

AN ABSTRACT OF THE THESIS OF

Dale Bennett Visger for the degree of Doctor of Education  
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Title: A COOPERATIVE WORK EXPERIENCE APPROACH TO  
IN-SERVICE STAFF DEVELOPMENT FOR SELECTED  
COMMUNITY COLLEGES

Abstract approved: \_\_\_\_\_

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Henry A. Ten Pas

The major purpose of this research was to study the in-service programs for community college vocational instructors, and develop guidelines for a cooperative work experience approach to in-service staff development.

The specific objectives of the study were:

- (1) To develop a research instrument capable of measuring the agreement relative to a cooperative work experience approach to in-service staff development.
- (2) To establish value priorities for a cooperative work experience approach to in-service staff development of vocational instructors at the community college.
- (3) To establish agreement regarding organizational procedures for a cooperative work experience approach to in-service staff development for vocational instructors at community colleges.

- (4) To develop guidelines that incorporate objectives two and three above in an in-service program.

Objective one was met by conducting a survey of the literature and listing statements concerning a cooperative work experience approach to in-service staff development for community college vocational instructors. A jury panel evaluated and refined the statements that were used as an interview checklist.

The sample consisted of an in-service coordinator, vocational instructor, and employer selected to represent each of the five community colleges in Oregon, and the five in Alberta used for this study.

The second objective was realized through the study of the literature, and a two-way analysis of variance F statistic. Present in-service programs are of lower value than a cooperative work experience in-service program. Overall group means indicated very high agreement as to the value and relevance of using cooperative in-service activities to provide for professional growth.

To accomplish the third objective, the degree of agreement with each statement by the three groups was analyzed, and the pertinent comments made by the interviewees considered. The basic organization and operating procedures of vocational work experience programs may be used for conducting cooperative in-service activities. The data and comments gave strong support for using cooperative in-service activities.

Objective four was met, as was objective three, and the following items should be considered when developing a cooperative in-service program:

- (1) Professional development must be the primary purpose of cooperative in-service programs.
- (2) The in-service coordinator is a key factor.
- (3) A written professional development plan is a must.
- (4) In-service activities must be learning experiences.

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by

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A COOPERATIVE WORK EXPERIENCE APPROACH TO  
IN-SERVICE STAFF DEVELOPMENT FOR  
SELECTED COMMUNITY COLLEGES

CHAPTER I

INTRODUCTION

If the community-junior college is to grow in quality as it has in quantity; . . . then it is imperative that immediate and considerable attention be given to the educational needs of those who staff 'democracy's college.'

(O'Banion 1972b, p. 83)

The current demand for accountability and relevance of education places an increasing demand upon the community college and its vocational instructors to provide a meaningful learning climate for the changing student clientele. To accomplish this immense task, provision must be made for an in-service program that affords the instructor the opportunity and activities that will assist him to become and remain the facilitator of learning that a community college requires, if it is to fulfill its unique role.

Statement of the Problem

The need for providing in-service education that addresses itself to the identified needs and interests of teachers is becoming a most crucial factor in providing for professional growth.

(Davies and Holloway 1975, p. 1)

In-service education for the community college vocational instructor is becoming more crucial and necessary as the demands for relevancy and accountability in education are stressed by those who support the educational institutions.

Higher education in its endeavor to prepare community college instructors and meet their in-service needs has met less than "10% of the live demand, and probably not more than 1% of the estimated need at present" (Haskew 1975, p. 112). McCormick (1975) found after research of community colleges in the southeastern United States that graduate programs for community college personnel were designed primarily around a small core of courses related to teaching and administration. Smith (1969) states that even summer school courses are often geared to meet university requirements, rather than relate to actual needs of the instructor.

Beckerman (1976) points out that in-service education usually consists of workshops or university courses, and that these do not always relate to or satisfy the teacher, school or district needs. More often they are a convenient way to increase salary. The present in-service programs are often too broad; lacking teacher input, they do not zero in on the real needs of the instructors (Dillon 1974).

The current state of in-service programs at most community colleges leaves much to be desired, and emphasizes the need to

develop an in-service program that will meet the critical need for staff renewal. Garrison (1975) clearly states the problem as follows:

The present typical state of in-service in most of our community colleges is one of confused aims and ill-defined purposes. Yet, given the current dramatic shifts in the make-up of community college student groups, . . . the need to help current faculty 're-tool' their approaches and the equally urgent need thoroughly to orient and assist new and part time faculty is so pressing that the question is not whether to have in-service opportunities, but rather what these should be and how they should develop (p. 18).

Education, if it is to be a profession, must have life-long professional renewal in-service activities using the lab and field approaches (Howsam 1976). Former U.S. Commissioner of Education Terrel H. Bell (1975) states that the increasing demands for vocational programs presents new challenges to develop in-service education that will provide the necessary staff development to assure effective instructors and capable leadership for our educational system.

#### Purpose of the Study

The major purpose of this study is to identify and evaluate the degree of agreement given by the population and the review of literature with the values and organizational procedures of a cooperative work experience approach to an in-service program for community college vocational instructors.

### Objectives of the Study

This study is designed to meet the following specific objectives:

1. To develop a research instrument capable of measuring the agreement relative to a cooperative work experience approach to in-service staff development.
2. To establish value priorities for a cooperative work experience approach to in-service staff development for vocational instructors at the community college.
3. To establish agreement regarding organizational procedures for a cooperative work experience approach to in-service staff development for vocational instructors at community colleges.
4. To develop guidelines that incorporate objectives two and three above in an in-service program.

### Rationale for the Study

The immensity of the undertaking is no cause to shudder. Our country was not built by people who were fearful of disrupting special privileges or of righting inequities. The citizens of our province have shown on several occasions that they are prepared to embark on rapid, even fundamental change, given bold, imaginative planning and leadership. There is reason to shudder, however, when one considers the consequences of leaving things undone.

(Worth 1972, p. 296)

The community college, which is not a parallel of the university or a lengthening of the high school, has critical in-service staff

development requirements due in part to its unique philosophy, comprehensive offerings, and changing student body. Walter Worth (1972), chairman of the commission to evaluate education in the province of Alberta, was referring to this educational in-service need when he made the above statement.

Gorman (1975) states that the expansion of vocational offerings has created an influx of instructors who do not have the preparation for teaching at the community college level, therefore there is a continuous need for updating instructional staff. The need for self-renewal for all instructors, and the consequences of neglecting it, are expressed by O'Banion (1972a), a strong supporter of relevant in-service programs for community college instructors.

Master teachers need renewal and reward or they will tend to grow dull and cynical; what is worse, they may become clock punchers rather than exemplars for other staff members (p. 10).

The present in-service programs provided at graduate level are not satisfactory for community college faculty (Martorana 1975). Such in-service education is better called career development, as the in-service activities are often taken to gain a degree or the next salary increment. O'Banion (1972b) has found that administrators of the community college agree that present in-service educational programs are not meeting the instructors' needs. Mesa (1976) states that the instructors take courses classed as in-service, but which

seldom result in direct improvement of services to the students. Dillon (1974) believes that the quality of education for students can only be improved through upgrading the effectiveness of their instructors.

Education, including in-service of vocational instructors, will be successful only to the extent of a "total partnership with the community at large" (Barlow 1974b, p. 32). Commissioner Bell (1976) said that "we should liberalize vocational education and vocationalize liberal education" (p. 10). In Oregon this is referred to as "vocademic" by H. Ten Pas and the researcher. This can only be accomplished by "exploring new initiatives to develop a strengthened and enduring interrelationship between the world of education and the world of work" (Javits 1976, p. 98). Tyler (1971) states that in-service education will not be limited to the campuses in the future, but will extend into actual work settings.

"Work" is a reality of our society, states Keller (1972), therefore it should "be an integral part of our educational system" (p. 187). Green (1968) was well aware of this when he said that it was through the performance of one's work "that men make clear who they are, reveal their individuality, or in other words express themselves as persons" (p. 39). Cooperative work experience education has endeavored to do just that--join education and work. Goldhammer

sums it up as follows:

That which is needed in today's world is neither a new brand of academicism nor a new style of vocationalism, but a fusion of the two (p. 24).

A cooperative approach to in-service education needs to be evaluated by those who would be affected by its implementation; the community college, the vocational instructor, and the employers. Croy (1973) and O'Banion (1972b) would have state boards for community colleges assist the administrators and faculty to survey and implement in-service programs, rather than legislate such programs. The college in-service coordinator, vocational instructor, and the employers representing the community in which the community college is located must by a cooperative effort create an in-service program that will effectively meet all their needs.

Cooperative education does not take an "either/or" position in regards to the value of vocational or academic education. Rather, Cross (1975) believes the well-educated individual needs both, and cooperative education has the mechanism to provide the balance.

The U.S. Department of Health, Education, and Welfare (1972) emphasizes that after many years of only lip service to the task of developing a close "business-industry/industrial-vocational education alliance," and with the new concerns for each other, now is the time to move "to the arena of mutual assistance" (p. 229). Through a combined effort, a cooperative approach to in-service staff

development could be explored and developed as a result of educational research. Industry provides an environment for the instructor that cannot be duplicated in the classroom or laboratory. The opportunities for the development of interpersonal relationships and work attitudes are provided more forcefully in the daily routine of business than in any other situation. These opportunities for in-service cannot be duplicated in seminars or workshops.

Wallace (1974) and Worthington (1975) emphasize the need for surveys and research to identify needs and develop in-service programs for vocational education. If the needs of staff and community colleges are to be met, then Willie (1976) says the attitudes of the staff and college to in-service educational programs need to be determined in order to develop an in-service program that will meet the identified needs. The basic principles of in-service, therefore, must be continually examined, tested, evaluated, and refined. Miller (1975), O'Banion (1973a) and others all emphasize and agree that the priorities of the 1970's are to create and identify well-designed in-service programs.

Bell (1975) states that the changing student of the community college caused by a changing society challenges vocational education to develop a variety of personalized in-service staff development programs. They must be concerned with more than what conditions are at present, but also with the "unborn tomorrows of vocational

personnel development" (p. 2). Meade (1971) believes that until meaningful programs of staff development meet the needs of instructors we cannot reach the goal of education: that of helping students to learn.

From the present trends and expectations for vocational education in the 1980's, Swanson (1975) would place the need for vocational instructors who have had adequate in-service opportunities as the most difficult problem facing the community colleges.

The community college is "the last chance to succeed in the educational system" (p. 2) for many students, states Preus (1975), therefore the improvement of teaching through individual programs must be given the highest priority. Unless the magnitude and urgency for creative and imaginative in-service programs are realized and met, the community colleges' full potential will remain unrealized (O'Banion 1973a).

#### Definition of Terms

Many terms used throughout this study are considered to be self-explanatory. Definitions are provided for terms used frequently and which may not be understood within the context of this study.

Advisory Committee. A group of individuals, usually outside the educational profession, providing expertise from areas of the

community for the purpose of offering advice and counsel regarding policies to the board of directors of the community college.

Analysis of Variance. An inferential statistic designed to measure the difference between three or more group means when the sample is composed of small numbers in each cell.

Community College. A two-year public institution offering a wide variety of courses to a student body with a wide range of interests and abilities. For the purpose of this study no distinction is made among the junior college, the institutes of technology and art, or the community-junior college.

Cooperative Work Experience (CWE). An educational program for individuals who, through a cooperative arrangement between the educational institution and employers, receive instruction in vocational and academic courses by the alternation of study in school with a job in an occupational field. These experiences are planned and supervised by the educational institution and employer so that each contributes to the individual's education and employability.

Cluster Area. A family of occupations having similar skills and knowledge requirements. Oregon had identified the following 13 occupational cluster areas: Accounting and Bookkeeping, Agriculture, Clerical, Construction, Electricity-Electronics, Food Service, Forest Products, Health Occupations, Industrial Mechanics, Marketing, Metals, Steno-Secretarial, and Service Occupations.

Employer. An individual from business or industry who hires graduates from one or more cluster area programs of the college. He is able to provide a variety of meaningful work experiences for his employees.

Exploratory Work Experience (EWE). A guidance program where students are given the opportunity to observe and participate in a variety of job situations. It is school supervised, and school credit may be granted. It is often the initial program for junior high school students, but may be used in later grades.

General Work Experience (GWE). Supervised part-time employment to provide maturing experiences and income. The employment is not necessarily related to the student's occupational goal. There is no related class in school for GWE in contrast to cooperative work experience, but school credit may be granted.

In-Service Activities. Educational experiences designed as a strategy to bring about positive changes in the instructor's professional and technical competencies. They may be one or a combination of the following: (a) research; (b) writing for publication; (c) industrial experience; (d) participation in civic activities; (e) participation in seminars; (f) membership and attendance in professional organizations; (g) course work at an institution of higher education; (h) orientation activities; or (i) others as agreed upon by the instructor and administration.

In-Service Coordinator. An individual designated by the college administration, responsible for supervising staff development programs for the instructional staff.

In-Service Education. Education activities engaged in by instructional staff during their term of service designed to increase their competence on the job. Professional Improvement and Staff Development are terms considered to be synonymous with in-service education.

Occupational Education. That training that prepares an individual for entering employment in business or industry. Programs are excluded that prepare individuals for employment in occupations generally considered professional or which require a baccalaureate or higher degree.

Official Recognition. Undergraduate, graduate, or in-service credit granted for completed in-service activities. Recognition may also be obtained through pay increases, promotion, and/or administrative approval to participate in special activities such as in-service education.

Professional Development Agreement. An agreement between the institution and the employer prepared by the in-service coordinator, instructor, and employer, indicating the period of training, hours of work, salary, and competencies to be gained to assure basic understanding of the instructor's position as a learner in the

cooperative arrangement. The agreement provides the obligations and responsibilities of each of the parties involved.

Professional Development Plan. Indicates what is to be learned by a specific instructor, whether it is to be gained from research and study, or through on-the-job experience. The professional development plan is derived from a realistic analysis of the tasks, duties, responsibilities, and professional competencies of the instructor. The plan is developed by the instructor in consultation with the staff development officer, and includes the in-service activities that would upgrade the instructor's professional competence.

Training Sponsor. The individual in industry to whom the instructor looks for instruction and training on-the-job. The on-the-job training sponsor may be the owner or manager, or a responsible individual appointed by management.

Training Station. The place of employment in business or industry of the vocational instructor.

Vocational. That relating to one's "vocation" or life thrust. It may include more than one's "job" whereby an income is secured; it may relate to one's "calling."

Vocational Education. Education that prepares one for "living," which will include occupational education. The literature may interchange occupational education with vocational education.

Vocational Teacher Education Model (Cotrell 1970). The instructional competencies of vocational and technical teachers listed as the result of an analysis of their careers. The list is divided into ten categories, subdivided into 50 clusters, with 390 elements listed under their respective cluster titles. The model is the result of eight years of study, using a sample population of over 3,000.

### Summary

There is an urgent need to create and identify well-designed in-service staff development programs that will do more towards meeting the community college vocational instructor's need for self-renewal, than are provided by present in-service activities.

The growing realization for the values of cooperative work experience education indicate that if adapted to an in-service program, the attainment of relevant staff development activities could become a reality.

## CHAPTER II

## SURVEY OF RELATED LITERATURE

The Community College

The community-junior college is an American institution that has developed in answer to needs in the American system of education. It is designed to meet specific functions that were not being met by the senior high schools or the institutions of higher learning.

The first concept was to teach courses locally for students, so they could then transfer to the four-year institutions. A broader and more comprehensive function was soon recognized as necessary for the two-year colleges. A curriculum should be offered which would include courses and programs especially developed to meet the vocational needs of students living in the college community. Venn (1964) stated that more must be done for the 80% of students who do not graduate from college.

As the community college movement grew, so did the functions, until the more definite objectives and responsibilities of the two-year institutions had to be identified.

The number of community colleges has increased specifically in the late sixties and early seventies, with an accompanying growth in enrollments which has led to an implicit redefinition of the functional role of the institution.

Charles Monroe (1972), a national authority on the community college, defines the community college as "a separate and distinct part of the educational system with its own objectives and destiny" (p. 23). He goes on to say that the community college is

The fulfillment of the American promise to its citizens for universal education; it offers two years of education beyond high school at a comparative low cost to the student, but not necessarily low cost to the public (p. 25).

The community college objectives are basically: a comprehensive curricula, open door principle, and community orientation.

Thorton (1972) would divide the total spectrum of functions under two headings: (1) those which deal with the cultivation of the humane qualities of the student; and (2) those which deal with occupational and professional development.

The first group would be subdivided into: (1) opportunities for improving learning skills for the disadvantaged; (2) continuing education services for everyone in the community; (3) general education for all students; and (4) guidance and counseling services for students.

The second group of functions would be: (1) technical and vocational education at the post-secondary level; and (2) transfer courses to the four-year institutions.

Landrith (1971) summed up the same functions and listed them under five general functions of the community-junior college. They would center around the following five broad areas: (1) popularizing

education; (2) offering transfer courses; (3) offering terminal or occupational courses; (4) adult education; and (5) guidance (p. 60).

The Canadian community colleges are a close parallel to the sister institutions in the United States. Campbell (1971) describes the basic functions of the community college, listing the same five that Landrith has given in the above statement.

The five functions given by Campbell and Landrith are expanded by Monroe (1972) in order to give specific functions of the community college.

1. Transfer or liberal arts, pre-professional curriculum
2. Citizenship and general education
3. Occupational training
4. General studies
5. Adult and continuing education
6. Remedial programs
7. Counseling and guidance
8. Salvage (closely related to remedial and counseling)
9. Screening
10. Goal finding a cooling out
11. Custodial
12. Co-curricular or student activity (p. 32-45)

The community college with these basic functions has specific need for instructors who can assist in the fulfilling of these goals and objectives.

The placement of the colleges in the local communities and the low cost to the students has increased the enrollment in the community college. It has also increased the demand for more instructors who can make a contribution to meeting the instructional needs of the community college.

The community college, with its goals and functions entrenched in the concept that teaching is of prime importance, should be among the first to recognize that the improvement of teaching must be given the highest priority. The community college is the last chance for "formal learning for many students. No other educational organization is better prepared to motivate the student and raise his level of understanding and skill, and provide the basis for further formal learning" (Preus 1975, p. 2).

The community college is student centered, says Cohen (1972), rather than subject centered. It thus becomes a leader in expanding educational opportunities through its treatment of subject matter, community centered offerings, and non-selective admission policies. If the community college is to retain this position and meet with success in the 1980's, O'Banion (1972b) believes this success will rest on the quality of the teaching staff.

#### The Community College Vocational Instructor

The demand for vocational instructors at the community college level has increased in the late sixties and early seventies due to the increase in the number of community colleges and vocational program offerings. Another reason for the demand for vocational instructors is the increase in the number of high school graduates who will attend community colleges. The need for vocational

instructors is not only growing, but is changing in emphasis (Thorton 1972). Thorton states that the emphasis is changing from craftsmanship to technology, and from "instruction in tools and artisanship to instruction in instruments and techniques" (p. 132).

O'Banion (1973a) said that "in the 1970's most new staff will come from business and industry, elementary and secondary schools, other community colleges and graduate programs that have not been designed for the two-year college" (p. 18). The shortage of staff may be met by using full-time industrial employees who teach part-time, or full-time day instructors who teach overtime in the evenings (Evans 1971b).

The majority of vocational instructors, Landrith (1971) finds, have "no college degree and little formal college training. . . possess special skills and experiences in his field. His salary is higher than that of the history or English instructor with advanced degree. . . he is not accepted by a large segment of the academic community" (p. 240).

The explosion of vocational offerings in the community colleges has and is creating an influx of instructors who are not specifically prepared to teach at the level of competency required in today's community college. Gorman (1975) divided these instructors into the following four groups: (1) new vocational teachers from industry who are occupationally qualified, but limited in professional

preparation; (2) new teachers completing a teacher education program; (3) experienced vocational instructors with identifiable professional development needs; and (4) post-secondary vocational and technical instructors who are technically competent, but hold minimal certification (p. 21).

Through a survey by Justice (1976b) it was found that the average community college instructor will teach for another 25 years or more. There is, therefore, considerable time in which an instructor can become out of touch with his area, or years in which to strive to stay abreast of the advances in his technical field.

With the varied backgrounds and pressing demands for the future, the community college instructor is hardly ready to function efficiently in the community college setting. O'Banion (1972b) says the characteristics of the typical faculty member indicate that he is educationally and vocationally unprepared for specific employment in the community college. Again, O'Banion (1975) states that the community college has often been required to mold and remake university graduates before they could become effective community college instructors.

The community college instructor does not usually have a community college background. Medsker (1971) states that only 8% had once been students at a community college, and that only 33% had completed a course or courses about the community college.

The educational level of community college instructors who hold bachelors, masters, or doctors degrees would be in the following proportions--7:75:18 (O'Banion 1972b). He would also agree with Medsker that despite their generally high level of training, there are not many who have attended community colleges or taken courses about the community college.

Culbertson (1975) found in his research that since traditional teacher education programs do not focus on andragogy (the concept of the adult in the learning situation), they are not completely appropriate for training community college vocational instructors. The National Advisory Council on Education Professions Development (1973) divides most of the vocational instructors into two groups. The first have not had sufficient time in paid occupational experience, and thus need help in acquiring an up-to-date knowledge of what to teach. The second group has up-to-date occupational competence, but need help in achieving good pedagogical methods.

Evans (1971b) gives a clear description of what often happens in practice with community college vocational instructors. Some are allowed to teach for 20 years or more with no teacher preparation, while others get a minimum of training when starting out, and then teach for 20 years or more without updating. This is significant when one considers the knowledge, skills, and other values that are occupationally oriented to industry.

Preus (1975) identifies another characteristic of the community college instructors; once they are hired little mobility takes place. He would further stress three outstanding challenges that the instructor faces at the community college.

The first challenge is the increasing demand for evidence that a student has actually learned after being taught, and this is more true at the community college than at any other level of the educational system. The second is that for the student, the community college is often his last chance for formal learning. If he cannot be motivated or have his level of understanding and skill raised, then probably no other educational organization can accomplish this. The third challenge arises out of the community college itself. With its goals and functions entrenched in the concept that teaching is of the highest order, the community college is the first to realize that in-service for its staff must be given the highest priority.

The demands made on the community college vocational instructor are heavy. Gaydos (1975) makes survival a paramount need for the first-year instructor, and only after four or five years will he or she become concerned with a need for renewal. Then Blake (1972) adds another dimension to the problem. When the community college responds to ever changing needs of society, its "staff must be continually retrained and upgraded" (p. 12).

With all the pressure to stay current in one's field, the instructor wants to participate in the plans for his self improvement, and unless he can do this, Smith (1969) finds that many will leave the field of education. It is a paradox to find, states Mesa (1976), that instructional staff do not wish to state their real deficiencies, or to ask for further training. Reinmuth (1974) found by research that if instructors are allowed to participate in a study of their needs, competencies in which they are deficient can be identified. He found that Oregon community college occupational instructors perceived a deficiency in 90% of the 53 listed competencies of the research. The need still exists for the instructor to participate in self renewal activities, and Taylor (1975) finds that there is a significant difference in the experience needed in professional development from one occupational area to another.

The challenges facing the community college vocational instructor are many, and probably the greatest is the problem of teaching students who represent such a broad range of abilities and motivation, while endeavoring to serve constituents through attention to the individual (Cohen 1972).

The rapid technological change taking place allows the world to pass the instructor by in two to three years if he does not participate in meaningful in-service activities (Justice 1976b).

Campbell (1971) challenges the vocational instructor to evaluate his own work and do some research in order to provide for better liaison with business and industry.

The demands and challenges that community college vocational instructors must face in their endeavor to become and remain competent in their area of instruction are increasing. It is of the highest priority that these demands and challenges are met, for the stakes are high. The National Advisory Council on Education Professions Development (1973) makes the following statement regarding vocational instructors.

Their successes and failures affect the lives and futures of students in vocational education programs and could affect similarly the vast numbers of youth and adults who should be, but are not, in such programs. . . vocational education and its practitioners have a potential for affecting all youth and adults (p. 8).

### In-Service Education

In-service education is a strategy for improving education through the professional development of the instructor after he has been employed by an institution. It is an endeavor to overcome deficiencies in pre-service education, upgrade technical and professional skills, and/or train for additional responsibilities.

Cochran (1975) believes that there is a continuous need for in-service activities in an efficient in-service program designed

around the following five components: sound research foundation; experimental/practical orientation; communications base of all participants; systems approach; and a cooperative framework.

Effective in-service education occurs when administrators provide avenues for "it to happen." Heerman (1974) believes "it will happen" when administrators become aware of the values of cooperative education. "Community college educators, more than ever, need to be attuned to the important benefits of cooperative education in achieving institutional missions and in answering to its constituency" (p. 57).

The philosophy behind teacher centered in-service education as defined for the National Education Association by O'Keefe (1974) is to "serve the needs of the teacher so that the teacher can respond effectively to the educational demands of the students and society" (p. 40).

Through research reported in Today's Education (1976), it was found that most school systems allow less than ten days for in-service activities of which over 65% were workshops led by teachers. Garrison (1967) describes this type of in-service education as "a bunch of people getting together fairly regularly to pool their ignorance" (p. 41).

A substantial amount of the potential for in-service education is destroyed because it is conducted for administrative purposes, with

the results being used to rate teachers for promotion and tenure (Bush 1971).

The goal of in-service education is to produce planned, purposeful activities which are designed to bring about positive changes in the instructors' professional and technical skills.

The purposes of in-service programs stated by Russel (1975) and supported by others, are to foster professional development of instructors, aid in identifying and solving problems and needs of instructors, disseminate pertinent information, and communicate administrative policies and procedures. Present in-service programs for vocational instructors have been termed by Edelfelt (1974) as the "step-child of education," and have proven inadequate for most instructors. The U.S. Department of Health, Education, and Welfare (1972) agrees in saying that of the many problems in education, in-service education is one seldom talked about, and for which no realistic plan for staff renewal exists. Generally speaking, in-service education presently consists of workshops and/or enrollment in college or university courses.

Staff often take college or university classes as in-service, but they seldom result in direct improvement of services to the students. Knowledge and competencies gained do not relate to staff and student needs. This type of in-service education would be better termed career development, as the courses are taken to obtain a better salary

or a higher degree (Mesa 1976). Collins (1975) found that in most community colleges, "present in-service training programs are a cipher, a false promise with no fulfillment" (p. 63).

Justice (1976) found as the results of a study of in-service programs that much is being written about the need for staff development programs, but progress is slow in actualizing integrated campus programs. Activities for which in-service credit is granted vary from one college to another, but the common activities are found to be university courses, workshops, orientation, summer employment, participation in professional meetings, writing, assisting the administration with various activities, and public service activities. Few of these seldom relate to the specific needs of the vocational instructor, but give credit for the next salary increment.

A study done in 1969 by the Oregon State University Vocational Division found that "very little is being done in in-service education in the community colleges in Oregon" (p. 17). A further study done by Justice (1976) found that the concern for in-service had increased, but that for a few exceptions such as at Mt. Hood and Portland community colleges, there was still little being done in the area of in-service education. The recognition attained by Oregon Institute of Technology for its work in the area of staff development programs will be noted later.

Alberta government-operated institutions like NAIT and SAIT have three-week sessions for all new instructors on the fundamentals of instruction, with follow-up seminars during the year. To provide for staff development the following types of leaves are available: education leave for a period exceeding 30 days; and staff updating leave for short courses or seminars of 30 days or less (Hare 1976).

Promising staff development programs that Evans (1971b) and O'Banion (1973b) speak highly of are found in Illinois and Oregon. Parkland College of Champaign, Illinois and Oregon Institute of Technology of Klamath Falls, Oregon employ their staff year round and provide for them to work in industry during the summer. Evans and O'Banion also refer to the extensive use of sabbatical leaves provided staff of community colleges in Canada. A majority of these colleges have a regular in-service budget, as well as an appointed staff development officer to design creative in-service programs.

Two strategies for personnel development of vocational instructors in Canada are described by LeBlanc (1975) as the "Internal Route" and the "External Route." In the internal route the institution hires an instructor with demonstrated ability in the subject area, and then develops his teaching ability. In the external route, the potential instructor will take three six-week summer institutes to acquire his professional development; further professional

development is discouraged, for the system has the instructor it wants, doing the job it wants, and pay increases are automatic.

Goad (1975) described the results of the Texas exchange program as having real promise nationally, as well as internationally. Community college instructors exchanged places with a counterpart in industry for one year. Industry funded a portion of the program, with the result that the instructors were highly positive when reporting their experience.

Former Commissioner of Education Bell (1975) stated that in-service programs must be designed so that vocational personnel may be able to identify and solve their own professional development problems. If in-service education is to become a reality beyond the few programs currently in existence, then all individuals working in the in-service programs must act on a view of teachers as professionals.

The responsibility for in-service education must be a shared commitment by the participants, a team identifying needs and action programs to alleviate the needs. The employer will receive in return for providing a special learning situation, employees who are interested in the occupation and who also provide a pool of trained help on which to draw for future full-time employees. In-service leaders must not only facilitate professional growth, but must make a concerted effort to increase the teachers' desire to operate near

their optimal capacity (Rubin 1971). Bush (1971) would want the instructor to retain sufficient control over his in-service activities in order to make each school an optimum operation. Teachers responded to a study by Brimm (1974) by giving their strongest endorsement to the statement, "The teacher should have the opportunity to select the kind of in-service activities which he feels will strengthen his professional competence" (p. 523). The teacher and in-service staff development officer must share the responsibility for effective in-service activities being planned and executed.

It is essential that if teachers are to keep pace with advancing technology, that constant retraining in subject matter, teaching methods, and technical skills be carried out through improved in-service education (Mohan and Hull 1975). O'Banion (1974) would emphasize that in-service education for community college instructors becomes the "catalyst for institutional renewal and as such a key to achieve the major purpose of education, student development" (p. 66). The community college and staff development programs cannot be separated, for Blake (1972) ties them together in the reverse order given by O'Banion. He states that the community college in a world of rapid change may prove to be the "catalyst for the creation of optimum staff development" (p. 12).

Vocational teachers and administrators were found to agree that in-service activities must be related to subject matter and skills

(Halcomb 1975). The results of an additional study by Slade (1975) recommend that in-service education should be a continuous process, and planned to meet the needs of individual instructors.

Teachers require an "in breadth" of understanding of how a subject matter is useful and may be translated into humane daily action (Howsam 1976). Howsam further states that the paramount need of our educational system is in-service educational activities that are responsive not only to the instructor's needs, but also to the needs of the institution and the community.

The most creative and potent staff development programs for community college staff must be identified and used, so that every instructor will have a professional development plan, "individually tailored in terms of the goals and resources of the college and the needs of the individual staff member" (O'Banion 1972b, p. 117). The instructor would develop his professional development plan in consultation with the college in-service coordinator.

Melvin Barlow (1974a), who not only is a historian, but also looks to the future for vocational education, states that it is a basic premise in vocational education that instructors should participate in in-service programs in vocational education, "in part related to their occupational level and in part to the new developments from educational research" (p. 269).

When designing in-service programs, Gorman (1975) finds the performance based elements identified by Cotrell (1972) of great potential when establishing programs especially suited to meeting the wide variety of in-service needs among vocational instructors.

The Oregon State Department of Education (1974) sets out a four-step process to provide in-service education in which staff can participate and learn effectively.

- Step I Assessing teacher's attitudes and changes in attitudes toward in-service.
- Step II Surveying for general in-service needs.
- Step III Assessing strengths and weaknesses of participants, objectives/competencies to emphasize, and the instructional method to utilize for the in-service.
- Step IV Providing an in-service package that meets the identified needs of participants (p. 1).

Melvin D. Miller (1975) from the University of Tennessee lists eight characteristics of a well-designed in-service program which were considered when constructing the interview checklist used in this study.

1. Program based on identified needs of professional staff.
2. Participants help set goals and objectives.
3. Staff input is utilized.
4. Active staff participation.

5. Program builds on previous experience.
6. Needs assessments are periodic and continuous.
7. Activities are evaluated and improved.
8. Program and activities are conducted in prime time (p. 55).

The effective in-service program is continuous and actively involves all participants. As a result of his study, Ralph (1971) found that instructors who were actively involved in innovative in-service activities can be expected to work better with students, as well as develop sound strategies for meeting student needs.

The effects of in-service are immediate, and therefore in-service education is the "best buy for the bucks," states Horner (1976), who also points out that "learning readiness" is epitomized in relevant in-service programs. Mason and Haines (1972) point out additional values of on-the-job experience for it is often the "focus for the choice of friends, residence, leisure-time activities, and even socio-economic value systems" (p. 30).

The growth of instructors through in-service activities makes the college a more potent force, and student development will be enhanced as a result of instructors participating in meaningful staff development programs. Terry O'Banion (1972a), an active proponent of developing relevant in-service activities, places the priority on in-service as the key to the effectiveness of the community college.

### Cooperative Work Experience Education

Cooperative work experience education is referred to as cooperative vocational education when defined in Part G of the Vocational Education Amendments of 1968.

. . . a program of vocational education for persons who, through a cooperative arrangement between the school and the employers, receive instruction, including required academic courses and related vocational instruction by alternation of study in school with a job in any occupational field, but these two experiences must be planned and supervised by the school and employers so that each contributes to the student's education and to his employability. Work periods and school attendance may be on alternate half-days, full-days, weeks, or other period of time in fulfilling the cooperative work-study program.

Dr. Herman Schneider is credited with instituting the first cooperative education plan at the University of Cincinnati in 1906. The greatest expansion of this type of education took place during World War II, followed by careful planning and expansion throughout the following years.

Today, cooperative work experience education is an integral part of the school curriculum at the secondary and post-secondary levels. It allows for an almost infinite diversification of occupational fields, and Kimbrell (1972) finds that "the only limitations are those imposed by child labor laws and the availability of job stations in reasonable proximity to the school" (p. 3).

This type of education is often called a "program," but it is more a plan for making education relevant rather than a program of studies that is different from regular programs of study.

### Organizational Procedures of Cooperative Work Experience Programs

Cooperative work experience programs are organized around basic common characteristics of the cooperative plan. Ralph Mason and Peter Haines (1972), who are specialists in the field of cooperative work experience education, list the following 12 characteristics necessary for successful operation of a cooperative work experience program.

1. Instruction in School
  - a. basic related instruction - needed by all students for occupational preparation
  - b. specific related instruction - needed by a student for a specific job station
2. Selected Training Station  
A business/industry that will provide educational experiences to meet the student's intended career objective.
3. Student-Learner with a Career Objective  
Student has made a tentative career choice and becomes a learner on the job.
4. Preparatory Courses  
Courses to prepare the student for job entry.
5. Step-by-Step Training Plan  
A written plan indicating what is to be learned in school and on the job, and developed jointly by the coordinator, training sponsor, and student.

6. Adequate On-the-Job Supervision  
Appointment of a training sponsor responsible for occupational learning experiences.
7. A Qualified Teacher-Coordinator  
The individual responsible for teaching the vocational class and coordinating the job learning experiences.
8. Adequate Coordination Time  
Time for placement and visitation of students.
9. Suitable Classroom Facilities and Instructional Materials  
Facilities and materials necessary for teaching vocational information, skills, and attitudes for occupational preparation.
10. Well Defined School Policies Regarding the Program  
A plan of administration for all facets of the program.
11. Well Organized Program Records  
A record system of training stations, students, and instructional materials.
12. Use of an Advisory Committee  
A committee representing students, school, parents, business and industry.

(p. 108-110)

These basic characteristics which are so essential to the success of a cooperative work experience educational program provided the basis as well for the development of the interview checklist used in this study.

The Oregon State Department of Education (n. p. ) adds an additional three characteristics that must be included to make the program a success.

- (1) Employment of students will conform with all labor regulations.

- (2) Provision is made for release time from school for the student to work at his/her training station.
- (3) Appropriate school credit is given for the work experience.

An authority and author in the vocational education field, Rupert Evans (1971b), states that the key to a successful cooperative program is the well-prepared and able coordinator. Committed training sponsors are also a necessary ingredient along with students who are willing and able to benefit from cooperative work experience education.

The Oregon State Department of Education (1972) emphasizes the necessity of maintaining a training emphasis, using the training plan, and having a planned program of public relations if the program is to be successful.

Beaumont stresses the main concept of cooperative education when he states that it is ". . . a cooperative effort on the part of both the university (or college) and business organizations in providing the best educational experience for our young people. This is our target" (Beaumont 1976, p. 79).

#### Values of Cooperative Work Experience Education

Cooperative education has many values for each of the participants. The major values for which cooperative education is particularly noted are presented.

The University of Minnesota in A Guide for Cooperative Vocational Education (1969), places a high value on cooperative education for the relevance that it brings to the curriculum and instruction. Cole (1974) states that "cooperative education is accountable. Its performance has facilitated rather than impeded educational purposes" (p. 34). The application of the classroom to real-life situations and on-the-job experiences to the classroom brings relevance to the educational process.

Asa Knowles (1972), who has designed and operated effective cooperative education programs at the college and university level, points out a significant value of cooperative education.

. . . cooperative education, by providing a bridge between the college and adult society, between education and full-time work, . . . affords an effective way for youth to make the transition from adolescence to adulthood. It has special significance in modern post-industrial society (p. 25).

The cooperative program brings new insights, not only to students but also to the teachers, for technical information and skills are often presented that are not to be found in textbooks (Dawson 1973).

When Mel Barlow (1974b), the vocational education historian, made the statement, "Long ago, it was determined that vocational education could be successful only to the extent that it developed a total partnership with the community at large" (p. 34), he was well aware of John Dewey's key to solving some of education's problems. That key was to arrange school materials and methods so as "to

utilize various forms of occupations typifying social callings, and to bring out their intellectual and moral content" (Dewey 1916, p. 369).

It was found as a result of a survey of employers participating in cooperative programs that over 90% hold a strong belief in the effectiveness of the program, and are strong advocates of cooperative education (Harris and Hodgson 1974). Mosbacker (1975) has found Canadian employers equally receptive to cooperative education. Similar results were found for employers in Oregon (Martin 1976).

The development of good work habits, attitudes, and inter-personal relations are key values of cooperative education (Kimbrell 1972). As an additional value Evans (1971a) points out that there is a lower capital investment in equipment and space for cooperative education than for regular school laboratories. Knowles (1976) believes that business, industry, and government support cooperative education for two principal reasons. One, there are "jobs that need to be done" and second, cooperative education is recognized as a "useful device for the recruitment of permanent personnel" (p. 22).

As a result of more than 60 hours of interviews with graduates of cooperative education programs in Ohio, Gore (1973) found that graduates had a deep sense of satisfaction with their educational experience, and were fully supportive of the cooperative system of education.

### A Cooperative Approach to In-Service

Vocational education, in order to meet the needs of individuals in an era of technological change, will have to become more involved with and sensitive to the needs of society. A cooperative approach to in-service for the vocational instructor is a place for this involvement to take place. The Secretary of Health, Education, and Welfare, David Mathews (1976), expresses the need when he states, "Today, I cannot envision a future for vocational education without a renewed and enlightened sense of community needs and community involvement" (p. 114).

Howsam (1976) places the responsibility on teachers to negotiate with society for more perfect education for the nation's youth. He states, "Teaching is definitely a matter of life and death" for students going through the educational system (p. 15).

Education and industry in cooperation will bring needed changes in education for the future. Former U.S. Commissioner of Education, T. Bell (1976) made the following prediction:

Emphasis will be placed on new curriculum and on such techniques as individualized learning. Employers will share more of the burden which has been placed on education (p. 10).

The opportunity for vocational instructors to work with industry is an opportunity to zero in on competencies that are lacking, need upgrading, and/or updating.

The vocational instructor may be downgraded by academically oriented administrators, as indicated earlier, even though the instructor may contribute as much or more to the college and its students than an instructor in the "academic" area. The National Advisory Council (1973) states that righting part of this inequity may be accomplished by awarding "in-service credit for occupational experience of prospective and experienced vocational education professionals" (p. 3).

The concept of a cooperative approach to in-service for community college vocational instructors is an untried and uncharted path, but one which holds promise for the future. Adams (1976) sums up the prospects of this concept in the following manner.

Cooperative education is far from a new trend in some of the vocational education services, but is just now unfolding as a major strategy for in-service education. . . (this approach) may be the main prototype for trade and industrial education in the years ahead (p. 25, 26).

### Summary

The community college is dedicated to meeting the changing, broadening needs of its clientele. The vocational instructor, working in this situation, is in need of meaningful in-service activities that are seldom available to him, for they more often meet administrative goals.

The review of literature was found to be positive in its evaluation of cooperative work experience education. Cooperative education provides key benefits for the learner, school, instructor and industrial employer. The implication for positive outcomes when used for vocational instructor in-service programs was also indicated in the literature. When a cooperative approach to in-service staff development is implemented and evaluated, then the positive and negative reactions may be ascertained.

The relevance of cooperative education, with its opportunities for meeting the changing technical skills and knowledge of today's society, is a vehicle for meeting the staff development needs of the community college vocational instructor.

## CHAPTER III

### THE DESIGN OF THE STUDY

The purposes of the study were to obtain and compare the degree of agreement with statements regarding the values and organizational procedures of a cooperative work experience approach to in-service staff development for community college vocational instructors, by individuals who would become involved in the program. The desired end product of the investigation was to establish guidelines that should be considered in establishing a cooperative work experience in-service staff development program.

Preliminary to obtaining the agreement with the concept of a cooperative approach to in-service, it was necessary to identify and prepare a list of statements on the value and organization of a cooperative work experience approach to in-service staff development.

#### The Dependent Variables

The dependent variables in the study were the scores judgmentally assigned by the interviewees in the sample to denote their agreement regarding the value and organizational procedure statements of a cooperative work experience approach to in-service staff development. Respondents were given a response scale to assist them in assigning

a score based on the following Likert-type scale (the response scale card may be found in Appendix C):

1. The respondent has no agreement with the given statement.
2. The respondent has slight agreement with the given statement.
3. The respondent has moderate agreement with the given statement.
4. The respondent has considerable agreement with the given statement.
5. The respondent has very high agreement with the given statement.

#### Development of the Research Instrument

The instrument used in this study was an interview checklist of statements of value and organizational procedures for an in-service staff development program based on the cooperative work experience program.

The initial step in the development of the interview checklist was a review of the literature concerning in-service and cooperative work experience programs. An extensive review of the literature indicated a deep concern for the development of a relevant in-service program for community college vocational instructors. The review of literature also indicated that a number of individuals in the cooperative work experience field have reached a consensus concerning the values and organizational procedures that compose a cooperative work

experience program. Statements were prepared presenting the values and organizational procedures for a cooperative work experience in-service staff development program.

A jury panel was selected to evaluate the statements on the interview checklist in relation to format, content, clarity, and comprehensiveness. The 12 participants were chosen for their willingness to give unbiased constructive criticism in the preparation of the final instrument. Each panel member was given a copy of the initial instrument and asked to critique it individually. A seminar was then held with the participants again evaluating each statement of the checklist for content, clarity, format and comprehensiveness. Members of the panel are listed in Appendix A.

As a result of the seminar, changes were made in content and format, and a number of statements were revised, combined and/or rewritten to make the instrument functional for the interview technique. The instrument was designed to obtain the most significant data from the interviewees' controlled responses. Opportunity was provided for clarification of responses that were pertinent to the study. The instrument was then field tested, but no additional changes were indicated. The purposes and method of the data collection were cleared with the Research Division of Oregon State University regarding the Protection of Human Subjects. The interview checklist with the

24 statements appears in Appendix B in the same format as used in the interviews.

### Selection of the Population

The study utilized the community colleges in Oregon, and similar institutions in Alberta. Five colleges were selected from Oregon's Willamette Valley and five institutions were selected from the southern half of the province of Alberta to provide equal representation from each area. The institutions from the larger metropolitan areas were selected for this study because of the opportunities for cooperative work experience activities. A list of institutions in each area and those participating are listed in Appendix D.

Authorization to proceed with the study was cleared with Dr. Don Shelton, Executive Secretary of the Oregon Community College Association, who recommended that agreement to participate be obtained from each subject as the sample was small and international.

Three individuals associated with each institution who were concerned with vocational in-service programs and the hiring of graduates of vocational programs were represented in the study.

The first group consisted of the in-service staff development coordinator from each institution used in the study.

The second group was composed of a randomly selected vocational instructor from each institution.

The third group was composed of a randomly selected employer who employs graduates of the vocational programs to represent each institution.

The sample composed of coordinators, vocational instructors, and employers representing the ten selected institutions provided a total of 30 interviewees for the study. Each subject was contacted personally to gain consent for participation in the study. Those participating in the study are listed in Appendix E.

#### The Collection of the Data

Data were collected by contacting each individual to obtain his/her consent to participate in the study, and to arrange a time for the interview. All interviews were completed within a period of five weeks.

The final step in the collection of the data was to check and code each interview checklist before having the data key punched on IBM cards for computer processing. The procedure for coding the IBM cards appears in Appendix F.

#### The Statistical Design

A two-way arrangement (2 x 3 matrix) was used for the sampling techniques as illustrated in Table 1.

Table 1. Two-way Arrangement Sampling Technique.

Area	Groups		
	Coordinators	Instructors	Employers
Alberta	5	5	5
Oregon	5	5	5

Three hypotheses were prepared in relationship to each of the 24 statements used in the study to examine the agreement with a cooperative work experience in-service program. Using the null form, it was hypothesized that:

- $H_1$ : There is no significant difference between the mean scores of agreement for the groups.
- $H_2$ : There is no significant difference between the mean scores of agreement for the areas.
- $H_3$ : There is no significant interaction effect between the mean scores of agreement for the groups and the areas.

ANOVA (analysis of variance) was used to analyze data at the 0.05 level of significance to determine where significant differences existed among groups and between areas. The two-way analysis of variance was designed as shown in Table 2.

A Least Significant Difference (LSD) test was used to ascertain where specific differences existed between adjacent mean scores of the groups when the null hypothesis was rejected.

Table 2. Design of Two-way Analysis of Variance.

Source	df	SS	MS	
Group	2	A	A/2	$MS_A / MS_D$
Area	1	B	B/1	$MS_B / MS_D$
Interaction	2	C	C/2	$MS_C / MS_D$
Error	<u>24</u>	<u>D</u>	D/24	
Total	29	E		

## CHAPTER IV

## PRESENTATION AND ANALYSIS OF THE DATA

This chapter presents the findings of the study which are divided into four categories:

1. Demographic data related to the population under study.
2. The analysis of variance statistical technique used for testing for differences among mean scores of the three groups and two areas in the study.
3. The results of the Least Significant Difference (LSD) test used for testing when the null hypothesis was rejected.
4. Descriptive data relating to a cooperative work experience approach to in-service staff development programs.

The findings have been presented in both narrative and analytical form. Reference to "coordinators" in the narrative refers to individuals responsible for in-service education for community college vocational instructors. "Instructors" refers to community college (or equivalent) vocational instructors. "Employers" refers to the person in business or industry responsible for hiring employees who are graduates of community college vocational programs.

#### Demographic Data

A sample of 30 personnel, representing the ten institutions, was

selected for the study. The sample was composed of three groups represented as follows:

Group one - the in-service staff development coordinator from each institution.

Group two - a randomly selected vocational instructor from each institution.

Group three - a randomly selected employer for each institution.

The population for Alberta had retained their present position twice as long as those selected to represent the institutions in Oregon, as shown in Table 3.

Table 4 provides a comparison of the educational training level of the groups from Alberta and Oregon.

The cluster areas represented by the vocational instructors in Alberta and Oregon are provided in Table 5.

The cluster areas represented by the employers in Alberta and Oregon selected for the study are provided in Table 6. More than ten clusters are shown, as some employers employed graduates from more than one cluster area.

The number of sample participants that are familiar with the concept of cooperative work experience education is given in Table 7.

Table 8 provides the number of interviewees who are familiar with the present in-service programs provided for vocational instructors at the community college level.

Table 3. Interviewees' Mean Years in Present Position.

Group	Alberta	Oregon	Overall Mean
Coordinators	6.4	3.2	4.8
Instructors	15.4	8.2	11.8
Employers	9.0	4.0	6.5

Table 4. Interviewees' Level of Training.

Group	Alberta			Oregon		
	Less than Bach.	Bach.	Post Bach.	Less than Bach.	Bach.	Post Bach.
Coordinators	0	1	4	0	1	4
Instructors	2	3	0	4	0	1
Employers	1	3	1	3	2	0

Table 5. Cluster Areas Represented by Instructors.

Cluster	Alberta	Oregon
Agriculture	1	0
Electricity and Electronics	0	1
Mechanics	4	3
Metals	0	1

Table 6. Cluster Areas Represented by Employers.

Cluster	Alberta	Oregon
Agriculture	1	0
Construction	0	1
Electricity and Electronics	2	0
Marketing	2	1
Mechanics	2	1
Metals	3	3
Office Occupations	2	1
Service Occupations	2	1

Table 7. Interviewees Familiar with Cooperative Work Experience Education.

Group	Alberta		Oregon	
	Yes	No	Yes	No
Coordinators	5	0	5	0
Instructors	2	3	5	0
Employers	4	1	4	1

Table 8. Interviewees Familiar with In-service Programs.

Group	Alberta		Oregon	
	Yes	No	Yes	No
Coordinators	5	0	5	0
Instructors	5	0	5	0
Employers	1	4	2	3

The mean enrollment of 5,740 at the institutions in Oregon was almost double that of the 3,020 mean enrollment for the institutions selected in Alberta for the study.

### The Analysis of Variance

The analysis of variance, using the F statistic, was used to test the null hypotheses for each of the 24 statements. Three hypotheses were tested for each statement.

H<sub>1</sub>: There is no significant difference between the mean scores of agreement for the groups.

H<sub>2</sub>: There is no significant difference between the mean scores of agreement for the areas.

H<sub>3</sub>: There is no significant interaction effect between the mean scores of agreement for the groups and the areas.

A total of 72 hypotheses were tested. The computed F value for the group means was less than the critical value of 4.26 at the 0.05 level of significance for 20 of the statements and greater than the critical value for four of the statements. Thus, the null hypothesis for the groups was retained for 20 variables and rejected for four. The results of the analysis of variance are presented in Appendix G.

The computed F value for the area means was less than the critical value of 3.40 at the 0.05 level of significance for 20 of the statements and greater than the critical value for four of the

statements. Thus, the null hypothesis for the areas was retained for 20 variables and rejected for four. The results of the analysis of variance are presented in Appendix G.

The computed F value for the interaction between group and area means was less than the critical value of 3.40 at the 0.05 level of significance for all 24 statements. Thus, the null hypothesis for the interaction of group and area means was retained for the 24 variables. The results of the analysis of variance are presented in Appendix G.

Because the analysis of variance test did not compare one mean with others, it is therefore necessary to do further testing to determine where a significant difference existed in the group means of the four rejected hypotheses.

#### Least Significant Difference Test

The 24 statement interview checklist used in the study contained four value statements, and 20 organizational statements regarding a cooperative work experience approach to an in-service staff development program. The interviewees were asked to give their level of agreement on a five-point scale. Responses ranged from no agreement, 1.0 point, to very high agreement of 5.0 points.

Each statement was analyzed using the F statistic with the 0.05 level of significance being used to determine when differences existed among the mean scores for the three groups. When the null hypothesis

was rejected using the analysis of variance test for the group means, the Least Significant Difference (LSD) test was used to determine where specific differences existed between mean scores of the three groups.

The null hypothesis stated that there was no significant difference between the mean scores of the three groups. Two value statements, 3 and 4, and two organizational statements, 17 and 18, were rejected. The group means and the results of the contrasts in the analysis of variance for the four statements are found in Appendix I.

The LSD test procedures used to analyze these rejections are included in Appendix J. The a priori consideration was selected to test the alternate hypotheses when the original null hypothesis was rejected. The alternate hypotheses were:

$$Ha_1: M_1 < M_2$$

$$Ha_2: M_1 < M_3$$

The lowest mean score on the first rejected statement, that of the coordinators, was selected as the mean to be used to compare for the a priori hypotheses. On statements 3 and 4, there are significant differences between coordinators and instructors, but not between coordinators and employers. The difference between mean scores for instructors and employers for statement 3 does not appear to be significant as the difference is less than the computed LSD. There

appears to be a significant difference between the instructors and employers for statement 4 as the difference between means is greater than the computed LSD.

There is no significant difference between the coordinators and instructors for the organizational statements 17 and 18. A significant difference exists between the coordinators and employers for these two statements as the difference is greater than the computed LSD. It would appear that there is also a difference between the instructors and employers as the instructors' mean score is superior to that of the employers.

A significant difference in mean scores of the areas was shown to exist as a result of the analysis of variance test. The null hypothesis was rejected when the computed F was found to be equal to or greater than the tabular F at the 0.05 level of significance. Statements 10, 17, 19, and 20 were found to have significant differences between the area means. The mean scores for Oregon were greater for statements 10, 19, and 20 and less for statement 17 than were the mean scores for Alberta. Appendix K includes the area mean scores found to have significant differences as a result of the analysis of variance test.

#### Descriptive Data

Selected interview checklist statements dealing with the

organization of a cooperative work experience in-service program induced interviewee comments. Those comments judged to be directly related to this study were recorded. Appendix H gives statements which had a very high degree of agreement by the different groups. The employers had very high agreement with 20 of the statements, instructors with 21 of the statements, and the coordinators with 18 of the statements. The coordinators and employers had slight agreement with statements 1 and 4, while instructors had slight agreement with only statement number 1. Eleven of the 20 organizational statements are presented with accompanying narration and descriptive statistics.

Statement 6: The highest priority for basing in-service activities are the professional development needs of the vocational instructor (Appendix H).

Statement 7: The highest priority for basing in-service activities for the vocational instructor are the needs of the institution (Appendix H).

The above statements were based on a repeated criticism made in the literature that in-service programs were set to meet administrative needs. Over 20% of the sample stressed that equal emphasis should be placed on each statement. Respondents stressed that the needs of students should be given paramount consideration when planning in-service activities for community college vocational instructors.

Statement 9: The professional development plan is prepared by the instructor in consultation with the in-service coordinator (Appendix H).

Present in-service policies (when they exist) provide in some institutions opportunities for the instructor to develop his own long-term professional development plan, and then in some cases have it approved by the in-service coordinator.

Of the respondents, 50% highly agreed with the statement in principle. These respondents, who were equally divided between instructors and coordinators, would rather the instructor develop his individual professional development plan in consultation with the division or department chairperson. There was general agreement that the in-service coordinator should serve in an advisory capacity to the department chairperson on matters concerning individual staff development.

Statement 10: The CWE professional development plan contains the different job activities which will increase the instructor's competence (Appendix H).

Statement 13: The employing sponsor provides a variety of experiences for the instructor, often involving rotation through different departments of the sponsoring agency (Appendix H).

The above statements deal with on-the-job activities. An accepted in-service activity for some institutions allows the vocational

instructor to return to the job held previous to teaching, perform the same activities year after year, and receive in-service credit for this type of experience. This problem was recognized by instructors and coordinators stating that the "old job is not good enough." Coordinators expressed that a major problem with this type of in-service activity was that such jobs were not always a learning experience, and the activities performed were not necessarily relevant to the teaching area. In some areas, such as automotives, an instructor felt that rotation through different agencies was necessary to keep abreast of technological changes and innovations developed by the many automobile manufacturers.

Statement 11: The professional development plan contains the job related research and study which provide information and activities which are essential for professional growth (Appendix H).

The academic and vocational dualism in education has hindered progress in both areas. High agreement was found for all groups for the combining of academic and vocational in-service activities. An instructor expressed the vital reason for maintaining this balance in professional development by commenting, "We are teaching people, not just a trade."

Statement 14: CWE in-service activities may be scheduled as a part of the vocational instructor's work load (Appendix H).

Coordinators and instructors gave a mean rating of 3.8 for this statement while employers rated it at 4.1. The lower rating would have been increased if the in-service activities were scheduled in a block time of 11 to 12 weeks. A coordinator pointed out that the concept was good in theory, but would be more difficult in practice due to cost and the need for staff replacements.

Statement 15: The vocational instructor receives regular salary while involved in CWE in-service activities (Appendix H).

Statement 16: Accrued earnings by the instructor while at the employing sponsor are paid to the instructor's institution.

The above two statements are presented together as they were to the interviewees, inasmuch as they deal with the remuneration issue. An Alberta employer felt that since public funds were involved, the choice of work experience must be selected with a great deal of care to insure that activities which were selected would improve the instructor's competence. An Oregon instructor and employer stated that since it is a personal responsibility to remain current in one's teaching field the instructor should be prepared to make some sacrifices.

An Oregon coordinator suggested a method of remuneration that has worked on a limited basis. The instructor remains on full salary from the college, thus maintaining service record, insurance, and other employment benefits. The employer provides the job learning

experience and makes a tax deductible donation to a college foundation. This foundation provides a portion of the in-service budget for the community college.

Statement 19: The in-service coordinator makes planned visits to the instructor and employer/sponsor (Appendix H).

Forty percent of the coordinators reacted to this statement, agreeing that planned visits were necessary if the program was to succeed and to provide vital information for upgrading the program. They also agreed that since the in-service coordinator is a facilitator, not a trainer, the coordination visits be made by the division or department chairperson for the instructor involved.

Statement 24: Planned publicity emphasizing the outcomes and educational values of CWE in-service staff development is essential to maintaining a successful program (Appendix H).

Two instructors stated that a CWE in-service publicity program would provide accountability to the taxpayer, indicating the type of instructor working at the community college and his/her endeavor to prepare to meet the needs of students.

Unsolicited Comments:

Unsolicited comments were provided by each group, with coordinators making the following specific statements.

"This approach to in-service is only a vehicle to give the opportunity to achieve the competencies listed by Cal Cotrell."

"I highly agree with the concept of a CWE approach to in-service. The traditional approaches to in-service will be difficult to restructure--but the results of going to a CWE approach to in-service will be worth the effort necessary to achieve success."

"The CWE concept is one I can agree with, but probably will not be one we can implement, as we do not have a budget to cover the costs."

Instructor comments emphasized their desire to see CWE in-service activities made available to them at the earliest time possible. Additional instructor comments were as follows.

"This type of in-service program should be available to all departments of the college."

"This is the type of in-service that will come, as it is more relevant than present programs and can be afforded."

Employers agreed with the concept of a cooperative work experience in-service program, and expressed their willingness and need to participate in staff development programs for vocational instructors.

"I would take a construction instructor right away, as I can see it would provide construction graduates who are current in the field."

There are too many changes taking place for instructors to neglect the field for even one year."

An employer in the metals cluster stated, "Something like this (CWE in-service) must be done, as at present many instructors are not keeping abreast of the changes and trends of their teaching field."

"It is past time that a close look was taken at what is being taught, why it is being taught, and how it is being taught. Present instructional programs in agriculture, marketing, and mechanics need to be upgraded to make them more current with what we are doing in business. This system of upgrading instructors would be an ideal way to solve many of these concerns."

An employer in the service cluster described instructors as not staying current with what goes on in business and industry, and "there is no other way they can be made aware of the real situation. I would like to hire students taught by instructors upgraded through a CWE in-service program."

A second employer in a service cluster commented, "Graduates are not aware of customer needs and of realistic budgeting. If instructors participated in a CWE program they would become aware of scheduling, deadlines, and the pressures of daily running a business. They would be more realistic in preparing students for work. Graduates at present are handicapped in locating 'good' jobs."

A personnel manager in a company hiring graduates from the clusters of metals, office occupations, power, and marketing, said "We are anxious to participate in such an in-service program for instructors from the community college, in fact I see enough value in it that we as a company would be willing to help finance the program."

### Summary

The sample was selected to provide equal representation of the five community colleges in Oregon and the five in Alberta. Those interviewed in Oregon had been in their present position approximately half as long as those from Alberta, with little difference in their formal training. The mean enrollment of the institutions studied in Alberta was approximately 50% that of the institutions in Oregon.

There was little difference between the areas regarding their familiarity with present in-service programs and cooperative work experience education.

The analysis of variance for the group mean scores was greater than the critical value for four of the 24 statements. Of the 24 area mean scores, four were found to have a significant difference.

A high degree of agreement was found for a cooperative approach to in-service education from the analysis of the data. Strong support was also given in the interviewees' comments. A more

detailed summary of the comments and analysis of the data is provided in the following chapter.

## CHAPTER V

## SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The major purpose of this study was to identify and evaluate the degree of agreement, given by the population and the review of literature, with the values and organizational procedures of a cooperative work experience approach to an in-service program for community college vocational instructors. This was accomplished through the four specific objectives for which the procedures and findings are here summarized.

Objective I

To develop a research instrument capable of measuring the agreement relative to a cooperative work experience approach to in-service staff development.

An extensive review of the literature indicated a deep concern for the identification and creation of relevant in-service education for community college vocational instructors. The literature also indicated the high value placed on cooperative work experience education by educational leaders.

Statements presenting the value and organization of a cooperative in-service program were individually evaluated by members of a jury

panel. The panel then met in seminar for a final evaluation and refinement of the statements to be used for the checklist. The interview checklist was field tested prior to being used for the study.

The two-way analysis of variance F statistic was utilized to statistically analyze the responses of the study population. The comments made by the interviewees considered by the researcher to be of import for this study were listed.

### Objective II

To establish value priorities for a cooperative work experience approach to in-service staff development of vocational instructors at the community college.

The responses of the three groups indicate that present in-service programs are not adequate to meet the needs of vocational instructors. The coordinators, with a 3.9 mean, do not agree as strongly as the other two groups that a cooperative in-service program is more relevant than present programs.

Coordinators and employers had a significant lower degree of agreement than instructors to the statement, "Educators in general are not aware of the value of the CWE approach to in-service staff development."

The unsolicited comments expressed a deep concern for vocational instructors having cooperative in-service education

available to them. The employers were most vocal in support of cooperative in-service staff development, as they indicated it would bring the relevance to education that the present graduates were apparently not receiving from many of their vocational instructors.

The high degree of agreement of four or higher by the population to 60% of the statements concerning a cooperative in-service program was found as a result of this study. Only statements 1 and 4 had group mean scores of less than 3.0 (Appendix H).

### Objective III

To establish agreement regarding organizational procedures for a cooperative work experience approach to in-service staff development for vocational instructors at community colleges.

The organization of a cooperative in-service program for vocational instructors is provided under the following headings: administration, professional development plan, in-service activities, and financial.

Administration. The overall mean of 4.23 indicates the necessity of having an advisory committee for a successful CWE in-service program. Policies for in-service programs must be stated, and an individual professional development agreement be drawn up between the employer, institution, and instructor.

A capable, trained coordinator is the key to a successful CWE in-service program. The employers do not agree as strongly as the coordinators that 12-month coordination is necessary. Coordinators generally agreed that coordination visits would be best accomplished by the division or department chairperson of the instructor concerned. The Oregon sample was significantly more in agreement than the Alberta sample with the concept of coordination visits, and the coordinator playing a liaison role with the state/provincial department of education and four-year institutions.

There was overall high agreement (4.27) with the necessity for a public relations program concerning a CWE in-service program. The feeling was expressed by many that good public relations would provide a portion of the accountability in education which the taxpayer is presently requiring.

Very high agreement (4.87) was given that evaluation is not only necessary, but that the criteria for the evaluation be based on the CWE in-service program making it possible for instructors to better meet the needs of the institution, instructor and the community. Considerable concern was expressed that of the community needs, those of students must receive top priority.

Professional Development Plan. Strong support was given for the instructor to have a professional development plan listing the job related research and study to be undertaken by him/her for

professional improvement. The plan would also include job activities which would increase the instructor's competence. This was supported significantly stronger in Oregon than in Alberta, shown by the area means of 4.93 and 4.27 respectively.

Fifty percent of the respondents expressed the need for the plan being developed by the instructor and his division or department chairperson, with the coordinator acting only in an advisory capacity.

The literature indicates that the vocational instructor is not readily accepted by academic educators, and this inequity could be partially alleviated by granting credit for occupational experience to vocational instructors. The need for recognition of CWE in-service activities, be it undergraduate, graduate, or in-service credit, was confirmed by an overall mean agreement of 4.87 for the population.

In-Service Activities. Equal emphasis was given to basing in-service activities on the needs of the instructor and the institution. The needs of the students must be emphasized as a third dimension for basing in-service activities.

Strong overall agreement (4.5) was given for including CWE in-service activities as a part of the instructor's professional development program. The "old job" is not good enough, for CWE in-service activities must provide a learning experience and increase the instructor's competence, as this concept received an overall mean support of 4.6. Rotation through departments or even agencies may

be necessary in order to bring the required relevance to in-service activities.

Strong support for the employers participating in rating the instructors' on-the-job experience will make the in-service program "cooperative."

The CWE approach to in-service staff development is a vehicle providing the necessary opportunities for the vocational instructor to achieve needed professional skills and knowledge.

Financial. The overall group mean of 3.9 for release time for the instructor would be higher if release time could be obtained in blocks of approximately 12 weeks. The cost factor, and the need for staff replacement were expressed concerns of coordinators.

A combined group mean of 4.95 for coordinators and instructors was given for the institution providing the budget for CWE in-service activities. Employer agreement was significantly lower at 4.1.

There was also a significant difference in degree of agreement between areas, with Alberta giving a higher degree of agreement than Oregon for institutional supported in-service education.

Strong support for the instructor receiving salary while involved in CWE in-service activities was given by each group with a 4.45 overall mean. The instructor should be paid, but not receive double pay while involved in CWE in-service activities.

The coordinators gave strong support for the CWE in-service concept, but expressed the greatest concern for financial support for the program. All employers were enthusiastic in verbal support of the CWE in-service concept and that possible means of industrial support for programs are available to community colleges.

#### Objective IV

To develop guidelines that incorporate objectives two and three above in an in-service program.

The following concepts should be considered when plans are being laid to organize and implement a CWE in-service program.

The primary purpose of utilizing a cooperative approach to in-service should be the professional development of the instructor, rather than the seeking of a less expensive in-service program.

The key to a successful cooperative in-service program is a well qualified capable coordinator, supported by an active advisory committee, and a planned public relations program.

The in-service program must be evaluated and refined to meet the changing needs of students, instructors, and institutions.

A written professional development plan is necessary for each instructor, listing the job activities and related research and study that will be undertaken to contribute to the instructor's professional growth.

The in-service activities participated in by the instructor must contribute, not only to his professional growth, but also to meeting the needs of his students and the institution.

Financial support for a cooperative work experience approach to in-service staff development will be provided when educational leadership grasps a vision of the values to be derived from this type of in-service activities.

Traditional in-service programs may be difficult to restructure to accommodate a cooperative approach, but the success will be worth the effort expended.

### Conclusions

Statistical analysis of the study data produced evidence to support a cooperative work experience approach to in-service staff development.

From the data it may be concluded that Alberta respondents give a higher degree of agreement for institutional support of in-service programs, while still desiring to maintain institutional independence in relation to the work of the in-service coordinator, than the respondents in Oregon.

In most cases the groups were in considerable to very high agreement with the positive statements relating to cooperative in-service education. From the study it can be concluded that the values

and organizational procedures of cooperative work experience education are readily acceptable and adaptable as in-service activities for the professional development of community college vocational instructors.

From the literature and this study, educators may expect strong support from employers when developing and implementing a cooperative work experience approach to in-service for vocational instructors.

It was concluded from the study that many coordinators are reluctant to establish a cooperative in-service program for financial reasons, while employers do not see this as a major problem.

As a result of the study it may be concluded that in-service programs for community college instructors must be based equally on the needs of the community (student), instructor, and community college.

Figure 1 presents the priorities for in-service activities of community college vocational education staff development programs. "A" needs, those which are the same for the college, instructor, and community, are of the highest priority. "B" needs, those which are the same for the instructor and community or instructor and college, should be met after meeting "A" needs.

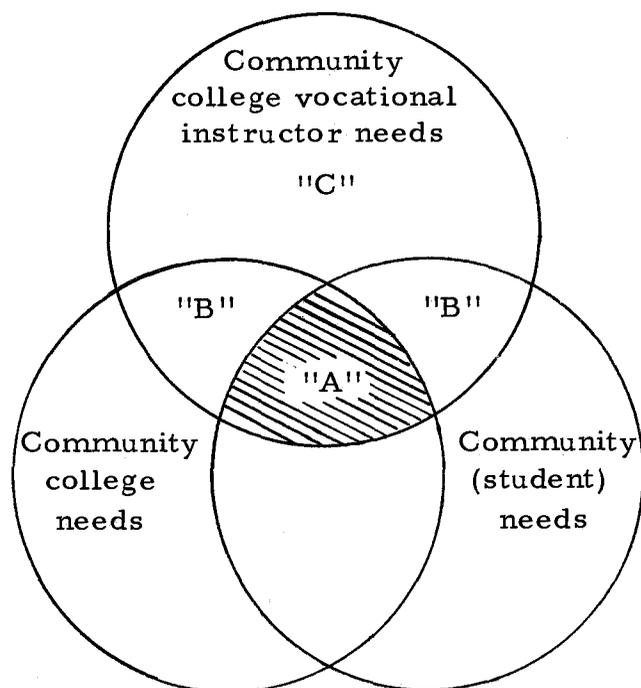


Figure 1. Priority of In-service Needs.

The basis for the needs represented in Figure 1 is derived as follows:

1. The vocational instructor needs are derived from the 390 elements of the Cal Cotrell model (Cotrell 1972).
2. The community college needs come from the charter and basic philosophy of the community college.
3. The community needs are derived from a community needs assessment which places a priority on student needs.

The researcher finds words inadequate to describe the enthusiasm displayed during the many hours spent with interviewees, discussing the various aspects and components of a cooperative work

experience approach to in-service education for community college vocational instructors.

### Recommendations

It is recommended that a similar study be conducted to ascertain the national response to cooperative in-service education.

Based on the findings of this study, it is recommended that a cooperative in-service staff development program be implemented at a selected community college, and that it subsequently be evaluated for effectiveness and group support.

The research indicated that there is a need to conduct a cost analysis study of present in-service programs, compared to a cooperative in-service program for vocational instructors.

A similar study is recommended in order to compare the degree of agreement with the concept of cooperative in-service education by teacher educators and state department of education personnel responsible for teacher in-service education.

An investigation should be undertaken to determine in more detail why in-service coordinators are more reluctant than employers to implement cooperative in-service education.

Because of the increasing interest in and support for in-service education, it is imperative that additional forms of in-service programs be created and identified, then evaluated for effectiveness, so that the best possible programs be developed and maintained.

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## APPENDICES

## APPENDIX A

## JURY PANEL

Dal Arnesen  
1915 S. W. Western  
Corvallis, OR 97330

EPDA Fellow\*  
Experience: Management Develop-  
ment Coordinator  
Boeing Company  
Commercial Airplane Division  
Renton, Washington

Larry Barnhardt  
5131 S. W. 38 Ave., #17  
Portland, OR 97331

EPDA Fellow  
Portland Personnel Development  
Center Intern  
Experience: Instructional Supervisor  
Central Kentucky State Voc/Tech  
School  
Lexington, Kentucky

Craig Clauser  
Rt. 1 Box 12-S  
Woods Creek Road  
Philomath, OR 97370

EPDA Fellow  
Special Needs Disadvantaged and  
Handicapped Intern  
Experience: Community College  
Instructor

George Genz  
940 N. W. Hobart  
Corvallis, OR 97330

EPDA Fellow  
Oregon State Penitentiary Vocational  
Training Unit  
Rehabilitation Program Intern  
Experience: Director of CETA  
Programs  
Clark County Community College  
Las Vegas, Nevada

Tom Hagg  
450 N. W. Maxine  
Corvallis, OR 97330

Coordinator of Oregon State Uni-  
versity Occupational Internship  
Program  
Voc/Tech Unit OSU  
Experience: Work Experience Co-  
ordinator  
Medford School District 549C  
Medford, Oregon

Fred Hasle  
3930 N.W. Witham Hill Drive  
Corvallis, OR 97330

Instructor Anthropology/Sociology  
Experience: Instructor Anthropology/  
Sociology  
Clatsop Community College  
Astoria, Oregon

Marilyn Johnston  
200 N.W. 53rd, #84  
Corvallis, OR 97330

EPDA Fellow  
State Advisory Council for Career  
and Vocational Education  
Past Counselor and Foreign Student  
Advisor  
Inver Hill Community College  
Inver Grove Heights, Minnesota

Jim Kononen  
2655 N.W. Highland Drive  
Corvallis, OR 97330

Research Assistant  
Portland Personnel Development  
Center  
Experience: Vocational Rehabilita-  
tion  
Community Colleges  
Bellingham, Washington

Gary Kramer  
1941 S.W. Western Blvd.  
Corvallis, OR 97330

EPDA Fellow  
Institutional Consortium for Career  
Education Intern  
Salem, Oregon  
Experience: Director of Student  
Services  
Northern Nevada Community College  
Elko, Nevada

Barry Noonan  
4601 S.W. Vesta Street  
Portland, OR 97219

Coordinator of Program Planning  
and Development  
Portland Community College  
Experience: VCLA Division of  
Vocational Education  
Assistant Supervisor of Trade and  
Technical Teacher Training

Marvin Seeman  
Rt. #1, Box 469  
Philomath, OR 97370

EPDA Fellow  
Executive Director  
Oregon V.I.C.A. Program  
Experience: Director Career and  
Vocational Education  
Eastern Maricopa County  
Arizona

Dell Swearingen  
3024 S. Pine  
Albany, OR 97321

Mathematics Instructor  
Linn-Benton Community College  
Experience: Director  
Oregon Vo-Tech Mathematics  
Project  
Linn-Benton Community College  
Albany, Oregon

\* EPDA = Educational Professional Development Act

APPENDIX B

INTERVIEW CHECKLIST

A COOPERATIVE WORK EXPERIENCE APPROACH  
TO IN-SERVICE STAFF DEVELOPMENT

Interview Checklist

Part I Demographic Data

POSITION:	In-service Coordinator	1
	Vocational Instructor	2
	Employer	3
Years in present position _____		
Training _____		
Community college located in	Alberta	1
	Oregon	2
Enrollment _____		
Type of Firm according to cluster _____		
Are you familiar with cooperative work experience programs ?		
	Yes	No
Are you familiar with present in-service programs ?		
	Yes	No

Part II Statements

**DIRECTIONS:** Circle the number which best describes the interviewee's agreement to the statements describing a cooperative work experience approach to in-service staff development.

Space is provided for unsolicited comments.

## AGREEMENT

- |                                                                                                                                                                                           | <u>None</u> <u>High</u> |   |   |   |   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|---|---|---|---|
|                                                                                                                                                                                           | 1                       | 2 | 3 | 4 | 5 |
| 1. Present in-service programs are adequate to meet the needs of community college vocational instructors.                                                                                |                         |   |   |   |   |
| Comment:                                                                                                                                                                                  |                         |   |   |   |   |
| 2. The primary purpose of the cooperative work approach (CWE) to in-service staff development is to provide for professional staff development rather than reduction of in-service costs. |                         |   |   |   |   |
| Comment:                                                                                                                                                                                  |                         |   |   |   |   |
| 3. The CWE approach to in-service staff development provides more relevant opportunities for professional development of vocational instructors than present in-service programs.         |                         |   |   |   |   |
| Comment:                                                                                                                                                                                  |                         |   |   |   |   |
| 4. Educators in general are not aware of the values of the CWE approach to in-service staff development.                                                                                  |                         |   |   |   |   |
| Comment:                                                                                                                                                                                  |                         |   |   |   |   |
| 5. A comprehensive in-service program for vocational instructors will include CWE in-service activities.                                                                                  |                         |   |   |   |   |
| Comment:                                                                                                                                                                                  |                         |   |   |   |   |
| 6. The highest priority for basing in-service activities are the professional development needs of the vocational instructor.                                                             |                         |   |   |   |   |
| Comment:                                                                                                                                                                                  |                         |   |   |   |   |

## AGREEMENT

- |                                                                                                                                                                             | AGREEMENT   |   |             |   |   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---|-------------|---|---|
|                                                                                                                                                                             | <u>None</u> |   | <u>High</u> |   |   |
|                                                                                                                                                                             | 1           | 2 | 3           | 4 | 5 |
| 7. The highest priority for basing in-service activities for the vocational instructor are the needs of the institution.                                                    |             |   |             |   |   |
| Comment:                                                                                                                                                                    |             |   |             |   |   |
| 8. A local advisory committee is essential for a CWE approach to in-service staff development.                                                                              |             |   |             |   |   |
| Comment:                                                                                                                                                                    |             |   |             |   |   |
| 9. The professional development plan is prepared by the instructor in consultation with the in-service coordinator.                                                         |             |   |             |   |   |
| Comment:                                                                                                                                                                    |             |   |             |   |   |
| 10. The CWE professional development plan contains the different job activities which will increase the instructor's competence.                                            |             |   |             |   |   |
| Comment:                                                                                                                                                                    |             |   |             |   |   |
| 11. The CWE professional development plan contains the job related research and study which provide information and activities which are essential for professional growth. |             |   |             |   |   |
| Comment:                                                                                                                                                                    |             |   |             |   |   |
| 12. The responsibilities of the institution, instructor, and employing sponsor are outlined in the professional development agreement.                                      |             |   |             |   |   |
| Comment:                                                                                                                                                                    |             |   |             |   |   |

- |     |                                                                                                                                                              | AGREEMENT   |   |             |   |   |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---|-------------|---|---|
|     |                                                                                                                                                              | <u>None</u> |   | <u>High</u> |   |   |
|     |                                                                                                                                                              | 1           | 2 | 3           | 4 | 5 |
| 13. | The employing sponsor provides a variety of experiences for the instructor, often involving rotation through different departments of the sponsoring agency. |             |   |             |   |   |
|     | Comment:                                                                                                                                                     |             |   |             |   |   |
| 14. | CWE in-service activities may be scheduled as a part of the vocational instructor's work load.                                                               | 1           | 2 | 3           | 4 | 5 |
|     | Comment:                                                                                                                                                     |             |   |             |   |   |
| 15. | The vocational instructor receives regular salary while involved in CWE in-service activities.                                                               | 1           | 2 | 3           | 4 | 5 |
|     | Comment:                                                                                                                                                     |             |   |             |   |   |
| 16. | Accrued earnings by the instructor while at the employing sponsor are paid to the instructor's institution.                                                  | 1           | 2 | 3           | 4 | 5 |
|     | Comment:                                                                                                                                                     |             |   |             |   |   |
| 17. | The institution provides a budget for CWE in-service staff development.                                                                                      | 1           | 2 | 3           | 4 | 5 |
|     | Comment:                                                                                                                                                     |             |   |             |   |   |
| 18. | Twelve month coordination of staff development is necessary for each institution.                                                                            | 1           | 2 | 3           | 4 | 5 |
|     | Comment:                                                                                                                                                     |             |   |             |   |   |
| 19. | The in-service coordinator makes planned visits to the instructor and employer / sponsor.                                                                    | 1           | 2 | 3           | 4 | 5 |
|     | Comment:                                                                                                                                                     |             |   |             |   |   |

- |     |                                                                                                                                                         | AGREEMENT   |   |             |   |   |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---|-------------|---|---|
|     |                                                                                                                                                         | <u>None</u> |   | <u>High</u> |   |   |
|     |                                                                                                                                                         | 1           | 2 | 3           | 4 | 5 |
| 20. | The in-service coordinator provides liaison with the state/provincial department of education and four-year institutions.                               |             |   |             |   |   |
|     | Comment:                                                                                                                                                |             |   |             |   |   |
| 21. | Official recognition will be given for completed stages of the CWE in-service professional development plan.                                            |             |   |             |   |   |
|     | Comment:                                                                                                                                                |             |   |             |   |   |
| 22. | The criteria for evaluation is based on the program meeting the needs of the institution, instructor, and community.                                    |             |   |             |   |   |
|     | Comment:                                                                                                                                                |             |   |             |   |   |
| 23. | Employment sponsors participate in rating the instructor's development in on-the-job activities.                                                        |             |   |             |   |   |
|     | Comment:                                                                                                                                                |             |   |             |   |   |
| 24. | Planned publicity emphasizing the outcomes and educational values of CWE in-service staff development is essential to maintaining a successful program. |             |   |             |   |   |
|     | Comment:                                                                                                                                                |             |   |             |   |   |

Unsolicited Comments:

## APPENDIX C

## RESPONSE CARD

Response Card				
State your degree, 1, 2, 3, 4, or 5, of <u>Agreement</u>				
verbally to each given statement.				
1	2	3	4	5
NO Agreement	SLIGHT Agreement	MODERATE Agreement	CONSIDERABLE Agreement	VERY HIGH Agreement

## APPENDIX D

## ALBERTA PUBLIC COMMUNITY COLLEGES

Fairview College	Fairview
Grande Prairie Regional College	Grande Prairie
Grant MacEwan	Edmonton
Keyano College	Fort McMurray
Lakeland College	Lloydminster
*Lethbridge	Lethbridge
Medicine Hat College	Medicine Hat
*Mount Royal College	Calgary
*Northern Alberta Institute of Technology	Edmonton
*Olds College	Olds
Red Deer College	Red Deer
*Southern Alberta Institute of Technology	Calgary

\* Institutions selected for the study involved in Area 1.

## OREGON PUBLIC COMMUNITY COLLEGES

Blue Mountain	Pendleton
Central Oregon	Bend
*Chemeketa	Salem
*Clackamas	Oregon City
Clatsop	Astoria
Lane	Eugene
*Linn-Benton	Albany
*Mt. Hood	Gresham
*Portland	Portland
Rogue	Grants Pass
Southwestern	Coos Bay
Treasure Valley	Ontario
Umpqua	Roseburg

\*Institutions selected for the study included in Area 2.

## APPENDIX E

## POPULATION SAMPLE

Group 1

<u>Coordinators</u>	<u>Institution</u>
Collin, W. J.	Olds
Fryett, Howard	Clackamas
Huff, L. Gaylon	Portland
Justice, Patricia	Mt. Hood
Kaplin, G.S.	SAIT
Monday, William	Mount Royal
Morgan, Leslie	NAIT
Siebler, Willian	Linn-Benton
Silvey, Roy	Chemeketa
Yanosit, M.	Lethbridge

Group 2Instructors

Campbell, W.  
 Durland, Joseph  
 Graham, F.  
 Grahn, Alvin  
 Hoffman, Hal  
 Jackson, Lynn  
 Palin, J. A. R.  
 Pond, Keith  
 Warden, F.  
 Watts, Ron

Institution

SAIT  
 Clackamas  
 Mount Royal  
 Portland  
 Lethbridge  
 Chemeketa  
 Olds  
 Linn-Benton  
 Mount Royal  
 Mt. Hood

Group 3Employers

Austin, Wayne  
 Ball, Julia  
 Berg, Larry  
 Chaney, Michael  
 Hildt, Don  
 Howton, R.  
 Maxin, Paul  
 Nowlin, Everett  
 West, Bruce  
 Wilson, Charles

Institution

Chemeketa  
 SAIT  
 NAIT  
 Mt. Hood  
 Mount Royal  
 Portland  
 Clackamas  
 Lethbridge  
 Olds  
 Linn-Benton

## APPENDIX F

## CODING OF IBM DATA CARDS

Data for each of the 30 interviews were coded on a card as follows:

<u>Column</u>	<u>Code</u>
1	Identifies interviewee's group.
2-3	Represents years in present position.
4	Identifies interviewee's level of training.
5	Area location of institution.
6	Identifies the size of the institution by enrollment.
7-8	Identifies cluster represented by employers and instructors.
9	Identifies interviewee's familiarity with cooperative work experience programs.
10	Identifies interviewee's familiarity with present in-service programs.
11-34	Data. Response values of agreement of 1, 2, 3, 4, or 5 which were assigned by the interviewee.

APPENDIX G

MEANS AND F STATISTICAL VALUES

Variable	Group Means				F*	Area		F**	Interaction
	1	2	3	F*		1	2		F***
1	2.40	2.50	2.40	0.03	2.67	2.20	1.58	0.42	
2	4.50	4.80	4.40	1.30	4.47	4.67	0.90	0.30	
3	3.90	4.90	4.40	7.50*	4.40	4.40	0.00	0.30	
4	2.80	4.20	2.20	11.70*	2.80	3.33	2.37	0.59	
5	4.20	4.70	4.60	1.68	4.33	4.67	2.00	1.52	
6	4.30	3.80	4.10	1.03	4.07	4.07	0.00	1.46	
7	3.90	4.30	4.20	0.47	4.00	4.27	0.58	0.04	
8	3.90	4.30	4.50	0.64	3.87	4.60	2.75	1.45	
9	4.50	4.50	4.60	0.04	4.67	4.40	0.63	0.27	
10	4.50	4.70	4.60	0.33	4.27	4.93	11.11*	0.78	
11	4.30	4.50	4.40	0.13	4.27	4.53	0.71	0.31	
12	4.80	4.80	4.90	0.15	4.67	5.00	3.85	0.15	
13	4.50	4.80	4.40	0.79	4.40	4.73	1.52	0.42	
14	3.70	3.90	4.10	0.24	3.60	4.20	1.62	0.96	
15	4.30	4.70	4.30	0.64	4.40	4.47	0.04	0.16	
16	4.60	4.40	4.60	0.14	4.27	4.80	2.21	0.97	

(Continued on next page)

Appendix G. (Continued)

Variable	Group Means				Area			Interaction
	1	2	3	F*	1	2	F**	F***
17	5.00	4.90	4.10	20.86*	4.80	4.53	4.57**	2.00
18	4.70	4.90	3.80	8.96*	4.47	4.47	0.00	1.83
19	4.00	4.30	4.00	0.25	3.67	4.53	4.76**	0.03
20	4.50	4.60	4.50	0.07	4.20	4.87	6.67	0.07
21	4.90	5.00	4.70	2.00	4.80	4.93	1.14	0.29
22	4.90	4.80	4.90	0.29	4.80	4.93	1.14	2.00
23	4.10	4.40	4.40	0.25	4.07	4.53	1.34	1.18
24	4.40	4.70	3.70	2.16	4.13	4.40	0.44	0.37

Groups: 1 = Coordinators; 2 = Instructors; 3 = Employers

Area: 1 = Alberta; 2 = Oregon

Interaction = Group x Area

\* Critical value of F,  $\alpha = 0.05$ ;  $df = 2, 24$ ;  $CV \geq 3.40$

\*\* Critical value of F,  $\alpha = 0.05$ ;  $df = 1, 24$ ;  $CV \geq 4.26$

\*\*\* Critical value of F,  $\alpha = 0.05$ ;  $df = 2, 24$ ;  $CV \geq 3.40$

APPENDIX H

MEAN SCORE OF AGREEMENT OF GROUPS AND AREAS TO STATEMENTS

	Mean Score Range		
	2.00 - 2.99	3.00 - 3.99	4.00 - 5.00
Group 1, Coordinators	1, 4	3, 7, 8, 14	2, 5, 6, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24
Group 2, Instructors	1	6, 14	2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24
Group 3, Employers	1, 4	18, 19	2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 20, 21, 22, 23, 24
Area 1, Alberta	1, 4	8, 14	2, 3, 5, 6, 7, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24
Area 2, Oregon	1	4	2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24

APPENDIX I

CONTRASTS IN THE ANALYSIS OF VARIANCE

Statement	Group Means			Group effect	Difference between Means			Computed LSD
	I	II	III		I-II	I-III	II-III	
3	3.9	4.9	4.4	reject	1.0*	0.5	0.5	0.529
4	2.8	4.2	2.2	reject	1.4*	0.6	2.0**	0.869
17	5.0	4.9	4.1	reject	0.1	0.9*	0.8**	0.313
18	4.7	4.9	3.8	reject	0.2	0.9*	1.1**	0.567

Group I = in-service coordinators; Group II = vocational instructors; Group III = employers

\*Represents a significant difference at the 0.05 level of significance.

\*\*It would appear that a significant difference exists between these groups, but the LSD tests only between two group mean scores at a time.

## APPENDIX J

LEAST SIGNIFICANT DIFFERENCE TEST OF STATEMENTS  
WHERE THE NULL HYPOTHESIS WAS REJECTED

Statement	Mean Scores	Difference	Computed LSD	Interpretation
3	(1) 3.9 (2) 4.9	1.0*	0.529	$M_1 \leq M_2$
	(1) 3.9 (3) 4.4	0.50	0.529	$M_1 = M_3$
4	(1) 2.8 (2) 4.2	1.40*	0.869	$M_1 \leq M_2$
	(1) 2.8 (3) 2.2	0.60	0.869	$M_1 = M_3$
17	(1) 5.0 (2) 4.9	0.10	0.313	$M_1 = M_2$
	(1) 5.0 (3) 4.1	0.90*	0.313	$M_1 \geq M_3$
18	(1) 4.7 (2) 4.9	0.20	0.567	$M_1 = M_2$
	(1) 4.7 (3) 3.8	0.90*	0.567	$M_1 \geq M_3$

(1) = In-service coordinators; (2) = Vocational instructors;  
(3) = Employers

\* Represents a significant difference at the 0.05 level of significance.

## APPENDIX K

## MEAN AREA SCORES WITH SIGNIFICANT DIFFERENCES

Statement	Area 1 Mean	Area 2 Mean	Computed F	Tabular F*
10	4.27	4.93	11.11	4.26
17	4.80	4.53	4.57	4.26
19	3.67	4.53	4.76	4.26
20	4.20	4.87	6.67	4.26

Area 1 = Alberta; Area 2 = Oregon

\*F tabular with 1, 24 degrees of freedom at the 0.05 critical value.