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ABSTRACT

To promote research conducted by faculty, Cuyahoga Community College (CCC), in Ohio, developed the Faculty as Researcher Initiative (FRI). The initial goals of the FRI were to recruit 15 to 18 faculty members from CCC's three campuses to form a research group, assist in the development of research ideas and strategies, and develop a system for communicating results. An emphasis on continuous quality improvement in CCC's overall faculty development program links and lends importance to the FRI with respect to faculty development activities, as the initiative is based on the assumptions that the quality of learning is directly linked to the quality of teaching and that the most effective method of improving teaching is for faculty to research questions that arise in their day-to-day activities. Institutional support requirements to implement the initiative have included reassigned time for consultants and participants, access to computers, a budget for reproducing materials, appropriate software with table display capabilities, and allocations for travel. Other considerations include establishing institutional support, informing faculty, and obtaining all necessary texts and computer equipment well in advance; coordinating meeting times between college campuses; and sustaining participant commitment. Attached materials include project descriptions, faculty recruitment letters, classroom assessment techniques, a discussion of differences between formal educational and action research, participant signup and evaluation forms, a schedule of activities, a list of common research errors, and a project planning checklist. (KP)

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ED 371 803

Faculty as Researcher Initiative

A Paper Presented at the International Conference on Teaching Excellence

Sponsored by the National Institute for Staff and Organizational Development (NISOD)

May 25, 1994

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I. OVERVIEW AND PURPOSE OF THE FRI PROGRAM:

Cuyahoga Community College (CCC), since its inception, has maintained a commitment to quality instruction. Faculty have been encouraged to utilize the most up-to-date technology and innovative teaching methodologies to meet the educational needs of their diverse (age, ethnicity, ability, experience, etc.) student population. Faculty development programs have been developed to provide appropriate levels of support for this commitment. These have taken various forms, some traditional (professional improvement leaves, travel, in-service meetings) and others quite non-traditional (Faculty Conversations meetings, Faculty Lecture Series, Faculty Scholarship Fund, the Faculty Symposium, etc.).

At first review, the support for faculty scholarship might appear to be an odd practice for a community college. These institutions have always emphasized teaching over research. Heavy teaching loads are a clear result of that emphasis. Increasingly, however, educational leaders (e.g. K. Patricia Cross) argue that community college faculty should scientifically (1) experiment and evaluate their instructional efforts, (2) measure student characteristics, differences, and levels of performance, and (3) evaluate instructional and support programs. Certainly it could be argued that improvements in instruction and learning are dependent upon research and evaluation. Quality teaching has a direct relationship to research; and the best person to conduct classroom related research is the teacher himself. Community college faculty should conduct research on a regular basis. Unfortunately, most faculty are uncertain or inexperienced in how to do this. In fact, many seasoned, experienced faculty have not conducted research since graduate school. This situation should and can change.

Through a series of activities and interventions that were led and conducted by the faculty consultants, this initiative is directed at developing a program to promote faculty conducted research.

II. Initial Goals of the Faculty Research Initiative **(overhead #1)**

1. Recruit a start-up group of faculty (15-18) from the three campuses interested in conducting research.
2. Assist faculty in the identification and clarification of research ideas.
3. Assist faculty in the development of appropriate research strategies for selected problems/issues, including research design, sampling, instrmuentation, data collection, and data analysis.
4. Develop a system for the communication of results within the College.
5. Represent CCC and present research papers at local, regional, and national conferences on faculty and instructional development and specific areas of research.
6. Contribute to other faculty development activities.

III. Where Does the Faculty Research Initiative Fit in the CCC Faculty Development Program?

The need for instructional and academic/teaching excellence has become a national concern. There is a general consensus that academic excellence is achieved primarily, but nor exclusively, through the continuing development and support of instructional, counseling, administrative and related competencies of the faculty. In order to assure an excellent instructional faculty, CCC has made over the past several years, a variety of commitments to faculty development.

The following is the working definition of faculty development used at CCC:

> Faculty development is that set of ongoing, goal-directed activities in which a faculty member engages for the specific purpose of personal and professional growth and improvement that will continue to enhance quality educational experiences for students, and academic excellence in the College. Faculty is defined as full-time and part-time teaching, library, and counseling faculty.
> **(overhead #2)**

The philosophy of the CCC Faculty Development Program is based on the following assumptions:

> 1. The faculty is the most important resource of the College. Their most important professional responsibility is instruction in the broadest sense.
> 2. A large part of teaching is a set of behaviors which are learned and which can be continually improved. Other aspects of the faculty role are also important, learned, and can be improved, such as participation in governance, leadership, keeping current in discipline area, curriculum development. etc.
> 3. Faculty should be encouraged to plan their professional development over a period of time in conjunction with their Division Head and the Faculty Development Program.
> 4. The Faculty Development Program supports sufficiently diverse activities to include a wide range of faculty needs, interests, and motivations.
> 5. The overall Faculty Development Program as well as its components are intended to be intellectually stimulating and professionally relevant.

IV. FACULTY DEVELOPMENT PROGRAM COMPONENTS **(overhead #3)**

The CCC Faculty Development Program contains the following components (several were discussed in detail):

Continuous Quality Improvement applied to teaching

New Faculty Orientation and workshops on a wide variety of topics

Faculty Resource Centers (Library and Computer) at each Campus

Mentoring program for new and part-time faculty that is discipline based

Faculty travel fund distribution

Ralph M. Besse Award for Excellence in Teaching

Faculty Emeritus Program

Faculty Lecture Series

Faculty Scholarship program

Faculty Symposium

Scholar in Residence Conversations

CCC/KSU post-graduate cours .s for CCC faculty

Instructional and Program Development Grants (IPD)

Forums for sharing outcomes of reassigned time, research projects, travel and improvement leaves.

Professional Improvement Leaves (sabbaticals)

Campus-based Faculty Development Coordinators

Campus peer consultants for computer applications and training

The organizational structure of the program is displayed in overhead #4.

V. CCC Continuous Quality Improvement Program

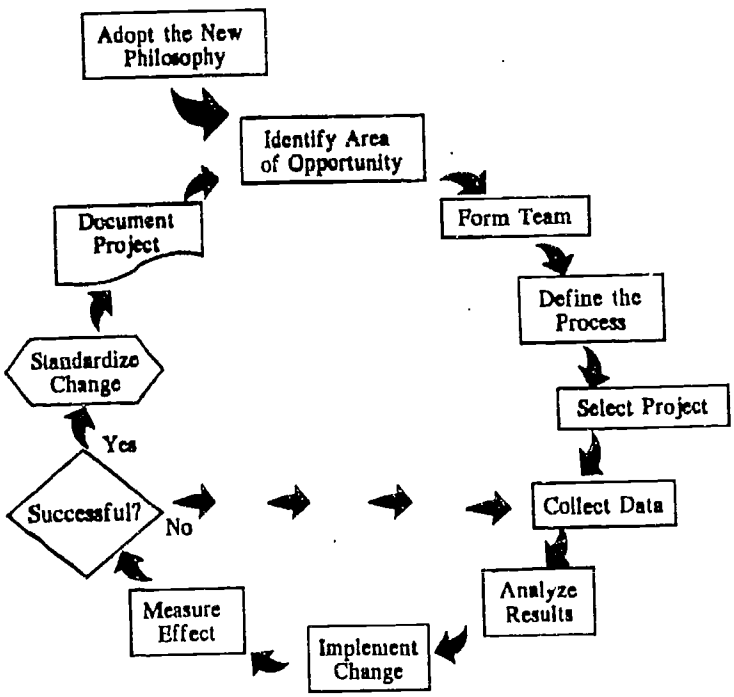
The Continuous Quality Improvement Program of CCC is an important institutional linkage for the Faculty Research Initiative. CQI means a college-wide commitment to enhancing the quality of education, work and services by encouraging every member of the college community to participate in and contribute to the process of on-going improvements.

CQI has significant implications for the classroom. It establishes a goal of constantly improving the quality and efficiency of instructional planning and delivery. The CQI process includes an audit and assessment of current practices, extending the College's research activities to build the data necessary for innovative and effective improvement activities, and the promotion of academic outcomes assessment.

The CQI overhead (#5) illustrates this process more fully.

Note that the procedures for CQI mirror those for the conduct of action research for educational settings. It is our contention that the enhancement of those research skills within the faculty are a necessary precondition for a full institutional commitment to CQI.

The Continuous Improvement Cycle



VI. Definition of Research

Because the Faculty Research Program at CCC is designed to encourage and support research and assessment activities within the faculty with the belief that research and assessment are essential to quality instruction and professional growth in a comprehensive community college, it is appropriate to limit its scope. At CCC, research is defined as systematized knowledge characterized by accuracy, critical ability, thoroughness, and erudition, and should be focused in the following: research on teaching/learning; organizational/institutional research; and technological innovation related to instruction.

VII. Five Assumptions Related to the Faculty As Researcher Concept

(overhead #6 lists them)

Cross and Angelo , Classroom Assessment Techniques (1985), state five assumptions that underpin their commitment to all faculty acting as researchers. They are as follows:

1. **The quality of student learning is directly - although not exclusively - related the quality of classroom teaching. Therefore, the first and most promising way to improve learning is to improve teaching.**

2. **To improve their teaching, teachers need to make their goals and objectives explicit. They also need to receive specific, comprehensible feedback on the extent to which they are achieving those goals and objectives.**

3. **The research most likely to improve teaching and learning is that conducted by teachers on questions they themselves have formulated is response to problems or issues in their own teaching.**

4. **Inquiry and intellectual challenge are powerful sources of motivation, growth, and renewal for college teachers and Classroom Research can provide such challenge.**

5. **There is nothing so esoteric, mysterious, or fragile about Classroom Research that it cannot be entrusted to and done by anyone capable of and dedicated to college teaching.**

Please note that the kind of research we are suggesting to be most appropriate for "new" or less experienced community college faculty researchers is action research. The Initiative, however, has been structured to provide assistance to faculty who are interested in conducting either action research or formal educational research. The following three overheads (#s 7,8,9) illustrate the difference between the two and "casual" approach to problem solving. The latter as you will see is something that should be avoided but may be quite commonly practiced.

OVERHEAD #10

VIII. 1994-95 Faculty Research Program Goals and Objectives

1. Goals

The statements below describe objectives of both a long-term and on-going nature.

To create a community of researchers committed to undertaking studies to improve instruction and evaluate college programs.

To train faculty in social science research methods, design, and data analysis.

To evaluate and improve classroom efforts and student learning outcomes.

To train faculty in computer statistical package software (SPSS/PC+).

To act as consultants and colleague reviewers for "experienced" researchers involved in on-going projects.

To provide a faculty research and evaluation linkage to the College's CQI program.

To provide services as needed to the College's faculty development program and constituent parties.

To train faculty in several of the K. Patricia Cross/Thomas Angelo "Classroom Assessment Techniques."

To promote studies that measure and analyze learning outcomes for both formative and summative evaluation purposes.

To annually publish a collection of faculty research projects.

To promote the publication, dissemination and presentation of faculty research project results in journals and at regional and national conferences.

To build linkages to neighboring post secondary educational institutions and community organizations.

overhead #11

2. Proposed 1995 Faculty Research Program Objectives

Recruit a new group of faculty researchers to add to continuing members.

Award research grants to faculty proposals meeting criteria.

Develop a journal club to discuss articles related to instructional research. It would meet three times per quarter.

Present a series of "how to" seminars on following topics:

- the scientific process
- review of literature
- stating research questions and hypotheses
- research design
- data collection
- descriptive statistics
- parametric statistics
- non-parametric statistics
- computer software for statistical analysis (SPSS/PC+)
- instrumentation
- analysis of data
- reporting results

Provide individual faculty consultations on research projects.

Provide a series of seminars on the Cross/Angelo Classroom Assessment Techniques during the Spring.

Coordinate publication of faculty research reports in a CCC journal.

Serve on Faculty Development Office advisory committees.

IX. Institutional support requirements for consultants and participants

1. reassigned time
   a. consultants - 4 per quarter, about 27% of workload

   b. participants - committee awards reassigned time; amount is dependent on type of project. Typically, a project can be accomplished in 100-125 hours. At CCC this would be the equivalent of teaching a 3-4 credit hour course on the quarter system. This level of support is critical.
2. access to computers
   a. word processing and statistical package software must be available for both consultants and participants. Ideally, each researcher and consultant would have his own PC.
   b. A lab is needed for the SPSSPC+ sessions.
   c. A portable computer/notebook for consultants would be ideal for one-on-one sessions in individual faculty offices.

3. copy center
   a. a budget is needed for promotional and recruitment materials, handouts, dissemination of project reports

4. software -
   a. Wordperfect or a comparable software is needed, with table display capabilities;
   b. SPSSPC+ is the standard for academic researchers. An excellent Studentware version with Manual costs only $44. It will handle nearly any educational setting research design.

5. travel - at CCC $325 per year is allocated to full-time faculty for travel. This can be supplemented with an additional $650 through the Faculty Development Office. These monies aid in the dissemination of projects findings and results.

X. Program Design

1. recruitment activities - expect to have to work hard on this for three to four weeks. Sent out three announcements; must have the backing of administration and the College Faculty Development Program; it should be stated in the announcement.

(An example of one of our Announcements is presented on overhead #12.)

Program designed continued, recruitment activities....

Faculty may be reluctant to engage in this kind of activity for several reasons: some do not read their mail and may not become aware of the opportunity; are busy; are already in a comfortable routine; may need to be convinced there is sufficient payoff; may be intimidated by the research process; may not want to see their work judged by their peers; may fear statistics; may dislike writing; some may lack organizational skills.

2. focus group meetings - were held at each of the three campuses at the start of the project, about three weeks after the announcement; faculty were asked to fill out a questionnaire, asking several questions about themselves.

The overheads titled "FRI - Participant Form"[6] (#s 13,14) illustrate this form.

An overview of the future meetings was given. Polling of intended projects was conducted. Attempt is made to determine common availability for meeting times and location.

Overheads #15 and 16 list the research topics that developed from these focus group meetings and which became participant projects.

3. seminars

a. display list of seminar dates and topics **(overhead #17)**
display outline of seminar 1 and 2 **(overhead # 18-20)**
display samples of handouts (e.g. one of the checklists or statistical test guides) **(overheads #21-24)**

b. the importance of the "second hour" participants discuss their own projects, ideas, problems, level of progress; they become a small community and true colleagues

c. SPSS/computer lab seminars - "hands on" each seminar includes reading assignments; tutorial session led by consultant; completion of exercises; application to their own projects

4. personal consultations on projects - designing a "data analysis path" plan for each participant

5. dissemination possibilities
   a. in service sessions

   b. CCC publication - CCC Press

   c. conferences

   d. Faculty Lecture Series

   e. journal publications

   6. evaluation measures - **display overhead of the questionnaire designed for collection of participant responses, overheads #25-26.**

H. The participants
   1. profile of participants
   2. abstracts of their studies - **overheads 15,16**
   3. review feedback from participants
   4. explain effect of program upon their morale and commitment to the College

XI. Challenges in establishing a program/ Recommendation for changes in FRI program design **(overhead #27)**

1. early support - all questions elated to available reassigned time for the consultants and participants, copy center, committee and organizational structure etc. should be in place at least six weeks prior to the start of the academic year

2. early announcements - faculty should be informed of the possibility of research seminars, grants etc. during Summer Quarter. A Focus Group meeting of all interested persons might be held then to start thinking about possible project topics. Department and division heads might be consulted about the data or research needs.

3. meeting time coordination - multi-campus operations such as CCC are a nightmare for meeting times and places. Devote serious time and effort to working out a suitable arrangement; flexibility is essential; some faculty may need assistance with time management

4. early acquisition of all texts, hardware, software. Decisions as to text should be made prior to start of seminars; and a text is needed! Software should be user friendly but powerful and inexpensive; **refer to overhead # 28 regarding texts.**

5. access to computer facilities

6. sustaining participant commitment

7. accountability for phases of participant research

8. maintain participant focus on research questions

9. focus on a narrow range of research topics (eg classroom/instructional strategy or program effectiveness

PRESENTATION

OVERHEADS

FACULTY RESEARCH INITIATIVE

1. Recruit a start-up group of faculty (15-18) from the three campuses interested in conducting research.

2. Assist faculty in the identification and clarification of research ideas.

3. Assist faculty in the development of appropriate research strategies for selected problems/issues, including research design, sampling, instrumentation, data collection, and data analysis.

4. Develop a system for the communication of results within the College.

5. Represent CCC and present research papers at local, regional, and national conferences on faculty and instructional development and specific areas of research.

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Cuyahoga Community College

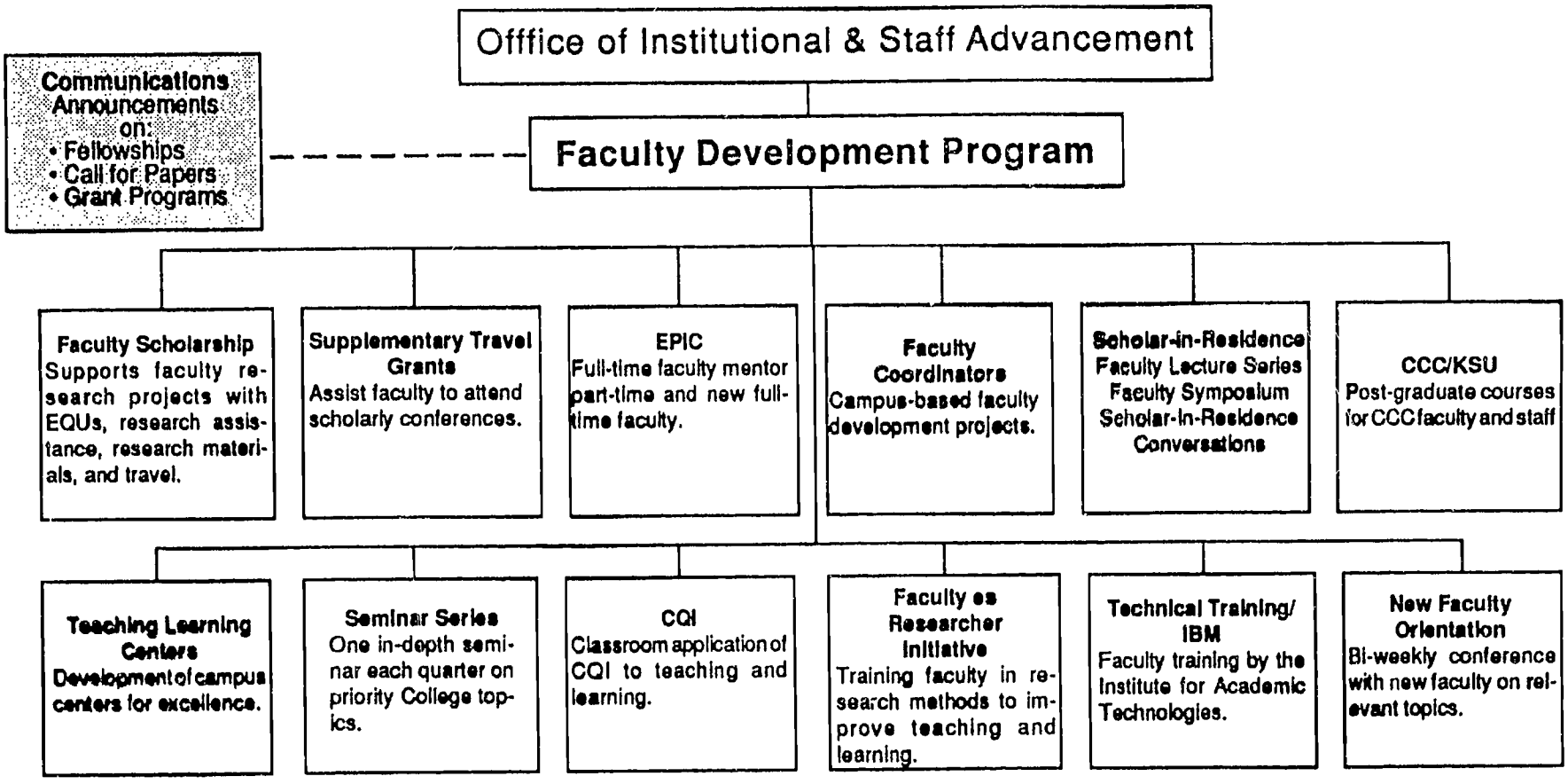
A Team Approach to Institutional Climate Change Through Comprehensive Quality and Staff Development Programs

Faculty Development

- Faculty Planning Committees
- Campus Coordinators
- Scholar-In-Residence
  - Faculty Lecture Series
  - Faculty Symposium
  - Scholar-In-Residence "Conversations"
- Part-time faculty mentored by full-time faculty
- Collaborations for post graduate studies
- Faculty Scholarship grants
- Faculty travel grants
- Faculty to be trained to conduct classroom research
- Cleveland Foundation Projects
  - CQI in the Classroom
  - Seminar Series
  - Technology training for faculty
- Development of teaching/learning centers
- Besse Awards for Excellence in Teaching
- Support in developing "Professional Improvement Leave" proposals
- Support in grants, fellowships, call for papers

From the Office of Institutional and Staff Advancement

Cuyahoga Community College

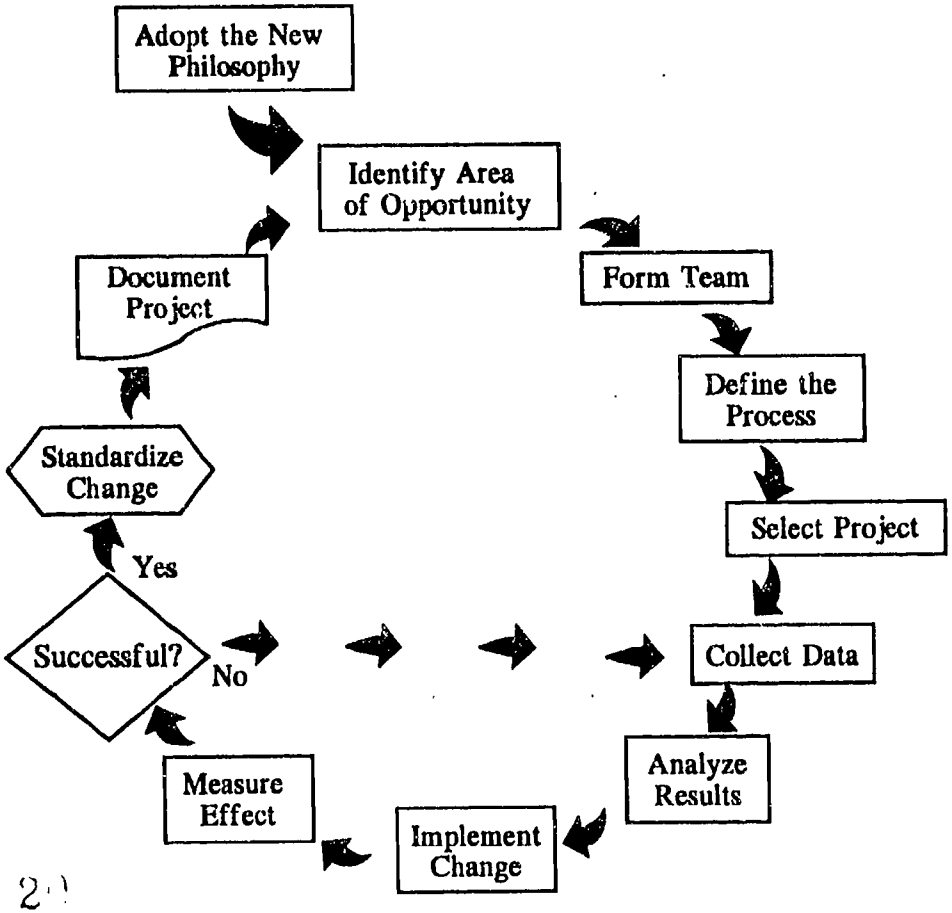


OVERHEAD #4

19

Continuous Quality Improvement Awareness

The Continuous Improvement Cycle



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OVERHEAD #5

In an excellent and important publication, Classroom Assessment Techniques (1985), Cross and Angelo state five assumptions that underpin their commitment to all faculty acting as researchers. They are as follows:

1. The quality of student learning is directly - although not exclusively - related the quality of classroom teaching. Therefore, the first and most promising way to improve learning is to improve teaching.

2. To improve their teaching, teachers need to make their goals and objectives explicit. They also need to receive specific, comprehensible feedback on the extent to which they are achieving those goals and objectives.

3. The research most likely to improve teaching and learning is that conducted by teachers on questions they themselves have formulated is response to problems or issues in their own teaching.

4. Inquiry and intellectual challenge are powerful sources of motivation, growth, and renewal for college teachers and Classroom Research can provide such challenge.

5. There is nothing so esoteric, mysterious, or fragile about Classroom Research that it cannot be entrusted to and done by anyone capable of and dedicated to college teaching.

These assumptions served as the framework for the Faculty Research Initiative and its continuation as the Faculty Research Program. They also are consistent with the goals of the College's commitment to a Continuous Quality Improvement program.

OVERHEAD #7

DIFFERENCES AMONG FORMAL EDUCATIONAL RESEARCH, ACTION RESEARCH, AND THE CASUAL APPROACH TO PROBLEM SOLVING IN EDUCATION[1]

Area	Formal Educational Research	Action Research	Casual or "Common Sense" Approach
1. Training required	Extensive training in measurement, statistics, and research methods is needed. Much of the scientific research done in education is weak because of deficiencies of the researchers in these areas.	Only a limited training in statistics and research methods is needed because rigorous design and analysis are not usually necessary. More training in educational measurement is needed than most teachers possess. Even if teacher's research skills are low, good action research can be carried out with the aid of a consultant.	No training is needed. This is the same method used since prehistoric times to achieve faulty solutions to ill defined problems.
2. Goals	To obtain knowledge that will be generalizable to a broad population and to develop and test educational theories.	To obtain knowledge that can be applied directly to the local classroom situation, and to give the participating teachers inservice training.	To make changes in the current procedure that appear likely to improve the situation.
3. Locating the research problem	Problems identified by a wide range of methods. Research worker must understand the problem, but is usually not directly involved in it.	Problems identified in the school situation that are causing the research worker trouble or are interfering with the efficiency of his teaching.	Problems identified in same manner as action research.
4. Hypotheses	Highly specific hypotheses are developed that employ operational definitions and are testable.	A specific statement of the problem usually serves as the research hypothesis. Ideally, action research hypotheses should approach rigor of formal research.	Specific hypotheses not established. Participants rarely progress beyond a fuzzy and ill-defined concept concerning the nature of the problem.

[1] ... Co., New York, 1963, pp. 319-322. By permission.

OVERHEAD #8

DIFFERENCES AMONG FORMAL EDUCATIONAL RESEARCH, ACTION RESEARCH, AND THE CASUAL APPROACH TO PROBLEM SOLVING IN EDUCATION (cont.)[1]

Area	Formal Educational Research	Action Research	Casual or "Common Sense" Approach
5. Review of the literature	An extensive review of primary source material is usually carried out, giving the research worker a thorough understanding of the current state of knowledge in the research area. This enables him to build upon the knowledge accumulated by others.	A review of available secondary sources gives the teacher a general understanding of the area to be studied. Exhaustive review of primary sources is almost never done.	Usually no review of the literature is carried out, although one or two secondary sources may be checked.
6. Sampling	Research worker attempts to obtain a random or otherwise unbiased sample of the population being studied, but is usually not completely successful.	Pupils available in the class of the teacher or teachers doing the research are used as subjects.	Some casual observation of pupil behavior may be made by the teacher after the change decided upon has been in effect for a while.
7. Experimental design	Design is carefully planned in detail prior to start of the study and adhered to as closely as possible. Major attention is given to maintaining comparable conditions and reducing error and bias. Control of extraneous variables is important.	Procedures are planned in general terms prior to start of study. Changes are made during the study if they seem likely to improve the teaching situation. Little attention is paid to control of the experimental conditions or reduction of error. Because participating teachers are ego-involved in the research situation, bias is usually present.	If classroom testing of the decision is attempted, procedures are planned only in the most general terms. No attempt is made to establish common definitions or procedures among participating teachers.

1. From Borg, Walter R., *Educational Research*, David McKay Company, New York, 1963, pp. 319–322.

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OVERHEAD #9

DIFFERENCES AMONG FORMAL EDUCATIONAL RESEARCH, ACTION RESEARCH, AND THE CASUAL APPROACH TO PROBLEM SOLVING IN EDUCATION (cont.)[1]

Area	Formal Educational Research	Action Research	Casual or "Common Sense" Approach
8. Measurement	An effort is made to obtain the most valid measures available. A thorough evaluation of available measures and a trial of these measures usually precedes their use in the research.	Less rigorous evaluation of measures than in scientific research. Participants often lack training in the use and evaluation of educational measures, but can do a satisfactory job with help of a consultant.	Usually no evaluation is made except for the casual observations of the teachers participating. The teacher's opinion as to whether the new procedure is an improvement or not depends almost entirely on whether the teacher approves the change.
9. Analysis of data	Complex analysis often called for. Inasmuch as generalizability of results is a goal, statistical significance is usually emphasized	Simple analysis procedures usually are sufficient. Practical significance rather than statistical significance is emphasized. Subjective opinion of participating teachers is often weighted heavily.	Subjective opinion of the participants is usually the only procedure used. No attempt made at objective analysis.
10. Application of results	Results are generalizable, but many useful findings are not applied in educational practice. Differences in training and experience between research workers and teachers generate a serious communication problem.	Findings are applied immediately to the classes of participating teachers and often lead to permanent improvement. Application of results beyond the participating teachers is usually slight.	Decisions reached are applied immediately in classes of participating teachers. Even if the decision leads to improvement, it is often changed later because no evidence is available to support its continuance. This approach leads to educational fads and "change for the sake of change."

1. From Borg, Walter R., *Educational Research*, David McKay Company, New York, 1963, pp. 319–322.

1994-95 Faculty Research Program Goals

The statements below describe objectives of both a long-term and on-going nature.

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To evaluate and improve classroom efforts and student learning outcomes.

To train faculty in computer statistical package software (SPSS/PC+).

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To promote studies that measure and analyze learning outcomes for both formative and summative evaluation purposes.

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To build linkages to neighboring post secondary educational institutions and community organizations.

overhead # 10

2. Proposed 1995 Faculty Research Program Objectives

Recruit a new group of faculty researchers to add to continuing members.

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Develop a journal club to discuss articles related to instructional research. It would meet three times per quarter.

Present a series of "how to" seminars on following topics:

- the scientific process
- review of literature
- stating research questions and hypotheses
- research design
- data collection
- descriptive statistics
- parametric statistics
- non-parametric statistics
- computer software for statistical analysis (SPSS/PC+)
- instrumentation
- analysis of data
- reporting results

Provide individual faculty consultations on research projects.

Provide a series of seminars on the Cross/Angelo Classroom Assessment Techniques during the Spring.

Coordinate publication of faculty research reports in a CCC journal.

Serve on Faculty Development Office advisory committees.

Overview #12

From the Office of Institutional and Staff Advancement

Faculty Development

FACULTY RESEARCH INITIATIVE

All faculty involved or interested in educational research who have some familiarity with a personal computer are invited to attend the next three seminars of the Faculty Research Initiative group. These seminars will be held in the Eastern Campus Computer lab, Room 3303A or 3302 (main building, 3rd floor). Each seminar will consist of two parts:

Part 1 Hands-on experience performing calculations and data manipulations of existing data sets to familiarize self with computer and software package.

Part 2 Researchers will discuss progress on their particular study, and get critical comments from the group. Please bring your data collection instruments.

Part 1 of the third meeting will involve setting up the data entry form and code book for each researcher's study.

Note: For these sessions you must bring your personal copy of Norusis, M.J., and SPSS Inc. (1991). SPSS/PC+ StudentWare Plus. If you do not own a copy please call either Professor Brown or Professor Jelfo.

Seminar Dates

Tuesday, April 19, 1994 **Tuesday, April 26, 1994** **Tuesday May 3, 1994**

Seminar Time

2:00 to 4:00 p.m.

If you would like to attend these seminars please contact:
Dr. Valerie Brown at ext.4521 or Professor Don Jelfo at ext.2058
by April 13,1994.

FACULTY AS RESEARCHER INITIATIVE

PARTICIPANT FORM

1. **Name**_____

   How many years have you been employed at CCC?_____

   Do you have tenure at CCC?_____

2. In what subject areas do you teach?_____
   _____

3. Do you have computer skills?_____

   Do you have access to a computer?_____

   If yes, what type? _____

4. Are you available for a series of 2 1/2 to 3 hour seminars that would meet on an afternoon once a week? _____

   What afternoons are you available?_____

5. Do you have a research idea/project topic already in mind?
   _____

   Please describe it. _____
   _____
   _____
   _____

6. Are your ideas for a research project directly related to improvement of instruction, student assessment, or program evaluation?_____

   If so, please explain._____
   _____
   _____

7. Are you interested in conducting a joint research project?

   If so, with whom?_____

8. Are you currently in a doctoral program?_____

_____

9. What is the highest degree that you have attained?

_____

In what year did you attain your degree?_____

Have you earned graduate credit hours beyound this degree?
_____ If so, how many_____

10. Are you committed to completing the research project by the end of the Spring Quarter? _____

If not, please explain._____

_____

_____

11. Have you ever completed a formal research project related to instruction, students or educational programs? _____

If so, please briefly describe one. _____

_____

_____

_____

FACULTY RESEARCH INITIATIVE
BRIEF DESCRIPTION OF
FACULTY RESEARCH PROJECTS

RESEARCHER	PURPOSE
#1	Demonstrate using a valid and reliable instrument the impact of training in coping skills and progressive muscle relaxation on students' test anxiety.
#2	Examine the relationship between student demographics and student ability to grasp abstract concepts and ideas in mathematics and philosophy.
#3	Describe the impact of three alternative instructional strategies on diagnostic reasoning skill development of ADN students; to explore student and professorial perceptions after participation in three alternative learning activities designed to develop diagnostic reasoning skills.
#4	Determine the relationship between prior knowledge of course material, previous grades in English prerequisite courses to student performance in a research writing course.
#5	Examine the relationship between study activities (eg., use of study guide, use of self-quiz in study guide, performance self-quiz, completion of reading assignments, time spent studying, number of times each chapter in the text was read, note taking on reading, notes on chapter terms,and note taking in class) and student performance (exam grade) for students enrolled in political science and psychology.
#6	Determine specific developmental psychology knowledge used daily by CCC alumni employed as child care workers and health care workers to perform their job responsibilities.

OVERHEAD #16

FACULTY RESEARCH INITIATIVE
BRIEF DESCRIPTION OF
FACULTY RESEARCH PROJECTS

RESEARCHER	PURPOSE
#7	Identify psychophysical sensory impediments to learning and implement non-medical interventions to eliminate or modify the impediments to facilitate learning.
#8	Identify predictors of student continuation in math curriculum beyond MATH 120 - Intermediate Algebra.
#9	Determine the profile of students currently participating in the Postsecondary Enrollment Options Program (PEOP), a program for high school students to enroll in college courses for credit, including demographics, personal reasons, impediments, and degrees of success.
#10	Identify learning style preferences of students in Early Childhood Education, and determine if there are differences in preferences with regard to age (i.e., traditional vs nontraditional student) learning preferences.
#11	Evaluate the effectiveness of the Paralegal Program's curriculum, specifically PL 223 Bankruptcy Law (day and evening sections) at CCC by assessing student skills in synthesizing and applying information in an upper level elective course through the daily use of teacher designed feedback forms and group instructional feedback techniques.
#12	Evaluate the effectiveness of multiple methods used to teach vocabulary in Introductory French classes.

SCHEDULE OF RESEARCH INITIATIVE ACTIVITIES

WINTER & SPRING 1994

DATE	DAY	ACTIVITY	COMMENTS
1/3-1/29	Recruitment Newsletters (3) distributed; respond to all inquiries		
1/31/94	Mon.	Focus group, West	journals and articles
2/2/94	Wed.	Focus group, East	journals and articles
2/3/94	Thurs.	Focus group, Metro	journals and articles
2/16/94	Wed.	Seminar 1	Scientific process
2/23/94	Wed.	Seminar 2, Pt. I	CCC Library Resources and Descriptive Statistics
3/02/94	Wed.	Seminar 2, Pt. II	Descriptive Statistics continue; Sampling
3/09/94	Wed.	Seminar 4	Non-parametric Statistics
3/16/94	Wed.	Seminar 5	Parametric Statistics
4/19/94	Tues.	Seminar 6	SPSSPC+ Studentware Orientation/Building a DataFile
4/26/94	Tues.	Seminar 7 Save, Log & Lis,	Continuation of SPSSPC+ Get, Print, Frequencies
5/3/94	Tues.	Seminar 8 Summarizing data,	Continuation of SPSSPC+ Examine, Hypothesis Tests
5/10 - 6/15		Individual Consultations	

I. Nature of Science
   A. Aim of Science
   B. Science as Product
      1. scientific vs. nonscientific questions
      2. knowledge as description
      3. knowledge as explanation and prediction
      4. knowledge as understanding
   C. Science as Process
      1. cyclical nature
      2. empiricism
      3. objectivity
      4. control
   D. Differences between formal educational research and casual approach to problem solving in education (handout)

II. Research Design and Data Collection
   A. Selecting a Topic for Research
   B. Variables
   C. Relationships
   D. Stating Problems and Hypotheses
   E. Research purposes
   F. Stages of Conducting Research
      1. selection and formulation of problem
      2. preparation of research design
      3. measurement
      4. sampling
      5. data collection (handout of "checklists")
      6. data processing
      7. data analysis and interpretation
   G. Basic Methods of Research (handout)
      1. historical
      2. descriptive
      3. developmental
      4. case and field
      5. correlational
      6. causal-comparative or "ex post facto"
      7. true experimental
      8. quasi-experimental
      9. action
   H. Common Errors in Conducting Social Research (handout)
      1. in formulating the study
      2. in reviewing the literature
      3. in gathering data
      4. in design and methodology
      5. in each of the nine methods

SEMINAR II - DESCRIPTIVE STATISTICS

I. Overview of Statistics
   A. Why the social science researcher uses statistics
   B. Functions of descriptive and inferential statistics
   C. Variables and Measurement
      1. definitions
      2. the measurement process
      3. reliability
      4. validity
      5. nominal variables
      6. ordinal variables
      7. interval variables
      8. ratio variables
      9. continuous ands discrete variables
   D. Aggregate data
      1. guidelines
      2. ecological fallacy

II. Organizing Data
   A. Frequency distributions
   B. Comparing distributions
   C. Grouped frequency distribution
   D. Tables
   E. Pie Charts
   F. Bar graphs
   G. Frequency polygons

III. Measures of central tendency
   A. Mode
   B. Median
   C. Mean
   D. Which to use?

IV. Measures of Variability
   A. Range
   B. Variance/ Mean Deviations
   C. Standard Deviation

V. The Normal Distribution
   A. Characteristics
   B. Standard deviation and the normal curve
   C. Probability and the normal curve

SAMPLING

A. Definition

B. Why we do it

C. Population Definition and Sampling Design

D. Probability Sampling
   1. Random Selection
   2. Simple random sampling
   3. Stratified random sampling
   4. cluster sampling
   5. systematic sampling

E. Non Probability Sampling
   1. definition
   2. where used
   3. convenience sampling
   4. purposive sampling
   5. quota sampling

F. Factors Affecting Choice of Sample Design
   1. stage of research and data use
   2. available resources
   3. method of data collection

G. Sample Size
   1. population heterogeneity
   2. desired precision
   3. sampling design
   4. available resources
   5. number breakdowns planned

A. COMMON ERRORS IN FORMULATING A RESEARCH STUDY[1]

OVERHEAD #21

1. Puts off selection of a problem until he has finished all or most of his courses.
2. Uncritically accepts the first research idea that he thinks of or that is suggested to him.
3. Selects a problem that is too vast or too vague to investigate meaningfully.
4. Prepares fuzzy or untestable hypotheses.
5. Fails to consider methods or analysis procedures in developing his tentative research plan.

B. COMMON ERRORS IN REVIEWING THE LITERATURE[2]

1. Carries out a hurried review of the literature in order to get started on the research project. This usually results in overlooking previous studies containing ideas that would have improved the student's project.
2. Relies too heavily upon secondary sources.
3. Concentrates on research findings when reading research articles, thus overlooking valuable information on methods, measures, and so forth.
4. Overlooks sources other than education journals, such as newspapers and popular magazines which often contain articles on educational topics.
5. Fails to define satisfactorily the topic limits of his review of the literature. Searching too broad an area often leads to the student's becoming discouraged or doing a slipshod job. Searching too narrow an area causes him to overlook many articles that are peripheral to his research topic but contain information that would help him design a better study.
6. Copies bibliographic data incorrectly and is then unable to locate the reference needed.
7. Copies far too much material onto note cards. This often indicates that the student does not have a clear understanding of his project and thus cannot separate important from unimportant information.

C. COMMON ERRORS IN GATHERING RESEARCH DATA[3]

1. Pays insufficient attention to establishing and maintaining rapport with his subjects. This often leads to refusals to cooperate or to a negative attitude that can reduce the validity of tests and other measures.
2. Weakens his research design by making changes for the administrative convenience of the schools from which he draws his subjects.
3. Fails to explain the purposes of measures used in the research to teachers and administrators. If a teacher thinks a test or measure is silly or worthless, her attitude is quickly sensed by pupils and leads to poor cooperation.
4. Fails to evaluate available measures thoroughly before selecting those to be used in his research. This often leads to the use of invalid or inappropriate measures.
5. Selects measures to use in his research of such low reliability that true differences are hidden by the errors of the measure.
6. Selects measures to use in his research that he is not qualified to administer and score.

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1. Borg, Walter R., *Educational Research: An Introduction.* David McKay Company, Inc., New York, 1963, p. 38. By permission.
2. Ibid, p. 67.
3. Ibid, p. 94

OVERHEAD #22

I. PLANNING THE PROJECT CHECKLIST

1. Draw up a short list of topics.	Consult journals, library catalogues, colleagues.
2. Select a topic for investigation.	Discuss possible outcomes with colleagues and decide what the emphasis of your study is to be.
3. Establish the precise focus of the study	Draw up a "first thoughts" list of research questions and subject each to rigorous examination.
4. Decide on the aims and objectives or formulate a hypothesis.	Think carefully about what is and what is not worth investigating.
5. Draw up an initial project outline.	List aims and/or objectives, questions to be investigated, possible methods of investigation and literature to be consulted.
6. Read enough to enable you to decide whether you are on the right track.	The initial reading may give you ideas about approach and methods and how information might be classified.
7. Devise a timetable to enable you to check that all stages will be covered and time allowed for writing.	It is easy to take too long over one stage and so to have sufficient time to carry out essential tasks in the next stage.
8. Consult colleagues.	At the stage of deciding on a topic, and after drawing up an initial project outline.

OVERHEAD #23

CUYAHOGA COMMUNITY COLLEGE
FACULTY DEVELOPMENT
FACULTY RESEARCH INITIATIVE
SEMINAR 3

WORKSHEET

Researcher's Name:_____ Date: _____

I. STUDY PURPOSE (DESCRIPTION OR EXPLANATION)

II. RESEARCH QUESTIONS AND/OR HYPOTHESES

III. VARIABLE LIST CONCRETE DEFINITION

IV. VARIABLE RELATIONSHIPS (MODELING)

V. VARIABLES INDICATORS INSTRUMENTS

VI. VARIABLES LEVEL OF MEASUREMENT

VII. APPROPRIATE STATISTICS FOR EACH RESEARCH QUESTION OR HYPOTHESIS

VIII. CODE BOOK

IX. DATA ANALYSIS

FACULTY RESEARCH INITIATIVE EVALUATION

(1) Which Faculty Research Initiative activities did you participate in (Check all that apply):

___ Focus group meeting
___ Seminars on the research process
___ Seminars on computer application of SPSS/PC+ StudentWare
___ Individual consultation
___ Other (Specify)

(2) How useful were the seminars on the research process

___ Very much
___ Quite a bit
___ Somewhat
___ A little
___ Not at all
___ Not attended

(3) How useful were the seminars on computer application of SPSS/PC+ StudentWare

___ Very much
___ Quite a bit
___ Somewhat
___ A little
___ Not at all
___ Not attended

(4) What did you like most about the seminars?

(5) How can the seminars be improved?

(6) What additional topics would you like to see covered?

(7) What topic(s) could be deleted?

(8) Were your expectatiors for participating in the project met?

___ Yes ___ No ___ Not applicable

(9) How much time per week did you spend on your project including attending seminars? _____

(10) Does your research interest lend itself to additional study next academic year? ___ Yes ___ No

(10) Would you participate in the initiative next year if offered?

___ Yes ___ No

(11) What things prevented you from taking full advantage of the initiative this year?

(12) How pleased were you with the outcome of your participation in this initiative?

___ Very much
___ Quite a bit
___ Somewhat
___ A little
___ Not at all

Thank you for your response!

Challenges and Recommendation for Change

1. Early institutional support
2. Early announcements to faculty
3. Meeting time coordination
4. Early acquisition of all texts, hardware, software.
5. Access to computer facilities
6. Sustaining participant commitment
7. Accountability for phases of participant research
8. Maintain participant focus on research questions
9. Focus on a narrow range of research topics (eg classroom/instructional strategy or program effectiveness

TEXTS

I. Required

Norusis, Marija (1991) SPSS/PC+ Studentware Plus, Chicago, SPSS Inc.

A copy of the Table of Contents is attached.

II. Suggested

A. General Research Methods

Babbie, Earl. (1992) Practice of Social Research. Belmont,CA., Wadsworth.

Nachmias, D., and C. Nachmias. (1987) Research Methods in the Social Sciences. New York, St. Martin's.

Phillips, Bernard. (1985) Sociological Research Methods. Homewood, IL., Dorsey.

Singleton, Royce Jr. et al. (1988) Approaches to Social Research. New York, Oxford.

Isaac, Stephen and William Michael. (1972) Handbook in Research and Evaluation. San Diego, Robert Knapp.

Bell, Judith. (1993) Doing Your Research Project. Philadephia, Open University Press.

Cross, K.Patricia and Thomas Angelo. (1988) Classroom Assessment Techniques. Ann Arbor, MI., University of Michigan, National Center for Research to Improve Postsecondary Teaching and Learning.

B. Statistics

Fox, William (1992) Social Statistics Using MicroCase. Bellevue, Washington, Microcase Corporation.