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AUTHOR	Handley, Herbert M.; Shill, James F.
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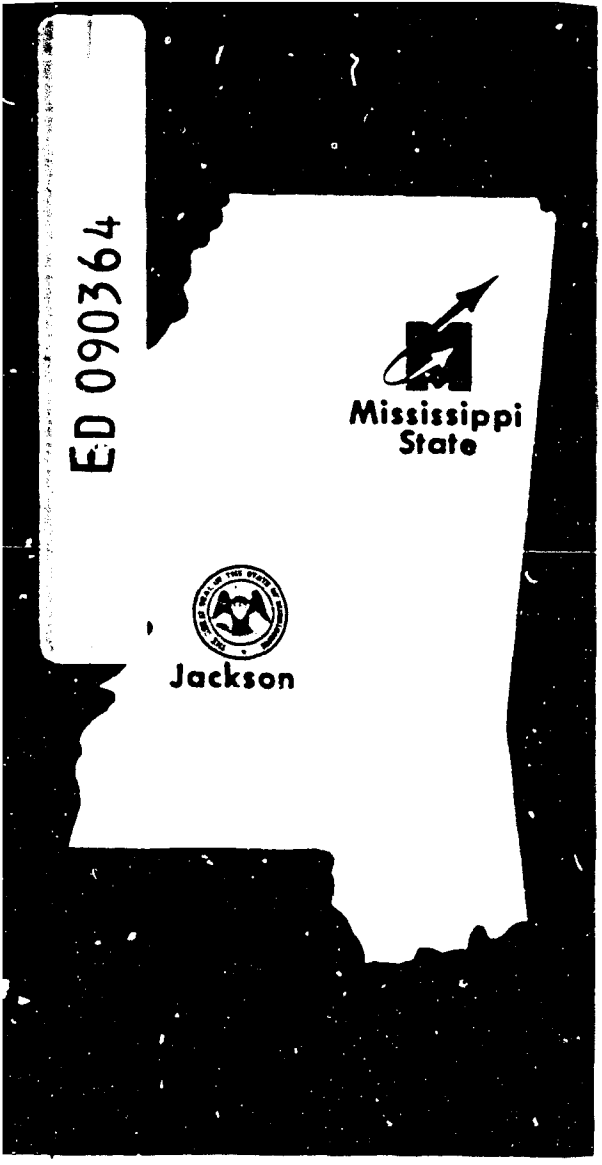
ABSTRACT

Summarizing vocational educators' perceptions of how well they are able to execute specific performance tasks after completion of inservice training programs in Mississippi, the report is the second in a series of three. The effectiveness of two types of inservice programs was evaluated: those conducted by institutions and those conducted by the State Division of Vocational and Technical Education. The study was conducted to provide baseline data to be used in curriculum planning for improving teacher training programs. Data for the study were collected through the use of the Assessment of Inservice Teacher Education Scale. The vocational educators were asked to evaluate the level of their performance of 20 tasks. One thousand one hundred eighty-five vocational educators with more than three years teaching experience in the field and vocational education administrators were mailed questionnaires. The sample is based on the 781 responses. Results of the study distinguish between credit and noncredit workshops, service areas of teachers, level of performance reported, and educational level of respondents. (AG)



Assessment of In-Service Vocational Teacher Education In Mississippi

Herbert M. Handley and James F. Shill

Research Functions

- Stimulate
- Coordinate
- Implement
- Disseminate

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In Cooperation With
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Division of Vocational & Technical Education

ASSESSMENT OF IN-SERVICE VOCATIONAL TEACHER EDUCATION IN MISSISSIPPI

by

Herbert M. Handley
Bureau of Educational Research
Mississippi State University

and

James F. Shill
Research and Curriculum Unit for
Vocational-Technical Education
Mississippi State University

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PREFACE

This report summarizes vocational educators' perceptions of how well they are able to execute specific performance tasks after completion of inservice training programs in Mississippi. The effectiveness of two types of inservice programs, those conducted by institutions and those conducted by the Division of Vocational and Technical Education of the Mississippi State Department of Education, for assisting teachers in developing needed skills and in gaining knowledge, was evaluated.

With the major focus on inservice training rather than preservice professional activities, this assessment was developed as a parallel study for the first phase of the investigation in which a comparison was made of the perceptions of Mississippi educators working in 13 service areas of their performance levels after completion of preservice professional training. This report is the second in a series of three completed by the investigators.

This study was conducted to provide baseline data to be used in curriculum planning for improving teacher training programs. It represents the first effort on a statewide basis to evaluate the effectiveness of existing inservice programs for assisting teachers to increase their performance levels.

Grateful acknowledgment is made to Mary Bestor and Dean Wilson for their work in data compilation. The assistance of Charlene Callaway is also appreciated for editing and supervision of typing and preparation of this report.

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I. INTRODUCTION

During Mississippi's growth toward a more complex industrial society in recent years the vocational needs of its young people have changed significantly. Teachers now must use updated skills and competencies in assisting students to train for their future employment needs.

Some inservice educators received training for teaching vocational skills that have become somewhat obsolete in the changing technology of work. The rapid growth of vocational education programs in the past decade has also resulted in the hiring of teachers who had less than optimum preservice professional training on an emergency basis. For these and other reasons, many teachers have continued their professional studies in vocational education through preservice work.

Colleges and universities and the Mississippi State Department of Education have developed and operated programs for updating the instructional skills of teachers in the various service areas. A determination of how effective these programs have been in developing the performance levels of vocational teachers has not previously been made on a statewide level.

Problem and Objectives

This second phase of the study for assessment of vocational teacher education in Mississippi was focused primarily upon determining how well vocational teachers are able to execute specific performance tasks after completion of both credit and noncredit inservice programs.

Specific objectives in the study were to answer the following questions:

1. How effectively are the inservice programs meeting the instructional needs of vocational education teachers?
2. How do inservice programs offered for teachers in the different service areas compare in effectiveness for assisting educators to perform their professional roles?
3. How do the assessments for groups of vocational educators when classified according to current position, educational level and type of inservice training program attended, respectively, compare in the effectiveness of inservice program?

Rationale for Study

The rationale for this evaluation was developed around the premise that program assessments should be made from several points of view. Hence, the perceptions of personnel working in different roles in vocational education and having different educational experiences were measured in the study. These divergent viewpoints provide a spectrum of data which may be useful in curriculum development.

II. RESEARCH METHODOLOGY

Data for the study were collected primarily through the use of one instrument, the Assessment of Inservice Teacher Education Scale (AITES). The questionnaire was developed by the investigators from a model reported by Cotrell[1] in studies at Ohio State University.

The Mississippi instrument consisted of 20 performance tasks in which the vocational teachers were requested to evaluate the level of performance which they possessed after completing inservice training programs. The teachers rated their performance level according to the following scale: level 5, very high degree; level 4, high degree; level 3, moderate degree; level 2, low degree; level 1, very low degree and level 0, no training in area.

In 1973 the questionnaires were mailed to 1185 persons in vocational education who had taught for more than three years in vocational education. They were also mailed to state-level supervisors, program directors and teacher educators involved in planning inservice programs. Seven hundred and eighty-one persons completed the questionnaire and served as the sample for this study. In Tables I through IV the distributions of respondents in descriptive categories are given.

Data Analysis

The questionnaires were hand scored. The 11-6 Univac computer and the facilities of the Thomas E. Tramel Computer Center of Mississippi State University were utilized for data analysis.

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[1]C. J. Cotrell, "Performance Requirements for Teachers," Model Curricula for Vocational and Technical Education. (Ohio State University: Center for Vocational and Technical Education Publication, 1971).

Table I. Number of Respondents by Service Area

Service Area	n	%
Agriculture	107	13.7
Business & Office	47	6.0
Consumer & Homemaking	182	33.0
Cooperative Education	19	2.4
Disadvantaged	12	1.5
Distributive Education	27	3.5
Guidance	35	4.5
Handicapped	2	0.3
Health	25	3.2
Industrial Arts	31	4.0
Occupational Orientation	23	2.9
Technical	30	3.8
Trade & Industrial	241	30.9

Table II. Distribution of Respondents by Current Position

Position	n	%
Vocational teacher	621	79.5
Vocational director	37	4.7
State level supervisor	14	1.8
SDVTE teacher educator	4	0.5
Institutional teacher educator	34	4.4
Other (specified)	71	9.1

Table III. Distribution of Respondents by Educational Level

Educational Level	n	%
GED Test	34	4.3
High School Diploma	51	6.5
Associate Degree	70	9.0
Baccalaureate Degree	295	37.8
Master's Degree	281	36.0
Specialist's Degree	10	1.3
Doctor's Degree	18	2.3
Other (specified)	22	2.8

Table IV. Distribution of Respondents by Type of Inservice Training Program Attended

Inservice Program	n	%
Noncredit workshops	167	21.4
College (Teacher Ed. Curriculum)	497	63.6
College (No Teacher Ed. Curriculum)	89	11.4
Other (specified)	22	2.8
No inservice education	6	0.7

The least squares analysis of variance program described by Harvey[2] was employed for comparing the mean ratings of the groups' perceptions of their abilities to perform specific instruction-related tasks after completion of inservice training programs. This

[2]W. R. Harvey. Least Squares Analysis of Variance with Unequal Subclass Numbers. (Washington, D. C.: U. S. Dept. of Agriculture, Agricultural Research Service, Pamphlet #ARS 20-8, 1968).

particular technique was chosen for data analysis since the model allows for inclusion of uneven subgroup sizes. Kramer's modification of Duncan's New Multiple Range as cited by Harvey was employed as the post hoc test.

III. RESULTS

Overall Effectiveness of Inservice Programs

Generally, the credit-granting inservice education programs provided by the colleges and universities and the noncredit workshops held by the State Division of Vocational-Technical Education appear to be meeting many of the needs of educators in Mississippi. Through these activities, the teachers are attempting to improve their professional competence.

In evaluating the competencies of teachers after they attended credit-granting inservice programs sponsored by the colleges and universities in the state, experienced vocational educators rated their performance level at a mean "moderate" or "high" on 18 of the 20 criteria. These criteria were measured by the Assessment of Inservice Teacher Education Scale (AITES). A mean effectiveness of rating in the "low" range was given by the total group of educators for only two of the criteria: (1) understanding changes in policies and legislation on state and national levels and (2) planning, implementing and coordinating activities of student vocational organizations. Means, given in terms of a 5-point scale, for the degree to which the credit-granting, inservice programs improved the subjects' ability in specific areas are given in Table V.

The five highest mean ratings were determined for activities which prepared the teachers to do the following tasks: (1) improve their role as a professional vocational educator; (2) plan instruction; (3) develop instructional procedures; (4) carry out instruction; and (5) select, obtain and use new subject matter.

In the noncredit inservice workshops, as observed in Table V, performance ratings in the "low" range were given only on two of the criteria: (1) improved guidance effectiveness and (2) changed attitude toward effectively participating in and utilizing research in programs. All of the other 18 criteria were rated in the "moderate" or higher ranges of the performance level scale by the subjects. The educators listed the same five performance areas as being the areas of best preparation for the noncredit workshops as they did for the credit workshops.

Improvement in Performance Levels Among Teachers Through Credit Workshops by Service Areas

As indicated by Table VI, differences on 16 of the 20 performance areas were predicted by the analysis of variance model among the service areas on the effectiveness of the credit workshops to improve instructional skills. A post hoc measure, Duncan's, was made on each of the criteria showing significant F ratios as attributed to

Table V. Overall Assessment of Inservice Programs as They Prepared Teachers to Perform on the Job

Performance Tasks	Credit Inservice Programs		Noncredit Inservice Programs	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.
1. Plan instruction	3.81	1.02	3.56	1.20
2. Carry out instruction	3.67	.99	3.44	1.22
3. Evaluate instruction	3.48	1.05	3.10	1.24
4. Develop instructional procedures	3.74	1.00	3.41	1.26
5. Use new subject matter	3.61	1.06	3.48	1.33
6. Develop occupational skills	3.16	1.18	3.23	1.40
7. Develop curriculum	3.55	1.02	3.41	1.22
8. Develop guidelines	3.26	1.15	3.26	1.32
9. Understand changes in legislation	2.96	1.29	3.11	1.42
10. Coordinate activities of student organizations	2.81	1.39	3.05	1.44
11. Improved basic knowledge	3.30	1.31	3.14	1.45
12. Improved classroom management	3.40	1.11	3.03	1.34
13. Improved guidance	3.03	1.32	2.90	1.45
14. Changed attitude toward research	3.20	1.18	2.96	1.36
15. Improved program management	3.41	1.00	3.29	1.24
16. Improved program planning	3.54	.99	3.35	1.20
17. Improved program evaluation	3.28	1.06	3.21	1.27
18. Improved public relations	3.30	1.22	3.24	1.35
19. Improved human relations	3.59	1.06	3.32	1.33
20. Improved role	3.90	.94	3.66	1.28

Table VI. Difference in Performance Levels by Credit Workshops Grouped According to Service Area, Current Position, Highest Degree and Type of Inservice Education Received**

	Performance Tasks	Group Area	Position	Degree	Inservice Program
1.	Plan instruction	2.78*	1.29	.96	5.15*
2.	Carry out instruction	2.62*	.82	1.60	6.07*
3.	Evaluate instruction	.90	1.59	.36	3.98*
4.	Develop procedures	1.48	1.66	.55	5.70*
5.	Use new subject matter	3.13*	1.05	.66	6.86*
6.	Develop occupational skills	2.88*	1.23	1.31	1.90
7.	Develop and expand curriculum	1.54	1.76	.60	5.23*
8.	Develop program guidelines	3.13*	1.07	.71	2.53*
9.	Understand changes in legislation	1.98*	2.00	.92	.74
10.	Coordinate activities of student organizations	4.32*	.88	.38	1.73
11.	Improved basic knowledge	1.83*	.63	.45	1.49
12.	Improved classroom management	2.27*	1.10	.90	3.78*
13.	Improved guidance	4.74*	.43	.71	2.02
14.	Changed attitude toward research	2.27*	1.31	.76	1.57
15.	Improved program management	2.34*	1.86	.87	1.76
16.	Improved program planning	2.03*	1.90	.19	2.78
17.	Improved program evaluation	1.71	.65	.58	1.78
18.	Improved public relations	3.07*	1.19	.21	3.69*
19.	Improved human relations	2.17*	3.67*	1.14	5.14*
20.	Improved professional role	2.21*	2.45*	.25	4.94*

* Significantly different at the .05 level

** Prediction by the Variance Model for subjects

the service area factor. Because of so much distortion in the subsample size, however, eight of the criteria did not continue to show significant differences at the .05 level on the post hoc test. Significant differences among different groups of vocational educators were shown on the following eight criteria in the credit workshops: planning instruction, developing policies and guidelines, understanding changes in policies and legislation on state and national levels, improved guidance effectiveness, changing attitudes toward effectively participating in and utilizing research, improved public relations and improved functioning in the role of a professional vocational educator.

Means for each of the performance criteria ratings in service areas may be found in the Appendices 1 through 13.

Planning Instruction. Educators in the service area of occupational orientation ranked themselves as receiving more help on planning instruction in the credit workshop than did any other group. Their rating was found to be significantly higher (.01 level) than that of the following groups of teachers on the post hoc test: trade and industrial, consumer and homemaking, health, technical, guidance and business and office. Distributive education teachers and coordinators also rated significantly higher on this criterion than did those working in the following areas: technical, guidance, and consumer and homemaking. Personnel in cooperative education and industrial arts also rated themselves with significantly more improvement in planning of instruction as a result of the inservice training than did the personnel in the business and office area. (See Table VII.)

Developing Policies and Guidelines. At the .05 level, educators working in the areas of distributive education and cooperative education rated themselves as showing significantly more improvement in developing guidelines and policies as a result of the credit workshops held by colleges and universities than did educators in the following areas: consumer and homemaking, business and office, technical education and health. Vocational educators working in the areas of trade and industry claimed significantly more assistance in developing policies and guidelines than did educators in technical and health fields who participated in credit workshop programs. Persons in occupational orientation also rated their improvement on this criteria significantly higher than did those in health fields. (See Table VIII.)

Understanding Changes in Policies and Legislation. As shown in Table IX, educators in the cooperative education area rated their understanding of changes in policies and legislation at state and national levels significantly higher than did educators in consumer and homemaking, technical and health fields. No other significant differences were observed among the various groups of vocational educators as they evaluated the effectiveness of inservice education programs on this criterion.

Table VII. Ranking of Vocational Service Areas on Planning for Instruction Criterion

Service Area	N	Ranked Means **
Occupational Orientation	23	4.12
Distributive Education	27	3.91
Cooperative Education	19	3.89
Industrial Arts	31	3.84
Disadvantaged	12	3.81
Handicapped	2	3.75
Agriculture	107	3.69
Trade & Industrial	150	3.54
Consumer and Homemaking	182	3.49
Health	25	3.31
Technical	30	3.28
Guidance	35	3.26
Business & Office	47	3.16

** Means not followed by a continuous line are significantly different at the .01 level.

Table VIII. Ranking of Vocational Service Areas on Developing Policies and Guidelines

Service Area	N	Ranked Means *
Cooperative Education	19	3.92
Distributive Education	27	3.64
Trade & Industrial	150	3.24
Occupational Orientation	23	3.24
Agriculture	107	3.23
Handicapped	2	3.15
Guidance	35	3.11
Industrial Arts	31	3.10
Disadvantaged	12	3.09
Consumer & Homemaking	182	2.99
Business & Office	47	2.87
Technical	30	2.71
Health	25	2.26

* Means not followed by a continuous line are significantly different at the .05 level.

Table IX. Ranking of Service Areas on Understanding Changes in Policies and Legislation

Service Area	N	Ranked Means *
Cooperative Education	19	3.66
Handicapped	2	3.25
Industrial Arts	31	3.24
Disadvantaged	12	3.08
Distributive Education	27	3.03
Trade & Industrial	150	3.00
Business & Office	47	2.98
Agriculture	107	2.94
Guidance	35	2.83
Occupational Orientation	23	2.80
Consumer & Homemaking	182	2.64
Technical	30	2.63
Health	25	2.38

* Means not followed by a continuous line are significantly different at the .05 level.

Improved Guidance Effectiveness. Respondents in cooperative education and guidance rated themselves highest on improved guidance effectiveness after participating in credit-granting inservice programs. They were significantly higher (.05 level) on this criterion than were the following groups of experienced educators: trade and industrial, industrial arts, technical, business and office, consumer and homemaking, and health. (See Table X.)

Persons in distributive education rated themselves as significantly more prepared (.05 level) for guidance functions than did those in the areas of: technical, business and office, consumer and homemaking, and health. Respondents in agricultural education rated significantly higher on this performance task than did persons in consumer and homemaking, and health fields.

Persons in health fields rated themselves lowest on this criterion and were also significantly outrated by educators in the occupational orientation and disadvantaged areas.

Changed Attitude Toward Research. Respondents from the service areas of distributive education and disadvantaged rated their improvement in attitudes toward research significantly higher (.05 level) than did those in the following five areas: business and office, consumer and homemaking, health, industrial arts, and technical. Respondents in technical areas rated themselves lowest on this factor. (See Table XI.)

Increased Public Relations Effectiveness. Persons in the health service area rated themselves as being significantly (.05 level) less able to execute effective public relations programs at the end of credit-granting workshop programs than did educators in the following eight areas: distributive education, cooperative education, industrial arts, agriculture, guidance, occupational orientation, trade and industrial and consumer and homemaking. (See Table XII.)

Improved Human Relations Effectiveness. Respondents in distributive education rated their performance level in human relations skills as a result of training in credit workshops to be significantly higher (.05 level) than did persons in technical education and health areas. Educators in the areas of the disadvantaged, cooperative education, and guidance also gave themselves a significantly higher rating in improved human relations skills than did those in the health fields. (See Table XIII.)

Table X. Ranking of Service Areas on Improved Guidance Effectiveness

Service Area	N	Ranked Means *
Cooperative Education	12	3.82
Guidance	27	3.62
Distributive Education	2	3.62
Agriculture	19	3.57
Occupational Orientation	107	3.25
Disadvantaged	150	3.22
Handicapped	23	3.21
Trade & Industrial	35	3.09
Industrial Arts	47	2.97
Technical	182	2.94
Business & Office	25	2.87
Consumer & Homemaking	31	2.86
Health	30	2.64

* Means not followed by a continuous line are significantly different at the .05 level.

Table XI. Ranking of Service Areas on Changed Attitudes Toward Using and Participating in Research

Service Area	N	Ranked Means *
Disadvantaged	12	3.82
Distributive Education	27	3.62
Handicapped	2	3.62
Cooperative Education	19	3.57
Agriculture	107	3.25
Trade & Industrial	150	3.22
Occupational Orientation	23	3.21
Guidance	35	3.09
Business & Office	47	2.97
Consumer & Homemaking	182	2.94
Health	25	2.87
Industrial Arts	31	2.86
Technical	30	2.64

* Means not followed by a continuous line are significantly different at the .05 level.

Table XII. Rankings of Service Areas on Increased Public Relations Effectiveness

Service Area	N	Ranked Means *
Distributive Education	27	3.95
Cooperative Education	19	3.75
Industrial Arts	31	3.60
Agriculture	107	3.37
Guidance	35	3.34
Occupational Orientation	23	3.18
Trade & Industrial	150	3.18
Consumer & Homemaking	182	3.13
Disadvantaged	12	3.10
Business & Office	47	3.08
Technical	30	2.72
Handicapped	2	2.71
Health	25	2.37

* Means not followed by a continuous line are significantly different at the .05 level.

Table XIII. Rankings of Service Areas on Improved Human Relations Effectiveness

Service Area	N	Ranked Means *
Distributive Education	27	3.98
Disadvantaged	12	3.75
Cooperative Education	19	3.73
Guidance	35	3.62
Occupational Orientation	23	3.54
Industrial Arts	31	3.52
Trade & Industrial	150	3.43
Agriculture	107	3.39
Business & Office	47	3.28
Consumer & Homemaking	182	3.27
Handicapped	2	3.23
Technical	30	3.10
Health	25	2.90

* Means not followed by a continuous line are significantly different at the .05 level.

Improved Professional Role. As seen in Table XIV, the areas of disadvantaged, cooperative education, distributive education, and agriculture claimed significantly more improvement (.05 level) in executing their professional role as vocational educators as a result of the credit workshops than did persons working in technical education areas.

Improvement in Performance Levels Among Teachers as a Result of Noncredit Workshops. As shown in Table XV, the variance statistical model predicted significant differences among educators in different service areas on four of the criteria as a result of having participated in noncredit workshops. In the post hoc test, however, it was demonstrated that no differences other than those which might be attributed to chance at the .05 level of significance existed among the groups on any of the criteria. The predicted differences indicated in Table XV, then, presumably were distorted by the unequal subsample sizes.

In the following section of this report there is a more detailed description of each of the groups of professional educators' evaluation of the effectiveness of their inservice training programs for improving performance levels.

Agriculture. Mean ratings for the group of educators with backgrounds in agriculture are given in Appendix 1. As indicated by the means in the noncredit workshops, persons in agricultural education evaluated improvement in their ability in the areas of expanding and developing curriculum, planning, implementing, and coordinating activities of student vocational organizations, basic knowledge of occupations, classroom management, attitudes toward research, public relations skills and human relations in the "low" area. They rated their improvement in these areas as a result of the inservice programs as generally below the overall mean for all vocational educators. Improvement in the other criteria was rated as moderate.

In credit workshops, the respondents in agriculture rated their improvement low on one criterion -- understanding changes in policies and legislation at the state and national level. They claimed a moderate degree of improvement on all of the other criteria in these workshops.

Business and Office. As seen in Appendix 2, respondents in the business and office group, as a whole, rated their inservice preparation from low to moderately helpful. They gave themselves nine ratings in the low performance level and eleven ratings in the moderate performance level in relationship to their training in noncredit workshops. They claimed to have acquired relatively more help in the following areas in noncredit workshops: (1) selecting, obtaining and using new subject matter and materials for program; (2) developing new occupational skills and (3) improving their roles as professional

Table XIV. Ratings of Service Areas on Improved Execution of Professional Role

Service Area	N	Ranked Means *
Disadvantaged	12	3.98
Cooperative Education	19	3.89
Distributive Education	27	3.76
Agriculture	107	3.59
Handicapped	2	3.56
Guidance	35	3.55
Trade & Industrial	150	3.52
Occupational Orientation	23	3.49
Industrial Arts	31	3.40
Consumer & Homemaking	182	3.38
Business & Office	47	3.37
Health	25	3.27
Technical	30	2.92

* Means not followed by a continuous line are significantly different at the .05 level.

Table XV. Differences in Training by Workshops Predicted by the Variance Model for Subjects Grouped According to Service Area, Current Position, Highest Degree and Type of Inservice Received

	Performance Areas	Group		Degree	In-service Program
		Area	Position		
1.	Plan instruction	1.36	1.00	1.56	4.08*
2.	Carry out instructions	1.78	1.13	1.70	3.72*
3.	Evaluate instructions	1.08	1.31	1.83	3.20*
4.	Develop procedures	1.16	.85	1.13	2.22
5.	Use new subject matter	1.78	.42	.83	4.32*
6.	Develop occupational skills	3.52*	.95	2.20*	2.03
7.	Develop curriculum	1.97*	.87	2.85*	3.86*
8.	Develop guidelines	.65	.67	1.75	4.05*
9.	Understand changes in legislation	1.99*	.95	1.36	1.60
10.	Coordinate activities of student organizations	1.76	.25	1.23	2.00
11.	Improved basic knowledge	1.74	.42	1.78	2.76*
12.	Improved classroom management	1.13	1.62	1.31	1.51
13.	Improved guidance	1.99*	.95	1.36	1.60
14.	Changed attitude toward research	1.68	.53	1.26	2.52
15.	Improved program management	.90	.80	.90	5.72*
16.	Improved program planning	.68	1.28	.96	4.40*
17.	Improved program evaluation	1.04	1.46	.74	4.11*
18.	Improved public relations	.84	1.23	.30	3.26*
19.	Improved human relations	1.41	1.35	.91	2.64*
20.	Improved role	1.01	2.51	1.09	4.73*

educators. They were less enthusiastic about the change in their attitude toward research and their abilities to coordinate activities of student vocational organizations.

As related to the credit-granting inservice programs, the business educators rated themselves on the low level for nine criteria and at the moderate level for eleven criteria. The group as a whole was most critical of their improvement in the following areas: guidance and follow-up of students, coordinating student vocational organizations, and classroom management. They rated their basic knowledge of occupations and improvement in professional roles as areas of highest performance as a result of their training. The business and office group rated lowest of all groups on the planning of instruction measured in criterion one for the credit workshops. They were significantly lower (.05 level) on this criterion than were educators in occupational orientation, distributive education, cooperative education and industrial arts.

Consumer and Homemaking. The consumer and homemaking group, as shown in Appendix 3, rated their improvement at the low performance level for noncredit workshops on all 20 criteria. They were most critical of their ability to develop curriculum, their basic knowledge of occupations, and their lack of change in attitudes toward research.

Persons in this group participating in the credit workshops, however, apparently received more assistance. They rated their improved performance in the moderate range on 13 criteria and in the low to moderate range on 7 criteria, in relationship to these workshops. This group expressed a need to know more about developing occupational skills (Criterion 6) and understanding changes in policies and legislation (Criterion 9). They gave their highest ratings for their ability to plan instruction and to use new subject matter.

Cooperative Education. Following work in credit workshops, vocational educators in cooperative education rated themselves in the moderate to high performance level on 19 of the criteria and in the high degree performance level on one criterion--improved guidance function. As observed in Appendix 4, these educators were less pleased with their preparation to coordinate activities of student organizations and to execute improved classroom management.

Cooperative education teachers rated their ability to perform at the low to moderate level on nine of the criteria in relationship to the noncredit workshops. They were most critical of their improvement in skills in overall program planning and program evaluation. This group reported considerably more progress toward use of new subject matter, understanding changes in policies and legislation and improved guidance functions as a result of the noncredit workshops.

Disadvantaged. Vocational educators working in the disadvantaged area rated their performance level in the moderate range on 19 of the 20 criteria in relationship to improvement effected by the credit workshops. As reported in Appendix 5, they claimed low performance level for their improvement in classroom management skills. They rated themselves highest on improvement in performing their professional role, in changing attitudes toward research, and in planning for instruction.

After the noncredit workshops, the vocational educators of the disadvantaged gave themselves low to moderate ratings on all criteria. They appeared to need most improvement in developing curriculum and in coordinating student activities. They were more improved in program management and in performing their professional role.

Distributive Education. Educators in Distributive Education as indicated in Appendix 6 rated their preparation in the moderate level range on all 20 criteria in conjunction with training in credit workshops. They indicated best preparation for planning instruction and for improved human relations. They rated comparably less preparation for understanding changes in legislation and policies and for developing occupational skills.

Participants in the noncredit workshops from this group were more critical of their preparation. They rated themselves, as a group, in the low to moderate performance level on seven of the twenty criteria and on the moderate level for the remainder. This group saw themselves as less prepared to develop occupational skills and to evaluate instruction. They were best prepared by their training programs to coordinate activities of student organizations and perform human relations functions.

Guidance. As shown in Appendix 7, the personnel working in the area of vocational guidance who had attended inservice programs for credit rated their competencies on 17 of the criteria at the moderate or higher levels. They gave an average low level performance rating to their preparation in the areas of understanding changes in policies and legislation, in coordinating activities of student organizations, and in classroom management.

Those who attended noncredit workshops rated themselves at the low to moderate levels of preparation on 13 criteria and at the moderate to high level on seven criteria. They indicated less improvement in basic knowledge of occupations, and in their attitudes toward research. They rated their preparation for improving their functioning in their professional role and guidance skills highest.

Handicapped. Only two persons reporting participated in the credit workshops for teachers of the handicapped and three persons studied in noncredit-granting inservice programs. Their ratings of preparation, then, were somewhat skewed when compared to the groups

with a larger number of respondents. As shown in Appendix 8, those who attended credit-granting inservice programs were best prepared to carry out instruction, evaluate instruction, execute improved program management, and program planning. They rated each of these criteria in the high performance range. In the low to moderate performance levels were their ratings of the groups' ability to develop instructional procedures, to use new subject matter, and to expand and develop curriculum.

The three persons studying in noncredit workshops rated their preparation in the low to moderate range for all criteria. They did give themselves moderate preparation ratings for the areas of planning instruction, carrying out instruction, developing program guidelines, understanding changes in legislation and policies, improved guidance, program management, program planning, human relations, and professional role functioning.

Health. Vocational educators working in health areas, as shown in Appendix 9, indicated from a very low to a low degree of preparation for coordinating student activities in vocational organizations. Those who attended noncredit workshops gave their preparation on this criteria a mean rating of 2.03 and those who had earned credit for their inservice study gave a mean rating of 1.93 for this preparation task. A low level of guidance preparation was indicated for the educators in the credit-earning inservice group. Those attending noncredit workshops apparently were more pleased with their training in guidance since they gave a higher rating to this criterion. Generally, those working in health areas of the vocational curriculum found themselves aided most in planning and carrying out instruction, securing basic knowledge of careers for students and in functioning in a more effective professional role.

Industrial Arts. Ratings of the vocational educators in the industrial arts area varied between the noncredit and credit-granting workshop experiences. As a whole, however, the educators appear to feel best prepared to develop instructional procedures, execute improved classroom management, use new subject matter, use improved program management, use improved program planning and to execute improved public relations, human relations and professional role. They rated their training in the moderate to high categories on all eight criteria. (See Appendix 10.)

Persons attending both types of programs indicated a need to improve their skills in coordination of student vocational activities, guidance and follow-up functions and in using and supporting research activities. They rated their performance level in the low to moderate categories for these criteria.

Occupational Orientation. Vocational educators working in occupational orientation areas who earned credit in inservice programs, rated their preparation for planning instruction at the high level. (See Appendix 11.) They also gave moderate to high performance ratings to their abilities on 17 of the performance criteria evaluated. They rated themselves low on their ability to coordinate activities of student organizations and in preparation for understanding changes in legislation and policies.

Persons participating in noncredit workshops rated themselves at the low to moderate performance levels for all of the 20 criteria. Moderate to high ratings were given for the other performance areas, with abilities to plan instruction, carry out instruction, and exhibit a changed attitude toward the use and support of research activities indicated as being strong performance areas.

Considering both types of inservice programs, persons in occupational orientation appeared to need assistance in understanding changes in legislation and policies, and in coordinating activities of student organizations.

Technical. Persons in technical education, as shown in Appendix 12, rated themselves in the low to moderate levels on one half of the performance criteria in inservice programs for credit. A moderate level rating was given to the other 10 criteria. The credit inservice groups still felt less secure in developing occupational skills and coordinating activities of student organizations. They apparently were best prepared for planning instruction and developing instructional procedures.

The noncredit workshop respondents in the technical area, on the other hand, rated their ability to plan, execute and evaluate instruction at a lower level. As indicated in Appendix 12, they rated their performance level low to moderate in 17 of the criteria and as very low to low on the remaining three factors. Low to very low ratings were reported on coordinating activities of student organizations, improving basic knowledge of careers and in developing occupational skills.

Trade and Industrial. As shown in Appendix 13, the trade and industrial educators attending credit-granting inservice programs rated their performance level as moderate to high in 19 categories. They gave a low to moderate rating to their basic knowledge about careers.

The noncredit group reported lower ratings than the moderate level on 10 of the criteria. They also felt less competent in their basic knowledge of careers as a result of their attending noncredit inservice programs. In terms of the other criteria, they seemed best prepared for developing program guidelines, and in understanding changes in legislation and policies at the state and national levels.

Ability to Execute Performance Tasks Among Different Groups by Current Position

In Tables VI and XIV it can be noted that three significant differences are indicated on the 20 criteria for credit and noncredit workshops among the educators when they were grouped according to current position held. In Appendices 14 through 19, means for ratings of different current position groups are given for the two types of inservice programs. These differences predicted by the variance model, however, did not prove to be significant when the variation in sample size was taken into account in the post hoc tests.

Generally, institutional teacher educators appeared to be somewhat more critical of the preparation received in noncredit workshops than they were of that received in credit workshops. They tended to rate preparation for coordinating activities of student organizations low for both types of inservice programs. Institutional teacher educators rated noncredit programs preparation for execution of instruction in 15 performance areas low to moderate. (See Appendix 14.)

Vocational directors were also critical of the preparation of teachers who had attended noncredit workshops. They rated preparation to be at the low to moderate performance level for 12 of the 20 criteria for the noncredit workshops. Only four of the criteria were rated low for the credit-granting programs. (See Appendix 15.)

Vocational teachers (See Appendix 16) attending credit-granting workshops rated their preparation in two areas to be at the low to moderate performance level. These areas were coordination of activities of student organizations, and guidance and follow-up functions. On the other hand, vocational teachers who attended noncredit workshops gave moderate level ratings to only four of the performance criteria: planning instruction, carrying out instruction, improved human relations, and improved professional role.

State level supervisors rated the preparation level of teachers in the low category for both types of inservice programs on 10 criteria. These criteria were developing occupational skills, developing curriculum, developing program guidelines, understanding changes in legislation and policies, coordinating activities of student organizations, attitudes toward and use of research, improved program evaluation, improved public relations, improved human relations, and improved professional role performance. (See Appendix 17.)

Persons occupying current positions other than those indicated appeared most critical of the noncredit workshops for not keeping teachers up-to-date. They also rated their skills for performing instructional related tasks in four areas as low after the credit-earning workshop experience. These areas were understanding change in legislation and policies, coordination of student activities, developing occupational skills and improving public relations. (See Appendix 18.)

Only five persons in the SDVTE teacher educators group (See Appendix 19) evaluated performance skills in relationship to the type of inservice program attended. They were more optimistic about their ability to evaluate instructional tasks than were the total group of vocational educators. These data, however, may be skewed because of the small subsample size.

Educational Level of Respondents as Related to Perceptions of Inservice Training Program Effectiveness

As indicated in Table VI, subgroups differentiated by educational level attending credit-granting programs did not differ significantly in their perceptions of inservice preparation of vocational teachers on any of the criteria. Different educational levels of respondents however, as shown in Table XVI, did show significant differences at the .05 level on two criteria. When these differences were further studied in the modified Duncan's multiple range analysis, they were verified. Data for each educational level group are presented in Appendices 20 through 27.

Table XVI. Vocational Educator's Ability to Develop Occupational Skills Related to Participation in Noncredit Programs Perceived by Respondents Educational Levels

Educational Level	n	Ranked Mean*
AA or AS Degree	26	3.32
Specialist Degree	7	3.18
Master's Degree	175	3.04
Baccalaureate Degree	140	2.87
High School Diploma	32	2.66
Doctor's Degree	7	2.62
Other Certification	22	2.57
GED Test	20	1.91

*Means not followed by a continuous line differ significantly from one another at the .05 level

Instructors earning only General Educational Development (GED) high school equivalency certificates rated themselves significantly lower on their ability to develop occupational skills in students than did those educators with associate degree levels of education. No other significant differences were indicated on this criterion.

Developing and Expanding Curriculum. As observed on Table XVII the GED level group also rated themselves as significantly lower than did the associate degree, master's degree, baccalaureate degree and the other certificate groups on ability to develop and expand curriculum after working in noncredit workshops. The GED certified group was not significantly different in their assessment of their training to develop and expand the curriculum from those who held specialist's degrees, high school diplomas and doctor's degree.

Table XVII. Ability of Vocational Teachers to Develop Curriculum after Participation in Noncredit Workshops by Educational Levels

Educational Level	n	Ranked Mean*
Associates' Degrees	26	3.24
Master's Degree	175	3.13
Baccalaureate Degree	140	3.05
Other Certification	22	2.94
Specialist's Degree	7	2.85
High School Diploma	32	2.71
Doctor's Degree	7	2.33
GED Certificate	20	1.88

*Mean not followed by a common line are significantly different from one another at the .05 level.

General Relationships Between Educational Level and Performance Ratings

Mean ratings for the different educational level groups on all criteria in relationship to attendance of credit and noncredit inservice programs are shown in Appendices 20 through 27.

Very few differences were indicated among different educational level groups in their expressed performance capabilities. Generally, persons with only GED certificates rated themselves as less qualified in their specific areas, but those with advanced degrees did not necessarily feel better qualified as the result of inservice training. In several cases, for example, persons working at the associate degree level claimed to be best prepared to teach, regardless of the type of inservice program in which they participated. This data may indicate that a change in perception of what an effective teaching performance is may occur as educators gain more training or experience. The more highly trained vocational teachers did appear to be more critical of their own ability to perform specific tasks.

Perceptions of Competency for Performing Instructional Tasks as Related to the Type of Inservice Programs Attended

Credit Workshops. The type of inservice program first attended by vocational educators appeared to be closely related to their perceptions of their ability to perform instructional tasks. As shown in Table VI, (page 8) respondents receiving credit for workshop experiences were grouped according to the type of inservice program first attended; significant differences were predicted among groups on eight of the criteria. When Kramer's modification of the Duncan's multiple range test was conducted as a post hoc measure, significant differences at the .05 level on the following eight criteria were demonstrated for the credit workshop participants: planning instruction, carrying out instruction, using new subject matter, developing and expanding curriculum, developing program guidelines, improved classroom management, improved public relations and improved professional role execution. The interrelationships of the inservice groups in relationship to the performance level criteria are complex and are presented in table form in an attempt to clarify the findings.

Persons participating in a teacher education curriculum, those participating in college programs other than teacher education, and those participating in noncredit workshops in their first inservice efforts rated their preparation for planning instruction in credit-granting programs significantly higher than did those who participated in other types of programs. These data are summarized in Table XVIII.

Table XVIII. Comparison of Performance Levels or Planning of Instruction for Educators in Credit Workshop Type of Inservice Program First Attended

Inservice Group	n	Ranked Means*
College (Teacher Ed. Curr.)	497	4.00
College (No Ed. Curr.)	89	3.97
Noncredit workshops	76	3.71
No teacher education	6	3.25
Other	22	3.16

*Means not followed by a continuous line are significantly different at the .05 level.

A significant difference was also indicated for ability of respondents to carry out instruction after credit workshops (Comparisons for the different types of inservice programs were made on this criterion.) In Table XIX it can be seen that all groups except those receiving no preservice education rated this factor significantly higher than did those who received their inservice training by some method other than

the programs listed. The other groups did not differ significantly on this factor.

Table XIX. Ranking of Inservice Groups' Ability to Carry Out Instruction After Attending Credit Workshops

Inservice Group	n	Ranked Means*
College (Nonteacher Ed.)	497	3.90
College (Teacher Ed. Curr.)	89	3.81
Noncredit Workshops	76	3.66
No Inservice Education	6	3.31
Other	22	2.94

*Means not followed by a continuous line are significantly different at the .05 level.

All groups except the one participating in noncredit workshop rated the ability to use new subject matter significantly higher than did the respondents in the "other" category after attending credit workshops. These data are presented in Table XX. No significant difference was found among the other four groups on this variable.

Table XX. Rankings of Inservice Groups on Ability to Use New Subject Matter After Attending Credit Workshops

Inservice Group	n	Ranked Means*
College (Nonteacher Ed.)	89	3.93
College (Teacher Ed. Curr.)	497	3.63
Noncredit Workshops	76	3.43
No Inservice Education	6	3.22
Other	22	2.77

*Means not followed by a continuous line are significantly different at the .05 level.

Significant differences were also shown for inservice groups for their ability to develop and expand curricula after attending credit workshops. As shown in Table XXI the college group who participated in an inservice program other than teacher education ranked significantly higher than the no inservice and other groups on Criterion 7.

Table XXI. Ranking of Inservice Groups on Ability to Develop Curricula After Attending Credit Workshops

Inservice Group	n	Ranked Means*
College (Nonteacher Ed.)	89	3.64
No-Preservice Education	6	3.57
College (Teacher Ed. Curr.)	497	3.52
No Inservice Education	76	3.24
Other	22	2.63

*Means not followed by a continuous line are significantly different at the .05 level.

Skills in developing program guidelines were significantly more improved for those who had attended the two college credit workshops than they were in the programs attended by teachers in the "others" category and those with no inservice education. No other significant differences were discovered among the inservice groups on this Criterion. These data are presented in Table XXII.

Table XXII. Rankings of Inservice Groups on Ability to Develop Program Guidelines After Attending Credit Workshops

Inservice Group	n	Ranked Means*
College (Nonteacher Ed.)	89	3.45
College (Teacher Ed. Curr.)	497	3.38
Credit Workshop	76	3.11
Other	6	2.87
No Inservice Education	22	2.79

*Means not followed by a continuous line are significantly different at the .05 level.

Persons who first studied in noncredit workshops and those studying first at the college level in both teacher education and non-teacher education programs rated themselves as significantly more improved in classroom management than did the group receiving their inservice training first by other means. These data are presented in Table XXIII.

Table XXIII. Ranking of Inservice Groups on Improved Classroom Management After Attending Credit Workshops

Inservice Group	n	Ranked Means*
College (Teacher Ed. Curr.)	497	3.44
Noncredit Workshops	76	3.31
College (Nonteacher Ed.)	89	3.30
No Inservice Education	6	2.93
Other	22	2.56

*Means not followed by a continuous line are significantly different at the .05 level.

As shown in Table XXIV vocational teachers attending the two college workshop groups and the noncredit workshops indicated improved public relations at a significantly higher level than did the group attending the "other" programs. No other differences were indicated for this factor.

Table XXIV. Ranking of Inservice Groups on Improved Public Relations After Attending Credit Workshops

Inservice Group	n	Ranked Means*
College (Teacher Ed. Curr.)	497	3.53
College (Nonteacher Ed.)	89	3.49
Noncredit Workshops	76	3.30
No Inservice Education	6	3.01
Other	22	2.62

*Means not followed by a continuous line are significantly different at the .05 level.

On the criterion, improvement of professional role functioning, the group which first attended the college teacher education curriculum workshop group rated themselves significantly higher on improved professional role as a result of participating in the credit-granting programs than did those attending noncredit programs, no inservice work, or other types of programs. These data are given in Table XXV.

Table XXV. Ranking of Inservice Groups on Improved Professional Role after Attending Credit Workshop Classes

Inservice Group	n	Ranked Means*
College (Teacher Ed. Curr.)	497	3.90
College (Nonteacher Ed.)	89	3.79
Noncredit Workshops	76	3.61
Other	22	3.28
No Inservice Training	6	2.99

*Means not followed by a continuous line are significantly different at the .05 level.

Noncredit Workshops. When the vocational educators were grouped according to the type of inservice training program which they first attended, significant differences were found among groups for the noncredit workshops on 13 of the 20 criteria examined. The F ratios predicting these significant differences are given in Table XV (page 20).

The means for each of the subgroups of respondents classified according to the type of inservice training which they first received are given in Table XXVI.

When the post hoc tests were calculated for the 13 criteria showing significant differences in the variance model, it was discovered that the "No Inservice Education" groups rated themselves significantly lower than all other groups on nine of the criteria. The criteria on which the two college workshop groups (the noncredit workshop group and the group doing inservice training in other programs) were better prepared are as follows: planning for instruction, carrying out instruction, evaluating instruction, developing curriculum, developing program guidelines, developing attitudes toward research, improving program management, improving program planning and improving program evaluation. The patterns for comparison were somewhat more complex for the other five criteria in which significant differences were found.

Table XXVI. MEANS FOR INSERVICE PREPARATION OF SUBJECTS
Who Received Inservice Training From Noncredit Workshops

	PERFORMANCE AREA	Groups				
		Noncredit (N= 119)	College Teacher Ed.	College Nonteacher Ed.	Other	No Inservice Ed.
1.	Plan Instruction	3.59	3.58	3.49	3.23	1.53
2.	Carry out instructions	3.45	3.49	3.32	3.16	1.55
3.	Evaluate instructions	3.19	3.28	3.18	2.73	1.44
4.	Develop porcedures	3.44	3.56	3.41	3.17	1.98
5.	Use new subject matter	3.44	3.74	3.53	2.97	1.70
6.	Develop occupational skills	3.07	3.24	3.13	2.64	1.78
7.	Develop curriculum	3.18	3.33	3.20	2.73	1.38
8.	Develop program guidelines	3.36	3.65	3.32	3.24	1.58
9.	Understand changes in legislation	3.28	3.44	3.13	3.19	2.05
10.	Coordinate activities of student organizations	3.11	3.00	2.70	2.77	1.63
11.	Improved basic knowledge	3.04	3.20	2.93	2.32	1.60
12.	Improved classroom management	3.10	3.22	2.96	2.68	2.10
13.	Improved guidance	3.28	3.44	3.93	3.19	2.06
14.	Changed attitude toward research	3.08	3.09	2.93	2.94	1.23
15.	Improved program management	3.55	3.82	3.30	3.29	1.74
16.	Improved program planning	3.42	3.56	3.22	3.13	1.53
17.	Improved program evaluation	3.31	3.50	3.13	2.86	1.58
18.	Improved public relations	3.38	3.49	3.13	2.82	1.72
19.	Improved human relations	3.34	3.48	3.24	2.90	1.84
20.	Improved performance role	3.68	3.92	3.50	3.61	1.77

In the ability to use new subject matter criteria, for example, the college inservice group who completed work in teacher education programs rated themselves significantly higher than did the noncredit workshop group, the no inservice education group, or the "other" group. At the .05 level, the noncredit workshop group and the college group (no teacher education curriculum) also rated themselves significantly higher than did the "no inservice education" group. These data are summarized on Table XXVII.

Table XXVII. Ratings of Inservice Teacher Groups on Ability to Use New Subject Matter after Attending Noncredit Workshops

Inservice Group	n	Ranked Means*
College (Teacher Ed. Curr.)	234	3.37
College (No Teacher Ed. Curr.)	58	3.53
Noncredit Workshops	119	3.44
Other	13	2.97
No Inservice Education	5	1.70

*Means not followed by a continuous line are significantly different at the .05 level.

On improving public relations skills as a result of attending noncredit workshops, the inservice groups were also found to be significantly different. The two college program groups and the noncredit workshop group rated themselves significantly higher on this criteria than did the group with no inservice education. No significant difference was found between the "other" group and the no inservice education group.

The same relationship was also found in the comparison of the inservice groups on the improved human relations criteria. No significant difference was found between the no inservice education group and the group labeled "other," but all of the other three groups receiving inservice training in established programs rated themselves significantly higher on this criterion.

As shown in Table XXVIII all preservice groups rated themselves as significantly more improved for assuming a professional role in vocational education after attending noncredit workshops than did the non inservice group. The college group with professional education training also rated themselves significantly higher on this criterion than did the college group not involved in a teacher education curriculum.

Table XXVIII. Rankings of Inservice Education Groups on Improved Professional Role after Participating in Noncredit Workshops

Inservice Group	n	Ranked Means*
College (Teacher Ed. Curr.)	234	3.92
Noncredit Workshop	119	3.68
Other	13	3.61
College (No Teacher Ed.)	58	3.58
No Inservice	5	1.77

*Means not followed by a continuous line are significantly different at the .05 level.

IV. SUMMARY AND CONCLUSIONS

Data describing the ability of vocational education teachers to execute specific performance tasks after having completed inservice training experiences are presented in this report. Seven hundred and eighty-one persons working in vocational education areas in the State of Mississippi in the spring of 1973 participated in the study.

The respondents were employed in all service areas of vocational education and held positions of vocational teacher, vocational director, state-level supervisor, state Division of Vocational-Technical Education teacher educator, institutional teacher educator, and other specified positions. Their educational levels ranged from holding the GED certificate to the doctor's degree. The educators received their inservice training in all types of programs, including noncredit workshops, college teacher education curricula, college non-teacher education curricula, other programs, or no inservice at all.

The respondents were grouped according to service area, current position, highest degree or diploma held, and the type of inservice teacher education received, to compare the effectiveness of the in-service programs in the development of their performance skills. A least squares analysis of variance program was used to compare means of the subgroups in the research of both credit and noncredit workshop programs.

Generalizations

The following generalizations are offered from the data analysis:

1. Overall, the vocational educators felt that their skills in the selected performance areas were moderately well developed in the credit inservice programs. Only for two areas--understanding changes in legislation and policies and coordinating activities of student organizations--did the entire group indicate preparation in the low degree range.

2. The reaction of the total group to the noncredit workshop experiences for preparing them to teach was also moderate. In these programs two tasks were rated at the low performance level--improved guidance functions and changed attitudes toward participating in research.

3. The educators in the different disciplines of vocational education appeared to be quite divergent, as separate groups, in their appraisal of the effectiveness of the inservice programs for assisting them. The ratings of performance levels among the different service area groups in relationship to the credit workshops differed significantly on eight criteria. The performance levels for each of the service areas on the 20 tasks are given in Table XXIX.

Table XXIX

Respondents' Perceptions of Inservice Task Development
In Credit Programs (Colleges and Universities) By Service Area

PERFORMANCE TASKS	Agriculture	Business & Office	Consumer & Homemaking	Cooperative Education	Disadvantaged	Distributive Education	Guidance	Handicapped	Industrial Arts	Occupational Orientation	Technical	Trade & Industrial	Health	
Degree to which in-service training improved your ability to:														
1. Plan instructions for your program.	M	M	M	M	M	M	M	M	M	H	M	M	M	
2. Carry out the instructional phase of the program.	M	M	M	M	M	M	M	H	M	M	M	M	M	
3. Evaluate your instruction and student learning.	M	M	M	M	M	M	M	H	M	M	M	M	L	
4. Develop instructional procedures and methods for your program.	M	M	M	M	M	M	M	L	M	M	M	M	M	
5. Select, obtain and use new subject matter and materials for your program.	M	L	M	M	M	M	M	L	M	M	M	M	M	
6. Develop or increase specific occupational skills.	M	L	L	M	M	M	M	M	M	M	L	M	L	
7. Expand and develop curriculum in your program.	M	M	M	M	M	M	M	L	M	M	M	L	M	
8. Develop policies and guidelines in your program.	M	L	L	M	M	M	M	M	M	M	L	M	L	
9. Understand changes in policies and legislation on state and national levels.	L	L	L	M	M	M	M	M	M	L	L	M	L	
10. Plan, implement, and coordinate activities of student vocational organizations.	M	L	L	M	M	M	L	M	L	L	L	M	L	

Table XXIX (cont.)

PERFORMANCE TASKS	Agriculture	Business & Office	Consumer & Homemaking Education	Cooperative Education	Disadvantaged	Distributive Education	Guidance	Handicapped	Industrial Arts	Occupational Orientation	Technical	Trade & Industrial	Health	
Degree to which in-service training:														
11. Improved basic knowledge of occupations.	M	M	M	M	M	M	M	M	M	M	L	L	M	
12. Improved classroom management effectiveness.	M	L	L	M	L	M	L	M	M	M	M	M	L	
13. Improved guidance effectiveness (including follow-up, placement, etc.)	M	L	L	H	M	M	M	M	L	M	L	M	L	
14. Changed your attitude toward effectively participating in and utilizing research in your program.	M	L	L	M	M	M	M	M	L	M	L	M	L	
15. Improved overall program management effectiveness.	M	M	M	M	M	M	M	H	M	M	L	M	L	
16. Improved overall program planning effectiveness.	M	M	M	M	M	M	M	H	M	M	M	M	M	
17. Improved overall program evaluation effectiveness.	M	L	M	M	M	M	M	M	L	M	M	M	L	
18. Improved public relations effectiveness of your program.	M	M	M	M	M	M	M	L	M	M	L	M	L	
19. Improved your human relations effectiveness and understanding.	M	M	M	M	M	M	M	M	M	M	M	M	L	
20. Improved your role as a professional vocational educator.	M	M	M	M	M	M	M	M	M	M	L	M	M	

H=Comparatively High
M=Comparatively Medium
L=Comparatively Low

4. The service area groups showed no significant differences in rating their ability to perform specific tasks after participating in the noncredit workshops. As a whole, however, several of the service area groups who had both experiences tended to rate their improvement less for the noncredit workshops than for the credit-granting inservice programs. The performance levels for each of the service areas on the 20 criterions are given in Table XXX.

5. No significant differences were indicated among the mean ratings for groups of respondents working in different current positions in their assessment of the developmental effect of inservice activities in both credit and noncredit workshops.

6. When respondents were grouped according to educational level for their assessments of the inservice programs, significant differences were found among the mean ratings for only two criteria of performance--developing occupational skills, and developing and expanding curriculum. In both cases persons with only the associate degree level rated themselves higher on these criteria. There does not appear to be a clear-cut relationship of the respondents' perception of their job performance levels to their educational level. In many cases, however, persons with the highest level degrees were most critical of the preparation offered in inservice programs while those with minimal formal training expressed more satisfaction in their preparation.

7. The type of inservice program first attended by vocational educators appeared to be an important factor in the respondents' assessment of their professional development in inservice programs. Generally, in both credit and noncredit workshops, persons who first received their inservice training in programs other than the established categories in the research (specified as "other") rated their performance level lower on the specific criteria than did all other groups, including those who had no inservice training at all.

8. Only eight persons in the study of vocational educators with more than three years of teaching experiences had received no inservice training at all. No data are available to determine whether this observation is typical of other teachers in the state who did not choose to answer the questionnaires, but if it is, the number of persons reached by inservice programs in the state, appears to be very effective.

Recommendations

Since the goals and objectives of each service area in vocational education are so diverse, general patterns needed in inservice program improvement are difficult to establish on the basis of a broad study such as the one completed. The following recommendations are made only as broad study such as the one completed. The following recommendations are made only as broad guidelines for the development of future inservice programs:

Table XXX

Respondents' Perceptions of Inservice Task Development in Noncredit Programs (State Dept. of Ed.) by Service Area

PERFORMANCE TASKS	Agriculture	Business & Office	Consumer & Homemaking	Cooperative Education	Disadvantaged	Distributive Education	Guidance	Handicapped	Industrial Arts	Occupational Orientation	Technical	Trade & Industrial	Health	
Degree to which in-service training improved your ability to:														
1. Plan instructions for your program.	M	M	L	L	M	M	L	M	L	M	L	M	M	
2. Carry out the instructional phase of the program.	M	M	L	L	M	L	L	M	L	M	L	M	M	
3. Evaluate your instruction and student learning.	L	L	L	L	M	L	L	L	L	M	L	L	M	
4. Develop instructional procedures and methods for your program.	M	M	L	M	L	L	L	L	M	M	L	M	M	
5. Select, obtain and use new subject matter and materials in your program.	M	M	L	M	L	M	L	L	M	M	L	M	M	
6. Develop or increase specific occupational skills.	M	M	L	M	L	L	L	L	L	M	L	L	M	
7. Expand and develop curriculum in your program.	L	M	L	M	L	L	L	L	L	M	L	L	L	
8. Develop policies and guidelines in your program.	M	M	L	M	L	M	L	M	L	L	L	M	L	
9. Understand change in policies and legislation on state and national levels.	M	M	L	M	L	M	M	M	L	L	L	M	L	
10. Plan, implement and coordinate activities of student vocational organizations.	L	L	L	L	L	M	L	L	L	L	L	L	L	

Table XXX (cont.)

PERFORMANCE TASKS	Agriculture	Business & Office	Consumer & Homemaking	Cooperative Education	Disadvantaged	Distributive Education	Guidance	Handicapped	Industrial Arts	Occupational Orientation	Technical	Trade & Industrial	Health	
Degree to which in-service training:														
11. Improved basic knowledge of occupations.	L	I	L	M	L	L	L	L	L	L	L	L	M	
12. Improved classroom management effectiveness.	L	L	L	M	L	M	L	L	M	L	L	L	L	
13. Improved guidance effectiveness (including follow-up, placement, etc.)	M	M	L	M	L	M	M	M	L	L	L	M	L	
14. Changed your attitude toward effectively participating in and utilizing research in your program.	L	L	L	L	M	M	L	L	L	M	L	L	L	
15. Improved overall program management effectiveness.	M	L	L	M	M	M	M	M	M	L	L	M	M	
16. Improved overall program planning effectiveness.	M	L	L	L	M	M	M	H	M	L	L	L	L	
17. Improved overall program evaluation effectiveness.	L	L	L	L	M	L	M	M	M	L	L	L	M	
18. Improved public relations effectiveness of your program.	L	L	L	L	L	M	M	L	M	L	L	L	M	
19. Improved your human relations effectiveness and understanding.	L	M	L	L	L	M	L	M	M	L	L	M	M	
20. Improved your role as a professional vocational educator.	M	M	L	M	M	M	M	M	M	M	L	M	M	

H=Comparatively High
M=Comparatively Medium
L=Comparatively Low

1. It is recommended that educators in each service area study the data related to their disciplines and decide how to modify their specific teacher training programs for more effectiveness.

2. It is recommended that credit-granting inservice programs planned in the future emphasize the following points: (1) teachers' understanding of changes in policies and legislation on state and national levels; (2) planning, implementing and coordinating activities of student vocational organizations; (3) improved guidance effectiveness (including follow-up studies, placement, etc.); and (4) attitudes toward effectively participating in research studies.

3. Since one-half or more of the service areas rated their preparation in the following areas at the low to moderate level as a result of the inservice programs, it is recommended that these points be given careful consideration by educators as they plan noncredit studies for teachers: (1) evaluation of instruction; (2) developing or increasing specific occupational skills; (3) expanding and developing curriculum; (4) developing policies and guidelines; (5) planning, implementing, and coordinating student activities; (6) improved basic knowledge of occupations; (7) improved classroom management effectiveness; (8) changed attitude toward effectively participating in research; (9) improved overall program planning; (10) improved public relations effectiveness and (11) improved human relations skills.

4. Since, generally, the educators appeared to feel that credit-granting inservice programs offered by colleges and universities were more effective for developing instructional skills than were noncredit workshops, it is recommended that the state division of vocational-technical education consider offering more of its vocational inservice programs for teachers in programs with a credit earning format. This recommendation infers that college level educators must work carefully with members of the state division of vocational-technical education to ascertain program needs in order that meaningful training can be offered.

5. It is recommended that a specific part of the training of all teacher personnel be related to the development of teachers' perceptions about what constitutes effective teaching performance. Data indicate that persons with more training may be more critical of their own performances. Persons with little formal training are more pleased with their own performance. Perhaps observations of other vocational educators at work or systematic studies of individual teachers of their own performance in terms of specific criteria would expand the perceptive realm of all teachers toward their teaching.

V. APPENDICES

Appendix 1

Means for Inservice Preparation of Respondents in Agricultural Education

Performance Area	Noncredit (N= 98)	Credit (N=107)
1. Plan instruction	3.06	3.69
2. Carry out instruction	3.03	3.37
3. Evaluate instruction	2.76	3.20
4. Develop instructional procedures	3.31	3.55
5. Use new subject matter	3.38	3.59
6. Develop occupational skills	3.12	3.21
7. Develop curriculum	2.76	3.43
8. Develop program guidelines	3.26	3.23
9. Understand changes in legislation	3.22	2.94
10. Coordinate activities of student organizations	2.94	3.45
11. Improve basic knowledge of occupations	2.82	3.58
12. Improved classroom management	2.72	3.13
13. Improved guidance	3.22	3.19
14. Changed attitude toward research	2.79	3.25
15. Improved program management	3.19	3.29
16. Improved program planning	3.10	3.61
17. Improved program evaluation	2.92	3.11
18. Improved public relations	2.79	3.67
19. Improved human relations	2.91	3.39
20. Improved professional role	3.30	3.59

Appendix 2

Means for Inservice Preparation of Respondents in Business & Office Education

Performance Area	Noncredit (N= 24)	Credit (N= 47)
1. Plan instruction	3.17	3.16
2. Carry out instruction	3.02	3.25
3. Evaluate instruction	2.71	3.05
4. Develop instructional procedures	3.09	3.22
5. Use new subject matter	3.33	2.98
6. Develop occupational skills	3.20	2.99
7. Develop curriculum	3.16	3.17
8. Develop program guidelines	3.03	2.87
9. Understand changes in legislation	3.04	2.98
10. Coordinate activities of student organizations	2.51	2.73
11. Improved basic knowledge of occupations	2.76	3.45
12. Improved classroom management	2.59	2.82
13. Improved guidance	3.04	2.70
14. Changed attitude toward research	2.52	2.97
15. Improved program management	2.91	3.00
16. Improved program planning	2.98	3.20
17. Improved program evaluation	2.85	2.87
18. Improved public relations	2.80	3.08
19. Improved human relations	3.10	3.28
20. Improved professional role	3.30	3.37

Appendix 3

Means for Inservice Preparations of Respondents in Consumer & Homemaking Education

Performance Area	Noncredit (N= 87)	Credit (N= 182)
1. Plan instruction	2.74	3.49
2. Carry out instruction	2.55	3.38
3. Evaluate instruction	2.50	3.24
4. Develop instructional procedures	2.92	3.36
5. Use new subject matter	2.90	3.52
6. Develop occupational skills	2.12	2.66
7. Develop curriculum	2.19	3.41
8. Develop program guidelines	2.90	2.98
9. Understand changes in legislation	2.44	2.64
10. Coordinate activities of student organizations	2.70	2.74
11. Improved basic knowledge of occupations	2.22	3.21
12. Improved classroom management	2.36	2.93
13. Improved guidance	2.44	2.58
14. Changed attitude toward research	2.13	2.94
15. Improved program management	2.82	3.09
16. Improved program planning	2.82	3.36
17. Improved program evaluation	2.53	3.08
18. Improved public relations	2.56	3.13
19. Improved human relations	2.69	3.27
20. Improved professional role	2.98	3.38

Appendix 4

Means for Inservice Preparation of Respondents in Cooperative Education

Performance Area	Noncredit (N= 5)	Credit (N= 19)
1. Plan instruction	2.91	3.89
2. Carry out instruction	2.94	3.57
3. Evaluate instruction	2.92	3.41
4. Develop instructional procedures	3.56	3.55
5. Use new subject matter	3.91	3.76
6. Develop occupational skills	3.26	3.38
7. Develop curriculum	3.15	3.89
8. Develop program guidelines	3.28	3.92
9. Understand changes in legislation	3.66	3.66
10. Coordinate activities of student organizations	2.95	3.22
11. Improved basic knowledge of occupations	3.28	3.39
12. Improved classroom management	3.01	3.20
13. Improved guidance	3.66	4.03
14. Changed attitude toward research	2.93	3.57
15. Improved program management	3.40	3.64
16. Improved program planning	2.62	3.78
17. Improved program evaluation	2.64	3.65
18. Improved public relations	2.72	3.75
19. Improved human relations	2.31	3.73
20. Improved professional role	3.05	3.89

Appendix 5

Means for Inservice Preparations of Respondents in Education of the Disadvantaged

Performance Area	Noncredit (N= 11)	Credit (N= 12)
1. Plan instruction	3.28	3.81
2. Carry out instruction	3.04	3.55
3. Evaluate instruction	3.27	3.02
4. Develop instructional procedures	2.86	3.48
5. Use new subject matter	2.96	3.97
6. Develop occupational skills	2.89	3.39
7. Develop curriculum	2.70	3.20
8. Develop program guidelines	2.90	3.09
9. Understand changes in legislation	2.87	3.08
10. Coordinate activities of student organizations	2.74	3.05
11. Improve basic knowledge of occupations	2.98	3.44
12. Improved classroom management	2.65	2.74
13. Improved guidance	2.87	3.11
14. Changed attitude toward research	3.10	3.82
15. Improved program management	3.36	3.16
16. Improved program planning	3.30	3.62
17. Improved program evaluation	3.06	3.04
18. Improved public relations	2.98	3.10
19. Improved human relations	2.96	3.75
20. Improved professional role	3.72	3.98

Appendix 6

Means for Inservice Preparation of Respondents in Distributive Education

Performance Area	Noncredit (N= 15)	Credit (N= 27)
1. Plan instruction	3.05	3.90
2. Carry out instruction	2.81	3.73
3. Evaluate instruction	2.45	3.36
4. Develop instructional procedures	2.96	3.73
5. Use new subject matter	3.01	3.61
6. Develop occupational skills	2.47	3.16
7. Develop curriculum	2.80	3.64
8. Develop program guidelines	3.19	3.64
9. Understand changes in legislation	3.14	3.03
10. Coordinate activities of student organizations	3.47	3.41
11. Improve basic knowledge of occupations	2.68	3.36
12. Improved classroom management	3.07	3.31
13. Improved guidance	3.14	3.51
14. Changed attitude toward research	3.08	3.62
15. Improved program management	3.07	3.50
16. Improved program planning	3.03	3.80
17. Improved program evaluation	2.71	3.33
18. Improved public relations	3.42	3.95
19. Improved human relations	3.66	3.98
20. Improved professional role	3.51	3.76

Appendix 7

Means for Inservice Preparation of Respondents in Guidance Education

Performance Area	Noncredit (N= 18)	Credit (N= 35)
1. Plan instruction	2.67	3.27
2. Carry out instruction	2.66	3.03
3. Evaluate instruction	2.56	3.21
4. Develop instructional procedures	2.98	3.19
5. Use new subject matter	2.58	3.07
6. Develop occupational skills	2.50	3.25
7. Develop curriculum	2.48	3.01
8. Develop program guidelines	2.89	3.11
9. Understand changes in legislation	3.34	2.83
10. Coordinate activities of student organizations	2.32	2.22
11. Improve basic knowledge of occupations	2.00	3.46
12. Improved classroom management	2.82	2.89
13. Improved guidance	3.34	3.64
14. Changed attitude toward research	2.35	3.09
15. Improved program management	3.26	3.46
16. Improved program planning	3.22	3.57
17. Improved program evaluation	3.15	3.39
18. Improved public relations	3.19	3.34
19. Improved human relations	2.78	3.62
20. Improved professional role	3.57	3.55

Appendix 8

Means for Inservice Preparation of Respondents in Education of the Handicapped

	Performance Area	Noncredit (N=3)	Credit (N=2)
1.	Plan instruction	3.74	3.75
2.	Carry out instruction	3.47	4.27
3.	Evaluate instruction	2.44	4.25
4.	Develop instructional procedures	2.40	2.76
5.	Use new subject matter	2.52	2.21
6.	Develop occupational skills	2.49	3.73
7.	Develop curriculum	2.60	2.67
8.	Develop program guidelines	3.30	3.15
9.	Understand changes in legislation	3.56	3.25
10.	Coordinate activities of student organizations	2.87	3.73
11.	Improved basic knowledge of occupations	2.60	3.88
12.	Improved classroom management	2.97	3.69
13.	Improved guidance	3.56	3.08
14.	Changed attitude toward research	2.59	3.62
15.	Improved program management	3.44	4.14
16.	Improved program planning	3.38	4.14
17.	Improved program evaluation	2.72	3.66
18.	Improved public relations	2.67	2.72
19.	Improved human relations	3.42	3.23
20.	Improved professional role	3.48	3.56

Appendix 9

Means for Inservice Preparation of Respondents in Health Education

	Performance Area	Noncredit (N=21)	Credit (N=25)
1.	Plan instruction	3.36	3.31
2.	Carry out instruction	3.44	3.28
3.	Evaluate instruction	3.20	2.96
4.	Develop instructional procedures	3.60	3.34
5.	Use new subject matter	3.59	3.42
6.	Develop occupational skills	3.03	2.76
7.	Develop curriculum	2.96	3.23
8.	Develop program guidelines	2.83	2.25
9.	Understand changes in legislation	2.70	2.38
10.	Coordinate activities of student organizations	2.03	1.93
11.	Improved basic knowledge of occupations	3.11	3.54
12.	Improved classroom management	2.87	2.44
13.	Improved guidance	2.70	2.04
14.	Changed attitude toward research	2.56	2.87
15.	Improved program management	3.45	2.77
16.	Improved program planning	2.91	3.09
17.	Improved program evaluation	3.19	2.55
18.	Improved public relations	3.11	2.37
19.	Improved human relations	3.10	2.90
20.	Improved professional role	3.40	3.27

Appendix 10

Means for Inservice Preparation of Respondents in Industrial Arts

	Performance Area	Noncredit (N=26)	Credit (N=31)
1.	Plan instruction	2.99	3.84
2.	Carry out instruction	2.94	3.82
3.	Evaluate instruction	2.88	3.42
4.	Develop instructional procedures	3.22	3.73
5.	Use new subject matter	3.19	3.53
6.	Develop occupational skills	2.95	3.20
7.	Develop curriculum	2.68	3.42
8.	Develop program guidelines	2.74	3.10
9.	Understand changes in legislation	2.48	3.24
10.	Coordinate activities of student organizations	2.33	2.61
11.	Improved basic knowledge of occupations	2.30	3.21
12.	Improved classroom management	3.15	3.34
13.	Improved guidance	2.48	2.86
14.	Changed attitude toward research	2.75	2.86
15.	Improved program management	3.07	3.31
16.	Improved program planning	3.17	3.20
17.	Improved program evaluation	3.33	2.99
18.	Improved public relations	3.13	3.60
19.	Improved human relations	3.29	3.52
20.	Improved professional role	3.59	3.40

Appendix 11

Means for Inservice Preparation of Respondents in Occupational Orientation

	Performance Area	Noncredit (N=6)	Credit (N=23)
1.	Plan instruction	3.60	4.12
2.	Carry out instruction	3.60	3.96
3.	Evaluate instruction	3.12	3.43
4.	Develop instructional procedures	3.51	3.76
5.	Use new subject matter	3.22	3.96
6.	Develop occupational skills	3.12	3.06
7.	Develop curriculum	3.17	3.51
8.	Develop program guidelines	2.97	3.23
9.	Understand changes in legislation	2.88	2.80
10.	Coordinate activities of student organizations	2.72	2.97
11.	Improved basic knowledge of occupations	2.98	3.64
12.	Improved classroom management	2.99	3.58
13.	Improved guidance	2.88	3.14
14.	Changed attitude toward research	3.59	3.21
15.	Improved program management	2.94	3.42
16.	Improved program planning	2.66	3.66
17.	Improved program evaluation	2.78	3.18
18.	Improved public relations	2.99	3.18
19.	Improved human relations	2.93	3.54
20.	Improved professional role	3.08	3.49

Appendix 12

Means for Inservice Preparation of Respondents in Technical Education

	Performance Area	Noncredit (N=20)	Credit (N=30)
1.	Plan instruction	2.42	3.28
2.	Carry out instruction	2.44	3.10
3.	Evaluate instruction	2.26	3.18
4.	Develop instructional procedures	2.72	3.27
5.	Use new subject matter	2.24	3.02
6.	Develop occupational skills	1.95	2.18
7.	Develop curriculum	2.51	3.08
8.	Develop program guidelines	2.81	2.71
9.	Understand changes in legislation	2.64	2.63
10.	Coordinate activities of student organizations	1.80	2.24
11.	Improved basic knowledge of occupations	1.90	2.77
12.	Improved classroom management	2.37	3.14
13.	Improved guidance	2.64	2.73
14.	Changed attitude toward research	2.29	2.64
15.	Improved program management	2.73	2.70
16.	Improved program planning	2.55	3.02
17.	Improved program evaluation	2.57	3.09
18.	Improved public relations	2.55	2.72
19.	Improved human relations	2.32	3.10
20.	Improved professional role	2.74	2.92

Appendix 13

Means for Inservice Preparation of Respondents
in Trade & Industrial Education

	Performance Area	Noncredit (N=95)	Credit (N=150)
1.	Plan instruction	3.07	3.54
2.	Carry out instruction	3.00	3.48
3.	Evaluate instruction	2.86	3.37
4.	Develop instructional procedures	3.33	3.54
5.	Use new subject matter	3.19	3.20
6.	Develop occupational skills	2.93	2.90
7.	Develop curriculum	2.79	3.52
8.	Develop program guidelines	3.28	3.25
9.	Understand changes in legislation	3.30	3.01
10.	Coordinate activities of student organizations	2.94	3.08
11.	Improved basic knowledge of occupations	2.42	2.96
12.	Improved classroom management	2.99	3.23
13.	Improved guidance	3.30	3.07
14.	Changed attitude toward research	2.82	3.22
15.	Improved program management	3.19	3.35
16.	Improved program planning	2.96	3.49
17.	Improved program evaluation	2.92	3.31
18.	Improved public relations	2.87	3.18
19.	Improved human relations	3.00	3.43
20.	Improved professional role	3.14	3.52

Appendix 14

Means for Inservice Preparation of Respondents
With the Current Position of Institutional Teacher Educator

	Performance Area	Noncredit (N=18)	Credit (N=34)
1.	Plan instruction	3.36	3.83
2.	Carry out instruction	3.04	3.66
3.	Evaluate instruction	2.65	3.50
4.	Develop instructional procedures	3.29	3.62
5.	Use new subject matter	2.97	3.74
6.	Develop occupational skills	3.01	3.51
7.	Develop curriculum	2.76	3.76
8.	Develop program guidelines	2.98	3.44
9.	Understand changes in legislation	2.43	3.31
10.	Coordinate activities of student organizations	2.48	2.91
11.	Improved basic knowledge of occupations	2.90	3.35
12.	Improved classroom management	2.59	3.41
13.	Improved guidance	2.43	3.31
14.	Changed attitude toward research	2.79	3.43
15.	Improved program management	2.98	3.70
16.	Improved program planning	3.06	3.87
17.	Improved program evaluation	2.73	3.50
18.	Improved public relations	2.88	3.42
19.	Improved human relations	2.96	3.74
20.	Improved professional role	2.97	3.69

Appendix 15

Means for Inservice Preparation of Respondents
With the Current Position of Vocational Director

Performance Area	Noncredit (N=30)	Credit (N=37)
1. Plan instruction	3.15	3.41
2. Carry out instruction	3.19	3.42
3. Evaluate instruction	3.10	3.22
4. Develop instructional procedures	2.91	3.37
5. Use new subject matter	2.76	3.31
6. Develop occupational skills	2.78	3.07
7. Develop curriculum	2.80	3.21
8. Develop program guidelines	2.73	3.12
9. Understand changes in legislation	2.93	2.97
10. Coordinate activities of student organizations	2.57	2.65
11. Improved basic knowledge of occupations	2.87	3.34
12. Improved classroom management	2.72	3.24
13. Improved guidance	2.93	2.87
14. Changed attitude toward research	2.63	2.90
15. Improved program management	2.98	3.05
16. Improved program planning	3.13	3.32
17. Improved program evaluation	3.24	3.13
18. Improved public relations	3.07	3.10
19. Improved human relations	3.07	3.38
20. Improved professional role	3.67	3.62

Appendix 16

Means for Inservice Preparation of Respondents
With the Current Position of Vocational Teacher

	Performance Area	Noncredit (N=326)	Credit (N=530)
1.	Plan instruction	3.18	3.74
2.	Carry out instruction	3.02	3.60
3.	Evaluate instruction	2.88	3.47
4.	Develop instructional procedures	2.96	3.53
5.	Use new subject matter	2.79	3.46
6.	Develop occupational skills	2.79	3.18
7.	Develop curriculum	2.87	3.36
8.	Develop program guidelines	2.64	3.06
9.	Understand changes in legislation	2.70	3.07
10.	Coordinate activities of student organizations	2.51	2.64
11.	Improved basic knowledge of occupations	2.77	3.24
12.	Improved classroom management	2.88	3.33
13.	Improved guidance	2.70	2.96
14.	Changed attitude toward research	2.70	3.21
15.	Improved program management	2.87	3.34
16.	Improved program planning	2.92	3.41
17.	Improved program evaluation	2.74	3.20
18.	Improved public relations	2.89	3.11
19.	Improved human relations	3.07	3.54
20.	Improved professional role	3.35	3.67

Appendix 17

Means for Inservice Preparation of Respondents
With the Current Position of State Level Supervisor

	Performance Area	Noncredit (N=12)	Credit (N=14)
1.	Plan instruction	2.89	3.41
2.	Carry out instruction	2.87	3.26
3.	Evaluate instruction	2.45	2.86
4.	Develop instructional procedures	3.05	2.97
5.	Use new subject matter	2.79	3.04
6.	Develop occupational skills	2.63	2.70
7.	Develop curriculum	2.60	2.80
8.	Develop program guidelines	2.61	2.60
9.	Understand changes in legislation	2.58	2.24
10.	Coordinate activities of student organizations	2.21	2.42
11.	Improved basic knowledge of occupations	2.67	3.09
12.	Improved classroom management	2.70	3.15
13.	Improved guidance	2.58	3.04
14.	Changed attitude toward research	2.24	2.70
15.	Improved program management	2.86	3.02
16.	Improved program planning	2.93	3.02
17.	Improved program evaluation	2.52	2.94
18.	Improved public relations	2.69	2.68
19.	Improved human relations	2.50	2.70
20.	Improved professional role	2.78	2.86

Appendix 18

Means for Inservice Preparation of Respondents in Positions Identified as "Other"

	Performance Area	Noncredit (N=42)	Credit (N=71)
1.	Plan instruction	2.64	3.50
2.	Carry out instruction	2.46	3.41
3.	Evaluate instruction	2.33	3.22
4.	Develop instructional procedures	2.53	3.23
5.	Use new subject matter	2.66	3.32
6.	Develop occupational skills	2.17	2.90
7.	Develop curriculum	2.30	3.35
8.	Develop program guidelines	2.57	3.04
9.	Understand changes in legislation	2.39	2.71
10.	Coordinate activities of student organizations	2.44	2.89
11.	Improved basic knowledge of occupations	2.39	3.11
12.	Improved classroom management	2.00	3.01
13.	Improved guidance	2.39	3.03
14.	Changed attitude toward research	2.36	3.21
15.	Improved program management	2.53	3.12
16.	Improved program planning	2.34	3.34
17.	Improved program evaluation	2.39	3.13
18.	Improved public relations	2.21	2.97
19.	Improved human relations	2.40	3.15
20.	Improved professional role	2.60	3.45

Appendix 19

Means for Inservice Preparation of Respondents
With the Current Position of SDVTE Teacher Educator

	Performance Area	Noncredit (N=1)	Credit (N=4)
1.	Plan instruction	3.26	3.82
2.	Carry out instruction	3.38	3.79
3.	Evaluate instruction	3.16	3.63
4.	Develop instructional procedures	3.94	3.80
5.	Use new subject matter	4.49	3.37
6.	Develop occupational skills	3.25	3.04
7.	Develop curriculum	3.26	3.46
8.	Develop program guidelines	4.65	3.44
9.	Understand changes in legislation	5.09	3.46
10.	Coordinate activities of student organizations	3.62	3.74
11.	Improved basic knowledge of occupations	2.10	4.14
12.	Improved classroom management	3.98	2.52
13.	Improved guidance	5.09	3.11
14.	Changed attitude toward research	3.22	3.78
15.	Improved program management	4.62	3.54
16.	Improved program planning	3.49	4.06
17.	Improved program evaluation	3.61	3.14
18.	Improved public relations	3.70	3.87
19.	Improved human relations	3.76	4.14
20.	Improved professional role	4.42	3.79

Appendix 20

Means for Inservice Preparation of Respondents
Holding a GED Certificate

	Performance Area	Noncredit (N=20)	Credit (N=23)
1.	Plan instruction	2.46	3.78
2.	Carry out instruction	2.31	3.10
3.	Evaluate instruction	2.01	3.26
4.	Develop instructional procedures	2.61	3.50
5.	Use new subject matter	2.87	3.48
6.	Develop occupational skills	1.91	2.45
7.	Develop curriculum	1.88	3.23
8.	Develop program guidelines	2.26	3.18
9.	Understand changes in legislation	2.18	2.72
10.	Coordinate activities of student organizations	2.10	2.49
11.	Improved basic knowledge of occupations	1.92	3.10
12.	Improved classroom management	2.27	2.84
13.	Improved guidance	2.18	2.77
14.	Changed attitude toward research	1.89	2.76
15.	Improved program management	2.54	2.83
16.	Improved program planning	2.47	3.42
17.	Improved program evaluation	2.37	3.07
18.	Improved public relations	2.74	3.21
19.	Improved human relations	2.36	3.22
20.	Improved professional role	2.69	3.63

Appendix 21

Means for Inservice Preparation of Respondents Holding a High School Diploma

Performance Area	Noncredit (N=32)	Credit (N=51)
1. Plan instruction	3.03	3.51
2. Carry out instruction	2.94	3.49
3. Evaluate instruction	2.71	3.27
4. Develop instructional procedures	3.02	3.26
5. Use new subject matter	2.80	3.33
6. Develop occupational skills	2.66	3.00
7. Develop curriculum	2.71	3.32
8. Develop program guidelines	2.73	3.18
9. Understand changes in legislation	2.98	3.16
10. Coordinate activities of student organizations	2.50	2.77
11. Improved basic knowledge of occupations	2.40	3.25
12. Improved classroom management	2.75	3.19
13. Improved guidance	2.98	3.30
14. Changed attitude toward research	2.53	3.12
15. Improved program management	2.96	3.37
16. Improved program planning	2.88	3.47
17. Improved program evaluation	2.91	3.12
18. Improved public relations	2.72	3.21
19. Improved human relations	2.96	3.50
20. Improved professional role	3.51	3.48

Appendix 22

Means for Inservice Preparation of Respondents Holding an Associate of Arts or Science Degree

	Performance Area	Noncredit (N=26)	Credit (N=50)
1.	Plan instruction	3.21	3.42
2.	Carry out instruction	3.29	3.49
3.	Evaluate instruction	3.06	3.29
4.	Develop instructional procedures	3.64	3.51
5.	Use new subject matter	3.53	3.42
6.	Develop occupational skills	3.32	3.16
7.	Develop curriculum	3.24	3.33
8.	Develop program guidelines	3.40	3.00
9.	Understand changes in legislation	3.17	2.85
10.	Coordinate activities of student organizations	2.82	2.97
11.	Improved basic knowledge of occupations	3.11	3.23
12.	Improved classroom management	3.41	3.03
13.	Improved guidance	3.17	3.29
14.	Changed attitude toward research	2.74	3.28
15.	Improved program management	3.41	3.34
16.	Improved program planning	3.30	3.48
17.	Improved program evaluation	3.10	3.00
18.	Improved public relations	3.10	3.10
19.	Improved human relations	3.17	3.38
20.	Improved professional role	3.62	3.51

Appendix 23

Means for Inservice Preparation of Respondents
Holding a Baccalaureate Degree

	Performance Area	Noncredit (N=140)	Credit (N=235)
1.	Plan instruction	3.13	3.45
2.	Carry out instruction	3.11	3.43
3.	Evaluate instruction	2.59	3.22
4.	Develop instructional procedures	3.19	3.31
5.	Use new subject matter	3.27	3.25
6.	Develop occupational skills	2.87	3.12
7.	Develop curriculum	3.05	3.28
8.	Develop program guidelines	3.10	3.20
9.	Understand changes in legislation	2.85	2.89
10.	Coordinate activities of student organizations	2.89	2.93
11.	Improved basic knowledge of occupations	2.58	3.45
12.	Improved classroom management	2.69	3.01
13.	Improved guidance	2.95	3.03
14.	Changed attitude toward research	2.60	3.19
15.	Improved program management	3.12	3.32
16.	Improved program planning	2.94	3.51
17.	Improved program evaluation	2.87	3.23
18.	Improved public relations	2.97	3.14
19.	Improved human relations	2.81	3.26
20.	Improved professional role	3.26	3.49

Appendix 24

Means for Inservice Preparation of Respondents Holding a Master's Degree

	Performance Area	Noncredit (N=175)	Credit (N=281)
1.	Plan instruction	3.22	3.44
2.	Carry out instruction	3.24	3.37
3.	Evaluate instruction	2.68	3.24
4.	Develop instructional procedures	3.13	3.31
5.	Use new subject matter	3.25	3.25
6.	Develop occupational skills	3.04	2.96
7.	Develop curriculum	3.13	3.23
8.	Develop program guidelines	3.21	3.08
9.	Understand changes in legislation	2.97	3.10
10.	Coordinate activities of student organizations	2.86	2.96
11.	Improved basic knowledge of occupations	2.84	3.38
12.	Improved classroom management	2.85	3.00
13.	Improved guidance	2.97	3.09
14.	Changed attitude toward research	2.72	3.31
15.	Improved program management	3.13	3.31
16.	Improved program planning	2.91	3.48
17.	Improved program evaluation	2.82	3.10
18.	Improved public relations	2.92	3.13
19.	Improved human relations	2.92	3.35
20.	Improved professional role	3.26	3.52

Appendix 25

Means for Inservice Preparation of Respondents Holding a Specialist's Degree

	Performance Area	Noncredit (N=7)	Credit (N=10)
1.	Plan instruction	3.70	3.80
2.	Carry out instruction	3.25	3.75
3.	Evaluate instruction	3.58	3.28
4.	Develop instructional procedures	3.32	3.53
5.	Use new subject matter	2.89	3.81
6.	Develop occupational skills	3.17	3.33
7.	Develop curriculum	2.85	3.41
8.	Develop program guidelines	3.43	2.93
9.	Understand changes in legislation	3.00	3.17
10.	Coordinate activities of student organizations	2.43	2.87
11.	Improved basic knowledge of occupations	2.94	3.55
12.	Improved classroom management	2.84	3.05
13.	Improved guidance	3.00	2.82
14.	Changed attitude toward research	3.38	3.40
15.	Improved program management	3.42	3.38
16.	Improved program planning	3.19	3.63
17.	Improved program evaluation	3.24	3.28
18.	Improved public relations	2.67	3.36
19.	Improved human relations	3.35	3.54
20.	Improved professional role	3.41	3.43

Appendix 26

Means for Inservice Preparation of Respondents Holding a Doctor's Degree

	Performance Area	Noncredit (N=7)	Credit (N=18)
1.	Plan instruction	2.56	3.69
2.	Carry out instruction	2.63	3.62
3.	Evaluate instruction	2.79	3.33
4.	Develop instructional procedures	2.75	3.53
5.	Use new subject matter	3.01	3.09
6.	Develop occupational skills	2.62	3.28
7.	Develop curriculum	2.33	3.09
8.	Develop program guidelines	2.70	2.88
9.	Understand changes in legislation	3.68	2.83
10.	Coordinate activities of student organizations	3.27	3.07
11.	Improved basic knowledge of occupations	2.90	3.67
12.	Improved classroom management	2.93	3.26
13.	Improved guidance	3.68	3.06
14.	Changed attitude toward research	2.62	3.27
15.	Improved program management	3.38	3.30
16.	Improved program planning	2.80	3.35
17.	Improved program evaluation	2.95	3.21
18.	Improved public relations	3.28	3.00
19.	Improved human relations	3.07	3.44
20.	Improved professional role	3.41	3.36

Appendix 27

Means for Inservice Preparation of Respondents Holding Another Specified Degree

	Performance Area	Noncredit (N=22)	Credit (N=22)
1.	Plan instruction	3.35	3.86
2.	Carry out instruction	3.18	3.94
3.	Evaluate instruction	2.70	3.60
4.	Develop instructional p ocedures	3.23	3.44
5.	Use new subject matter	3.01	3.37
6.	Develop occupational skills	2.57	3.24
7.	Develop curriculum	2.94	3.69
8.	Develop program guidelines	3.42	3.50
9.	Understand changes in legislation	3.33	2.96
10.	Coordinate activities of student organizations	2.26	2.95
11.	Improved basic knowledge of occupations	2.26	3.38
12.	Improved classroom management	2.76	3.50
13.	Improved guidance	3.33	3.06
14.	Changed attitude toward research	2.76	3.33
15.	Improved program management	3.15	3.51
16.	Improved program planning	3.29	3.67
17.	Improved program evaluation	2.71	3.37
18.	Improved public relations	2.87	3.37
19.	Improved human relations	3.04	3.84
20.	Improved professional role	3.21	3.69