longer." (E)

73. Do you agree with this statement. "Cooperative Education is a program, not a service."?

"Concept or in practice? - assume concept." (C)

"Both strongly disagree and strongly agree!" (F)

74. How much influence does the Cooperative Education Program have on:

a. College policy

"The administration and the CE heads don't communicate!"

"Quite a bit and getting better!" (A)

b. College mission

"Our mission already provides conceptual base for cooperative education." (A)

"Now ask me 'what it should be'? a. (1), b. (1), c. (1)." (F)

"Increasing quite a bit." (C)

75. After several terms of Cooperative Education, students should be better prepared for jobs in the firms where they have had work experiences. In general, how good a job is done by employers in considering the previous work experience when they hire Cooperative Education students for fulltime employment after graduation?

"Very good nationwide." (C)

"P.S. #5 (excellent) applies if I'm hired in the future." (S)

"Good this setting." (E)

"Do not know in general. But our company considers it carefully." (E)

76. Work-site placements are generally made by the Cooperative Education coordinator. How satisfied are you that coordinators participate to the maximum in job placement?

"NO!" (C)

"Was hired through the organization as a co-op, not through U. of Iowa." (S)

"Do not know college wide." (C)

"Somewhat dissatisfied for job developers-satisfied for departmental coordinators." (A)

"Not on college level, but on firm level somewhat dissatisfied." (S)

"Time." (F)

"Not true-by your definition." (C)

"We coordinate our own placement." (C)

"Not true at all." (S)

"A false statement." (F)

14.

77. In general, how much influence do participating employers have upon Cooperative Education Program development?
- "Development at school or at work?" (E)
 "Have associate advisor board." (C)
78. In general, what degree of influence do Cooperative Education Program administrators have upon relevant decision-making processes at the college?
- "A very great deal of influence as long as they have federal money." (F)
 "Not applicable." (E)
79. To what extent do you understand the organizational model of Cooperative Education within _____?
- "To no extent." (E)
80. Do you agree with this statement: "Administrative officers at the school are fully aware of the financial and personnel needs of the Cooperative Education Program."?
- "Some ignore the needs, though." (S)
 "Not applicable." (E)
81. How good a job does the Cooperative Education Program do in promoting the value of work experience concepts with employers?
- "Poor question. What do you mean?" (E)
82. How well is _____ known as a Cooperative Education institution?
- "It's a new program."
 "I never heard of it--and I started at CSFU in 1979!" (S)
 "It needs to be emphasized. It's too secluded right now." (S)
 "Employment throughout the state." (A)
 "Throughout the state and nation, some." (A)
 "But getting better." (S)
 "This is not designed for an adequate answer. We are not known by the entire university and some employers are not aware of us. But we are active University wide. State-wide, and in other states, #5 (throughout the state and nation) is closer but not quite accurate." (A)
83. To what extent are the Board of Trustees of the college aware of the Cooperative Education Program?
- "I really don't know, but I'm sure they have to be told." (S)
 "Probably not much." (F)
 "Another false statement." (F)
84. Good communications between the Cooperative Education Program and various support services, i.e. academic counseling, admissions, placement, registration, and student affairs, is essential to good program operation. To what extent does the Cooperative Education Program have good communications with:

15.

- a. Academic counseling
 - "Many answers would be only opinions/guesses not based on solid information." (C)
 - d. Registration
 - "Have lots of troubles pop up." (S)
 - e. Student affairs
 - "Regrets!" (F)
85. To what extent are employers convinced that Cooperative Education provides an opportunity to pre-screen qualified students for permanent employment in the future?
- "In our company, to a very great extent." (E)
 - "Do not know in others." (E)
86. How good a job does the Cooperative Education Program do in explaining the program to all new students at the college?
- "Excellent for freshmen, very good for others. This is the 3rd time this has come up-didn't you believe my previous answer?" (A)
88. Are the rules and regulations of the Cooperative Education Program clear to participating employers?
- "Very clear." (C)
 - "Very clear this setting." (E)
89. How frequently is information about the Cooperative Education Program given to high school and community college students?
- a. High School students
 - "Once a year and once a term depends on school." (A)
 - "At least twice a term." (C)
 - "Depends." (A)
 - "Never-that I know of, anyway!" (S)
 - "I have participated in several programs for this institution." (E)
 - b. Community college students
 - "At least twice a term." (C)
 - "Depends," (A)
 - "But an excellent idea--will begin." (C)
90. Do you agree with the following statement: "The Cooperative Education Program has a clear, precise, quality handbook for students, in order that 1) they understand policies regarding critical issues such as: housing, financial aid, social security, scholarships, and other issues, and 2) they have realistic goals which can be met."?

16.

a. This is how it is now.

"I don't know if we have these items covered." (S)

"Not pertinent." (A)

"Not in this form." (C)

"Double-edged question." (C)

"Do not know that students understand." (C)

"University Bulletin!" (A)

b. This is how I would like it to be:

"Suggested content doesn't seem that relevant. Other information more important." (C)

Miscellaneous Comments

"Questionnaire too long. The person who designed it could use a co-op experience with Reader's Digest." (A)

"Note: I have only been involved with this program for 1 month." (A)

"Although I very much want to cooperate and complete the... questionnaire, I really find I am unable to do so in a meaningful way...I had to mark so many of the questions 'do not know' that I can't imagine my response could be of assistance to the research effort...." (A)

"Too long." (F)

"This questionnaire is too long." (S)

"Please forgive me for the delay but I was out of the country." (S)

"Too many questions--many questions vague." (E)

"I am 80% faculty and 20% coop. ed. faculty coordinator." (F)

"Hope I helped." (S)

"You have really weak questions in your survey." (F)

"The _____ program is probably based upon number rather than quality to justify Federal Grant Training in the expanding office of co-od ed." (C)

"You're welcome" in response to the "thank you for...." on last page of questionnaire." (S)

"I have worked with the Co-op Program for 1 year to establish it in the college of educ.-I resigned after this task was completed(May 1983).

Therefore, I am not completing this questionnaire." (C)

"We have not participated in this program in over three years. I do not feel we can be effective in this survey." (E)

"Ms Grofe is no longer employed by Ramada Inn Six Flags and unfortunately there is no one else who can accurately respond to your questionnaire." (E)

"There is no Mr. Earlham in this office so am returning your questionnaire." (E)

"In response to your letter dated April 26, 1983 I have mailed in my copy of the study regarding the Cooperative Education at _____ University." (E)

"I received your letter concerning a questionnaire and was a little confused, as we have not received it as of this date. If you would please forward another copy to me, I would be happy to reply." (E)

"As the present Corporate Coordinator of the Co-operative Internship Program at Eastman Kodak Company, I am replying to your questionnaire concerning _____ University's Program. Eastman Kodak Company has not had a co-op from _____ University in recent history. Therefore, I feel our participation is not valuable to your survey." (E)

17.

"Too many questions to be answered by a busy person. I question how useful most of this information will be. Too many of the same questions worded differently. Too many questions had to be answered 'Do Not Know'." (E)

"I started to answer the first questionnaire I received, but there were too many questions. I don't know the answers to, so I threw it out. Some Co-op jobs are good for 18-21 yr. olds who have never had a 'real' job before. I am 28 and have had 2 co-op jobs, 3 quarters at 1 company, 1 quarter at another company. The first company had enough flexibility in their Co-op program so that I didn't feel stuck in an unchallenging, dead-end job designed for someone still 'cutting the apron strings'. The second company was just the opposite--they offer a narrow, limited, unflexible, dead-end job for every co-op; no increasing challenge or learning opportunities as a student continues to return. The co-op staff is desperate(I guess) to come up with jobs in this time of recession. They are scared that if a student doesn't fit into a job and quits, the company won't hire more co-ops. That makes for a lot of pressure to stay with a job, no matter how much the student may hate it!" (S)

"The enclosed copy of my note to _____ is self-explanatory. I am sorry I cannot be of assistance to you in this effort." (E)

"Although I very much want to cooperate and complete the Cooperative Education Self-evaluation questionnaire, I really find I'm unable to do so in any meaningful way. After your conversation with _____, I took pen in hand again but discovered that I had to mark so many of the questions 'do not know' that I can't imagine my response could be of any assistance to the research effort. I am, however, returning the envelope with stamps perchance you can use it for someone else. Sorry I couldn't help." (E)

"Please make note on your survey list from _____ that Dr. Howard Matthews, A&M, will not be participating in the survey. After looking at the survey, he did not feel he could adequately answer the questions, and therefore returned his survey packet back to our office." I certainly enjoyed your session in Toronto on due process." (S)

"The reason I've not answered your questionnaire is that I really have just started Co-op work and have not even placed any Co-op people yet due to funding (agency) cuts. Maybe next time." (F)

"Please check your records! I sent the completed survey.(Within one week of my receiving)" (C)

"In response to your letter concerning the COE Self-Evaluation, I would like to explain why I have not submitted the questionnaire. After reviewing the questions, I feel I am not qualified to intelligently or honestly answer each one. I have been on the _____ COE Board less than one year and have attended three meetings. The majority of material in the questionnaire is non-related to my position and I simply feel I have not been thoroughly educated on the means and purposes of the program. Reluctantly, I have completed the questionnaire, but do not feel it will be of benefit in compiling the necessary results." (E)

"Your letter to D. Dreiske has been referred to me since my office is responsible for IBM employment programs in the Atlanta area. Unfortunately, the information you seek, per your February 8th letter, requires a subsequent referral to Mr. George Morgenroth at IBM's Corporate Headquarters in Armonk, New York. Mr. Morgenroth will contact you once your request has been reviewed. Thank you for your interest in our company." (E)

"After receiving the questionnaire from the Cooperative Education office of _____ University in January, I promptly completed it and sent it

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to you. A few days later the Cooperative Education office sent me a letter stating that they neglected to put an identification number on my questionnaire. They asked me to fill in the number but if I had already sent the questionnaire to disregard their letter! Since then I have been receiving numerous letters from you stating that you have not received my questionnaire. These letters have been quite irritating and when I received your last letter which included a new questionnaire, I disposed of it. The questionnaire was quite tedious and time consuming to complete, and I refuse to fill out another one for it was not my mistake that a questionnaire was sent to me without an identification number. Therefore, please refrain from sending me further letters in the future." (S)

"This is my letter attached to a questionnaire on Cooperative Education Self Evaluation. The questionnaire promises confidentiality, and in order to help you meet that I won't sign my name. This is a sad commentary on the state of the world, but of course I would have to fear my job if this information should accidentally fall into the proper hands. In the proposal the _____ filed with the federal H.E.W. to get a grant for Co-op development, several untrue statements were made. The administration put in the proposal that all the concerned academic departments were in favor of securing the grant. This was not the case. Several Departments were fully supportive of Co-op but opposed to taking the federal grant. The proposal stated that all departments had held meetings and voted to recommend that the federal grant should be taken. This is untrue. The administration may have asked selected individuals for their opinions but some departments which were known to be opposed to the grant were never allowed to make input. Since the proposal was in effect an inducement to the federal government to award funds there ought to be some checking up on this. Since you are the only person that has showed any interest in researching Co-op, you may know of the proper government officer who would be interested in it. Almost everybody at _____ knows this is true but they are all so eager to keep the government money over there they won't say anything about it. I always hated to get poison pen letters and I am ashamed of writing one now but if anybody ever goes and asks they will find out this is true." (F)

Comments from Outside Back Cover

Is there anything else you would like to tell us about your experience with Cooperative Education? If so, please use this space for that purpose. Also give any comments you wish to make that you think may improve Cooperative Education in the future. Please put them here or in a separate letter.

Administrators:

"_____, the Director of the Co-op Program, is doing an excellent job."

"Co-op's value to an institution must be documented continually in student revenue generated, tuition dollars and credit generated recruitment of new and transfer student--influence in decision to attend, perceived employer benefits, and student placement. This information must be assertively distributed to faculty, academic and central university administrators, and the trustees to bring Co-op onto equal basis w/other programs in academic areas, to increase faculty belief in its validity, contribution to students and institution, and solidify program support with hard dollars from institution."

"Along with many other administrators, I work in support of the Co-op effort on campus. This questionnaire was difficult to respond to when you have a deep commitment to the Co-op concept, but only an appropriately general knowledge of the specifics of the Co-op office."

"The Director and Asst. Director are outstanding in their commitment to the goals of Co-op Education. This program is new at _____ and therefore, not enough time has really passed in order to evaluate the program meaningfully."

"Just recently I was Director of the Co-op (Assistant Dean of Instruction) at Brookhaven College of the Dallas County Community College District. The grant that I developed was approved after my departure in June of last year. I have found my experiences in Co-op to be quite rewarding."

"Co-op Ed. is an excellent program. Though relatively new at _____, it seems to be fairly well received. The program is currently under Academic supervision and located away from placement. I feel there should be closer ties (Communicative and Physical) to placement functions."

"This questionnaire assumes that there is one Co-op Ed. Program on campus. That is not correct. Schools and Depts. run their own programs, though there is a campus wide office of Co-op Ed. It facilitates promotion, development of campus standards, etc. But, the programs vary and most of your questions relate better to the School-Dept. programs then they do to the Institutions Office of Co-op Ed. It has a very limited role."

"I did not feel sufficiently knowledgeable to complete this form."

Faculty:

"Since the Program at _____ is expanding and developing, more clarification is needed regarding standards, goals, policy for admission, course content. Closer communication between and among Program coordinators, faculty and administrators would reduce present discrepancies in policies and practices. The Program needs to increase its visibility in every respect-- e.g. advertising, catalogues, brochures, separate offices, out-reach to employers. The Program presently is not well known in communities, industry/businesses, the University, etc."

"Not that some college programs within University are stronger, better managed, more active than others. My being in a college that emphasizes and strongly supports Cooperative Education influenced some of my responses. In the main, however, I've tried to keep a broader view."

"This questionnaire is too damned long to get valid results."

"Whew!"

"The program works. This questionnaire is dubious."

"Too many administrators in pro.--guidelines (rules and reg.) change too often. Questionnaire really doesn't address this."

"This questionnaire was too long to express well thought out answers (119 questions). I would have preferred 20 relevant questions directed to my category, faculty. Because of the way this questionnaire was put together, I don't believe your results will be of much value."

"This is too long of a survey. Surely someone could obtain the same information with 25 questions."

"The Cooperative Education Program is relatively new at our University; therefore some of the statements in this survey are not meaningful at present time. The program is making good progress--we learn by some of our mistakes."

"I strongly feel this questionnaire does not address our administration structure or operating mode. Responses will be of limited use and skew your results."

"I was a Co-op student for part of my college career, and am sold on the program. The experience is invaluable. The pay is a secondary benefit."

"This questionnaire is far too long to be of any value. Co-op at is strongly supported by a few and not supported by the rest of the faculty."

"I will sum my feeling toward Co-op education by saying that I think it is a good program and should always be available to students. I think that this questionnaire is a waste of my time. It could have been much more concise."

An amination boondoggle--faculty have no input or influence at all in the program. 'Managed' by unqualified personnel; there is not one engineer or former middle level/ executive manager in the lot."

"The Co-op program is very tightly tied to the President. It has no regard at all for faculty input or advice. Faculty who fail to applaud Co-op are deprecated by the administration. Question 63: Nor should Co-op be 'equal to other academic programs'. It is a student service, NOT an academic program. It has not faculty, no subject matter, no academic standards. It is, and should remain, a service to the academic program. If Co-op were a degree program, we would quickly become a degree mill. After all, almost every student here has some sort of job: why should they, as well as Co-ops, be 'programs'? If Co-op is an academic program, then so is workstudy and basketball and TKE. (Student Council, ASME, Camera Club, etc.)

"Too many questions."

"Served as Director of Programs at two different institutions. Most programs seem short on travel funds, more budgetary concerns about travel could improve Programs."

"Experiences as a Faculty Coordinator and being involved with Co-op students prior to being a faculty Coordinator, has afforded me a greater insight into the mastery of job-related skills. Please continue this type of on going research."

Coordinators:

"This questionnaire is very confusing--not at all clear. Co-op is a valuable educational experience."

"The University must recognize its obligation to the student interested in Co-op by aiding and encouraging participation. This obligation can best be fulfilled by proper funding and faculty support. It must have a high priority in the budgetary process and full recognition from top administration and board of trustees in order to be a rewarding and productive program. Beneficial to both the student and the University."

"We have the parallel plan almost exclusively, which makes some questions difficult to answer appropriately."

"Many of your questions are too ambiguous."

"Questions were often ambiguous or not understandable--Should not include 3 aspects of a program and ask agreement --if you may agree with two and not the other."

"#13 is inadequately worded. #76 is just not true. #90 question is 2 barbed...1 do we have a handbook 2 do students understand. . . #86 all new. . .? This significantly changed the response versus new students in general.?"

"The office of Co-op Ed. does not want to support job development experience by faculty, yet cannot place core science majors. Very strange considering that chem., physics etc. students are the most employable except under our Co-op Programs."

"This evaluation tool is too long."

"It is a great program. Federally, it should only be funded on a multi-year basis for planning, cost-effectiveness, and continuity. Whether or not it knows it, our campus needs the creative potential of Co-op."

"Co-op Ed. is controlled by the Depts. The University Co-op Ed. Program is complimentary to the Departments. This made answering some of the questions difficult."

"As a coordinator, I deal with students in various physical education options, sports dealership, Commercial and Industrial Fitness, and Athletic training. The greatest difficulty is finding new sites to place our interns. No firms come on campus for student interviews and we have poor communication with firms from outside our local area. It would be ideal if somehow we could publicize the product we have to offer various agencies."

"Cooperative Education is an excellent program providing numerous benefits to both students and employers. The Co-op program at _____ is doing its best explaining these benefits and matching (making opportunities available) students and employers. We are involved in a number of activities both on and off campus and overall do a very good job."

Employers:

"As an employer, I am very satisfied with the appropriateness and caliber of student provided. However, our contact with _____ is generally limited to the appraisals we complete on the trainees at the end of each work period. More direct communication would be mutually beneficial."

"We are currently in the process of bringing our first two _____ Co-op students on board. Answers to questions within may indicate that we are new to the program."

"Cooperative Education is a super program for students especially for employer--All students should participate in some type of co-op or intern program--and long before their final semester in school."

"All answers were geared specifically for our Cooperative Education Program with _____. Many answers will change if the answers are to pertain to our entire Cooperative Education Program."

"I think the Co-op Ed. office should help the student negotiate a reasonable working agreement with the employer and help the latter understand how the student can benefit into the work situation."

We only had experience with one student and one communication with advisor so our comments are probably not relevant. We have not seen the campus or had any experience with the public relations provided for the program."

"We were involved in pilot program where the student could work and go to school during the same school semester. This program was ideal for the student, employer and I believe the Co-op Program. I surely would like to see this program made permanent."

"This comment is concerning this study. Either I'm uneducated or the subject of Cooperative (and should be more so) or you need to develop a questionnaire that is directed to the different players of the Cooperative experience (employees, faculty, administration and students). I did not know many of the answers to questions I felt were best directed to other players of Co-op experience (i.e. questions 3 CDE, 4, 5, AB, 15 A-F, 16, 17, 18A, 19, 20, 22, 23, 24, etc.)"

"This was a total waste of my time and your money. Absolutely none of this was relevant to me as a supervisor/ employer; I have no way of knowing answers to most of the questions. I am very happy with the student's work and she is very happy with the job."

"I did not finish the questionnaire because I didn't have time to go through all the questions to find the few that applied to me. Suggestion: Separate the questions for the employers so we just have to read those questions."

"Our setting provides opportunities for non-paid internships, so I am unsure as to how valid this survey is to our particular setting. Because of this, I found the survey to be rather confusing and hard to interpret. I had not heard of the 'Cooperative Education Program' as such before this survey and feel unable to answer a majority of the questions. Those I did answer, I answered in reference to our non-paid student intern program."

"Numerous questions in survey were not applicable--or answers provided did not adequately answer questions asked. Maybe survey could be divided in sections--student-employer-administrator-coordinator, etc. So that questions would be more relevant--to persons answers."

"I found the questionnaire irrelevant as an employer. 50 to 75% of the questions I had to answer 'Do not know'."

"Cooperative Education is one of the most valuable tools available to Higher Education, and likewise it can be very valuable to employers as well in terms of COST efficiency for training and recruitment, and staff assistance. Cooperative Education helps bridge the gap between Formal Education and the Work Environment."

"We have an excellent relation with the Co-op office and faculty members at _____. This program has provided us with recruiting outstanding students and the individuals we have worked with at _____ are very knowledgeable of our agency and our needs. They continually maintain enough flexibility to develop and maintain their programs."

"Many of these questions are difficult to answer in the format provided because of the substandard variability between Co-op Programs in various academic Departments."

"I feel that employers should have more input into the courses and curriculum being offered to fit into the reality of the real business world. Example: Courses in insurance, general Insurance courses to familize a person with this area of activity. A knowledge of insurance is something a person will use the rest of their life."

"This questionnaire is absurd. It is too long, too complex, and poorly designed. As an employer of 2 Cooperative Ed. students--neither of whom had any idea what Cooperative Ed. was until we received this--I am concerned that the program has not developed an effective communications process. I have had great success with these two students. However, this questionnaire was so poorly designed that I could not express. I cannot generalize to all students, to all employers, or to all coordinators. I hope that the Research Department does not intend to make any practical use of this information, for it would be a grave error to rely on the results of the survey."

"This is the worst questionnaire I have ever seen. It's too long and too boring. It should have been divided into sections with only those questions applicable to each group sent to that group of people. I wasted a lot of time reading questions directed at a different audience."

"This can be one of the best tools a student and employer could have. Employers need young trainable future employees. This program could answer the needs for: 1. Helping the student financially as learns 2. Help the employer train replacement personnel or future employees."

"The students I have working for me are an asset to us. They have been trained and are functioning as regular employees. However, whether they will cast their lot with us in the final analysis, is not certain. Private industry has a greater financial lure than government. That gap will continue to wide. Retaining good people will be more difficult."

"Experience with _____ -- has been most excellent."

"It is my understanding that each student prepares a report at the end of the Co-op term. As an employer, I would like to receive a copy of it."

As per our conversation on 6/21/83, due to our minimal participation in the _____ Co-op Program, I believe it is inappropriate for me to fill out the questionnaire."

"As an employer, we view Cooperative Education as a source of Junior Staff Personnel, and treat Co-op students no differently than similar new employees. We have found that the students from _____ who have worked with us are generally enthusiastic and well prepared. We feel that meaningful on-the-job work experience provides educational benefits that absolutely cannot be duplicated in an academic environment and suggest that increased 'Coordination and supervision' from the school may only impair the experience. We have, from time to time, employed students from other institutions with similar beneficial results for both the student and our firm, with no institutional 'Co-op' ties. Accordingly, based on our experience, we feel that Cooperative Education should basically assist in matching students and employers, with minimum contact once a placement is made. In this sense, _____ has been excellent."

Students:

"I believe a more concentrated effort should be exercised by universities such as _____ to schedule classes at a time more convenient for those in the Cooperative Education Program, and for graduates seeking to extend their education. This would help students in the Co-op Program to graduate earlier while reinforcing study habits to a point where returning to a full-time student status will require less adjustment."

"I personally feel that the Cooperative Education Program is beneficial to any student who enters the program. It helps the student to obtain experience in his or her major and it builds a sturdy foundation and is a learning experience. The staff was very helpful in placing me as well as other individuals in positions. I thank them very much and praise their hard work in pleasing their students."

"This survey was too long to be answered adequately."

"I would like to receive a summary of the summary of results from the students only. Will there be a catagorical differentiations on the summary?"

"Cooperation education has been very advantageous for me. I always recommend it to other students."

It was excellent. I received meaningful work assignments and learned a lot. The pay also helped, but I think the experience gained was the most important part."

"I believe co-oping was the best college decision I could have made. The only problem is that I heard about co-oping from a friend at another University and had a hard time finding out about it at University of _____. I believe it should be advertised more and more credit should be given to the program then what it already has."

"Profs think taking Co-op is copping out, an easy credit they say."

"Choices of Co-op coordinator preferred. Evaluation of Co-op coordinator to be filled out by students for Co-op office preferred."

"I have had 2 cooperative education experiences. One of them I went out and found myself and then went through the school. The other, the employer came to my advisor and set the Co-op Ed. experience up. In my case, the Co-op Ed. people didn't do anything. I have however met one person from Co-op Ed.-- he came to a class I was in and discussed Co-op Ed. It was a special class with relatively few students. I'm not very high on their exposure. They do have Co-op Ed. experiences available in most other curriculums through (In handbooks of classes). My actual work experiences have been very good though. Not necessarily because of the Cooperative Ed. staff, but because of the employers I've worked for. They've been excellent."

"I feel Co-op recruitment should be conducted in Social/Science Welfare fields too."

"This evaluation is too long. Many questions are not relevant to the students who were in the Cooperative Education Program."

"My answers are based on my experience with the Recreation Administration Dept. which I feel has one of the best Internship programs in the nation. Without paid or volunteer work experience that the recreation department requires, I feel the program would not be as good as it is."

"When encountering the Co-op administrators on campus they always seem rushed and unorganized. I've been dissatisfied with their responses at times. Negativism exists about the students abilities to achieve in areas other than the major area of study."

"I really wish that Dr. _____ would have informed me more about the program rather than just signing me up. I felt a lack of communication. Luckily everything went OK. I did enjoy the experience. Next time you may want to make your questionnaire a little shorter. It took a long time to fill out. Thanks for considering me tho."

"The Co-op Program and staff at _____ is great. I thank them very much for the opportunity they have given me."

"The advisors of Co-op should try to meet with their Co-op students once every other month to discuss summer employment. Sometimes I feel that they are not working on my summer Co-op work-block. There is a short of communication."

"I am fully supportive of the Co-op program. It has given me financial aid and work experience that will benefit me greatly. My greatest gain from the program is the social aspects of dealing in business. It also helped greatly w/directing me toward a specific career goal. In other words, I went from marketing major to wanting to enter into technical sales."

"By participating in the Co-op program, I have gained a confidence in myself and in my abilities that ultimately can only benefit me in achieving my potential as a complete person. I feel the biggest drawback in _____'s program is students are reluctant to go on a 5 year plan. If there is a way to develop a program for 4 years, (offer credits and grades for the Co-op term), I think it should be undertaken."

"Personnally, I was very disappointed in the program. I was placed in a work site which my coordinator knew nothing about. Also, I was mislead about certain things in the program. My coordinator failed to visit me until several months into the work block. Was not kept up to date on what was going on at school, e.g. registration for the following semester. Very poorly organized program which could benefit many students if only the coordinators would do their job."

"I feel that Co-op has been very good for me. It has made me feel confident in 'The Real World'. I may be able to remain in my position full-time after graduation--Co-op has created job security for me. The Co-op office doesn't help much in the job search--they aren't very cooperative."

"Faculty advisors request entirely too much from the Co-op student to receive credit. Many students have classes at night after working during the day. Also many co-op jobs require studying and periodic tests that must be passed. I don't feel students should be assigned extensive, lengthy term papers just because they work. Many faculty advisors require much more from a co-op student than they do from regular students simply because co-ops do not carry as many college hours during working semesters. I am extremely disappointed with my faculty advisors attitude of co-op students. However, co-op faculty is excellent."

"Question 63--Cooperative Education should be elevated to the level of being valid, essential, and complimentary, but I question if it will ever be taken on an equal basis with other academic programs."

"Note--I worked at a site 650 miles from campus: I was also the first student from _____ at this site. My experience has been great, but you should judge my answers accordingly."

"My internship is the result of my response to a position announcement circulated among the students in my program. Cooperative Education was not a prominent part of my internship."

"I think the Faculty of each department should be more involved. I was never told anything about the job I got, I had not idea of what to expect and my advisor never even came to where I was working once the whole summer."

"The Cooperative Education Program has been the most valuable experience in my career. I highly recommend it to other students."

"I feel the the Cooperative Education Program gave me the competitive edge I needed to get the job I have today. Graduating in Personnel Mgmt. at _____ with over one year professional experience (through Co-oping in Personnel w/USDOL) helped me be the professional I am. I know of many others who graduated with the same degree, but haven't found the opportunity like I have. I am now a Personnel Manager at a Stevens Plan with over 1300 employees."

"Although I was hesitant to stretch out graduation for an extra year, I now know that it was the best decision I could have made. I believe it is an excellent program for both students and employers but that it has to be more publicized here at _____. Not enough students know about the program or are encouraged to participate. I happened to find out about it all by accident...I think all students need to know about the program so they have an opportunity to decide if they want to participate. How can students become involved in it when they haven't heard about it?!"

"My personal experience with Co-op was very beneficial. I can think of any positive aspects and would be happy to relate them to anyone interested in ascertaining them. My education and perspective on working were both augmented by my Co-op experience. This is a very poorly designed questionnaire and I would personally question any conclusions which are drawn from it. The questionnaire seemed to be directed toward internal operations of Co-op programs rather than

the resulting benefits for students. I know very little about _____'s Co-op organization, but a great deal about my personal experience. I did not complete the questionnaire because I became disgruntled at answering questions which are better asked of other parties. If and when a pertinent questionnaire is designed for students, I would be very happy to provide you with information. Please do take note of my name."

"My experience with Cooperative Education was a very rewarding experience. My supervisor worked constantly with us in the beginning to orient us in the type of work we were doing and then later he placed a great deal of responsibility on us while still helping and informing us of different work situations along the way. My employer was Black & Decker."

"I was not very happy with my first Co-op assignment (work placement, position); I was also not ecstatic about my second one. However, I strongly believe that my experiences were valuable, and I highly recommend Co-op to others. The lessons my positions taught me about human relations and the business world are invaluable. Through Co-op, I established my career goals and received the incentive to return to classes, taking courses I wanted rather than just the recommended ones. Co-op has been such a positive aspect in my college career, I'm surprised more schools do not have a Co-op program like ours."