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A STUDY OF THE PERCEPTIONS OF OCCUPATIONAL INSTRUCTORS AND ADMINISTRATORS OF IN-SERVICE EDUCATION PROGRAMS IN THE TECHNICAL INSTITUTES AND COMMUNITY COLLEGES OF NORTH CAROLINA

by

Ukaonu W. Uche

A Dissertation Submitted to
the Faculty of the Graduate School at
The University of North Carolina at Greensboro
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of the Requirements for the Degree
Doctor of Education

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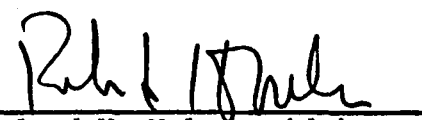
1973

Approved by



Roland H. Nelson, Adviser

APPROVAL PAGE

This dissertation has been approved by the following committee of the Faculty of the Graduate School at The University of North Carolina at Greensboro.

Dissertation Adviser _____

Oral Examination Committee Members _____

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_____

_____

May 9, 1973
Date of Examination

UCHE, UKAONU WILLIAM. A Study of the Perceptions of Occupational Instructors and Administrators of In-Service Education Programs in the Technical Institutes and Community Colleges of North Carolina. (1973) Directed by: Dr. Roland H. Nelson. Pp. 161

The purposes of this study were: to study the perceptions of instructors and administrators and the extent of agreement between their perceptions of content of in-service education programs;* to determine what constitutes current in-service education programs for occupational education instructors in technical institutes and community colleges in North Carolina; to examine the degree of agreement between the instructors and administrators on what should be the purposes of the in-service education programs; to indicate the extent of agreement between the instructors' and administrators' perceptions of both the purposes and content of in-service education programs as they relate to the guidelines derived from the review of relevant literature.

Relevant literature on in-service education was reviewed, and the elements that authors and researchers agreed should be included were selected for this study. Data were collected from a random sample of 524 occupational education instructors and the universe of 128 occupational education administrators (directors of occupational education and deans of instruction) employed in the North Carolina Community College System as full-time employees.

A questionnaire was constructed and validated, on a pilot group, before mailing to the respondents. The instrument contained

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*The researcher uses the term "content" to include methods of instruction throughout the dissertation.

items relating to the purposes, elements and methods of in-service education programs.

The data were organized, coded, and analyzed by computer and presented in tabular form. Percentage analyses of responses by the respondent groups were made to determine the relationship between their perceptions of the purposes and content of in-service education programs in North Carolina's community college system as they related to the guidelines derived from the literature.

Respondents, both instructors and administrators, perceived that current in-service programs did the following: helped instructors keep abreast of new knowledge and innovations in their respective fields, promoted mutual respect and acceptance among educators, provided training activities that recognized the need for realistic teaching innovations, provided small group programs for instructors' particular needs, provided programs for two-way communication between instructors and administrators, and provided programs that received administrative support.

The less formal education an instructor possessed, the more importance he attached to in-service training activities.

The current in-service education programs were given low ratings by instructors in the following areas: offered a wide variety of opportunities for professional growth; contributed to instructor's professional growth; encouraged instructor's participation in planning the in-service program activities; involved instructors in the identification of needs; offered incentives for the time contributed to study outside school hours; involved shared leadership responsibility; provided an effective method to promote

professional skills; was an integral part of the institution's programs; and provided adequate information for new instructors' adjustment in the teaching profession.

The current in-service education programs compared favorably with only five of the fourteen elements identified by the author from relevant literature.

There was a lack of agreement among the respondents on some of the purposes of local in-service programs.

Concepts identified by the author from the literature as guidelines for a successful in-service education program were: basic faculty needs, professional growth activities, mutual respect and open interaction, opportunities and variety of activities; individualized and small group programs for particular needs, involvement in planning, sharing in leadership, specific goals and objectives of programs, two-way communication, administrative cooperation, knowledge and utilization of resources, and evaluation.

The review of related literature revealed no standards nationally for in-service education programs, for in-service education programs in technical institutes or community colleges in North Carolina, and for in-service education programs in any particular state.

ACKNOWLEDGEMENTS

The author would like to acknowledge gratefully the comments, suggestions, and help given to him by Dr. Roland H. Nelson, his major advisor, not only in the completion of this dissertation but also in the program of studies that led to it.

Appreciation is also expressed to other members of the committee, which included Dr. Donald W. Russell and Dr. T. J. McCook, for their suggestions and time. Sincere gratitude is expressed to Dr. J. S. Himes who is also a member of the committee for his unlimited assistance.

The author is indebted to Mr. John L. Saunders, Director of Institutional Research, Dr. John C. Busch, Professor of Educational Research, U.N.C.-G.; Dr. Fleet Allen, Dr. LeRoy Dare of the Sandhills Community College, and Professor Jean M. Bright of A & T State University, whose assistance and suggestions added greatly to the success of this study. The author also thanks Kenneth S. Oleson, Director of Occupational Education, Department of Community Colleges, and other personnel in North Carolina's Technical Institutes and Community Colleges for making this study possible.

Finally, the author is indebted beyond expression to his beloved wife and son, Cecilia and Maraizu, whom he left in Nigeria for a period of four years. Their patience, understanding, and encouragement contributed to the successful completion of this research project.

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CHAPTER I

INTRODUCTION

A community college system was established in North Carolina in 1963. The legislation establishing that system provided for incorporation into the system existing industrial education centers, technical institutes, vocational institutes, community colleges and extension units throughout the state.[1]

All of these institutions offer training in technical and vocational education. The community colleges were given the responsibility for a two-year college transfer program in addition to technical and vocational education programs.[2]

In 1972, North Carolina had fifteen community colleges and forty-one technical institutes.[3] These community colleges and technical institutes offer vocational programs designed to train people to become semi-professional and skilled workers.

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[1]North Carolina Department of Community Colleges, Educational Guide Technical Institutes, Community Colleges (Raleigh, North Carolina, 1969), p. 3.

[2]W. W. Holding Technical Institute, Public School Laws of North Carolina Community Colleges, Technical Institutes and Industrial Education Centers, Chapter 115A, General Statue of North Carolina (Raleigh, North Carolina, 1971), p. 2.

[3]North Carolina Department of Community Colleges, Educational Guide Technical Institutes, Community Colleges (Raleigh, North Carolina, 1971), pp. 144-146.

The programs developed by the community college system to meet the needs of youths and adults of the community have caused a marked increase in the number of institutions, students, programs and courses. The following statistics exemplify the growth of technical and vocational education in North Carolina: in 1967-68, there were only 37 institutions as compared with 41 in 1971-72, excluding 15 community colleges. The full-time student enrollment has increased from 7,848 in fiscal year 1966-67 to 20,781 in 1971-72.[4] With this increase in the number of students has come the demand for more occupational, vocational and technical faculty possessing both knowledge of a skill and knowledge of how to teach it.

A large percentage of occupational instructors lack formal teacher training. Many come from the ranks of artisans and skilled workers and some have never attended college. These instructors pose a particular problem for those who plan in-service education programs, since their work experience and formal training are so diverse.

During each of the last five years, a three-day conference has been held for these instructors as in-service education. Several individual institutions have developed and conducted in-service training programs for their staff and courses are

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[4]North Carolina Department of Community Colleges, The Open Door (Raleigh, North Carolina, Education Building, Winter, 1972), p. 24.

offered by senior institutions for them throughout the year at many off-campus locations.[5]

Significant to this study is the apparent lack of consensus between instructors and administrators of what constitutes an in-service education program and what should be the purposes of in-service programs. The problems confronting in-service education for occupational instructors in North Carolina Community College System are fourfold:

1. What existing guidelines are viable for in-service education programs for instructors which can up-date the knowledge and educational skills of occupational instructors in technical institutes and community colleges in North Carolina?

2. To what extent do existing in-service education programs of occupational (vocational and technical) instructors in these institutes compare with those guidelines?

3. How do occupational instructors and administrators perceive the purposes and content of the current in-service education programs?

4. Is there agreement in the perceptions of the respondent groups in terms of what ought to be included in the in-service programs?

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[5]Kenneth S. Oleson, "Letter: Ukaonu W. Uche" (Raleigh, Division of Occupational Education, March 29, 1972).

STATEMENT OF THE PROBLEM

The purposes of this study were:

1. To study the perceptions of instructors and administrators and the extent of agreement between their perceptions of content to be included in the in-service training programs;*

2. To determine what constitutes current in-service education programs for occupational education instructors in technical institutes and community colleges in North Carolina;

3. To examine the degree of agreement between the instructors and administrators on what should be the purposes of the in-service education programs; and

4. To indicate the extent of agreement between the instructors' and administrators' perceptions of both the purposes and content of in-service education programs as they relate to the guidelines derived from the review of relevant literature.

SIGNIFICANCE OF THE STUDY

This study should provide a basis for development of effective in-service programs for occupational instructors by individual institutions and the state department of community colleges in North Carolina. It was believed that guidelines for in-service education would help in upgrading the present in-service practices already in progress on individual institution campuses and future state-wide programs. It would help to bring

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*The researcher uses the term "content" to include methods of instruction throughout the dissertation.

to focus the facts that more money and expertise were needed to produce in-service programs effective enough to update the knowledge and educational skills of occupational instructors. Some administrators had left this important part of their faculties' educational experience up to the individual instructor to decide when and how to participate in an in-service activity. This study intended to bring to light some of the basic concerns expressed by occupational instructors. It was believed that these concerns might help to develop more administrative cooperation and support essential for the success of any in-service education program. Such action would help to stimulate an exploration of various approaches to in-service education programs in an attempt to improve instructional skills and achievement.

LIMITATIONS

1. This study was limited to a randomly selected sample of occupational instructors and the universe of administrators (deans of instruction and directors of occupational education) in community colleges and technical institutes in North Carolina.

2. The study was not necessarily an indication of the quality of the in-service programs in the North Carolina Community College System except as perceived by instructors and administrators, and the guidelines derived from the literature.

3. It was limited to the fifty-six community colleges and technical institutes in operation in North Carolina listed below:

1. Anson Technical Institute
   Ansonville, North Carolina
2. Asheville-Buncombe Technical Institute
   Asheville, North Carolina

3. Beaufort County Technical Institute
   Washington, North Carolina

4. Bladen Technical Institute
   Dublin, North Carolina

5. Blue Ridge Technical Institute
   Hendersonville, North Carolina

6. Caldwell Community College and Technical Institute
   Lenoir, North Carolina

7. Cape Fear Technical Institute
   Wilmington, North Carolina

8. Carteret Technical Institute
   Morehead City, North Carolina

9. Catawba Valley Technical Institute
   Hickory, North Carolina

10. Central Carolina Technical Institute
    Sanford, North Carolina

11. Central Piedmont Community College
    Charlotte, North Carolina

12. Cleveland County Technical Institute
    Shelby, North Carolina

13. Coastal Carolina Community College
    Jacksonville, North Carolina

14. College of the Albemarle
    Elizabeth City, North Carolina

15. Craven Technical Institute
    New Bern, North Carolina

16. Davidson County Community College
    Lexington, North Carolina

17. Durham Technical Institute
    Durham, North Carolina

18. Edgecombe Technical Institute
    Tarboro, North Carolina

19. Fayetteville Technical Institute
    Fayetteville, North Carolina

20. Forsyth Technical Institute
Winston-Salem, North Carolina

21. Gaston College
Dallas, North Carolina

22. Guilford Technical Institute
Jamestown, North Carolina

23. Halifax County Technical Institute
Weldon, North Carolina

24. Haywood Technical Institute
Clyde, North Carolina

25. Isothermal Community College
Spindale, North Carolina

26. James Sprunt Institute
Kenansville, North Carolina

27. Johnston Technical Institute
Smithfield, North Carolina

28. Lenoir Community College
Kinston, North Carolina

29. Martin Technical Institute
Williamston, North Carolina

30. Mayland Technical Institute
Spruce Pine, North Carolina

31. McDowell Technical Institute
Marion, North Carolina

32. Montgomery Technical Institute
Troy, North Carolina

33. Nash Technical Institute
Rocky Mount, North Carolina

34. Pamlico Technical Institute
Alliance, North Carolina

35. Piedmont Technical Institute
Roxboro, North Carolina

36. Pitt Technical Institute
Greenville, North Carolina

37. Randolph Technical Institute
Asheboro, North Carolina

38. Richmond Technical Institute
Hamlet, North Carolina

39. Roanoke-Chowan Technical Institute
Ahoskie, North Carolina

40. Robeson Technical Institute
St. Pauls, North Carolina

41. Rockingham Community College
Wentworth, North Carolina

42. Rowan Technical Institute
Salisbury, North Carolina

43. Sampson Technical Institute
Clinton, North Carolina

44. Sandhills Community College
Southern Pines, North Carolina

45. Southeastern Community College
Whiteville, North Carolina

46. Southwestern Technical Institute
Sylva, North Carolina

47. Stanly Technical Institute
Albemarle, North Carolina

48. Surry Community College
Dobson, North Carolina

49. Technical Institute of Alamance
Burlington, North Carolina

50. Tri-County Technical Institute
Murphy, North Carolina

51. Vance County Technical Institute
Henderson, North Carolina

52. Wayne Community College
Goldsboro, North Carolina

53. Western Piedmont Community College
Morganton, North Carolina

54. Wilkes Community College
Wilkesboro, North Carolina

55. Wilson County Technical Institute
Wilson, North Carolina

56. W. W. Holding Technical Institute
Raleigh, North Carolina

4. There were instructors and administrators who did not return the questionnaire despite a follow-up letter and a reminder sent to them.

5. Findings from the study might not be applicable for generalizing about in-service education programs in other states.

6. This study may not necessarily apply to one particular institution since no one institution was identified.

DEFINITION OF TERMS

1. Community College: A comprehensive post-secondary educational institution which is responsible for offering:

a. College transfer education programs consisting of the freshman and sophomore courses of a college of arts and sciences;

b. Occupation education curriculum and extension programs for the training of individuals in technical or vocational skills in the broad areas of agriculture, business, health, trade and industry;

c. Adult education extension programs of all kinds including community service programs;

d. Special education extension programs for adults.

e. Training programs to provide workers for new and expanding industries.

2. Technical Institute: A technical education institution dedicated primarily to provide:

a. Technical and vocational training for high school graduates;

b. Adult education extension programs including community service programs;

c. Training programs to provide workers for new and expanding industries;

d. Upgrading and updating courses for associate degrees and non-degree programs consonant with community needs.

3. Occupational Education Instructor: An instructor employed full-time to teach in a community college or technical institute in the broad areas of agriculture, business, health, trade, and industry.

4. Administrator: An individual employed full-time in a community college or technical institute who participates in policy making for:

a. Assisting and coordinating efforts of an institution in achieving a high level of quality in its total educational program,

b. Maintaining a staff versed in the latest technical, industrial and vocational training methods and techniques.

c. Organizing and coordinating institutional in-service training for the faculty, and

d. Coordinating inter-institutional in-service conferences for the members of the institutions' faculty.

5. In-service Education: Programs which are offered under the auspices which have as their primary purposes:

a. To update the knowledge and educational skills of the instructors, and

b. To improve the quality of the education program.

CHAPTER II

REVIEW OF RELATED LITERATURE

One of the major reasons for this investigation was to compare the existing in-service education programs of occupational education instructors in technical institutes and community colleges in North Carolina with currently accepted standards for such programs. A review of the relevant literature, however, failed to show any universally accepted (commonly used) standards for in-service education. The review did provide, however, a basis for the author's development of guidelines for effective in-service education programs.

One of the arduously troublesome problems of in-service education in technical institutes and community colleges is that of orienting new instructors. , Ernestine Kopp and Rosaline Snyder have indicated seven special problems encountered by new instructors in the technical development of the community college problems:

1. Many instructors are recruited from industry with vast professional background, but without knowledge of educational principles or teaching experiences.
2. In industry the object had been the finished

product but the emphasis in teaching is on the development of the individual and the methods leading toward the achievement of the product.

3. Much difficulty is involved in translating the ability to produce into the ability of inspiring others to produce.
4. Often in the technical field the technician neither has nor needs an opportunity to wonder "why" a process works.
5. To break down a problem into general principles requires insight, understanding, and recognition of the scientific principles involved.
6. Industry is highly specialized; faculty members recruited from the business world frequently lack broad knowledge necessary for instruction.
7. Provision must be made to supply new teachers with a background in related fields.[1]

The kind of in-service education program described by Kopp and Snyder extended from one semester to three years, depending on the background of the person. Three stages are involved:

1. The individual observes the classroom and laboratory activities under the supervision of an instructor;
2. The individual observes the classroom activities and

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[1]Ernestine Kopp and Rosalind Snyder, "In-Service Improvement Program for New Instructors," The Junior College Journal, XXX (October, 1959), pp. 90-94.

then assumes the responsibility of the laboratory activities; and

3. The individual conducts classes independently but is assigned to special in-service courses according to his need for development.[2]

In the summer of 1959, Pearl Schaaf published an article that dealt with the purposes of in-service education. According to Schaaf:

> In-service [training] should help the experienced, well prepared teacher keep abreast of the expanding knowledge and development that related to his competency. In-service activities should always be related to some important, current, and local problem. The need should come from within and all should be included, administrators and teachers.[3]

Schaaf also described the following in-service activities as part of the purposes for organizing an in-service program:

1. To help the school develop its philosophy.
2. To prepare the curriculum guides.
3. To select textbooks.
4. To attend meetings at which consultants give help.
5. To participate in professional organizations.
6. Use of films and other audio-visual equipment.
7. Interclassroom visitation.
8. Reading of professional books and magazines.

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[2]Ibid.

[3]Pearl R. Schaaf, "Let's Review In-Service Education Programs," The American School Board Journal, CXXXVIII (June, 1959), p. 17.

9. Staff meetings in which study teachers work and plan together.
10. Supervision.
11. Action research in the classroom.
12. College courses.[4]

Mearl Gerheim, in his doctoral study, conducted a research concerning the nature and effectiveness of in-service education. This study identified some practices of in-service teacher education employed in selected school districts and determined their effectiveness in helping teachers meet their professional needs. This study disclosed that:

1. Teachers accepted and valued in-service programs which were local and cooperatively planned, but rejected programs which were poorly planned or authoritatively imposed.
2. There was a need for resource personnel to help teachers understand their pupils.
3. Teachers wanted to plan and preside at teacher meetings and desired more experience in group dynamics.
4. Visitation was most effective when employed outside the district.[5]

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[4]Ibid.

[5]Mearl F. Gerheim, "Teacher Evaluation of the Nature and Effectiveness of In-Service Teacher Education in Selected School Districts" (unpublished doctoral dissertation, University of Pittsburgh, 1959).

In February of 1960, Russell Morris stressed that the major responsibility in sustaining and supporting the in-service education program rested with the administration. This question was raised: "Students have orientation; why shouldn't the teachers?" Morris used the analogy that "in-service is to the teacher what the maintenance shop is to industry."[6]

Frank Durkee reported the following aspects of model in-service program activities: (1) academic courses, (2) workshops, (3) seminars, (4) practicums, (5) institutes, (6) intervisitations, (7) research projects, (8) development of curriculum guides, (9) development of resource units, (10) conference, (11) general staff meetings, (12) department meetings, (13) subject area meetings, and (14) use of consultants.[7]

J. B. Hodges, in the spring of 1960, stated that professional growth activities become dynamic through clarity of purpose, carefully planned procedures, and built-in provision for evaluation. He contended that only as these requirements are met can in-service serve education as the broad purpose of upgrading the instructional program and the profession.[8]

Based on his successful in-service program experiences, Guy Wagner suggested the following guidelines for local action:

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[6]J. Russell Morris, "Why Have An In-Service Program?" School Principal's Bulletin, XLLIV (February, 1960), p. 123.

[7]Frank M. Durkee, "Organizing for Growth In-Service," Educational Leadership, XVII (March, 1960), pp. 367-69.

[8]J. B. Hodges, "Continuing Education: Why and How?" Educational Leadership, XVII (March, 1960), pp. 330-31.

1. Cooperative participation with fellow teachers on in-service learning experience; teachers then can apply these techniques to the classroom.
2. Setting up local goals is highly important in the in-service projects.
3. Teachers should expect to do professional reading and action research as part of their regular work.
4. Individual teachers, as well as the whole school, should concern themselves with yearly evaluations and what they set out to achieve.[9]

In Educational Leadership of March, 1960, Sara Devine discussed the various roles and responsibilities of in-service education. According to Devine, the State Department should provide some assistance in solving local problems. This department should encourage the local district to work on local problems in a scientific manner. Teachers are concerned with improving their skills and understandings and, as a result, give their time to work on solutions to their problems, Devine maintained. She also believed that planning and evaluation are essential; as a result of these, the teachers expressed needs for information and guidance. As these needs are met, in-service is taking place.[10]

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[9]Guy Wagner, "What Schools Are Doing in In-Service," Education, LXXXI (October, 1960), p. 125.

[10]Sara Devine, "State Department Role in In-Service Education," Educational Leadership, XVII (March, 1960), pp. 356-60.

In a doctoral study at the University of Nebraska, Richard Whitmore determined promising devices for the orientation and administration of in-service education in selected schools. The study determined methods by which in-service programs can be initiated, defined, and assigned administrative responsibility. Some of his findings were that:

1. The in-service program is developed to provide opportunity for growth that is not available any other way.
2. Teachers getting together in committees and working on common goals brought out leadership often left dormant without this opportunity.
3. A great deal of mutual respect and appreciation was expressed between administrators and staff members when individuals were allowed to express, develop, and put their ideas into practice.
4. A program of in-service education must be highly structured by the administration at the start. When staff leadership is developed, the administrative structuring must subside in order to allow the functioning of the newly found leadership.[11]

Whitmore further recommended:

1. In-service should be an integral part of the educational program and should be financed out of the operating budget.

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[11]Richard F. Whitmore, "Effective Methods for Orientation and Administration of an In-Service Education Program" (unpublished doctoral dissertation, University of Nebraska, 1960).

2. In-service should be broad in scope--broad enough to interest and to involve all staff, but not to the extent that teachers feel insignificant.
3. Some administrative person should be assigned the responsibility of organizing the program.[12]

In their attempt to define in-service education, John Beery and March Murfin stated that: "In-service education usually means self-evaluation and critical analysis of method and procedures with resulting modification and change."[13]

A. K. Trenholme, in his article, focused his attention on the need for adequate resource materials in a successful in-service program. He felt that as the teacher's concept improved, better and more flexible materials would be demanded and produced. Curriculum Laboratory for in-service training is usually a part of a material center. A great many new materials are being prepared to assist teachers in their professional development and schools themselves are producing many new tools for in-service.[14]

In his article entitled "A Logical Approach to In-Service Education," Edward Hunt stressed four points necessary for an effective in-service program. The program should be:

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[12]Ibid.

[13]John R. Beery and March Murfin, "Meeting Barriers to In-Service Education," Educational Leadership, XVII (March, 1960), p. 351.

[14]A. K. Trenholme, "Materials Assist In-Service Growth," Educational Leadership, XVII (March, 1960), pp. 350,374.

1. Cooperatively planned.
2. Concerned with instructional matters.
3. Based on democratic procedures.
4. Use the scientific approach.[15]

Presenting a discussion on "In-Service Teacher Education," Joseph Teufner offered the following facts about in-service education programs:

1. Even recent graduates from teacher training programs need opportunities for continuous growth in the teaching skills.
2. Education needs to develop a more realistic approach for upgrading teachers on the job.
3. A positive correlation between the needs of the teacher and the needs of the school is needed.
4. If the teacher is able to appraise his needs and to identify his teaching weaknesses, these may be overcome by attending the proper college course. Often the one who needs to attend summer school cannot attend, and this points up the need for an effective in-service program.[16]

In the National Education Association Journal, April, 1961, the characteristics of an effective in-service program were presented. These included:

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[15]Edward G. Hunt, "A Logical Approach to In-Service Education," National Secondary School Principals' Bulletin, XL (February, 1961), pp. 39-41.

[16]L. Joseph Teufner, "In-Service Teacher Education Programs," American Vocational Journal, XXXVI (March, 1961), pp. 34-35, 40.

1. Find out what the teacher wants to learn.
2. Start where the teacher is now. "In-service is more than a workshop or seminar; it is an opportunity a teacher has for growing while he is on the job."
3. In-service is continuous.
4. In-service needs skilled leadership.
5. In-service offers opportunity to broaden the teacher's horizons by team efforts.
6. In-service allows for educational travel.
7. In-service must not be initiated by the chief administrator alone.
8. In-service must meet the needs of the new teacher as well as the needs of older teachers.
9. Good in-service education involves freeing the imagination and creativity of the staff.
10. Good in-service programs build morale.
11. In-service involves teacher visitation.[17]

The Educators Encyclopedia presented the following activities as devices of in-service education: (1) formal college courses, (2) workshops, (3) teacher conferences, (4) continuing workshops or project workshops, (5) faculty meetings, (6) professional staff councils, (7) independent study and research by individual teachers or groups of teachers, (8) programs presented by book companies and

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[17]Thompson, Tompkins, and Eaves, "In-Service Education Starts With You," National Educational Association Journal, L (April, 1961), pp. 12-14.

other commercial companies, (9) travel by teachers, (10) visits to exhibits provided by commercial companies, (11) field trips, (12) conferences and meetings with resource persons, and (13) teacher participation in local, civic, religious, and fraternal organizations.[18]

Edgar Draper, in "How to Develop an Effective In-Service Education Program," included the following criteria:

1. The participants, a faculty as a whole or a selected group, must recognize, appreciate, and understand the need for the study of a particular problem or condition.
2. The faculty or affected group, either as a whole or through a committee, must share in planning, deciding, and changing the problem.
3. A sense of "oneness" or "ourness" should permeate the performance of any in-service program.
4. Failing to recognize that many other judgments may be applied, there should be evidence of an improved education program through better service to the student affected.
5. The method used to evaluate the in-service program should provide several types of data.[19]

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[18] Edward W. Smith et al., "In-Service Education," The Educators Encyclopedia (Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1961), pp. 228-30.

[19] Edgar M. Draper, "How to Develop an Effective In-Service Education Program," National Association Secondary School Principals' Bulletin, XL (April, 1961), pp. 199-204.

In a follow-up of the graduates of secondary education in San Francisco State College, Taylor reported the following results: (1) motivation was one of the major problems constantly reported; and (2) courses for salary increments were the most common in-service effort identified by the teachers. The range of activities included: (1) in-service courses, (2) class visitation and observation, (3) workshops, (4) faculty meetings, (5) administrative help and encouragement, (6) evaluation, (7) professional library provided by the school, and (8) doing nothing at all.[20]

In a doctoral study, Wayne Teague analyzed the in-service program for the teachers and administrators in Dekalb County, Georgia. He listed the following needs:

1. Local schools should be given more responsibility for planning and conducting in-service activities.
2. In-service activities should be designed primarily to help reach specific goals that are recognized and desired by staff members.
3. Individual differences of personnel should be taken into consideration in planning.[21]

D. E. Berry, in a study concerning in-service of teachers in Topeka, Kansas, identified eight major practices and evaluated

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[20]Bob L. Taylor, "The In-Service Education Needs of New Teachers," California Journal of Education Research, XII (November, 1961), pp. 221-23.

[21]Wayne Teague, "An Evaluative Analysis of In-Service in Dekalb County, Georgia" (unpublished doctoral dissertation, Auburn University, 1962).

their effectiveness as expressed by personal opinions of the teachers and administrators. Berry found that the most effective practices were those requiring group participation.[22]

Walter Brown, in his article, discussed in-service education in Phoenix, Arizona, with emphasis on the technical-vocational aspect. In the attributes of the Phoenix in-service program, he found:

1. That the in-service program is aimed at keeping abreast of the changing instructional needs.
2. Many beginning teachers have received minimum training and need more subject matter content. The technical-vocational faculty members help to give the new teacher a wider base of related subjects.
3. The in-service program aids the teacher in curriculum development.
4. The program sharpens the teacher's methodology, ability to lead discussions, class demonstrations, and use of evaluative devices.
5. Safety was emphasized in the in-service program.[23]

Brown further stated the following outcomes of the Phoenix in-service program:

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[22]Daryle Eugene Berry, "A Study of Selected In-Service Practices for Improvement of Instruction in the Public Schools of Topeka" (unpublished doctoral dissertation, University of Kansas, 1962).

[23]Walter C. Brown, "In-Service Teacher Education in Phoenix," Industrial Arts and Vocational Education, LII (June, 1963), pp. 14-15.

1. Course outlines have been developed.
2. New skills and technical knowledge were being introduced.
3. Noticeable increase in the use of instructional aids was observed.
4. Safety rules and practices were more evident.
5. Teacher morale was high as a result of time for planning and working together for instructional improvement.[24]

In an article, 1963, Landrum wrote that professional growth results from:

1. advanced study;
2. experience;
3. travel;
4. in-service training groups;
5. active professional association membership; and
6. research and professional writing and extensive professional reading.[25]

Landrum further felt that these activities must be accomplished by a desire and motivation to grow professionally.[26]

Ramseyer, writing on "Professional Development of the Teaching Staff," held the following as being important components of an effective program of in-service education. He

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[24] Ibid.

[25] H. W. Landrum, "Motivation for Professional Growth," Texas Outlook, XLLII (June, 1963), pp. 12-13.

[26] Ibid.

also maintained that professional development occurs when:

1. The teacher finds himself becoming an integral part of the educational system; that is, participating in making important decisions for the school.
2. The teacher realizes himself as a person through the work he performs in the school.
3. The teacher continues to grow in competence as a teacher.[27]

In his article, John Hickman emphasized the agreement on the purposes of the workshop as related to the needs of industrial arts teachers and their roles. Hickman felt that the following purposes could readily be served by the workshop:

1. to provide in-service education for old and new teachers;
2. to seek better methods of integrating industrial arts into the total school program;
3. to review and discuss course content, and
4. to aid the individual teacher with his individual problems.

Hickman proposed a method for meeting these needs. "The after-school workshops," which he stated, should be attended only by teachers who are genuinely interested in learning; these teachers

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[27]John R. Ramseyer, "Professional Development of the Teaching Staff," Canadian Education and Research Digest, III (September, 1963), p. 203.

should be taught by other well-qualified faculty members or coordinators.[28]

Reynard, writing on the orientation of new teachers, stressed the importance of an individualized program based strictly on the needs of the teachers new to the school. He felt that an interview and a diagnostic check list could serve as a means of providing the necessary information for a well-planned personalized orientation program.[29]

Reid, in 1963, supported the concept that in-service education should occur during the regular hours of the school day. In his discussion, he dealt with certain aspects that he considered effective in-service techniques. He maintained that:

1. New teachers should be provided substitutes while they attended individual orientation conferences.
2. These substitute teachers should be employed part time.
3. In-service meetings should employ a variety of activities such as field trips and demonstrations.
4. Substitute teachers should be used when: (a) regular teachers visited other classes, (b) regular teachers worked on special assignments, (c) teachers were having

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[28]John Hickman, "Workshops for Industrial Arts Teachers," Industrial Arts and Vocational Education, III (October, 1963), p. 23.

[29]Harold E. Reynard, "Pre-Service and In-Service Education of Teachers," Review of Education Research, XXXIII (October, 1963), pp. 369-79.

conferences with the supervisor, and (d) regular teachers served on committees or attended out of town professional meetings.[30]

Lois Williams discussed a professional growth policy adopted in 1961 by the Montebello, California Board of Education for 920 employees. The basic assumptions were: (1) each teacher should be responsible for his maturation as a teacher, (2) professional development should occur when a teacher assesses his strengths and weaknesses and systematically acquires experience and strengthens his competencies, (3) each individual should assume responsibility for planning and evaluating his learning, (4) the professional growth plan should be independent of administrative approval, (5) each individual teacher should have a unique plan, (6) the board of education should be responsible for allocating money and resources for in-service education, and (7) the program should include a point system in which the faculty is required to earn so many points for salary increments.[31]

According to Williams, at the mid-point of the three-year experimental period in the professional growth policy, these gains were noted:

1. Increased morale among the faculty.

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[30]Hale C. Reid, "Free Time In-Service Education," National Education Association Journal, LII (November, 1963), p. 54.

[31]Lois Williams, "Individualizing In-Service Education, A Policy and Point of View," National Education Association Report (National Committee of Teacher Education and Professional Standards, 1963), pp. 388-98.

2. Recognition of professional activities.
3. Improved personnel files.
4. Provision for changing conditions,
5. The removal of a ceiling (limiting the number of points possible for a given time).
6. Expansion of the definition of professional growth.
7. Interest in the total educational plan.
8. Concern of the Board of Education.
9. Possible removal of requirement.[32]

Moffitt concluded in his report on In-Service Education for Teachers, that in an established program of successful in-service education in which a majority of mature teachers have had the benefit of belonging to a group, the initiation of a study group is desired. He felt that a sense of belonging brings satisfaction to the teacher. The morale of a group increases when:

1. The individual recognizes his contribution.
2. The individuals are given responsibility for developing better ways of enhancing the program of the school.
3. The responsibility for the educational program is shared among several persons rather than lodging in one person.[33]

John Freirer, in an editoral article in Industrial Arts and Vocational Education, asserted that in our rapidly changing

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[32]Ibid.

[33]John C. Moffitt, In-Service Education for Teachers, A Report (Washington: The Center for Applied Research in Education, 1963), pp. 1-103.

industrial world, no vocational instructor can remain competent himself. To do an adequate professional job, he maintained the vocational teacher needs on-the-job training in both content and methods.[34]

In his article in 1964, Ralph Bender dealt with the problems encountered by new vocational teachers. He proposed supervision during the period of adjustment because of the wide variety of problems encountered by new teachers. These problems varied from motivation of students to problems related to the wide range of courses the teacher must guide. Some of the methods used to handle some problems include non-credit workshops, seminars, and conferences conducted on the basis of small subject groups by subject areas. These sessions should include instruction for the development of technical and occupational competence as well as professional competency.[35]

J. R. Ogletree and Fred Edmonds discussed the various ways schools provide for professional development. They contended that schools seek to improve their program by:

1. Clearly defining objectives and striving to achieve them.
2. Changing the physical environment.

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[34]John L. Freirer, "How Good Are the Vocational Schools in This Country?" Industrial Arts and Vocational Education, LII (September, 1963), p. 21.

[35]Ralph E. Bender, "Teacher Perception for Vocational Education," Theory Into Practice, III (December, 1964), pp. 189-93.

3. Altering the content of curriculum.
4. Increasing the quality and quantity of instructional materials.
5. Changing the organizational structure to develop a more effective framework.
6. Modifying the behavior or performance of the professional staff through an in-service program.
7. Developing and utilizing leadership through in-service programs.[36]

By exploring the factors associated with successful in-service programs in ten schools in Alabama, Billy Duncan introduced a pilot study on some criteria or features of a successful in-service program. The school systems included in the study were chosen on the basis of recent success with in-service programs. Ten features were stated which would satisfy the criterion of being important in in-service success. Duncan recommended these features and practices:

1. Program based on local needs.
2. Planning of in-service evaluation processes shared by all.
3. Cooperation of staff members.
4. Professional leadership for administrators.
5. Specific planning and organization of the program.
6. Cross-sectioning of personnel.

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[36]James R. Ogletree and Fred Edmonds, "Programming for In-Service Growth," Educational Leadership, XXXI (February, 1964), pp. 288-91, 340.

7. Leadership from staff membership.
8. Opportunity for sharing ideas, information, and materials.
9. Improved programs of instruction.
10. Good participation by staff members.[37]

Writing on the various components of an effective in-service program, William Michaels advocated the following purposes for in-service education: (1) to provide for continuous development and improvement of all members of the school's professional staff, and (2) to provide learning experiences that fill gaps related to the teacher's education or technical competency, since it is becoming more difficult to find teachers technically competent in meeting the rapidly changing demand thrust upon them.[38]

In planning a program of in-service education for technical education, Michaels contended that the following should be considered:

1. The quality of a school program can be measured directly by the quality of the in-service education program.
2. Any program of in-service education should be geared toward "change."

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[37]Billy M. Duncan, "A Study of Factors Associated With the Successful Operation of In-Service Programs of Education in Selected Alabama Schools" (unpublished doctoral dissertation, College of Education, University of Alabama, 1964), pp. 119-20.

[38]William J. Michaels, "Observation on In-Service Teacher Education," Industrial Arts and Vocational Education, LIV (June, 1965), pp. 17-19.

3. A major aim of an in-service program should be to create a positive attitude toward the goals of the staff.
4. In-service education has many forms and dimensions; there should be multi-goals which encompass the activities of all the members of the professional staff.
5. The effective program must provide the right atmosphere in which the staff members can admit their problems and seek solutions.
6. In-service must be based on local needs.
7. In-service must provide the incentives necessary for personal and institutional improvement.
8. A perfunctory in-service program can produce negative results.
9. An effective tool for in-service education is to require each department to produce rules and plans for the future activities in their particular area.
10. In-service should promote and facilitate inter-communication between the divergent forces present in the school.
11. In-service should encourage and promote a varied program of self improvement.
12. An effective program should encourage the staff members to experiment.
13. Each school should be engaged in some type of research activities.

14. Local resources should be utilized before bringing in a consultant.
15. Consultants can serve a useful purpose, but the members must accept his assistance.
16. Various ways of stimulating the exchange of ideas and information should be devised.
17. The program should allow time for in-service in the employment plans.
18. In-service should look to industry for ideas and leads.[39]

According to Sister M. Josetta, the in-service faculty meeting should be based on real problems that are carefully planned and evaluated and dealt with for the purpose of improving the overall educational program for the particular school. Sister Josetta further suggested that activities be aimed at encouraging faculty suggestions and comments.[40]

In a report presented by William Stanton, other characteristic conditions of a good in-service program were presented. But this report dealt primarily with workshops. Stanton contended that too many workshops are illustrated lectures and lack sufficient active involvement with the participants. He also stressed the importance of two-way communication, adequate space in which to work, and adequate materials.[41]

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[39]Ibid.

[40]M. Josetta, "Planning the In-Service Faculty Meeting," Catholic School Journal, LXVI (October, 1966), pp. 90-91.

[41]William A. Stanton, "Successful In-Service Workshops," Industrial Arts and Vocational Education, LV (June, 1966), p. 23.

An October, 1966, article by Paul Metzger emphasized the characteristics of an effective faculty meeting for an in-service program. He persistently expressed that the meeting should be used for routine administrative problems. The discussion topics, he stated, should be centered around the interests of the teachers. The staff should assist in identifying and selecting problems; provision for feedback should be an integral part of the program. According to Metzger, the effective faculty meeting requires long and thorough preparation and should primarily motivate and guide staff members in pursuing individually their professional development.[42]

In the March, 1967 issue of the National Education Association Research Bulletin, the following hypotheses were made for the benefits of an effective in-service program: (1) improved faculty unity and teamwork; (2) increased individual competency in teaching by learning new procedures, improved methods and techniques, better understanding of the school objectives; (3) general encouragement of professional growth; (4) curriculum development and improvement; and (5) personal reward for teachers' salary increments, higher teacher certification, and satisfying requirements for tenure.[43]

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[42]Paul Metzger, "Employ the Faculty Meeting for In-Service Training," Catholic School Journal, LXVI (October, 1966), pp. 88-90.

[43]"Professional Growth of Teacher In-Service," National Education Research Bulletin, XL (March, 1967), pp. 25-26.

The same research bulletin revealed some general trends and practices concerning in-service. They were:

1. Teachers or their representatives are usually involved in planning the in-service education program.
2. Greater use is being made of the professional staff within a school system.
3. Schools are offering a wider variety of opportunities and activities for professional growth.
4. Schools are providing more released time during the regular session for in-service education.
5. Compensation is being given for time contributed to in-service education by the teacher outside regular school hours.
6. School systems are extending the period of teacher employment and the additional time is used for in-service programs.
7. Salary practices recognize experience and preparation.
8. In-service programs are receiving financial support from sources other than the school.
9. Nearly all in-service programs have subjective evaluations.[44]

On February 7 and 8, 1968, the Occupational Directors' Association of the Department of Community Colleges, Divisions of Vocational and Technical Education, North Carolina State

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[44]Ibid.

University at Raleigh sponsored a conference. In the final report entitled "Articulation Conference on Vocational Education in High Schools, Community Colleges and Technical Institutes in North Carolina," one of the activities dealt with was in-service education. The conference attempted to explore how "a joint effort in providing in-service training for professional personnel" might contribute to better articulation of vocational programs at both high school and post-secondary school levels. According to the report:

> The feasibility of this kind of effort has already been demonstrated in the area of industrial education. It should be expanded to other areas. Limited teacher education and research staffs demand that we seek ways and means of utilizing these staffs more efficiently.[45]

The conference further recommended the need for exchange of teacher and program. According to the report, one of the relative values of an exchange program included: (1) possibly a more effective use of present teaching talent, and (2) professional growth and development of instructors involved, leading to enrichment of the student learning situation.[46]

A national survey of training demand by Junior and Community College Administrators was conducted by the American Association of Junior Colleges. The data provided reflected the in-service training

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[45]Occupational Directors' Association, A Report of Articulation Conference on Vocational Education in High Schools, Community Colleges, and Technical Institutes in North Carolina, Department of Industrial and Technical Education, North Carolina State University, Raleigh (February, 1968), p. 11.

[46]Ibid., p. 34.

needs in greatest demand by the presidents of 288 members of the Association who returned the questionnaire.

According to the report, respondents listed up to three training priorities in each of the six course areas--academic, vocational, technical, general education. In vocational/technical courses, the number of mentions were:

1. Business 179
2. Engineering-related program 119
3. Para-Medical Occupation 110
4. Service Programs. 55[47]

Among the significant fields in which desired in-service training is generally unavailable were these:

1. Business-related programs indicated by 30 or more requests from respondents
2. Data Processing
3. Nursing
4. Para-Medical Program
5. Service.[48]

This report suggested an urgent and increasing need which had prevailed between the available supply and demand for in-service training.

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[47]"In-Service Training for Two-Year College Faculty and Staff: A Survey of Junior and Community College Administrators," American Association of Junior Colleges Report, Washington, D.C. (August 11, 1969), p. 13.

[48]Ibid., p. 26.

In 1970, Jacob D. Harder made a doctoral study to determine whether differences in teaching effectiveness resulted from two types of in-service education programs designed to orient beginning teachers to an industrial arts curriculum. This study was conducted with two in-service education programs and two evaluation instruments developed on the basis of three objectives. Using five null hypotheses, he found:

1. That there was no substantial difference among the groups used in the study in the attainment of the objectives as measured by the instruments. The data supported these null hypotheses.
2. There was no substantial difference on the mean score among and within the groups on the basis of those above and below the median on the variable age, years of education and teaching experience. However, subjects of Group One below the median age of thirty years scored substantially higher.
3. There was no substantial difference among groups in their attainment of the individual objectives.
4. There was no substantial difference among the groups when the subjects above and below the median were compared on the variables of: (a) university course work taken, (b) number of years of non-teaching experience, (c) population of school, (d) population of community, and (e) subject's upbringing; rural versus urban. However, subjects in large cities achieved substantially higher.

5. There was no substantial difference among the mean scores of each of the three groups of beginning teachers, and fifty randomly selected experienced teachers.[49]

Harder further concluded that the contributions made by the two in-service education programs to curriculum orientation revealed an increase in teaching effectiveness. He also contended that such increase in teaching effectiveness was directly related to investment in time and money.[50]

In the month of February, 1970, Joan E. Stoddard, Specialist in Occupations, published a report on "Oregon's Short-Term Teacher Education Programs for Health Occupation's Personnel." In this article, Stoddard stressed that Oregon was at the point where active personnel involvement on the part of all health occupations educators was essential. She further stated that Oregon's Board of Education had recognized the need for a defined standard for instructional personnel and support as needed. She concluded that it was the interpretation and implementation of such a standard that must frequently be given a closer second look.[51]

Justice M. Cheney, Associate Professor of Industrial Education in State University of New York, wrote an article entitled,

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[49]Jacob D. Harder, "Institute and Individualized In-Service Education Programs Designed to Orient Teachers to an Industrial Art Curriculum" (unpublished doctoral dissertation, Wayne State University, Detroit, Michigan, 1970).

[50]Ibid.

[51]Joan E. Stoddard, "Oregon's Short-Term Teacher Education Programs for Health Occupations Personnel," American Vocational Journal, XXXXV (February, 1970), pp. 37, 94.

"Teacher Education for Post Secondary Programs." Cheney recommended that the teacher education institution should work with industry, business and other employers to organize cooperative programs that would give prospective as well as in-service teachers the opportunity to gain and update their occupational competencies.[52]

Donald V. Brown made a two-year experimental study for the United States Office of Education on "Industry Education Cooperative Program for Pre-service and In-service Vocational and Technical Teacher Training."

According to Brown, during each subsequent academic quarter of these two years, an in-service program was held in the field of electronics, drafting, and machining technology, with a second electronics program held in the summer of 1970. In these five groups of in-service teacher training, a total of 114 selected participants represented thirty-five states. In his final report, Professor Brown reported these findings:

1. The basic elements of the teacher training programs as an industry-university partnership have been particularly well developed, field tested, and evaluated. This concept increases technical training and assists the teachers.
2. In-service narrows the gap between the classroom and modern industry.

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[52]Justice M. Cheney, "Teacher Education for Post Secondary Programs," American Vocational Journal, XXXXV (March, 1970), p. 28.

3. Home study for program refinement and seminars conducted for one hour each day involving the teachers in a review of the basic learning theories appear to be helpful.
4. Emphasis should focus on exploration, discussion, and an interchange of ideas among these groups.
5. Industrial teachers should be assisted and strengthened by motivation of all vocational programs and experiences.[53]

Brown concluded in his report that in-service training brought the teachers in touch with some of the vital developments in his field of technology and provided opportunity for him to associate with other teachers with similar problems. It also offers the teacher an opportunity to be realistically involved in some new learning experiences and their application to technical teaching.[54]

In a recent publication, Foundations of Vocational Education, Rupert N. Evans discussed in-service education in one of his chapters on "Programs of In-service Development." According to Evans, at present, the greatest amount of in-service education is accomplished on a purely voluntary and individually planned basis. The teacher decides that he has certain deficiencies which should be corrected. He then maps out ways of correcting these deficiencies through such means as:

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[53]Donald V. Brown, Industry-Education Cooperative Program for Pre-Service and In-Service Vocational and Technical Teacher Training, A Report of Project Study for the United States Office of Education (University of Tennessee, 1970), pp. 18-20.

[54]Ibid., pp. 20-24.

1. Reading periodicals and books about teaching or about the subject being taught.
2. Securing part-time employment during the week or during summer.
3. Attending schools conducted by business or industry.
4. Visiting local business and industry.
5. Attending technical meetings or meetings of educational personnel.[55]

Evans further contended that: (1) In-service education should be the primary responsibility of the local education agency with close cooperation of universities and State Departments of Education; (2) the most effective pattern of in-service education is one which involves employment of the teacher for twelve months with summers devoted to building strengths and remedying weaknesses; (3) highly desirable activity would be a regular exchange program with employers, not only to upgrade the knowledge of the regular teacher, but to acquaint key individuals in business and industry with what is actually going on in the schools.[56]

In his doctoral study, Rago provided a plan for the in-service education of teachers with a selected school system in New York, as it concerned media. He listed the following conclusions:

1. Teachers need to be involved in the identification and planning for the types of in-service training programs

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[55]Rupert M. Evans, Foundations of Vocational Education (Columbus, Ohio: Charles Merrill Publishing Company, 1971), p. 254.

[56]Ibid., p. 259.

organized to meet their particular needs.

2. Teachers consistently appear to favor local production of short modules of materials which are flexible and adaptable to their own techniques of presentation.
3. Skills in production of media acquired as part of the "hands-on technique" of training appear to make this training more meaningful for teachers.
4. In order to organize and conduct in-service programs for any school community, it is essential to have an annual survey listing availability of types, quantities and locations of audio visual equipment. The data should reflect the extent to which national and state standards for media programs are met.
5. Administrative cooperation and support are essential for the success of any in-service program.[57]

Romaine H. Ringis conducted a doctoral study examining the effectiveness of in-service program in changing teacher attitude. In his conclusion, Ringis identified the following findings:

1. In-service programs for cognitive change can effect an attitudinal change.
2. In-service programs using individualized instruction and "spaced" consultation procedures have a better chance of adoption.

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[57]Frank Rago, "In-Service Education in Instructional Media for Classroom Teachers Parts I and II" (unpublished doctoral dissertation, New York University, New York City, 1972).

3. Changes toward an individualized instruction pattern may occur without major shifts in other modes of instruction.
4. Changes in behavior toward individualized instructional practices may occur without a measurable change in attitude.
5. A measured attitude shift may not be revealed in observable behavior.
6. The "spaced" consultation may not necessarily produce a measurable difference in attitude.[58]

In a doctoral study, Guillerno Arciniega analyzed the effect that a teacher in-service program using Christensen's education model would have on teachers' understanding of the model perceptions of student behavior. After the analysis of the pretest and the posttest experimental group, he found a significant "gain in knowledge, understanding, and application of the education model."

Arciniega further felt that the in-service program was an effective method not only for providing teachers with theoretical and conceptual understanding of the educational model but also provided them with the skills needed to apply the model in classroom.[59]

In one of the most recent studies, Delfe Nsayaba, in his doctoral study, determined what constituted program of in-service

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[58]Romaine H. Ringis, "Effectiveness of an In-Service Program in Changing Teacher Attitudes" (unpublished doctoral dissertation, University of Southern California, 1972).

[59]Guillerno M. Arciniega, "Teacher In-Service: Education Model" (unpublished doctoral dissertation, University of Arizona, 1972).

education and what program of in-service education existed in Philippine schools as compared with a model in-service program. Although his study was designed for the Philippine schools, some of the findings may be applicable not only to Philippine schools, but to schools in the United States as well. In one of his findings, Nsayaba contended that: (1) teachers' in-service education programs possessed certain deficiencies insofar as they did not measure up with the model, and teachers' participation in planning in-service activities was short of desirable level of involvement.[60]

In summation, in this chapter, a review of the related literature on in-service education was presented. The literature revealed that:

1. There were more research studies and professional writings on in-service education in primary and secondary education levels than in higher education.
2. The number of studies and writings on occupational education was limited.
3. The main objectives and purposes of each writing and study on in-service education included the improvement of the professional and instructional standards of the institution.
4. Some of the professional writings and studies on primary and secondary education levels, to some extent, were applicable and relevant to this study.

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[60]Delfe Bayoneto Nsayaba, "A Comparison of Teacher In-Service Programs with a Theoretical Model" (unpublished doctoral dissertation, University of Iowa, 1972).

5. A review of documents and publications issued by the United States Office of Health, Education and Welfare on in-service training programs revealed that there were no standards nationally established.
6. There were no standards nationally used for in-service education programs.
7. There were no standards for in-service education programs in use in technical institutes and community colleges in North Carolina.
8. There were no standards for in-service education in use by any particular state.

Probably, there should not be such standards because of the diverse nature of the faculty members. Secondly, each institution in most cases has different programs.

A few of the specific studies in occupational education failed to suggest any standards for in-service education programs. John Brown was concerned with the outcome of the already established in-service programs of the technical-vocational institutions in Phoenix, Arizona. Lois Williams' three years experimental study was also concerned with establishing a policy for professional growth for the teachers of Montebello, California. John C. Moffitt's report, sponsored by the Center for Applied Research in Education, was only suggestive and could not be regarded as providing national standards.

But in general, most of the writers and researchers did seem to agree on some common principles or concepts. Richard

Whitmore, Mearl Gerhiem, and Wayne Teague, in their respective doctoral studies, stressed cooperative planning, use of staff members as resource person, visitation, specific goal, mutual respect, exchange of ideas among administrators and faculty. Billy Duncan, in his own research, emphasized in-service training based on local need, meeting individual teachers' particular needs, cooperative planning of programs, built-in evaluation for the program, and setting up goals. Romaine Ringis, Rupert Evans, Jacob Harder and Donald Brown stressed the importance of individualized small groups, meeting individual instructors' basic needs, motivation or incentives, discussions and exchange of ideas, and shared leadership. These concepts reflected the consensus of the above mentioned researchers, authors and other professional writers as essential to the success of in-service education programs. Therefore, these concepts revealed in the literature yielded the basis for the researcher's proposed in-service guidelines.

CONCEPTS AS GUIDELINES

This study was based on the assumption that the literature on in-service education programs found in professional periodicals, textbooks, and unpublished research studies yielded common principles which generally were accepted by those researching or investigating in-service programs as necessary conditions for a successful in-service program. The researcher's proposed guidelines derived from the literature were categorized in the following concepts:

Basic Needs

The in-service program must have meaning for the individual participant; such participant must see clearly the need for change and experience the desire for improvement. The individual must also indicate having deficiencies which should be corrected through in-service education. An in-service program is significant to an individual when involvement occurs. In order to meet the individual's needs, each person has the responsibility of suggesting significant problems to be treated.

Professional Growth Activities

The program must prepare the instructors for both old and new responsibilities. As a major component of continued education, it must promote changes in daily habits of work, in thinking and behavior. It is not only a forum to upgrade the knowledge of the instructor, but also to acquaint the instructor with developments, changing community needs, and what is going on in other institutions.

Mutual Respect and Open Interaction

Teachers in general, like other individuals, are more open when an attitude of mutual respect prevails. Furthermore, they are more willing to take an active part in the problem-solving process. The administrator or a consultant directing the in-service program must be careful not to dominate a group activity. Group interaction should result in the full utilization of all potentialities of the group. There should be an exchange of ideas and opinions among members.

Opportunities and Variety of Activities

Providing opportunities and a variety of activities as devices for personal enrichment and development of faculty members is essential. In-service programs must generate motivation and expectation in the instructors. It may also provide such incentives as graduate and undergraduate course credit, or an institute at less expensive cost.

Individualized and Small Group Program for Particular Needs

In-service education programs must involve both the strongest and weakest members of the faculty. In some cases, the weakest member is more willing to use in-service training than the strongest member. The program must encourage and push for the strong points of the individual instructor rather than weak ones. It must accept problems from the individual's viewpoint. It must serve each faculty member through individualized and small group planning to meet his or her particular need. An instructor may decide to correct certain deficiencies through such means as reading periodicals and books about teaching or subjects being taught, by attending schools conducted by business or industry, by visiting local businesses and industries, and by attending technical or professional meetings of educational personnel, or planned small group programs.

Involvement in Planning

The faculty members must actively participate and involve themselves in all levels of in-service activities. They must be

involved in identifying and planning for the type of in-service program that is meaningful and relevant to their particular needs. When actively involved, the instructor feels that the in-service program is really his personal program because of the active role he has played in selecting and designing the plan of activity.

Sharing in Leadership

Faculty members feel encouraged when given the status of a leader. By becoming involved in the total planning and identifying particular needs for an in-service program, the instructor has acquired some kind of competence involving the local situation. In some cases, the institution should use those instructors or faculty members who have demonstrated competence, knowledge, and remarkable interest as resource persons in some programs during the school year. Faculty members should be encouraged to serve as in-service coordinators, to form and direct committees on in-service education. Such faculty members may be asked to serve at the administrative meetings of the institution.

Specific Goals and Objectives of Programs

In-service program goals must be established. There must be a direct line between the faculty members' needs and the program goals. Each in-service program must have specific goals to be attained. Institutions must commit to writing the objectives of all their in-service programs. The relationship between the society and the teachers' needs must be the focal point of

consideration in determining the goals. However, in-service programs must be based upon educational realities.

Communication

Two-way communication is very important for an effective in-service program. The lack of consideration of suggestions can quickly kill any meaningful activity within a group.

The instructor must be able to discuss a new approach to a problem with his fellow group members and his department head with full confidence that his ideas will receive serious consideration.

Administrative Cooperation

In-service education programs have always been the responsibility of the local school administration. However, the demand on administrators is so great that the state offices of vocational education and universities are also providing in-service program leadership. In order to organize and conduct meaningful in-service programs by either state office, universities or local institutions, administrative cooperation and support are essential for the success of such programs. Often instructors and administrators have narrow perceptions of the total educational program. Genuine understanding and cooperation may result in a more realistic approach to the needed change. In such instances, a successful administrator can act as a facilitator or serve as a counselor to the instructors in most in-service programs. As a facilitator, he arranges for

instructors to be appointed to committees and sees that their expenses will be paid for attending off campus in-service training programs, conventions, and other professional meetings.

Knowledge and Utilization of Resources

The groups engaged in in-service program activities must know what resources are at their disposal. These resources could be special talents of faculty members, resource persons in the community, audio visual devices, and other types of materials. A consultant may be called from a university or industry if certain help is needed. Effort must be made to increase and update resources. All in-service program activities must be kept informed as new materials become available.

Evaluation

Evaluation must be an integral part of in-service programs. Provision must be built into the in-service activity to determine if the program is achieving the desired results. If the desired goals are not being achieved, some basis for modification of activities must be provided. It is necessary that every in-service program conducted must be appraised. Such questions as these must be considered: (1) Are the in-service program activities resulting in instructional improvement in the school? (2) Are the results of these in-service activities producing the desired goals? The evaluation should be done by those who are involved in the program.

It is, therefore, appropriate and possible now to translate the concepts just discussed into guidelines for evaluating an in-service program. The guidelines for the evaluation of the effectiveness of the current in-service education programs in the fifty-six technical institutes and community colleges in North Carolina include:

1. General orientation toward basic faculty needs.
2. Ascertaining and providing professional growth activities for faculty members.
3. Orientation toward mutual respect and open interaction between faculty members.
4. Provision for opportunities and varieties of activities as devices for personal enrichment and development of faculty members.
5. Orientation toward individualized and small group programs to meet the particular need of some faculty members.
6. Faculty members' involvement in planning the program.
7. Shared or participatory leadership.
8. Emphasis upon specific goals and objectives to be attained.
9. Provision for open communication.
10. Provision for administrative cooperation and recognition of the need for realistic changes or innovations.

11. Provision for and knowledge of resource materials.
12. Development of integral and continuous evaluation for all activities.

CHAPTER III

METHODS AND PROCEDURES

INTRODUCTION

The purposes of this study were: (1) to study the perceptions of instructors and administrators, and the extent of agreement between their perceptions of what content to be included in the in-service training programs; (2) to determine what constitutes the current in-service education programs for occupational education instructors in technical institutes and community colleges in North Carolina; (3) to examine the degree of agreement between the instructors and administrators on what should be the purposes of the in-service education programs; and (4) to indicate the extent of agreement between the instructors' and administrators' perceptions of both the purposes and content of in-service education programs as they relate to the guidelines derived from the review of relevant literature.

METHODOLOGY

It was proposed for this study to review in general the literature related to in-service education and to technical and vocational (occupational) instructors' in-service education programs. From the literature, the investigator extracted what the

writers and researchers agreed upon in the field of in-service education. These points of agreement provided the frame of reference for comparison of standards employed in current in-service education programs. The major findings were identified and presented in the form of a summary.

In order to carry out the purposes of this study, a questionnaire instrument was developed. The questionnaire contained items related to the purposes and methods of in-service education programs. The data for this study were gathered from 524 randomly selected occupational instructors, and the universe of 128 deans of instruction and directors of occupational education programs. These instructors, deans, and directors were full-time employees in the technical institutes and community colleges in North Carolina. In an attempt to validate the investigator's techniques, a pilot study was conducted on a randomly selected sample population of occupational instructors and the universe of administrators. The methodology used in the pilot study was the same as that employed in the actual study.

SELECTION OF RESPONDENTS

The researcher, in order to select his respondents, visited the State Department of Community Colleges at Raleigh, North Carolina. The Director of Occupational Education and the Business Manager made available to the researcher the operating budget personnel list of each technical institute and community college. Each operating budget personnel list contained the names of all

the occupational instructors and administrators in a community college or technical institute. Each occupational instructor was designated technical 212, vocational 222, director of occupational education 221, and dean of instruction 241. The list showed names, position, and teaching subject and also the classification of each person. The list made it possible for the researcher to separate occupational instructors from the administrators. Two lists of the respondents were then compiled and coded. Six institutions that had not turned in their operating budget personnel list to the state department were written, and sent then to the researcher.

A random selection of the instructors was made for the study. The two types of teachers, technical and vocational, who comprised the occupational instructors were put together in a single list of 1,572 individuals. Through the use of random sample table, all of the full-time occupational instructors were assigned numbers. Each respondent's number was written on a separate piece of paper and put in a container. After a thorough shake-up, one-third of the slips were drawn out. This resulted in a random sample of 524 respondents. All 128 (the universe) administrators (deans of instruction and directors of occupational education), were used for the study.

THE PILOT STUDY AND QUESTIONNAIRE

From the review of the literature, the researcher extracted those principles which generally were accepted by researchers and

professional writers as necessary conditions for a successful in-service training program. These principles were categorized into guidelines and formulated into questions. From these questions, a questionnaire instrument was constructed (see Appendix B). To test the practicality and suitability of the questionnaire, forty occupational instructors and five administrators were used for a pilot study.

The forty instructors were randomly drawn from the 1,572 occupational instructors. The five administrators were also randomly drawn from the 128 administrators. The sample questionnaire instruments were mailed to them. The purpose of the pilot study was clearly stated in the accompanying letter which was mailed to each respondent. Both the instructors and administrators were asked to criticize and to react to each question. They were provided with enough blank spaces to indicate any question that appeared ambiguous or confusing. Thirty-nine out of forty, or 99 percent of the instructors, returned the questionnaire. The entire five, or 100 percent of the administrators, also returned the questionnaire completed. The pilot study resulted in:

1. Deletion of some questions that would have not contributed much to the study;
2. Deletion of some items that were repetitious;
3. Redefinition of the term in-service education so that its meaning was clear to the respondents.

The actual questionnaire instrument to collect the data for this study was constructed from the modified questionnaire.

The modified questionnaire and revised cover letter were mailed in mid December, 1972, to the 524 occupational instructors and the universe of 128 administrators (deans of instruction and directors of occupational education) who composed the sample for this study.

RETURN OF QUESTIONNAIRE AND RECORD OF DATA

By the end of the third week, 75 percent of the completed questionnaires from the instructors and 64 percent from the administrators had been received. In order to expedite the returns, follow-up devices were employed. At the beginning of the fourth week, letters were mailed to those who had not returned the questionnaire. Ten days after the letters were dispatched, a reminder with an extra questionnaire was also mailed to those who still had not returned the completed questionnaire. A copy of the follow-up letter is enclosed in Appendix B. Some of the respondents were contacted by telephone to solicit their cooperation in returning the completed questionnaire. These follow-up devices proved very effective. By February 8, 1973 (almost two months after the first mailing), 442 (84 percent) returns from the occupational instructors and 92 (72 percent) from the administrators had been received. Two returned questionnaires were so incomplete that they had to be rejected. A mail return of this size was regarded as a good representative sample for valid analysis and conclusions.

The returned information was gathered and fed into a computer for analysis. The data sheets were kept on the responses

of each instructor and administrator. These were tallied, tabulated according to the predetermined categories, and analyzed according to percentage of response for the population that responded to the questionnaire (Table 1).

TABLE 1

NUMBER AND PERCENT OF QUESTIONNAIRE COPIES MAILED TO AND RETURNED FROM OCCUPATIONAL INSTRUCTORS AND ADMINISTRATORS

Category	Questionnaire Copies Mailed		Questionnaire Copies Returned	
	Number	Percentage Total Mailed	Number	Percentage Total Returned
Instructor	524	100	442	84
Administrator	128	100	92	72
Total	652	100	534	82

The response categories for this study were "yes" and "no," "frequently," "helpful," "never," "sometimes," and "no preference." To assess the general level of perceptions of the respondents toward their local institutional and state-wide in-service training programs, they were asked to "rate the effectiveness" of the training programs using the above listed response categories. These categories were scaled on one to five points, one being the highest rating.

To assess the perceptions of the respondent concerning the elements or characteristics essential for successful in-service training programs, they were asked to rate the quality of their institution's in-service program on a five-point scale with one being the highest and five the lowest. The following were the categories used for their response: "excellent," "good," "satisfactory," "unsatisfactory," and "very unsatisfactory"; "very helpful," "helpful," "moderately helpful," "not helpful," and "waste of time." Because of the skewed distribution of the responses to these questions, response categories were collapsed to three: for example, "excellent," "satisfactory," and "unsatisfactory."*

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*The skewed numbers in the high and low scales were between zero to two and one-half percent at either ends of the two categories.

CHAPTER IV

ANALYSIS OF FINDINGS

This study was based on two assumptions:

1. That the literature on in-service education programs found in professional periodicals, textbooks, and unpublished research studies yields common principles which generally were accepted by those researching in-service programs as necessary conditions for a successful in-service program.
2. That there was no difference between the perceptions of the instructors and administrators on in-service education programs.

After collecting the data, the next task was to analyze the findings in terms of the purposes of the study and the established assumptions. The findings presented and analyzed in this chapter were obtained from the questionnaire instruments completed and returned by a random sample of 524 occupational instructors and the universe of 128 administrators (deans of instruction and directors of occupational education) in North Carolina Community College System. The information gathered was classified into these major categories:

I. Characteristics of the sample

   A. Age and sex

B. Formal educational achievement

C. Years of experience.

II. Professional activities of respondents

III. Agreement between the instructors and administrators on the purposes of in-service education programs.

IV. Perceptions of instructors and administrators on the content used in conducting in-service programs.

V. Evaluation of local and state-wide in-service programs.

VI. Elements of a successful in-service training program.

In reference to the latter category, the respondents through the questionnaire items for structured responses made a comparison of both their local and state-wide in-service education programs.

CHARACTERISTICS OF THE SAMPLE

The data in Table 2 present a picture of the sex and age characteristics of the instructors and administrators. Of the 426 instructors who listed their sex, 61.5 percent were males and 38.5 percent were females.

The table revealed that the female instructors within their group were younger than were the males within the same respective groups. There were 5 percent more females than males within the age

TABLE 2

NUMBER AND PERCENT OF INSTRUCTORS AND ADMINISTRATORS BY SEX AND AGE

Category and Age	Male		Female		Total	
	Number	Percent	Number	Percent	Male	Female
Total instructors	262	61.5	164	38.5	61.5	38.5
30 and under	70	26.7	52	31.7	16.4	12.2
31 - 42	92	35.1	63	38.4	21.5	14.8
43 - 54	73	27.9	37	22.6	17.1	8.7
55 and over	27	10.3	12	7.3	6.3	2.8
Total administrators	79	90.8	8	9.2	90.2	9.2
30 and under	10	12.7	1	12.5	11.5	1.1
31 - 42	31	39.2	3	37.5	35.6	3.4
43 - 54	33	41.8	4	50.0	37.9	4.6
55 and over	5	6.3	0	--	5.7	--

range of 30 years and under. At the same time, 3.3 percent more females than males were within the age range of 43-50 years. Although 6.3 percent of the males were found in the age range of 55 years and over, there were 2.8 percent females in this same range.

Table 2, page 65, also shows that 87 of the 128 administrators responded to the question on sex and age. Over 90 percent were males and less than 10 percent were females. Data show that half of the females and slightly over half of the male administrators were under 43 years of age.

Although sex and age might not be too important to the purposes of the study, it was interesting to observe some differences in terms of sex and age between instructors and administrators as revealed by these data. First, as shown by groups, the instructors tend to be younger than the administrators. And second, a larger proportion of instructors than administrators were females. Upon reflection, it would seem that neither of these findings should be too surprising.

The data in Table 3 present the educational levels and years of experience of the respondents. Of 436 instructors who indicated their educational levels, 26.8 percent had less than the baccalaureate degree, 31.7 percent a baccalaureate degree, 38.5 percent a master's degree, and 3 percent a doctorate degree.

The table reveals that of the 436 instructors who also indicated their years of experience, 202 (46.3 percent) had five years or less; 123 (28.2 percent) with 6 to 10 years; 53 (12.2 percent) of

TABLE 3

NUMBER AND PERCENT OF INSTRUCTOR AND ADMINISTRATOR BY EDUCATIONAL LEVEL, AND BY YEARS OF EXPERIENCE

Category and Experience	Under Baccalaureate		Baccalaureate		Master's		Doctorate		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total instructors	117	26.8	138	31.7	168	38.5	13	3.0	436	100
5 years and under	50	11.5	67	15.3	79	18.1	6	1.4	202	46.3
6 - 10	38	8.7	32	7.3	50	11.5	3	0.7	123	28.2
11 - 15	15	3.4	21	4.8	17	3.9	-	--	53	12.2
16 and over	14	3.2	18	4.1	22	5.0	4	0.9	58	13.3
Total administrators	4	4.5	10	11.2	57	64.0	18	20.2	89	100
5 years and under	3	3.4	4	4.5	9	10.1	6	6.7	22	24.6
6 - 10	1	1.1	2	2.2	17	19.1	8	9.0	28	31.5
11 - 15	-	--	2	2.2	8	9.0	1	1.1	11	12.4
16 and over	-	--	2	2.2	23	25.8	3	3.4	28	31.5

them with 11 to 15 years; and 58 (13.3 percent) with 16 years and over experience.

Table 3, page 67, also shows that of the 89 administrators who responded to the question on educational achievement and years of experience, 4.5 percent held less than a baccalaureate degree; 11.2 percent held a baccalaureate degree; 64 percent held a master's degree; and 20.2 percent held a doctorate degree. The data also indicated: 24.6 percent of the administrators had less than 5 years of experience, 31.5 percent of them with 11 to 15 years of experience, and 31.5 percent had 16 years and over experience.

Difference in terms of educational achievement and experience between the instructors and administrators was revealed:

1. Within the instructor group, there were almost twice as many instructors with five or less years of experience than administrators.
2. There were more than double the percentage of administrators with sixteen years and over experience than the instructors.
3. The data revealed that 84 percent of the administrators held the master's and doctorate degrees compared with 41.5 percent of the instructors. A careful look at the data revealed that the administrators were more formally educated than the instructors.

Since the respondents are working in a two-year college or technical institute, they were asked a question about their first two years of undergraduate education. The data in Table 4 present

TABLE 4

NUMBER AND PERCENT OF INSTRUCTORS AND ADMINISTRATORS WHO HAVE BEEN IN TWO-YEAR COLLEGES AND TECHNICAL INSTITUTES

Category	Two-Year College		Technical Institute		Total	
	Number	Percent	Number	Percent	Number	Percent
Instructor	123	28	107	24.4	230	52.4
Administrator	20	22	12	13.2	32	35.2

their responses. Of 230 instructors who responded to the question, 28 percent of them indicated that they attended a two-year college, and 24.4 percent of them attended technical institutes.

Table 4 also shows that 32 of the 128 administrators responded to the question. Twenty-two percent of them attended a two-year college and 13.2 percent of them attended a technical institute.

The data in Table 5 present the picture of respondents who indicated having had industrial experience. Of the 439 instructors who responded to the question, 61 percent indicated

TABLE 5

NUMBER AND PERCENT OF INSTRUCTORS AND ADMINISTRATORS WHO HAVE HAD INDUSTRIAL EXPERIENCE

Category and Activity	Number		Percent		Total	
	Yes	No	Yes	No	Yes	No
(Q6) Have industrial experience						
Instructor	271	168	61	38	100	
Administrator	62	30	67	33	100	

that they had had industrial experience. The table also shows that 92 (67 percent) of the 128 administrators who responded to the question had industrial experience.

It was observed that more administrators than instructors have had industrial experience. Almost two-thirds of both the instructors and administrators had industrial experience. This industrial or practical experience should help both respondent groups in their respective positions. But this industrial or practical experience, however, does not provide pedagogical technique needed in classroom teaching.

PROFESSIONAL ACTIVITIES OF RESPONDENTS

The instructors and administrators were asked a series of questions about their professional activities and interests. In Table 6 their responses were tabulated on the basis of sex. These data indicated that more female than male instructors subscribed to professional journals (5.3 percent); saw a need for more training (8.2 percent); and took voluntary courses (49.3 percent).

The male administrators participated more in in-service programs than the female administrators by 8.7 percent. Males saw the need for training by more than 29 percent than did the females. Female administrators were less enthusiastic about furthering their training by participating in professional activities.

The data reveal a considerable difference between the male and female instructors, as a group, and between the male and female administrators, on the level of participation in professional activities. Important to this study is the fact that 85.9 percent of the male and only 50 percent of the female administrators indicated that they were motivated to upgrade their skills by participating in professional activities (see "Tables" 6, page 72).

The data in Table 7 (page 74) present the responses of the instructors and administrators on the question about their professional activities and interests on the basis of their educational achievement. In Table 7, it was clear that the less in

TABLE 6

PROFESSIONAL ACTIVITIES OF INSTRUCTORS
AND ADMINISTRATORS BY SEX

Category and Activities	Male		Female		Total	
	Yes	No	Yes	No	Yes	No
Total instructors	443	16.2	30.0	9.5	74.3	25.7
(Q 7) 1. Take voluntary course	73.3	26.7	76.0	24.0	74.4	25.6
(Q 8) 2. Subscribe to journal	85.9	14.1	91.2	8.8	88.0	12.0
(Q 9) 3. Participate in in-service program	90.1	9.9	90.6	9.4	90.3	9.7
(Q 10) 4. See need for more training	71.3	28.7	79.5	20.5	74.5	25.5
(Q 11) 5. Motivated to upgrade skills	73.3	26.7	78.0	22.0	75.2	24.8
(Q 12) 6. Attend professional meetings	88.1	11.9	88.9	11.9	88.4	11.6
(Q 13) 7. Adequate audio visuals	75.3	24.7	78.1	21.9	76.4	23.6
(Q 14) 8. Administration encourages innovative teaching ideas	90.8	9.2	91.7	8.3	91.2	8.8
(Q 15) 9. Member of professional organization	79.2	20.8	84.8	15.2	81.4	18.6
(Q 16)10. Benefit by colleague association	95.0	5.0	92.3	7.7	94.0	6.0
Total administrators	72.1	19.8	4.6	3.5	76.7	23.3
(Q 7) 1. Take voluntary course	78.5	21.5	57.1	42.9	76.7	23.3
(Q 8) 2. Subscribe to journal	96.2	3.8	100.0	--	96.6	3.4
(Q 9) 3. Participate in in-service program	96.2	3.8	87.5	12.5	95.4	4.6
(Q 10) 4. See need for more training	92.3	7.7	62.5	37.5	89.5	10.5

TABLE 6 (continued)

Category and Activities	Male		Female		Total	
	Yes	No	Yes	No	Yes	No
(Q 11) 5. Motivated to upgrade skills	85.9	14.1	50.0	50.0	82.6	17.4
(Q 12) 6. Attend professional meetings	97.5	2.5	100.0	--	97.7	2.3
(Q 13) 7. Adequate audio visuals	83.1	16.9	50.0	50.0	79.7	20.3
(Q 14) 8. Administration encourages innovative teaching ideas	94.9	5.1	87.5	12.5	94.3	5.7
(Q 15) 9. Member of professional organization	94.9	5.1	100.0	--	95.4	4.6
(Q 16) 10. Benefit by colleague association	96.2	3.8	100.0	--	96.6	3.4

TABLE 7

PROFESSIONAL ACTIVITIES OF INSTRUCTORS AND ADMINISTRATORS BY EDUCATIONAL ACHIEVEMENT

Category and Activities	Under Baccalaureate		Baccalaureate		Master's		Doctorate		Total	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Total Instructors										
(Q 7) 1. Take voluntary course	82.6	17.4	69.3	30.7	73.8	26.2	53.8	46.2	74.1	25.9
(Q 8) 2. Subscribe to journal	89.6	10.4	90.6	9.4	83.9	16.1	92.3	9.7	87.3	12.2
(Q 9) 3. Participate in in-service program	91.4	8.6	90.2	8.8	89.3	10.7	84.6	15.4	90.3	9.7
(Q 10) 4. See need for more training	82.3	17.7	75.0	25.0	69.5	30.5	58.3	41.7	74.3	25.7
(Q 11) 5. Motivated to upgrade skills	77.4	22.6	76.5	23.5	71.3	28.7	75.0	25.0	74.7	25.3
(Q 12) 6. Attend professional meetings	87.0	13.0	91.2	8.8	86.2	13.8	84.6	15.4	88.0	12.0
(Q 13) 7. Adequate audio visuals	81.1	18.9	75.8	24.2	74.8	25.2	69.2	30.8	76.6	23.4
(Q 14) 8. Administration encourages innovative teaching ideas	92.0	8.0	90.5	9.5	91.0	9.0	92.3	7.7	91.1	8.9

TABLE 7 (continued)

Category and Activities	Under Baccalaureate		Baccalaureate		Master's		Doctorate		Total	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
(Q 15) 9. Member of professional organization	81.9	18.1	77.5	22.5	83.3	16.7	84.6	15.4	81.1	18.9
(Q 16) 10. Benefit by colleague association	93.8	6.2	92.0	8.0	95.2	4.8	92.3	7.7	97.7	6.3
Total Administrators										
(Q 7) 1. Take voluntary course	100.0	--	77.8	22.2	82.5	17.5	50.0	50.0	76.1	23.9
(Q 8) 2. Subscribe to journal	100.0	--	100.0	--	96.5	3.5	94.4	5.6	96.6	3.4
(Q 9) 3. Participate in in-service program	100.0	--	90.0	10.0	94.7	5.3	100.0	--	95.5	4.5
(Q 10) 4. See need for more training	100.0	--	70.0	30.0	92.9	7.1	88.9	11.1	98.8	10.2
(Q 11) 5. Motivated to upgrade skills	100.0	--	60.0	40.0	83.9	16.1	88.9	11.1	83.0	17.0

TABLE 7 (continued)

Category and Activities	Under Baccalaureate		Baccalaureate		Master's		Doctorate		Total	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
(Q 12) 6. Attend professional meetings	100.0	--	100.0	--	96.5	3.5	100.0	--	97.8	2.2
(Q 13) 7. Adequate audio visuals	75.0	25.0	90.0	10.0	76.5	23.5	87.5	12.5	80.2	19.8
(Q 14) 8. Administration encourages innovative teaching ideas	100.0	--	100.0	--	93.0	7.0	94.4	5.6	94.4	5.6
(Q 15) 9. Member of professional organization	100.0	--	90.0	10.0	94.7	5.3	100.0	--	95.5	4.5
(Q 16) 10. Benefit by colleague association	100.0	--	90.0	10.0	96.5	3.5	100.0	--	96.6	3.4

educational achievement, the more strongly the respondents favored participation in most of the professional improvement activities. Differences show within the respondent groups and between the groups on their participation in taking voluntary courses and need for more training for upgrading their educational achievement.

The data revealed that, except for instructors with the doctorate degree who rated two of the ten variables less than 78 percent, educational achievement and participation in professional activities were rated highly as areas to be included in the development of an in-service training program.

The instructors and administrators were asked a series of questions about their professional activities and interests. In Table 8 (page 78), their responses were tabulated on the basis of their years of experience. The data show that years of experience of instructors was not an important factor to consider in developing an in-service training program. It was observed that more than 71 percent of the instructors agreed that there was need to participate in these selected professional activities.

The data also showed that years of experience of administrators did not seem to influence their perceptions of the importance of in-service programs except in the case of "taking of voluntary courses," for the group with less than five years of experience.

It would appear reasonable to expect administrators who had just recently graduated not to feel a need to take voluntary

TABLE 8

PROFESSIONAL ACTIVITIES OF INSTRUCTORS AND ADMINISTRATORS BY YEARS OF EXPERIENCE

Category and Activities	5 and Under		6 - 10		11 - 15		16 and Over		Total	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Total Instructors										
(Q 7) 1. Take voluntary course	71.1	28.9	75.8	24.2	76.9	23.1	81.4	18.6	74.5	25.5
(Q 8) 2. Subscribe to journal	83.9	16.1	89.5	10.5	94.2	5.8	93.2	6.8	88.0	12.0
(Q 9) 3. Participate in in-service program	87.7	12.3	92.7	7.3	86.8	13.2	98.3	1.7	90.5	9.5
(Q 10) 4. See need for more training	75.4	24.6	72.5	27.5	75.1	26.9	78.0	22.0	74.6	25.4
(Q 11) 5. Motivated to upgrade skills	76.6	23.4	67.8	32.2	79.2	20.8	81.0	19.0	75.1	24.9
(Q 12) 6. Attend professional meetings	86.6	13.3	87.1	12.9	90.6	9.4	93.2	6.8	88.1	11.9
(Q 13) 7. Adequate audio visuals	71.3	28.7	80.0	20.0	82.7	17.3	81.8	18.2	76.5	23.5

TABLE 8 (continued)

Category and Activities	5 and Under		6 - 10		11 - 15		16 and Over		Total	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
(Q 14) 8. Administration encourages innovative teaching ideas	91.6	8.4	89.3	10.3	94.3	5.7	91.4	8.6	91.3	8.7
(Q 15) 9. Member of professional organization	74.1	25.9	86.3	13.7	90.6	9.4	88.1	11.9	81.4	18.6
(Q 16) 10. Benefit by colleague association	92.6	7.4	95.1	4.9	94.1	5.9	94.8	5.2	93.8	6.2
Total Administrators										
(Q 7) 1. Take voluntary course	59.1	40.9	75.9	24.1	100.0	--	82.1	17.9	79.9	23.1
(Q 8) 2. Subscribe to journal	86.4	13.6	100.0	--	100.0	--	100.0	--	79.7	3.3
(Q 9) 3. Participate in in-service program	90.9	9.1	96.6	3.4	91.7	8.3	100.0	--	95.7	4.3
(Q 10) 4. See need for more training	81.8	18.2	93.1	6.9	90.9	9.1	89.7	10.3	89.0	11.0

TABLE 8 (continued)

Category and Activities	5 and Under		6 - 10		11 - 15		16 and Over		Total	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
(Q 11) 5. Motivated to upgrade skills	77.3	22.7	89.7	10.3	90.9	9.1	79.3	20.7	83.5	16.5
(Q 12) 6. Attend professional meetings	95.5	4.5	93.1	6.9	100.0	--	100.0	--	96.7	3.3
(Q 13) 7. Adequate audio visuals	76.2	23.8	92.3	7.7	80.0	20.0	94.1	25.9	81.0	19.0
(Q 14) 8. Administration encourages innovative teaching ideas	95.5	4.5	96.6	3.4	75.0	25.0	100.0	--	94.6	5.4
(Q 15) 9. Member of professional organization	86.4	13.6	96.6	3.4	100.0	--	100.0	--	95.7	4.3
(Q 16) 10. Benefit by colleague association	100.0	--	96.6	3.4	91.7	8.3	96.6	3.4	96.7	3.3

courses until after at least a few years at work (see "Tables" 8, page 79).

PURPOSES OF IN-SERVICE EDUCATION

The instructors and administrators responded to several questions designed to ascertain their judgements of four selected purposes of in-service education as applicable to their local institution's programs. Table 9 presents their answers on the basis of sex differences.

It can be seen that the instructors believed that in-service education at local institutions "helped instructors keep abreast of new knowledge" as "helpful" and with both males and females the largest percentage stated "very helpful." Also, both male and female instructors revealed a minority of negative answers, that is, 18 percent males and 14.6 percent females stated "not helpful."

The administrators, and especially the male administrators, were most enthusiastic about the helpfulness of in-service training helping instructors keep abreast of new knowledge. A percentage of 75.3 of the male administrators answered "very helpful," and 16.9 percent answered "helpful." A little over 92 percent of the males indicated that this area of in-service training was "very helpful" and "helpful." Only 75 percent of the female administrators gave an affirmative answer about this aspect of in-service training.

Instructors did not regard in-service training "very helpful" and "helpful" in providing adequate information for new

TABLE 9

AGREEMENT BETWEEN INSTRUCTORS AND ADMINISTRATORS
ON THE PURPOSES OF IN-SERVICE
EDUCATION PROGRAMS BY SEX

Areas of Agreement	Instructors		Administrators		Total	
	Male	Female	Male	Female	Male	Female
(Q 17) Helps instructors keep abreast						
Very helpful	58.4	60.8	75.3	37.5	66.85	49.15
Helpful	23.5	24.6	16.9	37.5	20.20	31.05
Not helpful	18.0	14.6	7.8	25.0	12.95	19.80
(Q 18) Adequate for new instructors adjustment						
Very helpful	37.3	33.1	52.7	12.5	45.00	22.80
Helpful	39.0	36.2	39.2	37.5	39.10	36.85
Not helpful	23.7	30.7	8.1	50.0	15.90	40.35
(Q 19) Promotes respect among educators						
Very helpful	61.0	77.1	84.6	87.5	72.80	82.30
Helpful	19.3	8.8	10.3	12.5	14.80	10.65
Not helpful	19.7	14.1	5.1	--	12.40	7.05
(Q 25) Recognized need for teaching innovation						
Very helpful	58.4	68.4	66.7	50.0	62.55	59.20
Helpful	29.6	23.4	25.3	50.0	27.40	36.70
Not helpful	12.1	8.2	8.0	--	10.05	4.10

instructors to make adjustments. Both male and female instructors revealed a substantial percentage of negative responses. For example, 23.7 percent male and 30.8 percent female instructors answered "not helpful" on this variable.

Fifty-two and seven-tenths percent of the male administrators viewed as "very helpful" and 39.2 percent "helpful" the contribution of in-service training to provide adequate information for beginning instructors. Only 50 percent of the females regarded this variable "very helpful." The negative response was greater among the females than among the males. That is, 50 percent females and 8.1 percent males answered "not helpful" to this variable.

Both the male and female instructors did not differ greatly on the variable that in-service training is a "very helpful" and "helpful" means of promoting mutual respect among educators. The data in the table show that 77.1 percent of the female instructors and 61 percent of the males answered "very helpful," 19.3 percent of the male instructors and 8.8 percent of females "helpful." The largest negative response was 19.7 percent by the males and 14.1 percent by the females who responded "not helpful."

The administrators appeared to agree that in-service training promoted respect among educators especially the females with 87.5 percent and males with 84.6 percent feeling strongly on the "very helpfulness" of this variable. Only 12.5 percent of the female administrators and 10.3 percent of the males indicated

"helpful," whereas 5.1 percent of the males and no females regarded this variable as "not helpful."

Data also revealed that 58.4 percent of the male and 68.4 percent of the female instructors indicated "very helpful" in their answer to "in-service training activities recognize teaching innovations." However, there was a minority of negative responses of 19.7 percent males and 14.1 percent females who stated "not helpful."

Ninety percent of the administrators indicated that teaching innovations were recognized by in-service training.

The data in Table 9 (page 82) revealed considerable congruency between the male and female respondents and their ranks. This suggests that:

1. In-service training programs at local institutions helped keep abreast of new knowledge and innovations.
2. In-service education was a means of promoting mutual respect and acceptance between educators.
3. In-service training activities recognized the need for realistic teaching innovations.
4. There was considerable lack of agreement between both sex and ranks (instructors or administrators) on in-service training programs providing new instructors adequate information to help make adjustment into teaching profession.

The data in Table 10 show the agreement or lack of agreement between the respondents on the questions designed to find out

TABLE 10

AGREEMENT BETWEEN INSTRUCTORS AND ADMINISTRATORS ON THE PURPOSES OF IN-SERVICE EDUCATION PROGRAMS BY EDUCATIONAL ACHIEVEMENT

Area of Agreement	Instructors				Administrators				Total			
	Under Bacca-laureate	Bacca-laureate	Master's	Doctorate	Under Bacca-laureate	Bacca-laureate	Master's	Doctorate	Under Bacca-laureate	Bacca-laureate	Master's	Doctorate
(Q 17) Helps instructors keep abreast												
Very helpful	63.2	58.2	58.2	50.0	100	50.0	69.6	88.2	81.60	54.10	63.90	69.10
Helpful	22.2	24.6	25.5	8.3	-	30.0	23.2	--	11.10	27.30	24.35	4.15
Not helpful	14.5	17.2	16.4	41.7	-	20.0	7.1	11.8	7.25	18.60	11.75	26.75
(Q 18) Adequate for new instructor adjustment												
Very helpful	47.4	30.7	34.4	9.1	75	44.4	45.5	56.3	61.20	37.55	39.95	32.70
Helpful	34.2	38.6	38.7	45.5	25	44.4	43.6	25.0	29.60	41.50	41.15	35.25
Not helpful	18.4	30.7	26.9	45.5	-	11.1	10.9	18.8	9.20	20.90	18.90	32.15
(Q 19) Promotes respect among educators												
Very helpful	74.8	67.4	63.2	75.0	100	50.0	89.5	88.2	87.40	58.70	76.35	81.60
Helpful	13.0	12.6	19.0	--	-	30.0	7.0	11.8	6.50	21.30	13.00	5.90
Not helpful	12.2	20.0	17.8	25.0	-	20.0	3.5	--	6.10	20.00	10.65	12.50

TABLE 10 (continued)

Area of Agreement	Instructors				Administrators				Total			
	Under Baccalaureate	Baccalaureate	Master's	Doctorate	Under Baccalaureate	Baccalaureate	Master's	Doctorate	Under Baccalaureate	Baccalaureate	Master's	Doctorate
(Q 25) Recognized need for teaching innovation												
Very helpful	62.1	66.2	59.1	66.7	100	60.0	67.3	56.3	81.05	63.10	63.20	61.50
Helpful	28.4	25.0	27.4	25.0	-	20.0	29.1	31.3	14.20	22.50	28.25	28.10
Not helpful	9.5	8.8	13.4	8.3	-	20.0	3.6	12.5	4.75	14.40	8.50	10.40

their judgments of the four selected purposes of in-service education programs as applicable to local institutions. In this table, their responses were tabulated on the basis of their rank and educational achievement. The data in the table reveal that educational achievement rather than rank (instructor or administrator) resulted in greater agreement on responses of the purposes of in-service education programs in these areas.

A closer examination of the data reveals that instructors who held less than the baccalaureate degree indicated by 85.4 percent "very helpful" and "helpful" to the variable, "in-service education helps instructors keep abreast of new knowledge." It can also be seen that instructors who held the baccalaureate, master's and doctorate degrees showed a similar agreement on the same variable. But 41.7 percent of the instructors who held the doctorate degree indicated that this variable was "not helpful."

The data also revealed that 100 percent of the administrators who held less than the baccalaureate degree indicated as being "very helpful" and "helpful" the variable "in-service training program helps instructors keep abreast of new knowledge." However, 20 percent of the administrators who held the master's and doctorate degrees viewed this variable "not helpful", whereas 80 percent of those who held the baccalaureate degree viewed it as "very helpful" and "helpful."

Instructors who held less than the baccalaureate degree indicated by 80.6 percent "very helpful" and "helpful" to

"in-service training provides adequate information to help new instructors make adjustment." Instructors who held the baccalaureate and master's degrees indicated less enthusiasm in their answers to this variable. A large (45.5 percent) disagreement or "not helpful" was indicated by the instructors who held the doctorate degree.

The administrators who held less than the baccalaureate degree indicated by 100 percent in their response "very helpful" and "helpful" to the variable, "in-service training provides adequate information to help new instructors make adjustment." The administrators who held the baccalaureate, master's and doctorate degrees indicated in their responses "very helpful" and "helpful" to this variable.

It was observed that there existed agreement between the instructors who held less than the baccalaureate, baccalaureate, and master's degrees in their responses "very helpful" and "helpful" to "in-service training promotes respect among educators." But instructors who held the doctorate degree indicated by 25 percent a negative response of "not helpful" to this variable.

The administrators tend to be in complete agreement in their answer "very helpful" and "helpful" to "in-service training promotes respect among educators." However, the administrators who held the baccalaureate degree indicated by 20 percent a negative response of "not helpful" to this variable.

The data revealed considerable agreement between the instructors and administrators in their response "very helpful"

and "helpful" to "in-service training activities recognize need for teaching innovations."

Data also revealed that considerable agreement existed between:

1. The instructors and administrators who held less than the baccalaureate degree on the four selected in-service purposes;
2. The instructors who held less than the baccalaureate, the baccalaureate, and master's degrees, and the administrators who held similar degrees as well as the doctorate degree;
3. Considerable disagreement existed between the instructors who held less than the baccalaureate, baccalaureate, and master's degree with those who held the doctorate degree on three of the four selected purposes of in-service training programs (see "Tables" 10, page 85).

The data in Table 11 present the picture of the extent of agreement between the instructors and administrators on four selected purposes of in-service training programs in terms of their years of experience.

Instructors indicated as "very helpful" and "helpful" at above 80 percent level of agreement in all experience groups that "in-service training helped them keep abreast of new knowledge and innovations in their fields."

Administrators also indicated as "very helpful" and "helpful" at above 86 percent level of agreement in all experience

TABLE 11

AGREEMENT BETWEEN INSTRUCTORS AND ADMINISTRATORS ON THE PURPOSES OF IN-SERVICE EDUCATION PROGRAMS BY YEARS OF EXPERIENCE

Area of Agreement	Instructors				Administrators				Total			
	5 and Under	6 - 10	11 - 15	16 and Over	5 and Under	6 - 10	11 - 15	16 and Over	5 and Under	6 - 10	11 - 15	16 and Over
(Q 17) Helps instructors keep abreast												
Very helpful	58.3	54.9	66.0	67.8	81.8	79.3	70.0	62.1	70.05	67.10	68.00	64.95
Helpful	23.6	25.4	18.9	23.7	18.2	10.3	20.0	24.1	20.90	17.85	19.45	23.90
Not helpful	18.1	19.7	15.1	8.5	--	10.3	10.0	13.8	9.05	15.00	12.55	11.15
(Q 18) Adequate for new instructor adjustment												
Very helpful	32.1	36.1	43.4	41.5	54.5	61.5	36.4	42.9	43.30	48.80	39.90	42.40
Helpful	37.3	41.2	43.4	28.3	31.8	38.5	54.5	35.7	34.55	39.85	48.95	32.00
Not helpful	30.6	22.7	13.2	30.2	13.6	--	9.1	21.4	22.10	11.35	11.15	17.30
(Q 19) Promotes respect among educators												
Very helpful	66.5	68.3	75.5	63.8	90.9	79.3	81.8	86.2	78.70	73.80	78.65	75.00
Helpful	16.0	14.2	11.3	15.5	4.5	13.8	9.1	13.8	10.25	14.00	10.20	14.65
Not helpful	17.5	17.5	13.2	20.7	4.5	6.9	9.1	--	11.00	12.20	11.15	10.35

TABLE 11 (continued)

Area of Agreement	Instructors				Administrators				Total			
	5 and Under	6 - 10	11 - 15	16 and Over	5 and Under	6 - 10	11 - 15	16 and Over	5 and Under	6 - 10	11 - 15	16 and Over
(Q 25) Recognized need for teaching innovation												
Very helpful	57.5	63.4	75.5	65.5	66.7	75.0	70.0	58.6	62.10	69.20	72.75	62.05
Helpful	28.0	26.0	18.9	32.8	33.3	14.3	30.0	31.0	30.65	20.15	24.45	31.90
Not helpful	14.5	10.6	5.7	1.7	--	10.7	--	10.3	7.25	10.65	2.80	6.00

groups that "in-service training helped them keep abreast of new knowledge and innovations in their fields."

Both instructors and administrators indicated "very helpful" and "helpful" at above 69 percent and 78 percent levels of agreement respectively in all experience groups that "in-service training for new instructors provides adequate information to make adjustments in the teaching profession."

The respondents indicated "very helpful" and "helpful" agreement at above the 79 and 80 percent level of agreement respectively in all experience groups that "in-service training promotes mutual respect and acceptance between educators."

Respondents indicated "very helpful" and "helpful" agreement above 85 percent level for instructors and 89 percent for administrators that "in-service training should recognize a need for realistic teaching innovations."

The above data revealed that years of experience was not a factor in the responses of the respondents in their judgment of the purposes of in-service training programs.

Considerable agreement existed between the instructors and administrators on the four variables included in Table 11, page 90. This supports the conclusion that the respondents were in agreement that the four variables should be included in a local in-service training program regardless of years of experience of the teaching faculty.

CONTENT OF IN-SERVICE TRAINING

Instructors and administrators were asked several questions to determine their perceptions of the contents of in-service training programs on the basis of sex. In Table 12, it was clear that all of the four selected categories of content necessary for conducting successful in-service training programs were rated from 87.5 percent to 100 percent "excellent" and "satisfactory." The largest negative response was 12.5 percent "unsatisfactory."

In Table 12, it can be shown that there was agreement in the perceptions of the respondents. The data lead to the conclusion that regardless of sex, both instructors and administrators perceived that a successful in-service training program should include and utilize as its content these four selected categories of content:

1. Programs with emphasis on problem solving methods to meet instructors' needs.
2. Involvement of instructors in planning program activities.
3. In-service programs planned to provide for two-way communication between instructors and administrators.
4. In-service program activities integrated with regular departmental activities (see Table 12, page 94).

Table 13 (page 95) shows the manner in which the instructors and administrators perceived the content of in-service training programs in terms of their educational achievement. Only one of the four variables had a low negative response of 20 percent "unsatisfactory."

TABLE 12

PERCEPTIONS OF INSTRUCTORS AND ADMINISTRATORS OF THE CONTENT OF IN-SERVICE PROGRAMS BY SEX

Program Content	Instructors		Administrators		Total	
	Male	Female	Male	Female	Male	Female
(Q 21) Program emphasis						
Excellent	63.8	78.8	87.2	87.5	75.50	83.15
Satisfactory	30.8	17.6	11.5	--	21.15	8.80
Unsatisfactory	5.4	3.5	1.3	12.5	3.35	8.00
(Q 22) Instructors help plan program activities						
Excellent	91.2	92.9	96.2	100.0	93.70	96.45
Satisfactory	8.8	5.3	2.6	--	5.70	2.65
Unsatisfactory	--	1.8	1.3	--	-.65	-.90
(Q 23) Instructor-administrator communication						
Excellent	92.7	97.0	94.9	87.5	93.80	92.25
Satisfactory	7.3	2.4	5.1	12.5	6.20	7.45
Unsatisfactory	--	-.6	--	--	--	-.30
(Q 24) Integrated departmental activities						
Excellent	82.7	82.4	92.3	75.0	87.50	78.70
Satisfactory	12.3	12.9	6.4	12.5	9.35	12.70
Unsatisfactory	5.0	4.7	1.3	12.5	3.15	8.60

TABLE 13

PERCEPTIONS OF INSTRUCTORS AND ADMINISTRATORS OF THE CONTENT OF IN-SERVICE PROGRAMS BY EDUCATIONAL ACHIEVEMENT

Program Content	Instructors				Administrators				Total			
	Under Baccalaureate	Baccalaureate	Master's	Doctorate	Under Baccalaureate	Baccalaureate	Master's	Doctorate	Under Baccalaureate	Baccalaureate	Master's	Doctorate
(Q 21) Program emphasis												
Excellent	70.1	73.9	65.9	75.0	100.0	90.0	89.5	76.5	85.50	81.95	77.70	75.75
Satisfactory	26.5	21.7	28.7	16.7	--	10.0	10.5	11.8	13.25	15.85	19.60	14.25
Unsatisfactory	3.4	4.3	5.5	8.3	--	--	--	11.8	1.70	2.15	2.75	10.05
(Q 22) Instructor help plan program activities												
Excellent	88.8	94.2	91.0	91.7	75.0	80.0	100.0	94.1	81.90	87.10	95.50	92.90
Satisfactory	11.2	5.1	7.8	8.3	25.0	10.0	--	5.9	18.10	7.55	3.90	7.10
Unsatisfactory	--	0.7	1.2	--	--	10.0	--	--	--	5.35	0.60	--

TABLE 13 (Continued)

Program Content	Instructors				Administrators				Total			
	Under Bacca-laureate	Bacca-laureate	Master's	Doctorate	Under Bacca-laureate	Bacca-laureate	Master's	Doctorate	Under Bacca-laureate	Bacca-laureate	Master's	Doctorate
(Q 23) Instructor-administrator communication												
Excellent	93.0	97.1	93.3	91.7	100.0	70.0	98.2	94.1	96.50	83.55	95.75	92.90
Satisfactory	7.0	2.9	6.1	8.3	--	30.0	1.8	5.9	3.50	16.45	3.95	7.10
Unsatisfactory	--	--	0.6	--	--	--	--	--	--	--	0.30	--
(Q 24) Integrated departmental activities												
Excellent	76.7	77.5	89.1	100.0	100.0	70.0	98.2	76.5	88.35	73.75	89.15	88.25
Satisfactory	17.2	15.9	7.3	--	--	10.0	1.8	23.5	8.60	12.95	3.66	11.50
Unsatisfactory	6.0	6.5	3.6	--	--	20.0	--	--	3.00	13.25	1.80	--

The data in Table 13, page 95, revealed that all instructors with limited formal education, that is, less than the baccalaureate degree and those who earned the doctorate degree, rated the four selected variables or content "excellent" and "satisfactory" by 80 to 100 percent.

This fact suggests that both the less educated and more educated instructors and administrators perceive that these four selected contents should be included in any plans for successful in-service program activities (see "Tables" 13, page 95).

The data in Table 14 present the perceptions of instructors and administrators on the content or variables necessary for in-service training programs on the basis of years of experience. The data in the table indicated that both instructors and administrators perceived these four selected contents as "excellent" and "satisfactory."

However, the data revealed a minority of negative responses of 9.8 percent among the instructors with 6-10 years of experience and 9.1 percent among the administrators with five years or less experience. This level of negative response was shown only on the variable "in-service program with emphasis on problem solving method."

The data further revealed that instructors and administrators at all years of experience group by 80.2 to 100 percent rated the four variables "excellent" and "satisfactory."

This fact leads to the conclusion that instructors and administrators with different years of experience perceived that

TABLE 14

PERCEPTIONS OF INSTRUCTORS AND ADMINISTRATORS OF THE CONTENT OF IN-SERVICE PROGRAMS BY YEARS OF EXPERIENCE

Program Content	Instructors				Administrators				Total			
	5 and Under	6 - 10	11 - 15	16 and Over	5 and Under	6 - 10	11 - 15	16 and Over	5 and Under	6 - 10	11 - 15	16 and Over
(Q 21) Program emphasis												
Excellent	72.8	64.2	69.8	69.5	86.4	89.7	81.8	89.7	79.60	76.95	75.80	79.60
Satisfactory	23.8	26.0	28.3	28.6	4.5	10.3	18.2	10.3	14.15	18.15	23.25	14.31
Unsatisfactory	3.5	9.8	1.9	1.7	9.1	--	--	--	6.30	4.90	0.95	0.85
(Q 22) Instructors help plan program activities												
Excellent	89.3	91.8	98.1	93.1	95.5	93.1	100.0	96.6	92.40	92.45	99.05	94.85
Satisfactory	10.7	7.4	--	5.2	4.5	6.9	--	--	7.60	7.15	--	2.60
Unsatisfactory	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 14 (Continued)

	Instructors				Administrators				Total			
	5 and Under	6 - 10	11 - 15	16 and Over	5 and Under	6 - 10	11 - 15	16 and Over	5 and Under	6 - 10	11 - 15	16 and Over
(Q 23) Instructor-administrator communication												
Excellent	94.0	94.3	92.3	98.3	95.5	96.6	81.8	96.6	94.75	95.45	87.05	97.45
Satisfactory	6.0	5.7	5.8	1.7	4.5	3.4	18.2	3.4	5.25	4.55	12.00	2.55
Unsatisfactory	--	--	1.9	--	--	--	--	--	--	--	0.95	--
(Q 24) Integrated departmental activities												
Excellent	80.8	78.9	86.8	91.4	86.4	93.1	90.9	93.1	83.60	86.00	88.90	92.25
Satisfactory	13.8	17.1	7.5	3.4	13.6	6.9	9.1	--	13.70	12.00	8.30	1.70
Unsatisfactory	5.4	4.1	5.7	5.2	--	--	--	6.9	2.70	2.05	2.85	6.05

These four selected contents should be included as an essential part of a successful in-service program activities (see "Tables" 14, page 98).

EVALUATION OF STATE AND LOCAL PROGRAMS

Table 15 shows the evaluation of the local and state-wide in-service training programs by the instructors and administrators on the basis of sex. The respondents were asked to compare the in-service programs at local institutions with their perceptions of the "purposes of in-service training programs."

The data in the table revealed that 88.5 percent of both male instructors and administrators perceived local in-service training as "very satisfactory" and "satisfactory." And 79.5 percent of both female instructors and administrators indicated "very satisfactory" and "satisfactory" to this same variable.

The data revealed a substantial difference in the perceptions of the female instructors and administrators. Eighty-seven and five-tenths percent (87.5 percent) of the female instructors and 71.4 percent of the female administrators perceived local in-service training programs as "very satisfactory" and "satisfactory." A substantial difference of negative responses of 28.6 percent "unsatisfactory" to this same variable was revealed among the female administrators.

As reported in Table 15, the respondents were also asked to rate the effectiveness of in-service training programs provided by the North Carolina Department of Community College System they had

TABLE 15

INSTRUCTORS' AND ADMINISTRATORS' EVALUATION OF LOCAL AND STATE IN-SERVICE PROGRAMS BY SEX

Evaluation	Instructors		Administrators		Total	
	Male	Female	Male	Female	Male	Female
(Q 26) Respondent's own local program						
Very satisfactory	50.6	46.7	52.6	14.3	51.60	30.50
Satisfactory	36.7	40.8	37.2	57.1	36.90	49.00
Unsatisfactory	12.7	12.4	10.3	28.6	11.50	20.50
(Q 28) State-wide program						
Very satisfactory	64.7	78.3	75.6	57.1	70.15	67.70
Satisfactory	24.4	19.1	19.2	42.9	21.80	31.00
Unsatisfactory	10.9	2.6	5.2	--	8.00	1.30

attended in the last five years. The data revealed that 89.1 to 97.4 percent of the male and female instructors and 94.8 to 100 percent of the male and female administrators indicated this variable as "very satisfactory" and "satisfactory."

There was a 10.9 percent negative response of "unsatisfactory" by the male instructors. The most striking result, however, is the high percentage of agreement on the state-wide in-service training programs among the respondents regardless of sex.

This fact suggests that sex of the respondents was a factor on how they think about the in-service training programs only on local levels. The 9 percent difference in the perceptions of the males as a group and females as a group confirms the conclusion that although sex was a factor in the difference of perceptions among the administrators, it was not a major factor among the instructors on local in-service programs. It also suggests that some of the in-service training programs being administered on local levels are not satisfactory to the female administrators (see Table 15, page 101).

The instructors and administrators were asked to compare the in-service programs at local institutions with their perceptions of the "purposes of in-service training programs." Table 16 presented their evaluation of the local and state-wide in-service training programs in terms of their educational achievement.

TABLE 16

INSTRUCTORS' AND ADMINISTRATORS' EVALUATION OF LOCAL AND STATE-WIDE IN-SERVICE PROGRAMS BY EDUCATIONAL ACHIEVEMENT

Evaluation	Instructors				Administrators				Total			
	Under Baccalaureate	Baccalaureate	Master's	Doctorate	Under Baccalaureate	Baccalaureate	Master's	Doctorate	Under Baccalaureate	Baccalaureate	Master's	Doctorate
(Q 26) Respondent's own local program												
Very satisfactory	56.6	42.9	50.0	36.4	100.0	44.4	45.6	58.8	78.30	43.60	47.80	47.60
Satisfactory	32.7	48.1	34.6	27.3	--	44.4	38.6	41.2	16.35	46.25	37.60	34.20
Unsatisfactory	10.6	9.0	15.4	36.4	--	11.1	15.8	--	5.30	10.05	15.60	18.20
(Q 28) State-wide program												
Very satisfactory	76.4	73.0	66.2	45.5	75.0	70.0	76.8	70.6	75.70	71.50	71.50	58.05
Satisfactory	16.4	21.4	26.9	27.3	25.0	20.0	17.9	29.4	20.70	20.70	22.40	28.30
Unsatisfactory	7.3	5.6	6.9	27.2	--	10.0	5.4	--	3.60	7.80	6.10	13.65

An examination of the data revealed that 89.3 percent of the instructors who held less than the baccalaureate degree and 91 percent of those who held the baccalaureate degree perceived their local in-service programs as "very satisfactory" and "satisfactory." Differences in perception of their local in-service programs existed among the instructors who held the master's and doctorate degrees by 21 percent. The instructors who held the master's degree indicated by 15.4 percent a negative response of "unsatisfactory," and those who held the doctorate degree, 36.4 percent "unsatisfactory" response.

The data also revealed that 100 percent of the administrators who held less than the baccalaureate degree and those who held the doctorate perceived their local in-service as "very satisfactory" and "satisfactory." Administrators who held the baccalaureate degree perceived in their in-service program 88.8 percent "very satisfactory" and "satisfactory," and 84.2 percent by those who held the master's degree.

Although differences existed among these respondents on local in-service training programs, it will be observed that over 15 percent gave a negative response of "unsatisfactory" at the master's degree level of achievement.

In Table 16, page 103, the respondents were also asked to rate the effectiveness of in-service training programs provided by the North Carolina Department of Community College System attended by them in the last five years. The data indicated that 92.8 percent of the instructors who held less than the baccalaureate

degree perceived as "very satisfactory" and "satisfactory" the effectiveness of the state-wide in-service training programs. Of the instructors who held the baccalaureate degree, 94 percent of them and 93.1 percent of those who held the master's degree indicated the state-wide in-service program as "very satisfactory"and "satisfactory." There was a 27.2 percent negative response of "unsatisfactory" by instructors who held the doctorate degree to this same variable.

One hundred percent of the administrators who held less than the baccalaureate degree and the doctorate degree rated the state-wide in-service programs as "very satisfactory" and "satisfactory." Those who held the baccalaureate degree rated this same variable 90 percent and those who held master's degrees agreed by 94.7 percent as being "very satisfactory" and "satisfactory." Data show that the administrators who held the baccalaureate degree disagreed by 10 percent by indicating "unsatisfactory" to this same variable.

The data revealed difference in opinion among the instructors by almost 20 percent on the basis of educational level. It was observed that instructors with less educational achievement to be "very satisfied" and "satisfied" with the purposes of local in-service training programs. Those instructors with the doctorate degree tended to be critical and less satisfied with the same local in-service programs.

The data also revealed considerable differences between the instructors and administrators at less than baccalaureate and doctorate educational levels on their evaluation of local in-service programs.

Although above 90 percent agreement existed between the instructors and administrators with less than doctorate degree, considerable difference existed between the instructors and administrators who held the doctorate degree on the effectiveness of state-wide in-service training programs. This suggests that the state-wide in-service training programs do not meet the needs of the occupational instructors who held the doctorate degree (see Table 16, page 103).

Table 17 presents data on evaluation of local and state-wide in-service training programs by the instructors and administrators on the basis of years of experience. In the last table, it was observed that considerable differences existed between instructors and administrators at all educational levels. The trend of their years of experience as revealed by the data appeared different in the figures of Table 17.

Data in this table show a 15.3 percent large minority negative response of "unsatisfactory" among instructors with less than five years of experience, 13.7 percent among those with eleven to fifteen years, and 13.8 percent among those with sixteen years and over. In other words, only instructors with six to ten years of experience rated local in-service programs 92.5 percent "very satisfactory" and "satisfactory."

The data revealed 21.4 percent "unsatisfactory" rating on local in-service programs among administrators with sixteen years of experience and over. However, administrators with less than five years of experience rated this variable 95.4 percent, and those with eleven to fifteen years of experience 90.9 percent.

TABLE 17

INSTRUCTORS' AND ADMINISTRATORS' EVALUATION OF LOCAL AND STATE-WIDE IN-SERVICE PROGRAMS BY YEARS OF EXPERIENCE

Evaluation	Instructors				Administrators				Total			
	5 and Under	6 - 10	11 - 15	16 and Over	5 and Under	6 - 10	11 - 15	16 and Over	5 and Under	6 - 10	11 - 15	16 and Over
(Q 26) Respondent's own local program												
Very satisfactory	46.9	50.0	52.9	50.0	54.5	62.1	27.3	42.9	50.70	56.05	40.10	46.45
Satisfactory	37.8	42.5	33.3	36.2	40.9	27.6	63.6	35.7	39.35	35.05	48.45	35.95
Unsatisfactory	15.3	7.5	13.7	13.8	4.5	10.3	9.1	21.4	9.90	8.90	11.40	17.60
(Q 28) State-wide program												
Very satisfactory	68.3	70.7	85.1	64.8	72.7	79.3	90.0	69.0	70.50	75.00	87.55	66.90
Satisfactory	23.3	18.1	12.8	33.3	22.7	13.8	--	31.0	23.00	15.95	6.40	32.15
Unsatisfactory	8.3	11.2	2.1	1.9	4.5	6.9	10.0	--	6.40	9.05	6.05	.95

The facts revealed in this table suggest that instructors with less than five years of experience and administrators with sixteen years of experience and over tend to be dissatisfied with local in-service programs. Differences of opinion existed between instructors and administrators at different experience levels on local in-service training programs.

The respondents were asked to rate the effectiveness of state-wide in-service training programs sponsored by the North Carolina Department of Community College System attended by them in the last five years. Differences on the basis of experience are evident in /the figures of/ Table 17, page 107. Only instructors with six to ten years of experience rated state-wide in-service programs as low as 88.8 percent. Ninety-one percent of the instructors with less than six years and more than ten years of experience rated this variable as "very satisfactory" and "satisfactory."

One hundred percent of the administrators with sixteen or more years of experience rated the state-wide in-service program as "very satisfactory" and "satisfactory." Although the administrators tend to be more satisfied with this variable than the instructors, 10 percent of the administrators with eleven to fifteen years of experience rated this variable as "satisfactory."

The facts in this table tend to lead to the conclusion that high agreement exists among the instructors and administrators with different years of experience on the local and state-wide in-service training programs. Although differences of opinion existed, both the instructors and administrators at all experience levels appeared

to be more satisfied with the state-wide in-service training programs than the local ones (see Table 17, page 107).

ELEMENTS OF A SUCCESSFUL IN-SERVICE TRAINING PROGRAM

Table 18 reports the extent of agreement between the instructors' and administrators' perceptions of local in-service programs and fourteen identified elements of a successful in-service program in terms of sex. The respondents were asked to rate the quality of their local in-service programs with the fourteen identified elements of a successful in-service program.

According to the data in the table, of the fourteen variables examined, only one ("provided two-way communication") was rated "excellent" by 92.7 percent of the male and 97 percent of the female instructors. The variable "size of learning group" (small group) received a rating of excellent by 68.9 percent of the male and 72.2 percent of the female instructors. No other variable received an "excellent" rating by 50 percent of the instructors. The variable "has received administrative cooperation and support" was rated "excellent" by 48.8 percent of both the male and female instructors. None of the remaining eleven variables was marked "excellent" by more than 22.1 percent of the male and 29.2 percent of the female instructors.

No variable in the table was marked "unsatisfactory" by as many as 50 percent of the instructors of either sex. About 36 to 39 percent of the instructors rated the variable "variety of

TABLE 18

INSTRUCTORS' AND ADMINISTRATORS' PERCEPTIONS OF THE ELEMENTS OF SUCCESSFUL IN-SERVICE TRAINING PROGRAMS BY SEX

Program Elements	Instructors		Administrators		Total	
	Male	Female	Male	Female	Male	Female
(Q 20) Size of learning group						
Excellent	68.9	72.2	76.7	85.7	72.8	79.0
Satisfactory	13.5	8.9	6.8	14.3	10.2	11.6
Unsatisfactory	17.1	18.9	16.4	--	16.8	9.5
(Q 23) Two-way communication						
Excellent	92.7	97.0	94.9	87.5	93.8	92.3
Satisfactory	7.3	2.4	5.1	12.5	6.2	7.5
Unsatisfactory	--	0.6	--	--	--	0.3
(29.1) Contribution to instructor's professional growth						
Excellent	31.0	33.1	39.5	12.5	35.3	22.8
Satisfactory	40.1	38.0	38.2	12.5	39.21	25.3
Unsatisfactory	29.0	28.8	22.4	75.0	26.1	51.9
(29.2) Variety of opportunities and activities						
Excellent	22.1	30.4	43.4	12.5	32.8	21.5
Satisfactory	41.5	30.4	27.6	--	34.6	15.2
Unsatisfactory	36.4	39.1	28.9	87.5	32.7	63.3

TABLE 18 (continued)

Program Elements	Instructors		Administrators		Total	
	Male	Female	Male	Female	Male	Female
(29.3) Encourage instructors in planning activities						
Excellent	35.6	31.5	42.1	12.5	38.9	22.0
Satisfactory	31.6	31.5	35.5	--	33.6	15.8
Unsatisfactory	32.8	37.0	22.4	87.5	27.6	62.3
(29.4) Instructors help identify needs						
Excellent	27.3	34.8	44.7	12.5	36.0	23.7
Satisfactory	39.9	30.4	32.9	12.5	36.4	21.5
Unsatisfactory	32.8	37.0	22.4	75.0	27.6	54.9
(29.5) Incentives to study outside school hours						
Excellent	29.6	33.3	40.8	28.6	35.2	31.0
Satisfactory	23.6	26.5	25.0	42.9	24.3	34.7
Unsatisfactory	46.8	40.1	34.2	28.6	40.5	34.4
(29.6) Instructors share in leadership						
Excellent	29.1	38.1	47.3	14.3	38.2	26.2
Satisfactory	40.2	31.9	36.5	--	38.4	16.0
Unsatisfactory	30.7	16.2	85.7	23.5	23.5	57.9
(29.7) Provide effective methods of teaching skills						
Excellent	26.3	29.2	38.7	12.5	32.5	20.9
Satisfactory	39.4	36.0	37.3	--	38.4	18.0
Unsatisfactory	34.3	34.8	24.0	87.5	27.2	61.2

TABLE 18 (continued)

Program Elements	Instructors		Administrators		Total	
	Male	Female	Male	Female	Male	Female
(29.8) Designed for specific goals						
Excellent	33.3	36.0	51.3	12.5	42.3	24.3
Satisfactory	42.2	37.9	31.6	25.0	36.9	31.5
Unsatisfactory	24.5	26.1	17.1	62.5	20.8	44.3
(29.9) Has administrative support						
Excellent	48.8	48.8	69.7	14.3	59.3	31.6
Satisfactory	35.2	33.7	19.7	14.3	27.5	24.0
Unsatisfactory	16.0	17.5	10.5	71.4	13.3	44.5
(29.10) Related to instructor's teaching subjects						
Excellent	32.7	38.4	51.3	12.5	42.0	25.5
Satisfactory	37.1	30.8	25.0	12.5	28.6	21.7
Unsatisfactory	30.2	30.8	23.7	75.0	27.0	53.0
(29.11) Integral part of institutional program						
Excellent	33.1	31.0	53.9	14.3	43.5	22.2
Satisfactory	38.7	34.2	21.1	14.3	29.9	24.3
Unsatisfactory	28.2	34.8	25.0	71.4	26.6	53.1
(29.12) Evaluation integral part of program						
Excellent	29.3	30.8	48.6	14.3	39.0	22.6
Satisfactory	41.7	40.5	28.4	14.3	35.1	35.1
Unsatisfactory	28.9	29.4	23.0	71.4	26.0	50.4

opportunities for professional growth," and 46.8 percent of them rated the variable "offered incentives to study outside school hours" as unsatisfactory. Not less than 17.1 to 46.8 percent of the male instructors and 0.6 to 40.1 percent of the female instructors evaluated the other eleven variables as unsatisfactory. The upshot of this analysis is the fact that while one variable received a very high rating, all others were rated more satisfactory than unsatisfactory by instructors.

The administrators of both sexes rated the first two variables high. The variable "size of learning group" (small group) received a rating of "excellent" by 76.7 percent of the male and 85.7 percent of the female administrators. The variable "provided for two-way communication" was rated "excellent" by 94.9 percent of the male and 87.5 percent of the female administrators.

Rating of other variables was less enthusiastic by the female administrators. Nine of the remaining twelve variables received very high unsatisfactory ratings by the female administrators. For example, the following were rated unsatisfactory: "has contributed to instructor's professional growth" received 75 percent; "offered variety of opportunities," 87.5 percent; "encouraged instructors in planning activities," 87.5 percent; "instructors helped identify needs," 75 percent; "provided effective methods of teaching skills," 87.5 percent; "has administrative cooperation and support," 71.4 percent; "related to instructor's teaching subjects," 75 percent; "integral part of institution's program," 71.4 percent; and "evaluation integral part of program," 71.4 percent.

The data revealed that while two variables received high ratings by both male and female administrators, more than half the remaining variables were rated more unsatisfactory than satisfactory by the female administrators.

The facts revealed by the data suggest that there were no extreme differences between male and female instructors. This could not be said about the administrators. In some cases, the male administrators were in more agreement than the females. In several cases the differences were striking. On the whole, male administrators reacted strongly in their agreement to the variables while the females showed considerably less satisfaction in the application of the listed variables to their local in-service programs (see "Tables" 18, page 110).

In the last table it was observed that only a few of the variables were rated "excellent" by over half of the male and female instructors. The trend was also evident in the figures of Table 19. In Table 19, instructors and administrators were asked to rate their local in-service programs with the identified elements of a successful in-service program on the basis of their educational achievement.

A close examination of the data revealed that of the fourteen variables, the first variable, "size of learning group" (small group), was rated excellent by the instructors, as follows: less than the baccalaureate degree, 64.3 percent; baccalaureate degree, 80.3 percent; master's degree, 66.1 percent; and doctorate degree, 66.7 percent. The second variable, "provided for two-way

TABLE 19

INSTRUCTORS' AND ADMINISTRATORS' PERCEPTIONS OF THE ELEMENTS OF SUCCESSFUL IN-SERVICE TRAINING PROGRAM BY EDUCATIONAL ACHIEVEMENT

Program Elements	Instructors				Administrators				Total			
	Under Baccalaureate	Baccalaureate	Master's	Doctorate	Under Baccalaureate	Baccalaureate	Master's	Doctorate	Under Baccalaureate	Baccalaureate	Master's	Doctorate
(Q 20) Size of learning group												
Excellent	64.3	80.3	66.1	66.7	75.0	77.8	84.9	56.3	69.6	78.0	75.0	61.5
Satisfactory	16.1	6.8	13.3	8.3	25.0	--	3.8	18.8	20.1	3.4	8.6	14.0
Unsatisfactory	19.6	12.9	20.6	25.0	--	22.2	11.3	25.0	9.8	16.6	16.0	25.0
(Q 23) Two-way communication												
Excellent	93.0	97.1	93.3	91.7	100.0	70.0	98.2	94.1	96.5	83.6	95.8	92.9
Satisfactory	0.7	2.9	6.1	8.3	--	30.0	1.8	5.9	3.5	16.5	4.0	7.1
Unsatisfactory	--	--	0.6	--	--	--	--	--	--	--	0.3	--
(29.1) Contribution to instructors professional growth												
Excellent	48.7	26.2	26.0	18.2	75.0	25.0	40.4	23.5	61.9	25.6	33.7	20.9
Satisfactory	30.4	40.8	44.4	36.4	25.0	37.5	31.6	52.9	27.7	39.2	38.0	44.7
Unsatisfactory	20.9	33.1	28.8	45.5	--	37.5	28.0	23.5	10.5	35.3	28.4	34.5

TABLE 19 (Continued

Program Elements	Instructors				Administrators				Total			
	Under Baccalaureate	Baccalaureate	Master's	Doctorate	Under Baccalaureate	Baccalaureate	Master's	Doctorate	Under Baccalaureate	Baccalaureate	Master's	Doctorate
(29.2) Variety of opportunities and activities												
Excellent	39.5	24.8	18.1	18.2	75.0	37.5	36.8	41.2	57.3	26.2	27.5	27.5
Satisfactory	34.2	31.8	43.8	27.3	25.0	25.0	28.1	23.5	29.6	25.9	36.0	25.4
Unsatisfactory	26.3	43.4	38.1	54.5	--	37.5	35.1	35.3	13.2	40.5	36.6	44.9
(29.3) Encourage instructors in planning activities												
Excellent	45.6	27.1	32.3	27.3	75.0	50.0	38.6	23.5	60.0	38.6	35.5	25.4
Satisfactory	28.9	34.1	31.7	18.2	25.0	25.0	31.6	47.1	27.0	27.0	31.7	32.7
Unsatisfactory	25.4	38.8	36.0	54.5	--	25.0	29.8	29.4	12.7	31.9	32.9	42.0
(29.4) Instructors help identify needs												
Excellent	40.0	23.4	30.4	27.3	100.0	25.0	40.4	41.2	70.0	24.7	35.4	34.3
Satisfactory	31.3	42.2	35.4	18.2	--	37.5	29.8	41.2	15.7	39.9	32.6	29.7
Unsatisfactory	28.7	34.4	34.2	54.5	--	37.5	29.8	17.6	14.4	36.0	32.0	36.0

TABLE 19 (Continued)

Program Elements	Instructors				Administrators				Total			
	Under Baccalaureate	Baccalaureate	Master's	Doctorate	Under Baccalaureate	Baccalaureate	Master's	Doctorate	Under Baccalaureate	Baccalaureate	Master's	Doctorate
(29.5) Incentives to study outside school hours												
Excellent	50.0	30.5	22.5	9.1	75.0	37.5	41.1	23.5	62.5	34.0	31.8	16.3
Satisfactory	18.4	24.2	28.1	36.4	--	12.5	26.8	41.2	9.2	18.4	27.5	38.8
Unsatisfactory	20.1	32.4	44.1	3.4	25.0	50.0	32.1	35.3	22.6	41.2	38.1	19.4
(29.6) Instructors share in leadership												
Excellent	41.1	29.7	30.0	27.3	100.0	37.5	40.7	47.1	70.6	33.6	35.4	37.2
Satisfactory	38.4	35.9	38.1	36.4	--	37.5	35.2	35.3	19.2	37.2	36.7	35.9
Unsatisfactory	20.5	34.4	31.9	36.4	--	25.0	24.1	17.6	10.3	29.7	28.0	27.0
(29.7) Provice effective source of teaching skill												
Excellent	39.8	24.8	21.2	18.2	75.0	37.5	33.9	29.4	57.4	31.2	27.6	23.8
Satisfactory	33.6	39.5	40.6	27.3	25.0	25.0	33.9	47.1	29.3	32.3	37.3	37.2
Unsatisfactory	26.5	35.7	38.1	54.5	--	37.5	32.1	23.5	13.3	36.6	35.1	39.0

TABLE 19 (Continued)

Program Elements	Instructors				Administrators				Total			
	Under Baccalaureate	Baccalaureate	Master's	Doctorate	Under Baccalaureate	Baccalaureate	Master's	Doctorate	Under Baccalaureate	Baccalaureate	Master's	Doctorate
(29.8) Designed for specific goals												
Excellent	43.8	29.1	33.7	27.3	75.0	37.5	49.1	35.3	59.4	33.3	41.4	31.3
Satisfactory	36.6	44.1	40.1	40.0	25.0	37.5	28.1	47.1	30.8	40.8	34.1	43.6
Unsatisfactory	19.6	26.8	26.2	45.5	--	25.0	22.8	17.6	9.8	25.9	24.5	31.6
(29.9) Has administrative support												
Excellent	51.3	51.6	46.2	45.5	75.0	37.5	64.3	70.6	63.2	44.6	55.3	58.0
Satisfactory	34.5	32.0	37.3	18.2	25.0	37.5	19.6	17.6	27.3	47.8	28.5	17.9
Unsatisfactory	14.2	16.4	16.5	36.4	--	25.0	16.1	11.8	7.1	20.7	16.3	23.6
(29.10) Related to instructor's teaching subjects												
Excellent	48.6	33.3	28.5	27.3	50.0	50.0	43.9	52.9	49.3	41.7	31.2	40.1
Satisfactory	29.7	31.7	38.6	36.4	50.0	12.5	28.1	17.6	39.9	22.1	33.4	27.0
Unsatisfactory	21.6	34.9	32.9	36.4	--	37.5	28.1	29.4	10.8	36.2	30.1	32.9

TABLE 19 (Continued)

	Instructors				Administrators				Total			
	Under Baccalaureate	Baccalaureate	Master's	Doctorate	Under Baccalaureate	Baccalaureate	Master's	Doctorate	Under Baccalaureate	Baccalaureate	Master's	Doctorate
(29.11) Integral part of program												
Excellent	42.2	28.6	29.3	30.0	100.0	50.0	46.4	52.9	26.1	39.3	37.9	41.5
Satisfactory	33.0	37.3	38.9	20.0	--	1.2	14.1	5.9	16.5	19.3	21.5	13.0
Unsatisfactory	24.8	34.1	31.8	50.0	--	37.5	32.1	17.6	12.4	35.8	32.0	33.8
(29.12) Evaluation integral part of program												
Excellent	41.7	23.4	28.1	22.2	75.0	50.0	42.6	41.2	58.4	36.7	35.4	31.7
Satisfactory	24.8	34.2	39.1	1.9	25.0	25.0	27.8	35.3	24.9	28.6	33.5	18.6
Unsatisfactory	21.3	32.3	30.7	44.4	--	25.0	29.6	23.5	10.7	28.7	30.2	34.0

communication," was also rated excellent by the instructors as follows: less than the baccalaureate degree, 93 percent; baccalaureate degree, 97.1 percent; master's degree, 93.3 percent; and doctorate degree, 91.7 percent.

Nine of the remaining variables were marked "excellent" as high as 40 to 50 percent only by the instructors with less than the baccalaureate degree. Only the variable "has administrative cooperation and support" was marked "excellent" by 46.2 percent of the instructors who held the master's degree, and by 45.5 percent of the instructors who held the doctorate degree. Three variables were rated "satisfactory" by instructors who held the baccalaureate degree. For example, the variable "has contributed to professional growth" was rated 40.4 percent; "involved instructors in identification of needs," 42.2 percent; and "designed for specific goals," 44.1 percent. Although a majority of the instructors who held the master's degree tended to show a greater dissatisfaction in their ratings, four of the variables were rated "satisfactory" by 40.1 percent to 44.4 percent among the instructors who held the doctorate degree.

Administrators of all educational levels rated the first two variables in this table "excellent" and "satisfactory." Three variables were marked 100 percent "excellent" by the administrators who held less than the baccalaureate degree. These variables were: "involved instructors in identification of needs," "instructors sharing in leadership," and "in-service programs integral part of institution's program."

Data revealed that administrators who held less than the baccalaureate degree were more positive and enthusiastic in rating other variables high than others in different educational levels. Three variables were rated as high as 50 percent "excellent" by administrators who held the baccalaureate degree. Three other variables were rated "excellent" by administrators who held the doctorate degree: "has administrative cooperation and support," 70.6 percent; "in-service related to instructor's teaching subject," 52.9 percent; and "in-service program integral part of institution's programs," 52.9 percent.

One variable, "in-service program related to instructor's teaching subject," was marked "satisfactory" by 50 percent of the administrators who held less than the baccalaureate degree. Except for the variable "has offered incentives to study outside school hours," which was rated "unsatisfactory" by 50 percent of the administrators who held the baccalaureate degree, no other variable was marked as high as 50 percent "unsatisfactory."

The data in the table show that instructors with limited education, or who held the baccalaureate training and less, tend to rate the variables examined as more important than those with high education--that is, master's and doctorate degrees. Considerable differences existed between the instructors and administrators in twelve of the fourteen variables. The administrators tend to be more satisfied in the application of the listed elements or variables by their local in-service programs than are the instructors.

This fact probably suggests that the less formally educated instructors see the selected qualities of in-service programs as a means of improving their occupational status. The administrators probably see these qualities only as a means to improve their teaching skills (see "Tables" 19, page 115).

The data in Table 20 present the perceptions of instructors and administrators on the elements of a successful in-service training program in terms of their experience. Looking at variables one and two in the table, "size of learning group" and "provide for two-way communication," the data reveal that the instructors rated these variables "excellent" by more than 61-98 percent at all levels of years of experience.

Instructors with six to ten years and eleven to fifteen years of experience rated five other variables "excellent." The following variables were rated "excellent:" "encourage instructors in planning activities," 40.4 percent; "has helped instructors identify needs," 40.4 percent; "has administrative support," 54.2 to 56.9 percent; "has been integral part of programs," 40 percent; and "designed for specific goal (6-10 years of experience)," 41.9 percent.

Instructors with sixteen years of experience marked "excellent" by not more than 50 percent on the five other variables.

Three variables were rated "satisfactory" by not more than 45 percent of instructors with five years of experience or less and with six to ten years. Only one variable, "has contributed to instructor's professional growth," was rated "satisfactory" by

TABLE 20

INSTRUCTORS' AND ADMINISTRATORS' PERCEPTIONS OF THE ELEMENTS OF SUCCESSFUL IN-SERVICE TRAINING PROGRAM BY YEARS OF EXPERIENCE

Program Elements	Instructors				Administrators				Total			
	5 and Under	6 - 10	11 - 15	16 and Over	5 and Under	6 - 10	11 - 15	16 and Over	5 and Under	6 -10	11 - 15	16 and Over
(Q 20) Size of learning group												
Excellent	73.5	61.9	80.8	66.7	63.6	85.7	66.7	88.0	68.6	73.8	73.8	77.4
Satisfactory	12.5	14.4	7.7	7.0	18.2	3.6	--	4.0	15.4	9.0	3.9	5.5
Unsatisfactory	14.5	23.7	11.5	26.3	18.2	10.7	33.3	8.0	16.4	17.2	22.4	17.2
(Q 23) Two-way communication												
Excellent	94.0	94.3	92.3	98.3	95.5	96.6	81.8	96.0	94.8	95.5	87.1	97.2
Satisfactory	6.0	5.7	5.8	1.7	4.5	3.4	18.2	3.4	5.3	7.2	12.0	2.6
Unsatisfactory	--	--	1.9	--	--	--	--	--	--	--	1.0	--
(29.1) Contribution to instructor's professional growth												
Excellent	29.7	34.2	36.5	32.8	42.9	53.6	36.4	24.1	36.3	43.9	36.5	28.5
Satisfactory	37.5	38.3	50.0	37.9	19.0	42.9	45.5	34.5	28.3	40.6	47.8	36.2
Unsatisfactory	32.8	27.5	13.5	29.3	38.1	3.6	18.2	41.4	35.5	15.6	15.9	35.4

TABLE 20 (Continued)

Program Elements	Instructors				Administrators				Total			
	5 and Under	6 - 10	11 - 15	16 and Over	5 and Under	6 - 10	11 - 15	16 and Over	5 and Under	6 - 10	11 - 15	16 and Over
(29.2) Variety of opportunities and activities												
Excellent	23.6	26.1	26.9	32.8	38.1	57.1	27.3	27.6	30.9	41.6	27.1	30.2
Satisfactory	34.6	38.7	50.0	31.0	19.0	28.6	45.5	27.6	26.8	33.7	47.8	34.3
Unsatisfactory	41.9	35.3	23.1	36.2	42.9	14.3	27.3	44.8	42.4	39.1	25.2	40.5
(29.3) Encourage instructors in planning activities												
Excellent	28.1	41.7	40.4	35.1	42.9	57.1	18.2	27.6	35.5	49.4	29.3	31.4
Satisfactory	31.8	32.5	28.8	29.9	28.6	32.1	54.5	31.0	30.2	32.3	41.7	30.5
Unsatisfactory	40.1	25.8	30.8	35.1	28.6	10.7	27.3	41.4	34.4	18.3	29.0	38.3
(29.4) Instructors help identify needs												
Excellent	25.9	34.5	40.4	31.6	66.7	53.6	27.3	20.7	46.3	44.0	33.9	26.2
Satisfactory	34.7	36.1	36.5	38.6	9.5	39.3	45.5	34.5	22.6	37.7	41.0	36.6
Unsatisfactory	39.4	29.4	23.1	29.8	23.8	7.1	27.3	44.8	31.6	18.3	25.2	37.3

TABLE 20 (Continued)

Program Elements	Instructors				Administrators				Total			
	5 and Under	6 - 10	11 - 15	16 and Over	5 and Under	6 - 10	11 - 15	16 and Over	5 and Under	6 - 10	11 - 15	16 and Over
(29.5) Incentives to study outside school hours												
Excellent	28.6	32.8	31.4	40.4	47.6	42.9	30.0	31.0	38.1	37.9	30.7	35.7
Satisfactory	24.5	21.0	25.5	33.3	23.8	32.1	30.0	27.6	24.2	26.6	27.8	30.5
Unsatisfactory	46.9	46.2	43.1	26.3	28.6	25.0	40.0	41.4	37.8	35.6	41.6	33.9
(29.6) Instructors share in leadership												
Excellent	27.4	33.9	36.5	43.9	50.0	57.1	33.3	31.0	38.7	45.5	34.9	37.5
Satisfactory	36.3	39.8	40.4	33.3	25.0	42.9	55.6	27.6	33.2	41.4	48.0	30.5
Unsatisfactory	36.3	26.3	23.1	22.8	25.0	--	11.1	41.4	28.2	13.2	16.1	32.1
(29.7) Provide effective source of teaching skills												
Excellent	24.0	28.0	32.7	33.3	42.9	48.1	20.0	24.1	33.5	34.0	26.4	28.7
Satisfactory	39.5	39.0	38.5	33.3	23.8	48.1	60.0	24.1	31.7	43.6	49.3	33.7
Unsatisfactory	36.5	33.1	28.8	33.0	33.3	3.7	20.0	51.7	34.9	18.4	24.4	42.5

TABLE 20 (Continued)

Program Elements	Instructors				Administrators				Total			
(29.8) Designed for specific goals												
Excellent	27.4	41.9	38.5	38.6	61.9	64.3	45.5	20.7	44.7	53.1	37.0	29.7
Satisfactory	46.3	35.0	40.4	35.1	33.3	25.0	36.4	37.9	39.8	30.0	38.4	31.5
Unsatisfactory	26.3	23.1	21.2	26.3	4.8	10.7	18.2	41.4	15.6	16.9	20.2	33.9
(29.9) Has administrative support												
Excellent	42.1	54.2	56.9	54.4	66.7	85.7	70.0	41.4	54.4	70.0	63.5	47.9
Satisfactory	41.6	28.8	27.5	29.8	19.0	14.3	20.0	27.6	30.3	20.6	23.8	28.7
Unsatisfactory	16.3	16.9	15.7	15.8	14.3	--	10.0	31.0	15.3	8.9	12.9	23.4
(29.10) Related to instructor's teaching subjects												
Excellent	30.2	37.6	38.0	44.6	57.1	57.1	45.5	31.0	43.7	47.4	41.8	37.8
Satisfactory	36.0	32.5	40.0	28.6	19.0	21.4	27.3	34.5	27.5	27.0	33.7	31.6
Unsatisfactory	33.9	29.9	22.0	26.8	23.8	21.4	27.3	34.5	28.9	25.7	24.7	25.7

TABLE 20 (Continued)

Program Elements	Instructors				Administrators				Total			
	5 and Under	6 - 10	11 - 15	16 and Over	5 and Under	6 - 10	11 - 15	16 and Over	5 and Under	6 - 10	11 - 15	16 and Over
(29.11) Integral part of program												
Excellent	24.7	35.4	40.0	45.5	52.4	67.9	50.0	31.0	38.6	51.7	45.0	38.3
Satisfactory	41.1	34.5	36.0	29.1	23.8	21.4	10.0	27.6	32.5	28.0	23.0	28.4
Unsatisfactory	34.2	30.1	24.0	25.5	23.8	10.7	40.0	41.4	29.0	20.4	32.0	33.5
(29.12) Evaluation integral part of program												
Excellent	11.2	8.2	5.0	5.5	45.0	66.7	40.0	24.1	28.1	37.5	22.5	14.8
Satisfactory	43.9	43.5	34.0	34.5	20.0	22.2	30.0	44.8	32.0	33.8	32.0	39.7
Unsatisfactory	32.1	25.9	26.0	25.5	35.0	11.1	30.0	31.0	33.6	18.5	28.0	28.3

instructors with eleven to fifteen years of experience. Ten of the fourteen variables were rated "unsatisfactory" by a substantial percentage of instructors with five years of experience or less and those with sixteen years and over.

The data reveal that two variables received "excellent" ratings. A few others rated "satisfactory" among the instructors with five years of experience or less and those with sixteen years and over. These facts tend to suggest that the two groups seem to be dissatisfied with most of the variables listed in the table.

An examination of the table reveals that the first two variables were rated "excellent" by the administrators at all years of experience level. Ten of the remaining variables were rated "excellent" by as high as 53.6 to 85.7 percent by administrators with five years of experience. "Unsatisfactory" rating was given to eight variables by the administrators with sixteen years of experience and over.

The facts revealed in the table tend to suggest a considerable dissatisfaction among the younger instructors over the application of these identified elements with the local in-service program. The data also tend to suggest that no matter what the experience, the respondents were critical of their local in-service program (see "Tables" 20, page 123).

In this chapter, descriptive analyses of the findings of this study were presented. The analyses were made in terms of the characteristics of the sample and professional activities of the

respondents; the degree of congruence between the respondents on the purposes of in-service education programs and the methods of training; evaluation of state and local in-service training programs and the extent of agreement between the respondents; and the perceptions of the respondents of the purposes of in-service programs and identified elements of a successful in-service program. The summary and principal conclusions and implications of this study are presented in the following chapter.

CHAPTER V

SUMMARY, CONCLUSIONS AND IMPLICATIONS

SUMMARY

The purposes of this study were: (1) to study the perceptions of instructors and administrators and the extent of agreement between their perceptions of what content to be included in the in-service education programs; (2) to determine what constitutes current in-service education programs for occupational education instructors in technical institutes and community colleges in North Carolina; (3) to examine the degree of agreement between the instructors and administrators on what should be the purposes of the in-service education programs; and (4) to indicate the extent of agreement between the instructors' and administrators' perceptions of both the purposes and content of in-service education programs as they relate to the guidelines derived from the review of relevant literature.

The assumptions for this study were that:

1. The literature on in-service education programs found in professional periodicals, textbooks, and unpublished research studies yielded common standards used for in-service education programs.
2. There were no considerable differences between the perceptions of the instructors and administrators on in-service programs.

Literature related to general and occupational education programs was reviewed.

A sample of 524 or one-third of the occupational instructors and the universe of 128 administrators constituted the respondents of this study. The samples were occupational instructors and the universe of the administrators (directors of occupational education and deans of instruction) who were full-time employees in North Carolina's technical institutes and community colleges.

A mailed questionnaire instrument to collect data was developed. The questionnaire contained items to facilitate analyses of the perceptions and the extent of agreement between the instructors and administrators on the purposes and content of in-service education programs. A pilot study of forty instructors and five administrators sample tested the validity and practicality of the questionnaire.

When completed questionnaires were received, they were recopied into computer schedules, edited, and coded for computer tabulation to facilitate analyses. Analyses were made to determine the perceptions and areas of agreement between the instructors and administrators on the purposes and content of in-service education programs. Percentage tabulations and descriptive data analyses were employed to indicate the extent of agreement between the instructors' and administrators' perceptions of both the purposes and content of in-service education programs and the guidelines derived from the review of relevant literature.

Data indicated that in-service education programs in North Carolina community colleges and technical institutes constituted three of the four selected primary purposes that a local institution should possess in their in-service education programs. In-service training programs should include preparation of the new staff for new responsibility and adjustment into their new profession and teaching environment. The local in-service training programs had basically used three of the four identified methods or content essential for an effective in-service program. The data indicated that the local in-service programs failed to measure up on nine of the fourteen identified elements of a successful in-service program as perceived by the instructors. No standards essential for an effective or successful in-service training program has yet been established. On this basis, data supported the instructors' perceptions and agreement that local in-service training programs in the North Carolina Community College System were weak and unresponsive. Guidelines for a successful in-service training program were identified.

It was believed that the guidelines identified in this study for in-service education programs would help in strengthening and upgrading the current in-service training practices at local institutions and state-wide levels. The findings of this study would help to focus attention on the facts that more expertise, money and further studies were needed to produce in-service programs standards effective enough to help to update knowledge,

educational skills and pedagogical techniques of occupational instructors. This study was intended to bring to light some of the basic concerns expressed or felt by occupational instructors. It was believed that these concerns would help to develop more administrative cooperation essential for the success of future in-service education programs.

The findings of this study were subject to a randomly selected sample of 524 occupational instructors and the universe of 128 administrators in the North Carolina Community College System. These findings were not necessarily indications of the quality of the in-service programs in North Carolina technical institutes and community colleges, except as perceived by the instructors and administrators. These findings were also limited to the fifty-six technical institutes and community colleges in operation in North Carolina. These findings might not be applicable for generalizing in-service education programs in other states.

If North Carolina's community college system is to maintain efficient occupational instructors, then there must be a continuous effort to improve their teaching skills and keep them abreast of new knowledge, teaching innovations, and educational skills. One of the pre-requisites is a comprehensive understanding and agreement of the occupational instructors and administrators on the purposes and content of in-service training programs conducted either at local institutions or state-wide levels. The findings of this study and the guidelines identified might be

helpful in developing, planning and conducting a successful in-service education program.

CONCLUSIONS

Conclusions reached in this study were based on analyses and interpretations of data obtained from a mailed questionnaire sent to the occupational instructors and administrators (deans of instruction and directors of occupational education) in technical institutes and community colleges in North Carolina. The strength of the current in-service programs, reflected in the findings of this study, were commendable insofar as they compared favorably with the perceptions of the respondents and the identified elements of a successful in-service training program. These were as follows:

I. There was agreement between the instructors and administrators that the in-service training programs in their institutions have:

A. (1) Helped instructors keep abreast of new knowledge and innovations in their respective fields that (a) updated their knowledge, and (b) provided them skills to improve both the quality of the educational programs and the competency of the staff members.

(2) Promoted mutual respect and acceptance between educators.

(3) Provided training activities that recognized the need for realistic teaching innovations.

B. The content found in use in local in-service training programs had included:

(1) Using small group discussion,

(2) Placing emphasis on meeting the instructor's needs,

(3) Integrating the in-service activities into various departments of the institution.

C. Some of the local in-service program elements compared favorably with those identified from the literature. These were:

(1) Small group programs for instructor's particular needs.

(2) Programs that provide for two-way communication between instructors as well as between administrators.

(3) Programs designed to attain specific goals.

(4) Programs that received administrative cooperation and support.

(5) Evaluation had been an integral part of the programs.

II. It was found that both the instructors and administrators had a good record of participating in professional activities. However, the administrators, as a group, seemed to participate more in professional activities than the instructors.

III. The less formal education the instructor possessed, the more importance was attached to in-service training activities. The less formally educated instructors and administrators

perceived some selected in-service training program activities as a means of improving job security and occupational status.

IV. (1) There were more female than male instructors in the five years or less experience group. The administrator's sex was not a factor in what they perceived should be the activities of an in-service training.

(2) The administrators were more formally educated and more experienced than the instructors. However, years of experience of the respondents was only a factor on the perception of in-service training activity participation.

V. In-service education programs for occupational instructors suffered from certain deficiencies or weaknesses insofar as they did not measure up to the identified elements of a successful in-service training program. Deficiencies were found in the local in-service programs. The instructors gave a low rating to in-service training programs that had not:

(1) Offered a wide variety of opportunities for professional growth.

(2) Contributed highly to the instructor's professional growth.

(3) Encouraged the instructor's participation in planning the in-service program activities.

(4) Involved instructors in the identification of needs.

(5) Offered incentives for the time contributed to study outside school hours.

(6) Involved shared leadership responsibility.

(7) Been an effective method to provide professional or teaching skills

(8) Been an integral part of the institutions' programs.

(9) Provided adequate information for new instructors' adjustment into the teaching profession.

The quality of in-service education programs in community colleges and technical institutes in North Carolina compared favorably with only five of the fourteen identified elements from relevant literature of a successful in-service training program. The in-service training programs do not possess adequate elements or principles that constitute an effective or successful in-service program. A lack of agreement existed between the instructors and administrators on some of the purposes of local in-service programs. The evidence in this study indicates the conclusion that the current in-service education programs in North Carolina's community colleges and technical institutes are weak and unresponsive to the instructor's needs for an in-service training program.

This study, therefore, has identified some concepts as guidelines for a successful in-service education program. These guidelines included:

1. basic faculty needs,
2. professional growth activities,
3. mutual respect and open interaction,
4. opportunities and varieties of activities,

5. individualized and small group programs for particular needs,
6. involvement in planning,
7. sharing in leadership
8. specific goals and objectives of programs,
9. two-way communication,
10. administrative cooperation,
11. knowledge and utilization of resources,
12. evaluation.

The study also revealed that there were no standards:

1. nationally used for in-service education programs,
2. for in-service education programs in use in technical institutes and community colleges in North Carolina,
3. for in-service education in use by any particular state.

IMPLICATIONS

The findings of this study should be helpful to all school personnel developing and conducting in-service education programs. The study revealed that there were some areas of agreement and disagreement between the instructors and administrators who responded to this study.

The data indicated that in-service education programs in technical institutes and community colleges were disorganized. The perceptions of some instructors and administrators of

in-service training programs were weak. However, some respondents had strong perceptions of what in-service training programs should be.

I. In order to bring about understanding and agreement on in-service programs, there is the need to establish an in-service planning committee comprised of the instructors and administrators at local institution level as well as at the state department level.

II. This in-service planning committee needs to develop continuous and strong in-service training programs. These in-service training programs should be initiated in such a manner that greater participation of instructors and administrators will be achieved.

III. The state and local administrators should provide the time and resources necessary to develop strong and effective in-service program guidelines. These in-service training programs should be provided at the local institutions and state level, using (a) general in-service training guidelines, and (b) specific area in-service guidelines that would keep the faculty up to date in their area of responsibilities.

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APPENDIXES

APPENDIX A

Letters of Transmittal

Sandhills Community College
Post Office Box 1379
Southern Pines, North Carolina 28387
Phone: 919 692-6185

March 21, 1972

Mr. Bobby Anderson, Director
Department of Community Colleges
State Board of Education
Raleigh, N. C. 27602

Dear Mr. Anderson:

I am writing to request your help in securing relevant literature related to In-Service Education for technical and vocational faculty in North Carolina Public Technical and Community Colleges.

I have recently completed all my classroom requirements toward my doctorate degree program at UNC-G. Presently, I am on the teaching staff of the Sandhills Community College, Southern Pines, N. C. I am considering writing my dissertation on In-Service Education of Technical and Vocational Faculty of North Carolina Public Technical Institutes and Community Colleges.

Going through some related literature, I discovered that in your Administrative Memo No. 1-3 of November 25, 1968, you have given some directives on In-Service training of Community College and Technical faculty. Perhaps, it would be helpful to both the North Carolina Technical Institutes and Community College System to know:

(a) What has been done in this area of In-Service Education of Technical and Vocational faculty or instructors;
(b) What ought to be done;
(c) Suggestions for improvement.

I, therefore, request your maximum help in furnishing me with all available related materials concerning such a topic.

Sincerely yours,

Ukaonu W. Uche

DEPARTMENT OF
COMMUNITY COLLEGES
NORTH CAROLINA STATE BOARD OF EDUCATION
RALEIGH 27602

March 29, 1972

Mr. Ukaonu W. Uche
Sandhills Community College
Post Office Box 1379
Southern Pines, North Carolina 28387

Dear Mr. Uche:

Your letter to Mr. Anderson has been forwarded to our office for reply.

Inservice education for vocational and technical instructors has been provided in several ways. During each of the last four years, a three-day conference has been held for instructors. This year the conference is scheduled for May 29-31 in Asheville. Program materials and evaluation reports are on file in our Instructional Materials Laboratory. You may want to contact Mr. Roger Worthington concerning this information.

One- and two-day workshops are held during the year by our staff under the direction of Mr. Worthington. Several groups of instructors have formed associations and they usually meet one to three times per year. Several of our institutions have developed inservice training programs for their staff. Courses are offered by senior institutions throughout the year at many off-campus locations.

From these brief descriptions, I have tried to indicate the varied approaches to inservice education. Just how effective these various approaches have been, I do not know. We feel that the programs offered by the department have met part of the needs of instructors.

Mr. Henry Rahn of your institution is familiar with some of the programs offered and he may be of help to you.

Sincerely yours,

Kenneth S. Oleson cm

Kenneth S. Oleson, Director
Division of Occupational Education

KSO/cm

cc: Bobby Anderson

Sandhills Community College
Post Office Box 1379
Southern Pines, North Carolina 28387
Phone: 919 692-6185

May 9, 1972

Subject: Request for Information on Institution Organized In-Service Education

Dear

I am conducting a scientific study of the in-service training programs for our system-wide occupational instructors in North Carolina's technical institutes and community colleges. Messers Kenneth Oleson, Director of Occupational Programs and Fred Manley, Associate Director, Division of Research State Department, Raleigh, have officially approved of this study undertaken.

I personally request strongly for your kind cooperation and assistance. Please send to me or advise your Dean of Instruction to send me all: booklets, pamphlets, handouts and other available related information on all in-service training programs organized and held in your institution for your occupational instructors since 1967-1972.

Again, please, may I remind you that the importance of this request cannot be overemphasized. Your immediate response will be highly appreciated.

Sincerely yours,

Ukaonu W. Uche

Sandhills Community College
Post Office Box 1379
Southern Pines, North Carolina 28387
Phone: 919 692-6185

December 7, 1972

Subject: Request for the Names of Full-Time Technical and Vocational Instructors Currently on Your Teaching and Administrative Faculty

Dear Sir:

I am engaged in collecting a representative population for a study of in-service education programs for our System-Wide Occupational Instructors.

The Department of Community Colleges, Raleigh, has been kind enough to furnish me with a list of the technical and vocational instructors of other institutions. The list of your instructors could not be made available because your "operating budget - personnel" form for full-time personnel currently employed in your institution has not been submitted to the Department.

May I, therefore, request through you to your Business Manager to take just a few minutes of his time to list out and send to me the full names of your full-time technical and vocational instructors. I mean those listed under budget line items Nos. 212 and 222.

Below is a sample of my request.

Full Name	Technical Teaching	Budget Line Item No.
	Vocational	

Your immediate response in the next few days will be highly appreciated.

Very sincerely yours,

Ukaonu W. Uche

APPENDIX B

Questionnaire and Follow-Up Letter

Sandhills Community College
Post Office Box 1379
Southern Pines, North Carolina 28388
Phone 919 692-6185

January 30, 1973

Subject: Reminder for Return of Completed Questionnaire

Dear Colleague:

A few weeks ago I sent to you a questionnaire concerning In-Service Education programs in Technical Institutes and Community Colleges in North Carolina. Since I have not heard from you, perhaps your copy has been filed meticulously away and has slipped your mind. I am sure that you can identify with my need to acquire a significant sampling of occupational education instructors and administrators in North Carolina'a Technical Institutes and Community Colleges.

I have already heard from 75 percent of our instructors and only 64 percent of the administrators to date. I am pleased to acknowledge that you are prepared to return the questionnaire. I am also sure that the administrators in particular, who are flooded with documents every day, are prepared to return the questionnaire in order to acquire an equal percentage of sampling to that of the instructors.

If you have already responded to this questionnaire, please disregard my inconvenience and accept my thanks for completing the questions.

Very sincerely yours,

Ukaonu W. Uche

Sandhills Community College
Post Office Box 1379
Southern Pines, North Carolina 28387

January 2, 1973

Dear Colleague:

I am a doctoral candidate conducting a scientific study of in-service education programs for our system-wide occupational instructors in North Carlina's technical institutes and community colleges.

The purposes of this study are to determine what constitutes the current in-service education programs of technical and vocational (occupational) instructors in North Carolina's technical institutes and community colleges. Secondly, to examine the perceptions of both occupational instructors and administrators concerning the current in-service education programs, the purposes and what the respondent groups perceive ought to be included in in-service training programs.

For the purpose of this study, however, In-Service Education is defined as programs which have as their primary purposes: (1) to up date the knowledge and educational skills of the instructors, and (2) to improve both the quality of the educational program and the competency of the staff members.

Please, would you take just a few minutes of your time to fill out the attached questionnaire for me. The study is absolutely anonymous, and you are one of those randomly selected for it. Do not write your name or any other indication of your identity as an individual. However, I have placed a code number on each copy of the questionnaire only to facilitate follow-up reminder, if needed.

I assure you that whatever response or information received from you is confidential. Such information will only be used in statistical significance tests and can in no way be revealed to another person or used for other purposes.

After you have completed the questionnaire, please return it to me in the enclosed, self-addressed, stamped envelope. Please, I want and need your response.

Your response within the next few days will be greatly appreciated.

Very sincerely yours,

Ukaonu W. Uche

QUESTIONNAIRE

Please respond to each of the following questions as frankly and honestly as you are able.

DIRECTIONS: In the space provided, place a check (✓) mark and where appropriate indicate the number.

	Answer Column	Data Analysis
		ID 1-3
1. Age:		(4)
1. Between 25 and 30 ----------	____ 1	
2. Between 31 and 36 ----------	____ 2	
3. Between 37 and 42 ----------	____ 3	
4. Between 43 and 48 ----------	____ 4	
5. Between 49 and 54 ----------	____ 5	
6. Over 55 ----------	____ 6	
Sex:		(5)
1. Male ----------	____ 1	
2. Female ----------	____ 2	
2. Education: Please indicate highest level:		(6)
Less than High School ----------	____ 1	
High School Graduate ----------	____ 2	
Some College ----------	____ 3	
Associate Degree (2 yrs.) ----------	____ 4	
College Degree ----------	____ 5	
Masters Degree ----------	____ 6	
Doctorate Degree ----------	____ 7	
3. Occupation Experience: Please include only occupational experience beyond high school level:		
Teaching; years _____	____ 1	(7-8)
Administration; years _____	____ 2	(9-10)
Subject Area:		(11-12-13)
Agriculture----------	____ 1	
Business ----------	____ 2	
Health ----------	____ 3	
Trade ----------	____ 4	
Industry ----------	____ 5	
Others ----------	____ 6	
4. Have you ever been a student in a two-year college?	___ 1 Yes ___ 2 No	(14)

	Answer Column	Data Analysis
5. Have you ever been a student in a technical institute?	____ 1 Yes ____ 2 No	(15)
6. Do you have industrial experience?	____ 1 Yes ____ 2 No	(16)
7. Do you voluntarily take courses for credit regularly in your field?	____ 1 Yes ____ 2 No	(17)
8. Do you subscribe at least to one professional journal in your field?	____ 1 Yes ____ 2 No	(18)
9. Have you participated in any kind of in-service training program within the last 5 years?	____ 1 Yes ____ 2 No	(19)
10. Have in-service education programs shown you a need for further professional training?	____ 1 Yes ____ 2 No	(20)
11. Have in-service training programs in any way motivated you toward upgrading the skills required in your present job?	____ 1 Yes ____ 2 No	(21)
12. Do you voluntarily attend professional meetings? (Not just meetings on your campus?)	____ 1 Yes ____ 2 No	(22)
13. Does your institution have available adequate audio visual materials for less preparation?	____ 1 Yes ____ 2 No	(23)
14. Does the administration of your institution encourage the use of innovative teaching ideas?	____ 1 Yes ____ 2 No	(24)
15. Are you a member of any professional organization?	____ 1 Yes ____ 2 No	(25)

	Answer Column	Data Analysis
16. Do you benefit profesionally by association with fellow instructors or administrators?	____ 1 Yes ____ 2 No	(26)
17. Is the in-service training program at your institution helping you keep abreast of new knowledge and innovations in your field?	____ 1 Frequently ____ 2 Sometimes ____ 3 Seldom ____ 4 Never ____ 5 No Preference	(27)
18. At your institution do in-service training programs for new instructors provide adequate information to help one make adjustments into the teaching profession?	____ 1 Very Helpful ____ 2 Helpful ____ 3 Moderately Helpful ____ 4 Not Helpful ____ 5 Waste of Time	(28)
19. How do you feel about in-service education as a means of promoting mutual respect and acceptance between educators?	____ 1 Very Essential ____ 2 Essential ____ 3 Not Necessary ____ 4 Not Applicable ____ 5 Don't Know	(29)
20. What kind of in-service training is most helpful to you?	____ 1 Individualized ____ 2 Small Group ____ 3 State Wide ____ 4 Makes No Difference ____ 5 No Preference	(30)
21. Would you support in-service education programs with special emphasis on problem-solving methodsto meet instructors needs?	____ 1 Very Strongly ____ 2 Strongly ____ 3 Moderate ____ 4 Useless to Support ____ 5 No Opinion	(31)

	Answer Column	Data Analysis
22. Do you feel instructors should be involved in planning the in-service program activities?	____ 1 Approve Strongly ____ 2 Approve ____ 3 Undecided ____ 4 Disapprove ____ 5 Disapprove Strongly	(32)
23. Is it essential that in-service education programs provide for two-way communication between instructors as well as between instructors and administration?	____ 1 Agree Strongly ____ 2 Agree ____ 3 Makes No Difference ____ 4 Disagree ____ 5 Disagree Strongly	(33)
24. To what extent should in-service education programs integrate the activities of the various departments in an institution?	____ 1 Should be a high priority objective ____ 2 Should be an appropriate objective ____ 3 No Opinion ____ 4 Not Appropriate ____ 5 Not Very Appropriate	(34)
25. Do you feel that in-service training activities recognize the need for realistic teaching innovations?	____ 1 Very Frequently ____ 2 Frequently ____ 3 Not Frequently ____ 4 Never ____ 5 No Opinion	(35)
26. Are the in-service programs at your present institution satisfactory compared to what you perceived as the objectives of in-service education programs?	____ 1 Very Satisfactory ____ 2 Satisfactory ____ 3 Unsatisfactory ____ 4 Very Unsatisfactory ____ 5 Never	(36)

	Answer Column	Data Analysis
27. How many in-service education programs provided by North Carolina Community College System have you attended in the last five years?	____ 1 ____ 2 ____ 3 ____ 4 ____ 5	(37)
28. The North Carolina Community College System provides in-service education programs on a state-wide basis. Rate the effectiveness of their programs. (One being the highest rate.)	____ 1 Very Satisfactory ____ 2 Satisfactory ____ 3 Unsatisfactory ____ 4 Very Unsatisfactory ____ 5 Never	(38)
29. A good in-service education program possesses or reflects the listed characteristics (statements) below. Please rate the quality of your institution's in-service programs: (One being the highest rate.)		(39)
1. Has contributed considerably to instructors' professional growth?	____ 1 Excellent ____ 2 Good ____ 3 Satisfactory ____ 4 Unsatisfactory ____ 5 Very Unsatisfactory	(40)
2. Has offered wide variety of opportunities and activities for professional growth?	____ 1 Excellent ____ 2 Good ____ 3 Satisfactory ____ 4 Unsatisfactory ____ 5 Very Unsatisfactory	(42)

	Answer Column	Data Analysis
3. Has encouraged instructors' participation in planning the activities?	____ 1 Excellent ____ 2 Good ____ 3 Satisfactory ____ 4 Unsatisfactory ____ 5 Very Unsatisfactory	(44)
4. Has involved instructors in the identification of particular needs?	____ 1 Excellent ____ 2 Good ____ 3 Satisfactory ____ 4 Unsatisfactory ____ 5 Very Unsatisfactory	(46)
5. Has offered incentives for the time contributed to programs outside school hours; (for example, graduate or advanced degree credits, financial assistance, etc.?)	____ 1 Excellent ____ 2 Good ____ 3 Satisfactory ____ 4 Unsatisfactory ____ 5 Very Unsatisfactory	(48)
6. Has shared leadership responsibility?	____ 1 Excellent ____ 2 Good ____ 3 Satisfactory ____ 4 Unsatisfactory ____ 5 Very Unsatisfactory	(50)
7. Has been an effective method to provide professional or teaching skills?	____ 1 Excellent ____ 2 Good ____ 3 Satisfactory ____ 4 Unsatisfactory ____ 5 Very Unsatisfactory	(52)
8. Has been designed primarily to attain specific goals?	____ 1 Excellent ____ 2 Good ____ 3 Satisfactory ____ 4 Unsatisfactory ____ 5 Very Unsatisfactory	(54)

	Answer Column	Data Analysis
9. Has received administrative cooperation and support for its success?	____ 1 Excellent ____ 2 Good ____ 3 Satisfactory ____ 4 Unsatisfactory ____ 5 Very Unsatisfactory	(56)
10. Has contributed to curriculum orientation as related to students' courses?	____ 1 Excellent ____ 2 Good ____ 3 Satisfactory ____ 4 Unsatisfactory ____ 5 Very Unsatisfactory	(58)
11. Has been an integral part of the institution's programs?	____ 1 Excellent ____ 2 Good ____ 3 Satisfactory ____ 4 Unsatisfactory ____ 5 Very Unsatisfactory	(60)
12. The evaluation has been an integral part of the institution's in-service programs?	____ 1 Excellent ____ 2 Good ____ 3 Satisfactory ____ 4 Unsatisfactory ____ 5 Very Unsatisfactory	(62)

COMMENTS: _____

_____

_____

_____

Thank you very much for your cooperation in completing this form.