

THE EFFECT OF VARIATION IN JOB EMPHASIS
ON TASK INVENTORY RESULTS

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Technical-occupation programs in the past two decades have become a very important portion of the curriculum offerings at the post-secondary level of education. Data collected from the instructors of these programs are used to make numerous educational administrative decisions. The purpose of this study was to determine what effect the variation in job emphasis had on the reliability of the data gathered by administering the task inventory to technical-occupation instructors at the post-secondary level.

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CHAPTER I

THE PROBLEM

Introduction

The very existence of a post-secondary educational institution may depend upon the data supplied by its faculty. The increased importance of obtaining educational data for purposes of planning and decision making has placed more responsibility on post-secondary technical-occupation instructors. Inconsistent data acquired from the technical-occupation instructor may affect accreditation, program funding, finances, eligibility for special state and federal projects, teacher accountability, and other issues of major proportion.

Data in the past was generally prepared by only members of the administration; however, greater use is being made of data prepared by the individual faculty member. With this new role being assigned to the technical-occupation instructor, the question arises as to the dependability of the data. Does the technical-occupation instructor provide consistent data or are questionnaires and forms viewed by the instructor as something to be handled in a haphazard manner? Data acquired from the technical-occupation instructor must be consistent if it is to be of significant value in making pertinent administrative decisions.

With this new role assigned to the technical-occupation instructor, questions arise as to the dependability of the data. Can important decisions and future planning be made from this data? The technical-

occupation faculties of twenty-three institutions of higher education in Oklahoma were studied to determine the reliability of the data prepared by them.

Statement of Problem

The problem with which this study was concerned involved the lack of information regarding the variability of data obtained by a task inventory from post-secondary technical-occupation instructors administered under varying occupational emphasis during the school year. Although examination of the tasks performed by the technical-occupation instructor as viewed by the instructor was of extreme importance, the problem as viewed in this study was the consistency at various points of occupational emphasis with which the answers were given regarding these tasks. The difficulties that might arise from inconsistent data provided by the technical-occupation instructor could be a major concern.

Certain agencies require data to be provided to them by the technical-occupation instructor while he or she is operating under varying occupational emphasis during the academic year. The data provided must be consistent regardless of the conditions or time at which the data was retrieved. It is of extreme importance to know if the administering of a questionnaire under varying occupational emphasis during the academic year has an effect on the technical-occupation instructor's response to the questionnaire; or is the response reliable regardless of when the technical-occupation instructor completes it.

The types of Oklahoma post-secondary institutions that this problem affects are universities, junior colleges, community colleges, and technical institutions in their relationship with local Boards of Regents,

Higher Education Accrediting Associations, State Regents for Higher Education, State Department of Vocational-Technical Education, United States Office of Education, United States Department of Health, Education and Welfare, etc..

The instrument selected was designed to be of equal importance to each technical-occupation instructor regardless of teaching speciality. The instrument, Tinnell's "Occupational Education Task Inventory",¹ was used to obtain a measurement of the consistency of responses to the questions concerning time spent in performing the following duty categories: preparing for instruction, executing instruction, evaluating instruction, administering instructional services, managing equipment and facilities, providing student services, participating in professional development, developing instructional programs, and participating in non-instructional activities.

In summary, the problem with which this study was concerned involved the lack of information regarding the variability of data obtained by a task inventory from post-secondary technical-occupation instructors administered under varying occupational emphasis at different times during the academic year.

Purpose of the Study

Occupational emphases of post-secondary technical-occupation instructors vary during the school year. The purpose of this study was to determine if the administering of a task inventory to a post-secondary technical-occupation instructor working under different conditions at different times of the academic year would have a significant affect on the results of the data collected. The occupational emphases times

selected for the investigation were: end of the fall semester, beginning of the spring semester, middle of the spring semester, and the end of the spring semester. This was to be compared with an identical questionnaire administered by Tinnell to a group of Oklahoma post-secondary technical-occupation instructors at the middle of the fall semester.

Need for the Study

Post-secondary education was in a state of crisis in the first half of this decade of the 70's. Enrollments had either stabilized or declined slightly. Coupled with this were the problems caused by inflation. In the decade of the 60's, institutions could make bad decisions based on unreliable data and still exist. That luxury no longer prevailed.

Instructors often view data preparation as a nuisance to be tolerated with as little effort as possible and not as a matter of prime importance to them individually or to their institutions. Out of the realization of this fact develops the need for stressing the importance of data preparation by the technical-occupation instructor through such means as in-service training, departmental meetings, individual conferences, and others.

If the best time-frame to collect data can be determined, then post-secondary institutions can obtain more reliable data.

Description of Study Participants

The study involved technical-occupation instructors from four types of Oklahoma post-secondary institutions. The following descriptions are provided to describe the participants who provided data for

this study:

"University Faculty" is the professor or instructor in an institution whose major emphases is the awarding of the baccalaureate degree who is teaching technical-occupation courses in either a two-year or four-year curriculum specifically selected for this study.

"Community College Faculty" is a full time instructor in a two-year college specializing in the needs of commuting students who teaches technical-occupation courses in one of the curriculums specifically selected for this study.

"Junior College Faculty" is an instructor in a two-year college specializing in instruction for commuting and non-commuting students who teaches technical-occupation courses in one of the junior college curriculums specifically selected for this study.

"Technical Institute Faculty" is a teacher or instructor in an institution specializing in instruction for immediate employment teaching full-time technical-occupation courses in a curriculum involved in this study.

Hypothesis

There is no significant difference in the results of data obtained by the task inventory administered to the same technical-occupation instructors under varying occupational emphasis at different times during the academic year.

Assumptions

For the purpose of this study, the following assumptions were made:

- A. Instructor tasks vary from time to time through a semester (term).
For example, at the beginning of a semester course planning is important; later execution of instruction overshadows planning; and near the end, student evaluation becomes the main focus.
- B. Current activities at any given time tend to dominate an instructor's immediate perception of his or her job. An instructor tends to place relatively more importance on the task at hand than on those of past or future.
- C. Instructors will respond to a task inventory in a manner which reflects their immediate perception of their job. Their responses will be given in light of the way they see their job at the time the instrument is completed.

FOOTNOTES

¹Richard W. Tinnell, "A Task Inventory of Technical Teachers in Oklahoma" (Unpub. Ed.D. Dissertation, Oklahoma State University, 1975). pp. 46-66.

CHAPTER II

REVIEW OF LITERATURE

A study involving the manner in which post-secondary technical-occupation instructors' view their duty-task throughout the academic year requires some enlightenment as to terminology and its use. Terms regarding the instructor and those tasks performed by him need to be defined as to their meaning, how they were used, why they were necessary, and why the interlacement provides an intricate part of the study. Therefore, it becomes of the utmost importance to provide the reader with the definitions of those terms at the outset of the study.

Good states that instructor's tasks is labor or study imposed by another, quite often in a definite quantity, or broadly stated, anything imposed upon the instructor by duty or necessity, undertaking or work.¹ Tinnell, in a task inventory, narrowed the investigation of instructors to nine duty areas: (1) preparing for instruction, (2) executing instruction, (3) evaluating instruction, (4) administering instructional services, (5) managing equipment and facilities, (6) providing student services, (7) participating in professional development, (8) developing instructional programs, and (9) participating in non-instructional activities.² The instrument used to provide the data for this study employed Tinnell's Task Inventory.

Good uses the term instructor interchangeably with teacher and so is the case in the text of this study. An instructor is one who imparts

knowledge in colleges and universities.³ The study will enlarge Good's statement to include technical institutes at the post-secondary level, namely, Oklahoma State University Technical Institute, Oklahoma City, and Oklahoma State Tech, Okmulgee.

The "Task Inventory", as provided by Tinnell, meets all the requirements of a research instrument; therefore, Good's Directory of Education definition of instrument will be used interchangeably with both questionnaire and task inventory. The purpose of the instrument was to gather the necessary data. Good refers to a data-gathering instrument as a form or outline used as a guide in gathering data; for example, a printed form such as a check list and/or a rating scale on which the research worker may record information or ratings from others.⁴ The research instrument, as previously stated, is often referred to as a questionnaire, which is a list of planned, written questions related to a particular topic, with space provided for indicating the response to each question. This is intended for a number of persons to reply, and is commonly used in normative-survey studies and in the measurement of opinions.

In reviewing the literature relating to how an instructor views tasks and the accuracy with which he provides data regarding those tasks at different time periods of occupational emphasis, it was necessary to divide the review of literature into three groups which will provide the structure of this chapter. They are: (1) the instructor's view of tasks, (2) the accuracy of the data collected from instructors at various times of occupational emphasis, and (3) the effect the period of occupational emphasis has on data collected.

The Instructor's View of Teacher's Tasks

According to DeVaughn, in a study conducted in Oklahoma to provide a validated list of teacher competencies for teachers to use in more efficient planning and teaching, technical-occupation teachers:

...rated eight of the thirteen items in the planning area as very important. They considered determining educational needs and goals of students, and selecting and developing instructional content for lessons, units and courses as being very important. All groups judged organizing the sequence of learning tasks and developing a variety of methods and techniques of teaching as being very important.

...of those items related to instructional methods, they considered demonstration, laboratory experiences, use of cues, and reinforcement of learning through positive reinforcement techniques as being very important. In addition they considered proper maintenance of facilities and equipment and the use of safety rules as being very important.⁵

While DeVaughn's study did not take into consideration the validity of instructors' data at various periods of occupational emphasis, it did provide an insight into some occupational emphases and their importance regarding how instructors view their tasks and the mutual interest of task in the two studies. It is of interest to note that:

Technical education teachers represented the only teacher group rating, 'participate in non-instructional school duties, i.e., PTA, chaperoning', as being little or no importance. Teachers of agriculture, business and office, distributive education, health, home economics, industrial arts and trade and industry considered the item important

...three items from the planning area in the ten percent. These items were 'select and develop instructional content for lessons, units and courses', 'develop a variety of methods and techniques of teaching', and 'determine and select tools and equipment necessary for learning experiences of students'

The ranked top ten percent of competencies rated technical education teachers is given in Table XI. It was interesting that they gave item number seven, 'select and develop instructional content for lessons, units and courses', from the

planning area, the highest rating.

In addition, they ranked two other items from the planning area in the top ten percent. These items were 'identify competencies needed for students to possess to enable them to enter an occupational skill', and 'organize the sequence of learning tasks'.⁶

The importance rating given in the DeVaughn's study in planning data is supportive to the consistency of which the tasks are rated on the tasks inventory section of "preparing for instruction" of Tinnell's questionnaire as used in this study.

The Accuracy of Data Collected From Instructors at Various Times of Job Emphases

In Schaefer's look at the technical-occupation teacher, he states:

As rapidly as occupational technology is changing today, how can we expect the teacher of agriculture, business, distributive, home economics, trade and industrial, and technical education to remain up-to-date in their technology? Have you ever sensed that some vocational-technical education content as being taught is obsolescent? That our teachers may come to us with six years of experience—one year repeated six times?

If the questions asked by Schaefer are true, is it not likely that data collected from technical-occupation instructors during the teaching year can be viewed as having little accuracy due to their hectic environment of catch-up or fall farther behind? This could support the position that technical-occupation teachers view data collection as unimportant, time consuming and as something to be handled in a haphazard manner.

Simplicity and the ease of marking questionnaires may outweigh the haphazard manner so often referred to in the completion of questionnaires. Rummell however, recognizes that misuse does exist when he states: "The correspondence method (i.e., mailed questionnaires) has not only been the most popular in extent of usage in research work, but

it has also been the most misused method".⁸ Rummell does not necessarily imply that the instructor, as in the case of this study, contributes to the misuse of the questionnaire but that researcher and respondent both can and often do contribute to the misuse of the questionnaire.

In Brzezinski's study "An Experimental Study of Techniques for Increasing Return Ratio in Mail Surveys", she presents the problems of question interpretation and "correct" intended respondent.

In forced choice questionnaire formats, good ranges of alternative answers are often not provided. The researcher cannot always be certain that a particular question is interpreted in the same way by every respondent. In fact, with mailed questionnaires he cannot even be certain that it was the intended respondent who completed and returned the form. Most survey researchers occasionally receive carefully completed questionnaires expressing strong opinions on the subject at hand, only to find written at the bottom something like 'Completed for Dr. Blank, who is on sabbatical this year'. One is left to worry about how many questionnaires were completed by persons less compulsive about mentioning the intended respondent's absence.⁹

Length of the questionnaire may also be a possible determining factor in the accuracy of the data collected from the instructor. The anonymity of the respondent may also produce questionable results; however, Brzezinski found that:

The one page questionnaires were no more effective in eliciting higher response rates than the three page questionnaires containing the same number of items.

...it would appear that researchers need not strain to limit the number of items [within the limits of 20 or 40 items at least] if adequate follow-up procedures are used.

There may be great practical significance in the knowledge that lack of anonymity does not decrease response rates of college and university professors on typical higher education questionnaires.¹⁰

The Effect the Period of Occupational
Emphasis Has on the Data Collected

Research of the literature revealed very little information regarding the time of data collection or the effect task emphasis has on the data being collected; however, it seems logical that time dates such as filing income tax, popular weeks for vacation, national holidays, spring and fall school breaks, examination, etc., all must be viewed as obstacles for acquiring accurate, consistent data. If this is the case, time periods such as those listed above should be avoided in the collection of data from the vocational-technical instructor.

During a telephone conversation, Ms. Maureen Byers, of the National Center for Higher Education Management Systems, Western Interstate Commission for Higher Education, stated that WICHE used the common sense method. Although no specific study had been completed, WICHE avoided time periods such as the beginning of the school year, Thanksgiving Holiday, Christmas and New Year's Holiday, March 15 to April 15 tax filing period, weeks during which most schools are taking their spring break or Easter Holiday, and the three summer months of June, July, and August for acquiring data from faculties of Higher Education Institutions.¹¹

Through correspondence with James R. Topping (see appendix B) who is also with the National Center for Higher Education Management Systems, Western Interstate Commission for Higher Education, part C of the pilot test of NCHEMS survey instrument and procedures was acquired. This instrument was tested by the University of Michigan to determine

if there is a significant difference in how faculty report their activities when the instrument was administered at the beginning or in the middle of the semester. In both cases of the NCHEMS study, the time period covered by the survey was one academic semester, whereas the present study covered both the Fall and Spring terms. The NCHEMS study investigated whether faculty perception of what they would do during the semester differed significantly from their perception of their activities once the semester was half over. The findings of the Michigan study were further substantiated in studies by Lorents:

This question of when to administer the instrument was answered quite clearly. Tables 1 and 2 concisely demonstrate that no differences existed between the administration of the survey instrument in the early part of the term versus the middle of the term when either NCHEMS' or the University of Michigan's survey instrument was used.

The possibility exists that asking faculty members at the end of a term to recall their activities might produce some genuine differences. These would be differences of retrospection versus prospective estimation. Nevertheless, the current evidence is that the time during the term when the estimate is required is irrelevant.¹²

The following Tables are from Lorents:

TESTS FOR SIGNIFICANT DIFFERENCES IN ACTIVITY
 SCORES CAUSED BY TIME OF REPORTING
 WHEN NCHEMS' FACULTY ACTIVITY
 AND OUTCOME SURVEY WAS USED

Activity* Category	Mean % from early reporting	Mean % from middle reporting	T Value
Credit Instruction	44.95	44.29	0.15
Non-credit Instruction	15.29	15.46	-0.05
Research and Creative Activity	20.78	20.14	0.13
Service Activity	3.61	5.27	1.54
Administrative Activity	7.42	6.23	0.50
Professional Development	7.95	8.61	-0.47

Degrees of Freedom = 83

* All activity categories are taken from the
 University of Michigan's Academic Activities
 Personnel Report.¹³

TEST FOR SIGNIFICANT DIFFERENCES IN ACTIVITY SCORES
 CAUSED BY TIME OF REPORTING WHEN UNIVERSITY
 OF MICHIGAN'S ACADEMIC PERSONNEL
 ACTIVITIES REPORT WAS USED

Activity* Category	Mean % from early reporting	Mean % from middle reporting	T Value
Credit Instruction	54.14	50.95	0.60
Non-credit Instruction	12.23	13.19	-0.41
Research and Creative Activity	18.91	17.64	0.27
Service Activity	4.00	3.36	0.60
Administrative Activity	4.93	8.60	-1.36
Professional Development	5.79	6.26	-0.32

Degrees of Freedom = 84

* All activity categories are taken from the
 University of Michigan's Academic Activities
 Personnel Report.¹⁴

FOOTNOTES

¹Carter V. Good, Directory of Education (New York, 1959), p. 292.

²Richard W. Tinnell, "A Task Inventory of Technical Teachers in Oklahoma" (Unpub. Ed.D. dissertation, Oklahoma State University, 1975), pp. 46-66.

³Good, p. 291.

⁴Carter V. Good, Directory of Education (New York, 1973), p. 510.

⁵Zed Farris DeVaughn, "Competencies Needed by Vocational and Technical Education Teachers as Rated by Selected Groups" (Unpub. Ed.D. dissertation, Oklahoma State University, 1974), pp. 32-38.

⁶Ibid., pp. 41-55.

⁷Carl Schaefer, A Rationale for Comprehensive Personnel Development in a State (Ohio, 1972), pp. 3-4.

⁸J.F. Rummel, An Introduction to Research Procedures in Education (New York, 1958), p. 87.

⁹Evelyn J. Brzezinski and Blaine R. Worthen, An Experimental Study of Techniques for Increasing Return Rates in Mail Surveys (paper presented at American Educational Research Association, New Orleans, 1973), p. 3.

¹⁰Ibid., p. 24.

¹¹Maureen Byers, Personal Communication, April 2, 1975.

¹²Alden C. Lorents, Faculty Activity and Planning Models in Education (Minnesota, 1971), pp. 58-62.

¹³Ibid., p. 60.

¹⁴Ibid., p. 61.

CHAPTER III

METHODOLOGY

Introduction

The present study is an extension of a research effort conducted by Tinnell. The instrument developed and used by Tinnell was also used in this study. Respondents to the Tinnell study were also used in this study and the data obtained by Tinnell were compared to the data of this study. This chapter reports the methodology used in the study. The methodology implemented to achieve the purpose of the study can be divided into five categories: (1) research design; (2) instrument; (3) respondents; (4) collection of data; and (5) statistical treatment.

Research Design

The study is a quasi-experimental design which allows the test of the hypothesis by reaching conclusions about the hypothesis. Through statistical analysis of the data, the results of the study can be interpreted and conclusions drawn.

Instrument

Data for the study were collected by a task analysis inventory. This inventory required the respondent to indicate on a five point scale their emphases on tasks in the following duties: (1) preparing for instruction; (2) executing instruction; (3) evaluating instruction;

(4) administering instructional services; (5) managing equipment and facilities; (6) providing instructional services; (7) participating in professional development; (8) developing instructional programs; and (9) participating in non-instructional activities.

The instrument selected for the study was a task inventory prepared by Richard W. Tinnell.¹ A list of the duties and the number of tasks included with each duty is given in Table I. The inventory consisted of two hundred items with provisions for the respondent to write in other tasks that he or she might feel pertinent to the questionnaire. The respondent placed a check-mark beside those tasks which were performed and rated those tasks individually by the use of a five-point-time-spent scale. The scale was rated by placing a check-mark in the appropriate column of: (1) very little time spent; (2) below average time spent; (3) about average time spent; (4) above average time spent; and (5) very much time spent. A copy of the inventory is included in the Appendix A.

TABLE I
DUTIES AND NUMBER OF TASKS

Duty	Number of Tasks
1 Preparing for Instruction	27
2 Executing Instruction	30
3 Evaluating Instruction	29
4 Administering Instructional Services	22
5 Managing Equipment and Facilities	20
6 Providing Student Services	20
7 Participating in Professional Development	18
8 Developing Instructional Programs	20
9 Participating in Non-Instructional Activities	<u>14</u>
Total:	200

Respondents

Technical-occupation instructors' from 23 post-secondary institutions participated in the original survey by Tinnell. For a list of institutions see Appendix D. One hundred thirty-nine Tinnell respondents were surveyed and answers were received from 115. Table II list the potential number of participants in the Tinnell study, while Table III indicates the actual number responding to the Tinnell study from each institution.

TABLE II

THE TINNELL STUDY PARTICIPANTS

	Institution	Number of Participants
1	Bethany Nazarine College	1
2	Cameron University	7
3	Carl Albert Junior College	1
4	Connors State College	2
5	Eastern Oklahoma State College	13
6	El Reno Junior College	1
7	Langston University	2
8	Murray State College	7
9	Northeastern Oklahoma State University	1
10	Northeastern Oklahoma A&M College	10
11	Northern Oklahoma College	7
12	Northwestern Oklahoma State University	2
13	Oklahoma State University School of Technology	23
14	Oklahoma State University Technical Institute	14
15	Oklahoma State Tech	50
16	Oscar Rose Junior College	7
17	Sayre Junior College	1
18	Seminole Junior College	1
19	Southeastern Oklahoma State University	3
20	Southwestern College	2
21	South Oklahoma City Junior College	4
22	Tulsa Junior College	10
23	Western Oklahoma State College	2
	Total:	171

Study Participants

The 139 technical-occupation instructors who participated in the Tinnell study (see Table III) were divided into four groups, three groups had 35 participants and the remaining group had 34 participants. In the eleven institutions with four or more participants, a random selection was made by taking every fourth name on the participant roll.

TABLE III
THE REVISED STUDY PARTICIPANTS^a

Institution	Number of Participants
1 Bethany Nazarine College	1
2 Cameron University	7
3 Carl Albert Junior College	1
4 Connors State College	1
5 Eastern Oklahoma State College	8
6 El Reno Junior College	0
7 Langston University	1
8 Murray State College	7
9 Northeastern Oklahoma State University	1
10 Northeastern Oklahoma A&M College	10
11 Northern Oklahoma College	5
12 Northwestern Oklahoma State University	2
13 Oklahoma State University School of Technology	18
14 Oklahoma State University Technical Institute	12
15 Oklahoma State Tech	50
16 Oscar Rose Junior College	5
17 Sayre Junior College	0
18 Seminole Junior College	0
19 Southeastern Oklahoma State University	3
20 Southwestern College	0
21 South Oklahoma City Junior College	4
22 Tulsa Junior College	3
23 Western Oklahoma State College	0
Total:	139

^aThose who answered the Tinnell study and surveyed by this study.

Those institutions with one, two, or three participants presented a different problem. This was resolved by randomly aligning these participants with the participants from the larger institutions until the total group size (three with 35 and one with 34 participants) was reached. This selection procedure was chosen to eliminate any bias that might appear in the study due to instructor's major field, type of institution, number of years teaching experience, age, and sex of the participant.

Collection of Data

The periods selected for the respondents to complete the identical questionnaire as that used in the October, 1974 data collection by Tinnell were: (1) Group I, November 30, 1974; (2) Group II, January 15, 1975; (3) Group III, February 5, 1975; and (4) Group IV, April 25, 1975.

The respondent was urged to give careful consideration to each duty and tasks and to provide data for only those tasks actually performed. The respondent was discouraged from attempting any form of recall as to how the questionnaire was answered the first time and an explanation was given in a letter regarding the purpose of the second questionnaire being identical to the first. (See Appendix C for the letter of explanation.)

Although numbers were assigned to each questionnaire and respondent identity was available in most instances, no record of this data was employed or retained for the study.

Each respondent's reaction to the twice administered questionnaire provided data for analysis of consistency relevant to the tasks performed and the time spent on each task.

Statistical Treatment

The data retrieved from the Tinnell questionnaire and the data retrieved from one of the four time periods of occupational emphasis of this study were statistically analyzed by methods of percentages and the Kendall Coefficient of Concordance. The Kendall Coefficient of Concordance method was selected to measure the degree of consistency and amount of agreement with which an instructor answered the two hundred task questions in Tinnell's study compared to those same questions administered in this study, but administered at different time periods of job emphasis. The Kendall Coefficient of Concordance was calculated, and, in addition, a chi-square statistic was computed in order to determine the significance of the calculated Kendall Coefficient of Concordance.²

FOOTNOTES

¹Richard W. Tinnell, "A Task Inventory of Technical Teachers in Oklahoma" (Unpub. Ed.D. Dissertation, Oklahoma State University, 1975), pp. 46-66.

²Gary W. Folkers, "Kendall Coefficient of Concordance" (Unpub. Paper, Oklahoma State University, 1967), pp. 4-5.

CHAPTER IV

RESULTS

Questionnaire Results

One hundred thirty-nine post-secondary technical-occupation instructors representing 18 Oklahoma institutions were requested to again complete a task inventory (see Appendix A) that they had previously completed in October, 1974. Four occupational emphasis periods were selected and the return for each selected period is given below.

On November 30, 1974, task analysis questionnaires were mailed to Group I study participants (34 participants). By January 15, 1975, thirty-one returns had been received for a 91.1 percent return; however, two which had been initially received were misplaced before the data could be recorded. This necessitated a revision of the number of returns to 29 (85.3 percent).

On January 15, 1975, task analysis questionnaires were mailed to Group II participants (35 participants). By February 18, 1975, thirty returns had been received for an 85.7 percent return. However, questionnaire number 103 was mailed by mistake to another institution and was completed and returned by an individual who was neither a participant of the study nor a technical-occupation instructor. This necessitated the removal of the task analysis questionnaire from the return and revised the number of returns to 29 (82.9 percent).

On February 5, 1975, task analysis questionnaires were mailed to

Group III participants (35 participants). By April 5, 1975, thirty-one (88.6 percent) had been received.

Task analysis questionnaires were mailed on April 25, 1975, to Group IV participants (35 participants). By May 15, 1975, twenty-six had been received for a 74.3 percent return. This represented the shortest time frame (25 days) for returning questionnaires; however, all but one institution partially closed for the summer the second week in May. Two returns were received after May 15, 1975, but neither was considered as useable data, because of the above mentioned cut-off date.

Table IV is a summary of instruments mailed and returned and the percentage of return from each institution involved in the study. Two institutions, each with one occupational instructor, failed to return the questionnaire. The two of the original 18 institutions not responding represented only 11 percent of the total number. Of the 139 questionnaires mailed throughout the year, 115 were useable for an 82.7 percent return as compared to Tinnell's 81.3 percent.

Return Results

The data concerning the responses of each technical-occupation instructor responding to each duty-task that they performed was calculated. This procedure provided several methods by which the data on each duty-task could be analyzed and compared. Among these methods are the range and percentage of responses, total relative time spent on a particular duty-task, the product of time spent, and the mean of the time spent (see Table V).

The number of responses to the duty-task (see Table V) ranged from 16 to 112. This produces an extent of variation in the range of

TABLE IV

SUMMARY OF INSTRUMENTS MAILED AND RETURNED WITH
PERCENTAGE OF RETURN FROM EACH MAILING

Insti- tution	Tinnell Study Oct. 15 1974			Group I thru IV Nov. 30 thru Apr. 25 1974 1975		
	Number Mailed	Number Returned	Percent	Number Mailed	Number Returned	Percent
1	1	1	100	1	0	0
2	7	7	100	7	7	100
3	1	1	100	1	0	0
4	2	1	50	1	0	0
5	13	8	62	7	7	100
6	1	0	0			
7	2	1	50	1	1	100
8	7	7	100	7	4	57
9	1	1	100	1	1	100
10	10	10	100	10	10	100
11	7	6	86	6	5	83
12	2	2	100	2	2	100
13	23	18	78	18	14	78
14	14	12	86	12	7	58
15	50	50	100	50	44	88
16	7	4	67	4	4	100
17	1	0	0			
18	1	0	0			
19	3	3	100	3	2	66
20	2	0	0			
21	4	4	100	4	4	100
22	10	3	30	3	3	100
23	2	0	0			
Totals:	171	139	81.3	139	115	82.7

TABLE IV (Continued)

Institution	Group I Nov. 1974			Group II Jan. 1975			Group III Feb. 1975			Group IV Apr. 1975		
	Number Mailed	Number Returned	Percent	Number Mailed	Number Returned	Percent	Number Mailed	Number Returned	Percent	Number Mailed	Number Returned	Percent
1	1	0	0	0	0	0	0	0	0	0	0	0
2	2	2	100	1	1	100	2	2	100	2	2	100
3	0	0	0	0	0	0	0	0	0	1	0	0
4	0	0	0	0	0	0	0	0	0	1	0	0
5	2	2	100	1	1	100	3	3	100	2	2	100
6												
7	0	0	0	1	1	100	0	0	0	0	0	0
8	2	2	100	2	1	50	1	1	100	2	0	0
9	1	1	100	0	0	0	0	0	0	0	0	0
10	2	2	100	2	2	100	3	3	100	3	3	100
11	1	0	0	2	2	100	1	1	100	2	2	100
12	0	0	0	1	1	100	1	1	100	0	0	0
13	5	4	80	5	5	100	4	2	50	4	3	75
14	3	3	100	3	2	67	3	1	33	3	1	33
15	12	10	83	13	12	92	13	13	100	12	9	75
16	1	1	100	1	0	0	1	1	100	1	1	100
17												
18												
19	1	1	100	1	0	0	0	0	0	1	1	100
20												
21	1	1	100	1	1	100	1	1	100	1	1	100
22	0	0	0	1	1	100	1	1	100	1	1	100
23												
Totals:	34	29	85.2	35	29	85.7	35	31	88.6	35	26	74.3

responses which is marginal, i.e., 96 for this study compared to 128 for Tinnell or a difference of 25 percent.

The total relative time spent performing each duty-task was calculated by taking the frequency the duty-task was performed times a weighted factor. Computation of the data for duty-task I-1, "preparing for instruction, develop student safety procedures" provide us an example:

	<u>Weighted Factor</u>	<u>Frequency</u>	<u>Total Relative Time</u>
Done:			
not done	0	31	0
very little	1	31	31
below average	2	12	24
about average	3	32	96
above average	4	6	24
very much	5	<u>3</u>	<u>15</u>
		115	190

The range of the total relative time spent on each duty-task was from 24 on duty 9 task 7 (drive a school bus); to 418 on duty 2 task 22 (present lessons with a chalkboard). This compares favorably with Tinnell's range on total relative time of five to 483 respectively on the identical duty-tasks.

The product of each duty-task was computed by multiplying the frequency (number of responses) times the total relative time. In doing this the number of zero responses (31 in the above) must be subtracted from the total frequencies (115) to provide the total useable frequencies (84). Multiplying this number (84) times the total relative time provides the product (15960). The range of products was from 384 on duty 9 task 7 (drive a school bus) to 46,816 duty 2 task 22 (present lessons with a chalkboard). Tinnell's range was from 20 on duty 9 task 7 (drive a school bus) to 60,858 on duty 2 task 22 (present lessons

with a chalkboard). Again, a 25 percent variation between this study and Tinnell's occurs on products as was the case pointed out earlier on the range of responses.

The mean total time that the respondents spent performing each duty-task was calculated by dividing the total relative time (190 for duty-task I-1) by the number of respondents indicating that they performed the task (84). The results were compared to the Tinnell study for each task in the inventory. The range for the mean total time spent on individual tasks was from 1.50 on duty 9 task 7 (drive a school bus) to 3.85 on duty 2 task 26 (supervise student laboratory work). This compares with Tinnell's range of 1.25 (which was also identified as duty 9 task 7) to 4.0 (on duty 2 task 26 which again was the identical duty and task identified in both studies).

All results of these four methods of calculation are given on each duty-task in Table V. The number of zero, one, two, three, four, and five weighted responses were calculated for all tasks. The range of the results for the least number of affirmative responses were compared to the Tinnell results:

<u>Weighted Factor</u>	<u>Present Study Duty 9 Task 7 No. of Responses</u>	<u>Tinnell Study Duty 9 Task 7 No. of Responses</u>
0	99	134
1	12	3
2	2	1
3	1	0
4	0	0
5	1	0

As indicated above, on one duty-task in the present study, 99 of the 115 respondents did not perform the task compared to 134 of 139 respondents in the Tinnell study. Although a difference of 99 to 134 appears large,

it should be noted that the respondents for this study was 115 while the Tinnell study was 139, a difference of 24. The largest number of affirmative responses were also compared:

<u>Weighted Factor</u>	<u>Present Study Duty 2 Task 22 No. of Responses</u>	<u>Tinnell Study Duty 7 Task 8 No. of Responses</u>
0	3	6
1	4	17
2	7	32
3	36	56
4	33	22
5	32	5

In this study 112 of a possible 115 respondents indicated they performed a given task while in the Tinnell study 133 of 139 respondents indicated they performed a task.

TABLE V
THE DATA FOR EACH TASK

I Preparing for Instruction

	Responses ^a	Total ^b Relative Time	Product ^c	Mean ^d
1. Develop student safety procedures	84	190	15960	2.26
2. Identify library resources	87	194	16878	2.23
3. Identify resource persons	63	140	8820	2.22
4. Identify terminal evaluative criteria	72	194	13968	2.69
5. Maintain an instructional materials file	106	324	34344	3.06
6. Make mimeograph masters	70	184	12880	2.63
7. Make photo (thermo) copy masters	67	160	10720	2.39
8. Make spirit duplicator masters	54	127	6858	2.35
9. Make visual aids	94	256	24064	2.72
10. Operate a mimeograph machine	58	115	6670	1.98
11. Operate a photo (thermo) copy machine	57	123	7011	2.16
12. Operate a spirit duplicator	49	111	5439	2.27
13. Organize lesson plans	108	368	39744	3.41
14. Plan field trips	85	206	17510	2.42
15. Prepare lecture outlines	110	373	41030	3.39
16. Select course content	106	347	36782	3.27
17. Select student projects	105	351	36855	3.34
18. Select text books	101	288	29088	2.85
19. Select training package	69	178	12282	2.58
20. Select visual aids	93	257	23901	2.76
21. Set up demonstrations	101	305	30805	3.02
22. Set up laboratory equipment	91	277	25207	3.04
23. Write course objectives	104	306	31824	2.94
24. Write laboratory exercises	92	280	25760	3.04
25. Write lesson objectives	102	283	28866	2.77
26. Write student handout sheets	109	344	37496	3.16
27. Write unit objectives	86	222	19092	2.58

TABLE V (Continued)

II Executing Instruction				
1. Coordinate a cooperative work program	37	93	3441	2.51
2. Demonstrate manipulative skills	89	291	25899	3.27
3. Derive mathematical equations	67	170	11390	2.54
4. Direct group discussions	86	261	22446	3.03
5. Direct programmed instruction	48	137	6576	2.85
6. Direct student skill practice	98	359	35182	3.66
7. Direct student project work	89	317	28213	3.56
8. Employ oral questioning	100	334	33400	3.34
9. Give homework assignments	102	292	29784	2.86
10. Give lectures	110	390	42900	3.55
11. Give students assistance in laboratory	106	393	41658	3.71
12. Implement rules of acceptable conduct	91	268	24388	2.95
13. Implement safety procedures	83	249	20677	3.00
14. Present lessons through problem solving	103	347	35741	3.37
15. Present lessons using analogies	75	225	16875	3.00
16. Present lessons using audio tape	43	99	4257	2.30
17. Present lessons using filmstrips	60	141	8460	2.35
18. Present lessons using flip charts	41	83	3403	2.02
19. Present lessons using models	79	214	16906	2.71
20. Present lessons using photo slides	57	141	8037	2.47
21. Present lessons using video tape	34	72	2448	2.12
22. Present lessons using a chalkboard	112	418	46816	3.73
23. Present lessons with motion pictures	73	185	13505	2.53
24. Present lessons with overhead projector	95	296	28120	3.12
25. Present principles by demonstration	102	351	35802	3.44
26. Supervise student laboratory work	98	378	37044	3.86
27. Supervise field trips	81	191	15471	2.36
28. Teach evening classes	67	194	12998	2.90
29. Teach extension classes	29	56	1624	1.93
30. Work problems before class	105	346	36330	3.30

TABLE V (Continued)

III Evaluating Instruction				
1. Administer written tests	110	360	39600	3.27
2. Analyze tests for reliability	91	242	22022	2.66
3. Analyze tests for validity	87	233	20271	2.68
4. Check graduate performance with employer	73	184	13432	2.52
5. Conduct drop-out studies	39	78	3042	2.00
6. Determine final grades	109	388	42292	3.56
7. Devise laboratory performance tests	82	251	20582	3.06
8. Formulate case-study problems	40	97	3880	2.43
9. Formulate completion test questions	94	269	25286	2.86
10. Formulate essay test questions	81	194	15714	2.40
11. Formulate multiple choice questions	89	240	21360	2.70
12. Formulate matching test questions	98	288	28224	2.94
13. Formulate tech-math problems	62	185	11470	2.98
14. Formulate true-false questions	89	287	25543	3.22
15. Grade homework assignments	93	287	26691	3.09
16. Grade laboratory reports	81	260	21060	3.21
17. Grade student projects	96	329	31584	3.43
18. Grade student class performance	95	335	31825	3.53
19. Grade written tests	108	374	40392	3.46
20. Have advisory committee evaluate courses	66	167	11022	2.53
21. Have students evaluate course content	87	196	17052	2.25
22. Have students evaluate teacher	84	203	17052	2.42
23. Obtain program evaluation from graduates	56	129	7224	2.30
24. Prepare progress charts	61	165	10065	2.70
25. Rate other teachers	41	82	3362	2.00
26. Serve on self-study committees	46	112	5152	2.43
27. Write a self-evaluation form	52	130	6760	2.50
28. Write lesson objectives	91	258	23478	2.84
29. Write student evaluation criteria	53	139	7367	2.62

TABLE V (Continued)

IV Administering Instructional Services					
1.	Assign students to classes	61	160	9760	2.62
2.	Attend faculty meetings	110	323	35530	2.94
3.	Collect fees	38	78	2964	2.05
4.	Coordinate teaching in several programs	39	109	4251	2.79
5.	Handle petty cash	32	59	1888	1.84
6.	Identify prospective teachers	48	113	5424	2.35
7.	Interview prospective employees	48	109	5232	2.27
8.	Maintain attendance records	100	322	32200	3.22
9.	Maintain counseling records	54	137	7398	2.54
10.	Maintain financial records	27	62	1674	2.30
11.	Maintain follow-up records	44	114	5016	2.59
12.	Maintain placement records	45	127	5715	2.82
13.	Maintain purchasing records	48	133	6384	2.77
14.	Make teaching assignments	47	130	6110	2.77
15.	Plan the budget	44	116	5104	2.64
16.	Prepare class schedules	70	191	13370	2.73
17.	Prepare promotional brochures	56	144	8064	2.57
18.	Prepare recruiting materials	53	137	7261	2.58
19.	Prepare travel claims	67	121	8107	1.81
20.	Recruit new students	88	243	21384	2.76
21.	Specify teacher qualifications	45	103	4635	2.29
22.	Supervise other teachers	85	236	20060	2.78
V Managing Equipment and Facilities					
1.	Administer laboratory clean-up	85	236	20060	2.78
2.	Arrange for equipment storage	73	191	13943	2.62
3.	Conduct the inventory	79	215	16985	2.72
4.	Control environment (light, heat, etc.)	76	185	14060	2.43
5.	Evaluate available facilities	62	156	9672	2.52
6.	Maintain equipment	83	258	21414	3.11
7.	Manage a tool room	45	106	4770	2.36
8.	Order instructional supplies	93	264	24552	2.84
9.	Order laboratory equipment	84	226	18984	2.69
10.	Plan long range equipment needs	84	219	18396	2.61
11.	Prepare equipment budgets	53	146	7738	2.75
12.	Recommend library purchases	81	199	16119	2.46
13.	Repair damaged equipment	79	234	18486	2.96
14.	Review building construction plans	46	109	5014	2.37
15.	Schedule student laboratory time	77	211	16247	2.74
16.	Select audio-visual equipment	59	140	8260	2.37
17.	Select classrooms	45	113	5085	2.51
18.	Solicit contributions from industry	42	98	4116	2.33
19.	Select laboratory (shop) space	35	78	2730	2.23
20.	Write equipment specifications	67	179	11993	2.67

TABLE V (Continued)

VI Providing Student Services					
1.	Administer counseling tests	20	32	640	1.60
2.	Administer placement tests	22	44	968	2.00
3.	Advise students about employment	104	324	33696	3.12
4.	Advise students about further education	99	284	28116	2.87
5.	Advise students with personal problems	99	230	22770	2.32
6.	Advise students with scholastic problems	101	276	27876	2.73
7.	Assess student academic ability	65	190	12350	2.92
8.	Assist students in getting financial aids	71	106	7526	1.49
9.	Conduct counseling sessions	55	137	7535	2.49
10.	Conduct a graduate follow-up program	49	114	5586	2.33
11.	Conduct home visits	21	34	714	1.62
12.	Contact prospective employers	69	186	12834	2.70
13.	Evaluate student selection data	26	54	1404	2.08
14.	Interview prospective students	78	218	17004	2.79
15.	Place graduates with employers	64	182	11648	2.84
16.	Provide disciplinary action	45	89	4005	1.98
17.	Provide placement services	50	143	7150	2.86
18.	Select students for the program	30	79	2370	2.63
19.	Set student selection criteria	29	65	1885	2.24
20.	Write letters of recommendation	89	223	19847	2.51
VII Participating in Professional Development					
1.	Assist new teachers	74	192	14208	2.59
2.	Attend professional meetings	104	290	30160	2.79
3.	Conduct research	38	75	2850	1.97
4.	Participate in professional organizations	98	277	27146	2.83
5.	Participate in research studies	41	85	3485	2.07
6.	Participate in seminars	81	192	15552	2.37
7.	Practice new specialty skills	57	157	8949	2.75
8.	Read professional journals	104	295	30680	2.84
9.	Read text books	102	323	32946	3.17
10.	Read technical journals	100	294	29400	2.94
11.	Serve as an officer of an organization	54	150	8100	2.78
12.	Take college courses	81	226	18306	2.79
13.	Take correspondence courses	21	36	756	1.71
14.	Take short courses	48	102	4896	2.13
15.	Visit other schools	83	210	17430	2.53
16.	Work in industry	50	122	6100	2.44
17.	Write professional articles	23	44	1012	1.91
18.	Write technical journal articles	24	42	1008	1.75

TABLE V (Continued)

VIII Developing Instructional Programs				
1. Adapt occupational surveys to local needs	34	80	2720	2.35
2. Analyze occupational clusters	37	83	3071	2.24
3. Assess relevancy of program offerings	57	155	8835	2.72
4. Conduct occupational needs surveys	33	69	2277	2.09
5. Determine staff and faculty requirements	48	116	5568	2.42
6. Establish program goals	70	193	13510	2.76
7. Examine curricula of other schools	70	170	11900	2.43
8. Identify appropriate program content	73	207	15111	2.84
9. Identify entry level skills	56	142	8094	2.54
10. Make job analyses	52	111	5772	2.13
11. Meet with advisory committees	83	203	16849	2.45
12. Organize advisory committees	50	110	5500	2.20
13. Plan advisory committee meetings	49	106	5194	2.16
14. Read curriculum research reports	57	127	7239	2.23
15. Read vocational education needs surveys	72	168	12096	2.33
16. Select programs to be offered	50	127	6350	2.54
17. Sequence courses within the program	62	170	10540	2.74
18. Serve on a curriculum committee	49	125	6125	2.55
19. Write program objectives	63	167	10521	2.65
20. Write proposals for funding	37	71	2627	1.92
IX Participating in Non-Instructional Activities				
1. Assist with institutional maintenance	55	138	7590	2.51
2. Attend civic club meetings	67	159	10653	2.37
3. Attend school related social functions	100	273	27300	2.73
4. Chaperon student activities	71	164	11644	2.31
5. Collect money for charities	36	65	2340	1.81
6. Collect tickets at school activities	31	59	1829	1.90
7. Drive a school bus	16	24	384	1.50
8. Participate in community activities	78	199	15522	2.55
9. Prepare news releases	36	66	2376	1.83
10. Sell activities tickets	21	26	546	1.24
11. Serve on committees	72	195	14040	2.71
12. Sponsor student clubs	70	196	13720	2.80
13. Visit with other teachers	93	282	26226	3.03
14. Work as a consultant	50	102	5100	2.04

a Total number responding to a given task.

b Number responding multiplied by weighted factor (0-5) which indicated amount of time spent performing each task.

c Responses multiplied by total relative time.

d Total relative time divided by response.

Ranking the Responses

The ranking of technical-occupation instructors' responses, as indicated in Table V, would be lengthy and the value of such would indeed be questionable. For this reason, only the rankings of those task in the top and bottom decile of the following four methods will be given:

1. The number of respondents who reported performing each task. (Table VI, VII, VIII, IX, X)
2. The total relative times reported spent on each task. (Table XI, XII, XIII, XIV, XV)
3. The product of the number of affirmative respondents and the total relative time spent on the tasks. (Table XVI, XVII, XVIII, XIX, XX)
4. The reported mean relative time spent performing each task. (Table XXI, XXII, XXIII, XXIV, XXV)

Tables VI through X give the number of respondents reporting that they performed a particular task. The top portion of the table represents the top decile while the lower portion of the table is the bottom decile. Also given is the percentage of the ranking for the number of respondents indicating that they performed the task.

The top and bottom decile rankings of the total relative time spent performing each task is given in Table XI through XV. The top and bottom decile of the rankings of the product of the number of affirmative respondents and the total relative time spent on the tasks are given in Table XVI through XX. Similarly, Table XXI through XXV give the rankings of the reported mean total relative time spent performing each task.

The structure of Table VI through XXV was patterned after the Tinnell study to better facilitate a comparison of the two studies. There are many ways of viewing the results and many valuable conclusions could be gleaned from the data; however, the main objective of this study was to determine if a significant difference in the results of

data would be gained by administering a task analysis questionnaire to the same technical-occupation instructors under varying occupational emphasis at different times during the academic year. To permit analysis of the data XXXI through XXXVIII compare the top and bottom deciles of this study as presented in Tables VI through XXV to the findings of the Timnell study. The conclusions and recommendations derived from these data will appear in the next chapter.

While the above material compared the data of this study with that of the Timnell study and the data obtained in each of the four job emphasis periods in this study were compared with each other, another approach is to compare the way in which a given instructor answered the two identical task inventories. To determine the consistency with which a given occupation instructor answered the original and follow-up instruments (see Tables XXVII through XXX), the Kendall Coefficient of Concordance was employed.

For example, as can be observed in Table XXIV, one respondent completed both task analysis questionnaires in an identical manner, i.e., that each of the 200 questions were completed the same in February as in the initial (October) questionnaire. This produced a Kendall Coefficient of Concordance of 1.000000 and a Chi Square value of 398.00000. At the other extreme, a Kendall Coefficient of Concordance of 0.168317 and a Chi Square of 66.99022 was produced by a respondent as indicated in Table XXIX. It is interesting to note that both extremes were in the same month (February, Group III).

To permit determination of whether one job emphasis period has more effect than another job emphasis period on the manner in which a technical-occupation instructor provides data, a mean correlation

between the initial questionnaire and each of the four follow-up periods was developed. The mean of the Kendall Coefficient of Concordance between the initial questionnaire and the November questionnaire was 0.78165; January questionnaire, 0.83208; February questionnaire, 0.75309, and, April questionnaire, 0.80704. While the latter is interesting, the primary purpose of the study was to determine the best time to request data from the technical-occupation instructor -- or those times to avoid.

Mean By Job Emphasis Period:

November	0.78165	End of Semester
January	0.83208	First of Semester
February	0.75309	Mid Semester
April	0.80704	End of Semester

Mean of Means:

$$3.17387 \div 4 = 0.79347$$

Total Mean:

$$86.41551 \div 109 = 0.79280$$

The range, 0.07899, of the job emphasis period means is from 0.83208 to 0.75309 which is very small when one considers the number of respondents with which the study dealt. The small range in the job emphasis group means indicates that the time period in which a given technical-occupation instructor provides data has no significance. Consistent data may be retrieved at any job emphasis period.

TABLE VI

TOP AND BOTTOM DECILE - -- NUMBER OF RESPONDENTS WHO REPORTED
PERFORMING EACH TASK IN GROUPS I, II, III, AND IV

Duty-Task		Number Responding ^a (N= 115)	Per Cent
II-22	Present lessons with a chalkboard	112	97.4
I-15	Prepare lecture outlines	110	95.7
II-10	Give lectures	110	95.7
III-1	Administer written test	110	95.7
IV-2	Attend faculty meetings	110	95.7
I-26	Write student handout sheets	109	94.8
III-6	Determine final grades	109	94.8
I-13	Organize lesson plans	108	93.9
III-19	Grade written tests	108	93.9
I-5	Maintain an instructional materials file	106	92.2
I-16	Select course content	106	92.2
II-11	Give students assistance in laboratory	106	92.2
I-17	Select student projects	105	91.3
II-30	Work problems before class	105	91.3
I-23	Write course objectives	104	90.4
VI-3	Advise students about employment	104	90.4
VII-2	Attend professional meetings	104	90.4
VII-8	Read professional journals	104	90.4
II-14	Present lessons by problem solving	103	89.6
VII-9	Read text books	102	88.7
IX-5	Collect money for charities	36	31.3
V-19	Select laboratory (shop space)	35	30.4
II-21	Present lessons using video tape	34	29.6
VIII-1	Adapt occupational surveys to local needs	34	29.6
VIII-4	Conduct occupational needs surveys	33	28.7
IV-5	Handle petty cash	32	27.8
IX-6	Collect tickets at school activities	31	27.0
VI-18	Select students for the program	30	26.1
II-29	Teach extension classes	29	25.2
VI-19	Set student selection criteria	29	25.2
IV-10	Maintain financial records	27	23.5
VI-13	Evaluate student selection data	26	22.6
VII-18	Write technical journal articles	24	20.9
VII-17	Write professional articles	23	20.0
VI-2	Administer placement tests	22	19.1
VI-11	Conduct home visits	21	18.3
VII-13	Take correspondence courses	21	18.3
IX-10	Sell activities tickets	21	18.3
VI-1	Administer counseling tests	20	17.4
IX-7	Drive a school bus	16	13.9

^aTotal number responding to a given task.

TABLE VII

TOP AND BOTTOM DECILE -- NUMBER OF RESPONDENTS
WHO REPORTED PERFORMING EACH TASK IN GROUP I

	Duty-Task	Number Responding ^a (N= 29)	Per Cent
I-15	Prepare lecture outlines	27	93.1
I-17	Select student projects	27	93.1
II-10	Give lectures	27	93.1
II-11	Give students assistance in laboratory	27	93.1
II-22	Present lessons with a chalkboard	27	93.1
IV-2	Attend faculty meetings	27	93.1
I-13	Organize lesson plans	26	89.7
I-26	Write student handout sheets	26	89.7
II-9	Give homework assignments	26	89.7
II-25	Present principles by demonstration	26	89.7
II-26	Supervise student laboratory work	26	89.7
II-30	Work problems before class	26	89.7
III-1	Administer written tests	26	89.7
VII-2	Attend professional meetings	26	89.7
I-5	Maintain an instructional material file	25	86.2
III-6	Determine final grades	25	86.2
I-16	Select course content	24	82.8
II-14	Present lessons by problem solving	24	82.8
III-19	Grade written tests	24	82.8
VII-8	Read professional journals	24	82.8
VIII-2	Analyze occupational clusters	5	17.2
IV-5	Handle petty cash	5	17.2
II-29	Teach extension classes	5	17.2
II-21	Present lessons using video tape	5	17.2
IX-9	Prepare news releases	4	13.8
IX-6	Collect tickets at school activities	4	13.8
VIII-1	Adapt occupational surveys to local needs	4	13.8
VII-18	Write technical journal articles	4	13.8
VII-17	Write professional articles	4	13.8
VI-18	Select students for the program	4	13.8
VI-13	Evaluate student selection data	4	13.8
IV-10	Maintain financial records	4	13.8
III-5	Conduct drop-out studies	4	13.8
VI-19	Set student selection criteria	3	10.3
IX-10	Sell activities tickets	2	6.9
VII-13	Take correspondence courses	2	6.9
VI-1	Administer counseling tests	2	6.9
IX-7	Drive a school bus	1	3.4
VI-11	Conduct home visits	1	3.4
VI-2	Administer placement tests	1	3.4

^aTotal number responding to a given task.

TABLE VIII

TOP AND BOTTOM DECILE -- NUMBER OF RESPONDENTS
WHO REPORTED PERFORMING EACH TASK IN GROUP II

Duty-Task		Number Responding ^a (N= 29)	Per Cent
I-15	Prepare lecture outlines	28	96.6
I-23	Write course objectives	28	96.6
I-25	Write lesson objectives	28	96.6
III-12	Formulate multiple choice questions	28	96.6
VII-2	Attend professional meetings	28	96.6
VII-8	Read professional journals	28	96.6
VII-9	Read text books	28	96.6
I-13	Organize lesson plans	27	93.1
I-16	Select course content	27	93.1
I-21	Set up demonstrations	27	93.1
I-26	Write student handout sheets	27	93.1
II-8	Employ oral questioning	27	93.1
II-10	Give lectures	27	93.1
II-11	Give students assistance in laboratory	27	93.1
II-14	Present lessons by problem solving	27	93.1
II-25	Present principles by demonstration	27	93.1
II-30	Work problems before class	27	93.1
III-17	Grade student projects	27	93.1
IV-2	Attend faculty meetings	27	93.1
IV-8	Maintain attendance records	27	93.1
VIII-20	Write proposals for funding	10	34.5
II-1	Coordinate a cooperative work program	9	31.0
II-29	Teach extension classes	9	31.0
IV-3	Collect fees	9	31.0
VI-19	Set student selection criteria	9	31.0
VIII-4	Conduct occupational needs survey	9	31.0
IX-5	Collect money for charities	9	31.0
IX-6	Collect tickets at school activities	9	31.0
IX-10	Sell activities tickets	9	31.0
II-21	Present lessons using video tape	8	27.6
IV-10	Maintain financial records	8	27.6
VI-2	Administer placement tests	8	27.6
VI-11	Conduct home visits	8	27.6
VI-13	Evaluate student selection data	8	27.6
VI-18	Select students for the program	8	27.6
VII-17	Write professional articles	8	27.6
VI-1	Administer counseling tests	7	24.1
VII-18	Write technical journal articles	7	24.1
IX-7	Drive a school bus	6	20.7
VII-13	Take correspondence courses	5	17.2

^aTotal number responding to a given task.

TABLE IX

TOP AND BOTTOM DECILE -- NUMBER OF RESPONDENTS WHO
REPORTED PERFORMING EACH TASK IN GROUP III

Duty-Task		Number Responding ^a (N= 31)	Per Cent
I-13	Organize lesson plans	30	96.8
I-26	Write student handout sheets	30	96.8
II-10	Give lectures	30	96.8
II-22	Present lessons with a chalkboard	30	96.8
III-1	Administer written tests	30	96.8
III-6	Determine final grades	30	96.8
IV-2	Attend faculty meetings	30	96.8
VI-3	Advise students about employment	30	96.8
VII-8	Read professional journals	30	96.8
VII-10	Read technical journals	30	96.8
III-19	Grade written tests	29	93.5
VII-2	Attend professional meetings	29	93.5
I-5	Maintain an instructional material file	28	90.3
I-15	Prepare lecture outlines	28	90.3
I-16	Select course content	28	90.3
I-17	Select student projects	28	90.3
II-14	Present lessons by problem solving	28	90.3
III-18	Grade students class performance	28	90.3
IV-8	Maintain attendance records	28	90.3
VI-6	Advise students with scholastic problems	28	90.3
III-8	Formulate case study problems	10	32.3
IV-5	Handle petty cash	10	32.3
V-19	Select laboratory (shop) space	10	32.3
VIII-1	Adapt occupational surveys to local needs	10	32.3
VIII-4	Conduct occupational needs surveys	10	32.3
VIII-20	Write proposals for funding	10	32.3
IV-10	Maintain financial records	8	25.8
VI-18	Select students for the program	8	25.8
VI-19	Set student selection criteria	8	25.8
VII-13	Take correspondence courses	8	25.8
IX-5	Collect money for charities	8	25.8
VI-13	Evaluate student selection data	7	22.6
VII-18	Write technical journal articles	7	22.6
II-29	Teach extension classes	6	19.4
VI-1	Administer counseling tests	6	19.4
VI-2	Administer placement tests	6	19.4
VII-17	Write professional articles	6	19.4
IX-10	Sell activities tickets	6	19.4
VI-11	Conduct home visits	5	16.1
IX-7	Drive a school bus	5	16.1

^aTotal number responding to a given task.

TABLE X

TOP AND BOTTOM DECILE -- NUMBER OF RESPONDENTS WHO
REPORTED PERFORMING EACH TASK IN GROUP IV

Duty-Task		Number Responding ^a (N= 26)	Per Cent
I-13	Organize lesson plans	25	92.3
I-15	Prepare lecture outlines	25	96.2
I-16	Select course content	25	96.2
I-23	Write course objectives	25	96.2
II-10	Give lectures	25	96.2
III-1	Administer written tests	25	96.2
I-5	Maintain an instructional material file	24	92.3
I-17	Select student projects	24	92.3
I-25	Write lesson objectives	24	92.3
I-26	Write student handout sheets	24	92.3
II-11	Give students assistance in laboratory	24	92.3
II-14	Present lessons by problem solving	24	92.3
II-25	Prepare principles by demonstration	24	92.3
II-26	Supervise student laboratory work	24	92.3
II-30	Work problems before class	24	92.3
III-6	Determine final grades	24	92.3
III-9	Formulate completion test questions	24	92.3
III-19	Grade written tests	24	92.3
VI-3	Advise students about employment	24	92.3
VI-4	Advise students about further education	24	92.3
IV-3	Collect fees	8	30.8
V-7	Manage a tool room	8	30.8
V-17	Select classrooms	8	30.8
VI-19	Set student selection criteria	8	30.8
II-21	Present lessons using video tape	7	26.9
IV-10	Maintain financial records	7	26.9
V-19	Select laboratory (shop) space	7	26.9
VI-2	Administer placement tests	7	26.9
VI-11	Conduct home visits	7	26.9
VI-13	Evaluate student selection data	7	26.9
VII-3	Conduct research	7	26.9
IX-6	Collect tickets at school activities	7	26.9
IV-5	Handle petty cash	6	23.1
VII-5	Participate in research studies	6	23.1
VII-13	Take correspondence courses	6	23.1
VII-18	Write technical journal articles	6	23.1
VI-1	Administer counseling tests	5	19.2
VII-17	Write professional articles	5	19.2
IX-7	Drive a school bus	4	15.4
IX-10	Sell activities tickets	4	15.4

^aTotal number responding to a given task.

TABLE XI

TOP AND BOTTOM DECILE -- TOTAL RELATIVE TIME REPORTED SPENT
ON EACH TASK IN GROUPS I, II, III, AND IV

Duty-Task		Total ^a Relative Time
II-22	Present lessons with a chalkboard	418
II-11	Give students assistance in laboratory	390
II-10	Give lectures	393
III-6	Determine final grades	388
II-26	Supervise student laboratory work	378
III-19	Grade written tests	374
I-15	Prepare lecture outlines	373
I-13	Organize lesson plans	368
III-1	Administer written tests	360
II-6	Direct student skill practice	359
I-17	Select student projects	351
II-25	Present principles through demonstration	351
I-16	Select course content	347
II-14	Present lessons through problem solving	347
II-30	Work problems before class	346
I-26	Write student handout sheets	344
III-18	Grade students class performance	335
II-8	Employ oral questioning	334
III-17	Grade student projects	329
I-5	Maintain an instructional materials file	324
IV-3	Collect fees	78
V-19	Select laboratory (shop) space	78
VII-3	Conduct research	75
II-21	Present lessons using video tape	72
VIII-20	Write proposals for funding	71
IX-9	Prepare news releases	66
IX-5	Collect money for charities	65
IV-10	Maintain financial records	62
IV-5	Handle petty cash	59
IX-6	Collect tickets at school activities	59
II-29	Teach extension classes	56
VI-13	Evaluate student selection data	54
VI-2	Administer placement tests	32
VII-17	Write professional articles	44
VII-18	Write technical journal articles	42
VII-13	Take correspondence courses	36
VI-11	Conduct home visits	34
VI-1	Administer counseling tests	32
IX-10	Sell activities tickets	26
IX-7	Drive a school bus	24

^aNumber responding multiplied by weighted factor (0-5) which indicated amount of time spent performing each task.

TABLE XII

TOP AND BOTTOM DECILE -- TOTAL RELATIVE TIME
REPORTED SPENT ON EACH TASK IN GROUP I

Duty -Task	Total ^a Relative Time	
II-11	Give students assistance in laboratory	106
II-22	Present lessons with a chalkboard	99
II-26	Supervise student laboratory work	98
I-15	Prepare lecture outlines	95
II-10	Give lectures	95
II-25	Present principles through demonstration	94
I-13	Organize lesson plans	91
I-17	Select student projects	87
II-6	Direct student skill practice	87
II-14	Present lessons through problem solving	81
III-6	Determine final grades	81
II-30	Work problems before class	80
I-26	Write student handout sheets	76
III-1	Administer written tests	76
VII-9	Read text books	76
I-16	Select course content	75
II-8	Employ oral questioning	74
I-5	Maintain an instructional materials file	73
I-21	Set up demonstrations	73
III-18	Grade students class performance	73
VIII-20	Write proposals for funding	11
VI-18	Select students for the program	11
IX-6	Collect tickets at school activities	10
VIII-4	Conduct occupational needs surveys	10
III-5	Conduct drop-out studies	10
II-21	Present lessons using video tape	9
II-29	Teach extension classes	8
VII-17	Write professional articles	8
VI-19	Set student selection criteria	7
VI-13	Evaluate student selection data	7
IX-9	Prepare news releases	6
VII-18	Write technical journal articles	6
IV-10	Maintain financial records	6
IV-5	Handle petty cash	6
VI-1	Administer counseling tests	4
VII-13	Take correspondence courses	3
IX-10	Sell activities tickets	2
IX-7	Drive a school bus	1
VI-11	Conduct home visits	1
VI-2	Administer placement tests	1

^aNumber responding multiplied by weighted factor (0-5) which indicated amount of time spent performing each task.

TABLE XIII

TOP AND BOTTOM DECILE -- TOTAL RELATIVE TIME
REPORTED SPENT ON EACH TASK IN GROUP II

Duty-Task	Total ^a Relative Time	
II-11	Give students assistance in laboratory	107
III-6	Determine final grades	103
I-15	Prepare lecture outlines	102
II-10	Give lectures	102
III-19	Grade written tests	101
II-26	Supervise student laboratory work	100
I-13	Organize lesson plans	98
I-26	Write student handout sheets	96
I-16	Select course content	95
III-17	Grade student projects	94
II-25	Present principles through demonstration	94
III-1	Administer written tests	93
II-6	Direct student skill practice	93
VII-9	Read text books	92
II-8	Employ oral questioning	92
VI-3	Advise students about employment	91
II-30	Work problems before class	91
III-12	Formulate multiple choice questions	90
I-5	Maintain an instructional materials file	90
III-18	Grade students class performance	90
IX-9	Prepare news releases	20
IV-10	Maintain financial records	19
IV-5	Handle petty cash	18
IX-5	Collect money for charities	18
VI-2	Administer placement tests	17
VI-18	Select students for the program	16
VI-19	Set student selection criteria	16
VIII-4	Conduct occupational needs surveys	16
II-21	Present lessons using video tape	15
VI-13	Evaluate student selection data	15
VIII-20	Write proposals for funding	15
IX-6	Collect tickets at school activities	15
II-29	Teach extension classes	12
VI-11	Conduct home visits	12
VII-17	Write professional articles	12
VI-1	Administer counseling tests	10
IX-10	Sell activities tickets	9
IX-7	Drive a school bus	8
VII-13	Take correspondence courses	7
VII-18	Write technical journal articles	7

^aNumber responding multiplied by weighted factor (0-5) which indicated amount of time spent performing each task.

TABLE XIV

TOP AND BOTTOM DECILE - - TOTAL RELATIVE TIME
REPORTED SPENT ON EACH TASK IN GROUP III

Duty-Task	Total ^a Relative Time	
III-6	Determine final grades	109
III-19	Grade written tests	109
II-22	Present lessons with a chalkboard	107
III-18	Grade students class performance	106
I-26	Write student handout sheets	104
II-10	Give lectures	102
IV-8	Maintain attendance records	101
I-17	Select student projects	100
I-13	Organize lesson plans	99
II-14	Present lessons through problem solving	99
III-1	Administer written tests	99
I-16	Select course content	95
IV-2	Attend faculty meetings	95
VI-3	Advise students about employment	95
VII-10	Read technical journals	95
I-15	Prepare lecture outlines	93
VII-9	Read text books	91
VIII-8	Identify appropriate program content	88
I-5	Maintain an instructional materials file	86
VI-6	Advise students with scholastic problems	84
IV-3	Collect fees	25
V-19	Select laboratory (shop) space	24
IX-9	Prepare news releases	24
IV-10	Maintain financial records	23
VIII-20	Write proposals for funding	23
IV-5	Handle petty cash	22
III-8	Formulate case-study problems	21
VII-3	Conduct research	21
II-29	Teach extension classes	20
IX-5	Collect money for charities	20
VI-13	Evaluate student selection data	19
VII-18	Write technical journal articles	19
IX-6	Collect tickets at school activities	19
VI-2	Administer placement tests	17
VII-13	Take correspondence courses	17
VII-17	Write professional articles	16
VI-1	Administer counseling tests	13
VI-11	Conduct home visits	12
IX-7	Drive a school bus	10
IX-10	Sell activities tickets	10

^aNumber responding multiplied by weighted factor (0-5) which indicated amount of time spent performing each task.

TABLE XV

TOP AND BOTTOM DECILE -- TOTAL RELATIVE TIME
REPORTED SPENT ON EACH TASK IN GROUP IV

Duty-Task		Total ^a Relative Time
II-22	Present lessons with a chalkboard	97
II-11	Give students assistance in laboratory	93
II-26	Supervise student laboratory work	91
II-10	Give lectures	90
III-1	Administer written tests	88
II-25	Present principles through demonstration	87
III-6	Determine final grades	86
III-19	Grade written tests	85
II-8	Employ oral questioning	82
II-30	Work problems before class	82
I-15	Prepare lecture outlines	81
I-16	Select course content	79
I-13	Organize lesson plans	78
I-17	Select student projects	78
VI-3	Advise students about employment	75
I-5	Maintain an instructional materials file	72
II-14	Present lessons through problem solving	71
VI-4	Advise students about further education	71
I-21	Set up demonstrations	70
I-23	Write course objectives	68
IV-3	Collect fees	17
VI-19	Set student selection criteria	17
II-29	Teach extension classes	16
V-17	Select classrooms	16
VIII-4	Conduct occupational needs surveys	16
IX-6	Collect tickets at school activities	15
IV-10	Maintain financial records	14
IV-5	Handle petty cash	13
VI-13	Evaluate student selection data	13
II-21	Present lessons using video tape	12
VII-3	Conduct research	12
VII-5	Participate in research studies	11
VII-18	Write technical journal articles	10
VI-2	Administer placement tests	9
VI-11	Conduct home visits	9
VII-13	Take correspondence courses	9
VII-17	Write professional articles	9
VI-1	Administer counseling tests	5
IX-7	Drive a school bus	5
IX-10	Sell activities tickets	5

^aNumber responding multiplied by weighted factor (0-5) which indicated amount of time spent performing each task.

TABLE XVI

TOP AND BOTTOM DECILE -- PRODUCTS OF THE NUMBER OF AFFIRMATIVE
RESPONDENTS AND THE TOTAL RELATIVE TIME SPENT
ON THE TASK IN GROUPS I, II, III, AND IV

	Duty-Task	Product ^a
II-22	Present lessons with a chalkboard	46816
II-10	Give lectures	49000
III-6	Determine final grades	42292
II-11	Give students assistance in laboratory	41658
I-15	Prepare lecture outlines	41030
III-19	Grade written tests	40392
I-13	Organize lesson plans	39744
III-1	Administer written tests	39600
I-26	Write student handout sheets	37496
II-26	Supervise student laboratory work	37044
I-17	Select student projects	36855
I-16	Select course content	36782
II-30	Work problems before class	36330
II-25	Present principles by demonstration	35802
II-14	Present lessons through problem solving	35741
IV-2	Attend faculty meetings	35530
II-6	Direct student skill practice	35182
I-5	Maintain an instructional materials file	34344
VI-3	Advise students about employment	33696
II-8	Employ oral questioning	33400
VIII-1	Adapt occupational surveys to local needs	2720
VIII-20	Write proposals for funding	2627
II-21	Present lessons using video tape	2448
VI-18	Select students for the program	2370
IX-5	Collect money for charities	2340
VIII-4	Conduct occupational needs surveys	2277
IV-5	Handle petty cash	1888
IX-6	Collect tickets at school activities	1829
VI-19	Set student selection criteria	1885
IV-10	Maintain financial records	1674
II-29	Teach extension classes	1624
VI-13	Evaluate student selection data	1404
VII-17	Write professional articles	1674
VII-18	Write technical journal articles	1008
VI-2	Administer placement tests	968
VII-13	Take correspondence courses	756
VI-1	Administer counseling test	640
VI-11	Conduct home visits	714
IX-10	Sell activities tickets	546
IX-7	Drive a school bus	384

^aResponses multiplied by the total relative time.

TABLE XVII

TOP AND BOTTOM DECILE -- PRODUCTS OF THE NUMBER OF
AFFIRMATIVE RESPONDENTS AND THE TOTAL RELATIVE
TIME SPENT ON THE TASK IN GROUP I

	Duty-Task	Product ^a
II-11	Give students assistance in laboratory	2862
II-22	Present lessons with a chalkboard	2673
I-15	Prepare lecture outlines	2565
II-10	Give lectures	2565
II-26	Supervise student laboratory work	2548
II-25	Present principles by demonstration	2444
I-13	Organize lesson plans	2366
I-17	Select student projects	2349
II-6	Direct student skill practice	2088
II-30	Work problems before class	2080
III-6	Determine final grades	2025
I-26	Write student handout sheets	1976
III-1	Administer written tests	1976
II-14	Present lessons through problem solving	1944
IV-2	Attend faculty meetings	1836
I-5	Maintain an instructional materials file	1825
VII-9	Read text books	1824
II-9	Give homework assignments	1820
II-8	Employ oral questioning	1776
I-21	Set up demonstrations	1752
VIII-4	Conduct occupational needs surveys	50
II-21	Present lessons using video tape	45
VI-18	Select students for the program	44
VIII-1	Adapt occupational surveys to local needs	44
II-29	Teach extension classes	40
III-5	Conduct drop-out studies	40
IX-6	Collect tickets at school activities	40
IV-5	Handle petty cash	30
VII-17	Write professional articles	28
VI-13	Evaluate student selection data	28
IX-9	Prepare news releases	24
IV-10	Maintain financial records	24
VII-18	Write technical journal articles	24
IV-19	Set student selection criteria	21
VI-1	Administer counseling tests	8
VII-13	Take correspondence courses	6
IX-10	Sell activities tickets	4
VI-2	Administer placement tests	1
VI-11	Conduct home visits	1
IX-7	Drive a school bus	1

^aResponses multiplied by the total relative time.

TABLE XVIII

TOP AND BOTTOM DECILE -- PRODUCTS OF THE NUMBER OF
AFFIRMATIVE RESPONDENTS AND THE TOTAL RELATIVE
TIME SPENT ON THE TASK IN GROUP II

	Duty-Task	Product ^a
II-11	Give students assistance in laboratory	2889
I-15	Prepare lecture outlines	2856
II-10	Give lectures	2754
I-13	Organize lesson plans	2700
III-6	Determine final grades	2678
III-19	Grade written tests	2652
I-26	Write student handout sheets	2646
II-26	Supervise student laboratory work	2626
VII-9	Read text books	2604
I-16	Select course content	2592
III-17	Grade student projects	2565
III-12	Formulate multiple choice questions	2548
II-8	Employ oral questioning	2484
VI-3	Advise students about employment	2484
II-30	Work problems before class	2454
III-1	Administer written tests	2444
VII-8	Read professional journals	2436
IV-8	Maintain attendance records	2430
I-23	Write course objectives	2408
I-25	Write lesson objectives	2352
IV-3	Collect fees	198
IV-5	Handle petty cash	198
IX-5	Collect money for charities	162
IV-10	Maintain financial records	152
VIII-20	Write proposals for funding	150
VI-19	Set student selection criteria	144
VIII-4	Conduct occupational needs surveys	144
VI-2	Administer placement tests	136
IX-6	Collect tickets at school activities	135
VI-18	Select students for the program	128
II-21	Present lessons using video tape	120
VI-13	Evaluate student selection data	120
II-29	Teach extension classes	108
VI-11	Conduct home visits	96
VII-17	Write professional articles	96
IX-10	Sell activities tickets	81
VI-1	Administer counseling test	70
VII-18	Write technical journal articles	49
IX-7	Drive a school bus	48
VII-13	Take correspondence courses	35

^aResponses multiplied by the total relative time.

TABLE XIX

TOP AND BOTTOM DECILE - - PRODUCTS OF THE NUMBER OF
AFFIRMATIVE RESPONDENTS AND THE TOTAL RELATIVE
TIME SPENT ON THE TASK IN GROUP III

	Duty-Task	Product ^a
III-6	Determine final grades	3270
II-22	Present lessons with a chalkboard	3210
III-19	Grade written tests	3161
I-26	Write student handout sheets	3120
II-10	Give lectures	3060
I-13	Organize lesson plans	2970
III-1	Administer written tests	2970
III-18	Grade student class performance	2968
IV-2	Attend faculty meetings	2850
VI-3	Advise students about employment	2850
VII-10	Read technical journals	2850
IV-8	Maintain attendance records	2828
I-17	Select student projects	2800
II-14	Present lessons through problem solving	2716
I-16	Select course content	2660
VII-8	Read professional journals	2640
I-15	Prepare lecture outlines	2604
VII-9	Read text books	2548
I-5	Maintain an instructional materials file	2408
VII-2	Attend professional meetings	2378
V-19	Select laboratory (shop) space	240
VI-18	Select students for the program	232
VII-3	Conduct research	231
VIII-20	Write proposals for funding	230
IV-5	Handle petty cash	220
III-8	Formulate case-study problems	210
IX-6	Collect tickets at school activities	209
VI-19	Set student selection criteria	200
IV-10	Maintain financial records	184
IX-5	Collect money for charities	160
VII-13	Take correspondence courses	136
VI-13	Evaluate student selection data	133
VII-18	Write technical journal articles	133
II-29	Teach extension classes	120
VI-2	Administer placement tests	102
VII-17	Write professional articles	96
VI-1	Administer counseling tests	78
VI-11	Conduct home visits	60
IX-10	Sell activities tickets	60
IX-7	Drive a school bus	50

^aResponses multiplied by the total relative time.

TABLE XX

TOP AND BOTTOM DECILE -- PRODUCTS OF THE NUMBER OF
AFFIRMATIVE RESPONDENTS AND THE TOTAL RELATIVE
TIME SPENT ON THE TASK IN GROUP IV

	Duty-Task	Product ^a
II-10	Give lectures	2250
II-11	Give students assistance in laboratory	2232
II-22	Present lessons with a chalkboard	2231
III-1	Administer written tests	2200
II-26	Supervise student laboratory work	2184
II-25	Present principles by demonstration	2088
III-6	Determine final grades	2064
III-19	Grade written tests	2040
I-15	Prepare lecture outlines	2025
I-16	Select course content	1975
II-30	Work problems before class	1968
I-13	Organize lesson plans	1950
II-8	Employ oral questioning	1886
I-17	Select student projects	1872
VI-3	Advise students about employment	1800
I-5	Maintain an instructional materials file	1728
II-14	Present lessons through problem solving	1704
VI-4	Advise students about further education	1704
I-23	Write course objectives	1700
I-21	Set up demonstrations	1610
VIII-4	Conduct occupational needs surveys	144
IV-3	Collect fees	136
VI-19	Set student selection criteria	136
V-19	Select laboratory (shop) space	133
V-17	Select classrooms	128
IX-6	Collect tickets at school activities	105
IV-10	Maintain financial records	98
VI-13	Evaluate student selection data	91
II-21	Present lessons using video tape	84
VII-3	Conduct research	84
IV-5	Handle petty cash	78
VII-5	Participate in research studies	66
VI-2	Administer placement tests	63
VII-11	Conduct home visits	63
VII-18	Write technical journal articles	60
VII-13	Take correspondence courses	54
VII-17	Write professional articles	45
VI-1	Administer counseling tests	25
IX-7	Drive a school bus	20
IX-10	Sell activities tickets	20

^aResponses multiplied by the total relative time.

TABLE XXI

TOP AND BOTTOM DECILE - - REPORTED MEAN RELATIVE
TIME SPENT PERFORMING EACH TASK IN
GROUPS I, II, III, AND IV

Duty-Task		Mean time ^a
II-26	Supervise student laboratory work	3.86
II-22	Present lessons with a chalkboard	3.73
II-11	Give students assistance in laboratory	3.71
II-6	Direct student skill practice	3.66
II-7	Direct student project work	3.56
III-6	Determine final grades	3.56
II-10	Give lectures	3.55
III-18	Grade students class performance	3.53
III-19	Grade written tests	3.46
II-25	Present principles by demonstration	3.44
III-17	Grade student projects	3.43
I-13	Organize lesson plans	3.41
I-15	Prepare lecture outlines	3.39
II-14	Present lessons through problem solving	3.37
I-17	Select student projects	3.34
II-8	Employ oral questioning	3.34
II-30	Work problems before class	3.30
I-16	Select course content	3.27
II-2	Demonstrate manipulative skills	3.27
III-1	Administer written test	3.27
III-5	Conduct drop-out studies	2.00
VI-2	Administer placement tests	2.00
I-10	Operate a mimeograph machine	1.98
VI-16	Provide disciplinary action	1.98
VII-3	Conduct research	1.97
II-29	Teach extension classes	1.93
VIII-20	Write proposals for funding	1.92
VII-17	Write professional articles	1.91
IX-6	Collect tickets at school activities	1.90
IV-5	Handle petty cash	1.84
IX-9	Prepare news releases	1.83
IV-19	Prepare travel claims	1.81
IX-5	Collect money for charities	1.81
VI-18	Write technical journal articles	1.75
VII-13	Take correspondence courses	1.71
VI-11	Conduct home visits	1.62
VI-1	Administer counseling tests	1.60
IX-7	Drive a school bus	1.50
VI-8	Assist students in getting financial aids	1.49
IX-10	Sell activities tickets	1.24

^aTotal relative time divided by responses.

TABLE XXII

TOP AND BOTTOM DECILE -- REPORTED MEAN RELATIVE
TIME SPENT PERFORMING EACH TASK IN GROUP I

Duty-Task	Mean time ^a	
II-11	Give students assistance in laboratory	3.93
II-26	Supervise student laboratory work	3.72
II-22	Present lessons with a chalkboard	3.67
II-6	Direct student skill practice	3.63
II-25	Present principles by demonstration	3.62
I-15	Prepare lecture outlines	3.52
II-10	Give lectures	3.52
I-13	Organize lesson plans	3.50
II-7	Direct student project work	3.39
II-14	Present lessons through problem solving	3.38
III-6	Determine final grades	3.24
I-17	Select student projects	3.22
III-18	Grade students class performance	3.17
VII-9	Read text books	3.17
I-16	Select course content	3.13
III-17	Grade student projects	3.13
II-2	Demonstrate manipulative skills	3.10
II-8	Employ oral questioning	3.08
II-30	Work problems before class	3.08
I-21	Set up demonstrations	3.04
V-19	Select laboratory (shop) space	2.33
III-25	Rate other teachers	2.33
IV-12	Maintain placement records	2.17
VIII-4	Conduct occupational needs surveys	2.00
VI-1	Administer counseling tests	2.00
VI-16	Provide disciplinary action	2.00
VIII-20	Write proposals for funding	1.83
II-21	Present lessons using video tape	1.80
VI-13	Evaluate student selection data	1.75
VII-17	Write professional articles	1.75
II-29	Teach extension classes	1.60
IX-9	Prepare news releases	1.50
VII-18	Write technical journal articles	1.50
VII-13	Take correspondence courses	1.50
IV-10	Maintain financial records	1.50
IV-5	Handle petty cash	1.20
IX-10	Sell activities tickets	1.00
IX-7	Drive a school bus	1.00
VI-11	Conduct home visits	1.00
VI-2	Administer placement tests	1.00

^aTotal relative time divided by responses.

TABLE XXIII

TOP AND BOTTOM DECILE -- REPORTED MEAN RELATIVE
TIME SPENT PERFORMING EACH TASK IN GROUP II

Duty-Task	Mean time ^a	
II-11	Give students assistance in laboratory	3.96
III-6	Determine final grades	3.96
III-19	Grade written tests	3.92
II-26	Supervise student laboratory work	3.88
II-10	Give lectures	3.78
II-6	Direct student skill practice	3.72
II-7	Direct student project work	3.72
I-13	Organize lesson plans	3.70
I-15	Prepare lecture outlines	3.64
I-26	Write student handout sheets	3.63
III-1	Administer written tests	3.62
III-18	Grade students class performance	3.60
I-16	Select course content	3.56
III-17	Grade student projects	3.52
II-25	Present principles by demonstration	3.48
I-5	Maintain an instructional materials file	3.46
II-8	Employ oral questioning	3.41
VI-3	Advise students about employment	3.41
II-2	Demonstrate manipulative skills	3.40
II-30	Work problems before class	3.37
VI-2	Administer placement tests	2.13
VI-18	Write technical journal articles	2.00
IX-5	Collect money for charities	2.00
II-21	Present lessons using video tape	1.88
VI-13	Evaluate student selection data	1.88
IX-9	Prepare news releases	1.82
VI-19	Set student selection criteria	1.78
VIII-4	Conduct occupational needs surveys	1.78
V-19	Select laboratory (shop) space	1.75
IX-6	Collect tickets at school activities	1.67
IV-5	Handle petty cash	1.64
VI-11	Conduct home visits	1.50
VII-17	Write professional articles	1.50
VIII-20	Write proposals for funding	1.50
VI-1	Administer counseling tests	1.43
VII-13	Take correspondence courses	1.40
II-29	Teach extension classes	1.33
IX-7	Drive a school bus	1.33
VII-18	Write technical journal articles	1.00
IX-10	Sell activities tickets	1.00

^aTotal relative time divided by responses.

TABLE XXIV

TOP AND BOTTOM DECILE -- REPORTED MEAN RELATIVE
TIME SPENT PERFORMING EACH TASK IN GROUP III

Duty-Task	Mean time ^a	
III-18	Grade students class performance	3.79
III-19	Grade written tests	3.76
III-6	Determine final grades	3.63
IV-8	Maintain attendance records	3.61
I-17	Select student projects	3.57
II-22	Present lessons with a chalkboard	3.57
I-26	Write student handout sheets	3.47
II-14	Present lessons through problem solving	3.46
II-10	Give lectures	3.40
I-16	Select course content	3.39
I-15	Prepare lecture outlines	3.32
I-13	Organize lesson plans	3.30
III-1	Administer written test	3.30
VII-9	Read text books	3.25
IV-2	Attend faculty meetings	3.17
VI-3	Advise students about employment	3.17
VII-10	Read technical journals	3.17
I-5	Maintain an instructional materials file	3.07
I-23	Write course objectives	3.07
VI-6	Advise students with scholastic problems	3.00
VII-18	Provide disciplinary action	2.98
VI-13	Administer placement tests	2.71
VIII-4	Conduct occupational needs surveys	2.70
VII-17	Write professional articles	2.67
VIII-2	Analyze occupational clusters	2.55
II-1	Coordinate a cooperative work program	2.55
IX-5	Collect money for charities	2.50
VI-11	Conduct home visits	2.40
V-19	Select laboratory (shop) space	2.40
VIII-20	Write proposals for funding	2.30
IV-3	Collect fees	2.27
IV-5	Handle petty cash	2.20
IX-9	Prepare news releases	2.18
VI-1	Administer counseling tests	2.17
VII-13	Take correspondence courses	2.13
III-8	Formulate case-study problems	2.10
IX-7	Drive a school bus	2.00
VII-3	Conduct research	1.91
IX-6	Collect tickets at school activities	1.73
IX-10	Sell activities tickets	1.67

^aTotal relative time divided by responses.

TABLE XXV

TOP AND BOTTOM DECILE -- REPORTED MEAN RELATIVE
TIME SPENT PERFORMING EACH TASK IN GROUP IV

	Duty-Task	Mean time ^a
II-22	Present lessons with a chalkboard	4.22
II-11	Give students assistance in laboratory	3.88
II-26	Supervise student laboratory work	3.79
II-25	Present principles by demonstration	3.63
II-10	Give lectures	3.60
III-6	Determine final grades	3.58
II-8	Employ oral questioning	3.57
III-19	Grade written tests	3.54
III-1	Administer written tests	3.52
II-30	Work problems before class	3.42
I-17	Select student projects	3.25
I-15	Prepare lecture outlines	3.24
I-16	Select course content	3.16
VI-3	Advise students about employment	3.13
I-13	Organize lesson plans	3.12
I-21	Set up demonstrations	3.04
I-5	Maintain an instructional materials file	3.00
II-14	Present lessons through problem solving	2.96
IX-13	Visit with other teachers	2.91
II-6	Direct student skill practice	2.81
IX-6	Collect tickets at school activities	2.14
IV-3	Collect fees	2.13
VI-19	Set student selection criteria	2.13
V-18	Solicit contributions from industry	2.11
IV-10	Maintain financial records	2.00
V-17	Select classrooms	2.00
VI-13	Evaluate student selection criteria	1.86
VII-5	Participate in research studies	1.83
VII-17	Write professional articles	1.80
II-29	Teach extension classes	1.78
VIII-4	Conduct occupational needs surveys	1.78
II-21	Present lessons using video tape	1.71
VII-3	Conduct research	1.71
VII-18	Write technical journal articles	1.67
VII-13	Take correspondence courses	1.50
VI-2	Administer placement tests	1.29
VI-11	Conduct home visits	1.29
IX-7	Drive a school bus	1.25
IX-10	Sell activities tickets	1.25
VI-1	Administer counseling tests	1.00

^aTotal relative time divided by responses.

TABLE XXVI

KENDALL COEFFICIENT OF CONCORDANCE

<u>Concordance</u>	<u>Chi Square</u>	<u>I.D. Number</u>
1.000000	398.00000	25
0.958278	381.39429	31
0.945261	376.21387	136
0.920002	366.16064	153
0.900455	358.38086	108
0.894843	356.14746	110
0.892503	355.21606	79
0.888724	353.71191	150
0.887966	353.41040	157
0.887767	353.33105	164
0.886627	352.87744	154
0.886193	352.70483	131
0.883668	351.69995	134
0.883330	351.56519	95
0.879132	349.89453	138
0.878758	349.74585	118
0.878518	349.65015	75
0.877787	349.35938	165
0.877293	349.16235	59
0.871704	346.93799	48
0.869328	345.99243	37
0.868092	345.50049	71
0.867476	345.25562	97
0.864987	344.26465	8
0.862156	343.13818	26
0.858781	341.79492	24
0.856748	340.98560	137
0.856529	340.89844	170
0.854776	340.20093	116
0.852992	339.49097	51
0.852628	339.34595	28
0.850160	338.36377	22
0.849998	338.29907	30
0.849656	338.16309	29
0.848461	337.68750	27
0.847280	337.21753	14
0.847163	337.17090	168
0.847130	337.15747	87
0.846501	336.90723	119
0.845185	336.38354	125
0.842005	335.11792	6
0.841652	334.97729	156
0.839267	334.02832	117

TABLE XXVI (Continued)

0.838511	333.72729	99
0.836781	333.03857	91
0.835035	332.34399	114
0.834231	332.02393	132
0.834132	331.98438	148
0.833504	331.73462	96
0.833465	331.71875	17
0.831627	330.98730	73
0.830993	330.73511	40
0.828841	329.87842	101
0.828333	329.67651	23
0.823351	327.69360	1
0.821413	326.92212	67
0.820981	326.75024	66
0.816864	325.11157	169
0.815893	324.72534	74
0.814774	324.28003	144
0.813848	323.91162	140
0.812768	323.48145	123
0.810701	322.65869	47
0.806806	321.10889	162
0.806641	321.04297	152
0.801212	318.88208	42
0.801183	318.87061	38
0.801048	318.81689	111
0.800870	318.74609	166
0.798479	317.79468	113
0.797962	317.58862	19
0.796499	317.00659	141
0.794319	316.13892	77
0.792209	315.29007	34
0.787610	313.46851	143
0.786592	313.06348	81
0.785082	312.46240	35
0.782849	311.57373	49
0.780693	310.71558	142
0.780596	310.67700	124
0.780047	310.45850	158
0.778477	309.83374	146
0.775378	308.60034	12
0.775123	308.49878	21
0.773502	307.85376	135
0.769241	306.15771	161
0.768656	305.92480	128
0.756243	300.98438	4
0.752126	299.34595	145
0.749424	298.27051	72
0.748208	297.78687	171

TABLE XXVI (Continued)

0.745033	296.52295	122
0.743365	295.85913	149
0.742187	295.39014	121
0.723435	287.92700	52
0.722584	287.58838	127
0.722472	287.54346	139
0.720777	286.86914	82
0.719044	286.17944	107
0.703675	280.06250	32
0.681591	271.27295	65
0.662099	263.51514	45
0.659698	262.55981	94
0.640307	245.84222	90
0.620999	247.15759	155
0.609494	242.57866	103
0.500000	199.00000	115
0.500000	199.00000	50
0.484759	192.93394	109
0.168317	66.99022	133

TABLE XXVII
 KENDALL COEFFICIENT OF CONCORDANCE
 FOR GROUP I RESPONDENTS

<u>Concordance</u>	<u>Chi Square</u>	<u>I.D. Number</u>
0.958278	381.39429	31
0.892503	355.21606	79
0.886193	352.70483	131
0.883330	351.56519	95
0.868092	345.50049	71
0.850160	338.36377	22
0.848461	337.68750	27
0.846501	336.90723	119
0.842005	335.11792	6
0.838511	333.72729	99
0.823351	327.69360	1
0.815893	324.72534	74
0.812768	323.48145	123
0.801212	318.88208	42
0.801048	318.81689	111
0.787610	313.46851	143
0.786592	313.06348	81
0.773502	307.85376	135
0.722584	287.58838	127
0.722472	287.54346	139
0.719044	286.17944	107
0.640307	245.84222	90
0.620999	247.15759	155
0.500000	199.00000	115
0.500000	199.00000	50

TABLE XXVIII
 KENDALL COEFFICIENT OF CONCORDANCE
 FOR GROUP II RESPONDENTS

<u>Concordance</u>	<u>Chi Square</u>	<u>I.D. Number</u>
0.945261	376.21387	136
0.900455	358.38086	108
0.887767	353.33105	164
0.877293	349.16235	59
0.869328	345.99243	37
0.862156	343.13818	26
0.854776	340.20093	116
0.849998	338.29907	30
0.847163	337.17090	168
0.847130	337.15747	87
0.841652	334.97729	156
0.836781	333.03857	91
0.834231	332.02393	132
0.834132	331.98438	148
0.833504	331.73462	96
0.833465	331.71875	17
0.828841	329.87842	101
0.828333	329.67651	23
0.821413	326.92212	67
0.814774	324.28003	144
0.813848	323.91162	140
0.806641	321.04297	152
0.801183	318.87061	38
0.782849	311.57373	49
0.780596	310.67700	124
0.775378	308.60034	12
0.768656	305.92480	128
0.720777	286.86914	82

TABLE XXIX
 KENDALL COEFFICIENT OF CONCORDANCE
 FOR GROUP III RESPONDENTS

<u>Concordance</u>	<u>Chi Square</u>	<u>I.D. Number</u>
1.000000	398.00000	25
0.920002	366.16064	153
0.887966	353.41040	157
0.878518	349.65015	75
0.877787	349.35938	165
0.871704	346.93799	48
0.867476	345.25562	97
0.864987	344.26465	8
0.856748	340.98560	137
0.856529	340.89844	170
0.849656	338.16309	29
0.845185	336.38354	125
0.839267	334.02832	117
0.831627	330.98730	73
0.820981	326.75024	66
0.816864	325.11157	169
0.798479	317.79468	113
0.797962	317.58862	19
0.796499	317.00659	141
0.794319	316.13892	77
0.785082	312.46240	35
0.769241	306.15771	161
0.752126	299.34595	145
0.743365	295.85913	149
0.742187	295.39014	121
0.723435	287.92700	52
0.662099	263.51514	45
0.609494	242.57866	103
0.484759	192.93394	109
0.168317	66.99022	133

TABLE XXX
 KENDALL COEFFICIENT OF CONCORDANCE
 FOR GROUP IV RESPONDENTS

<u>Concordance</u>	<u>Chi Square</u>	<u>I.D. Number</u>
0.894843	356.14746	110
0.888724	353.71191	150
0.886627	352.87744	154
0.883668	351.69995	134
0.879132	349.89453	138
0.878758	349.74585	118
0.858781	341.79492	24
0.852992	339.49097	51
0.852628	339.34595	28
0.847280	337.21753	14
0.835035	332.34399	114
0.830993	330.73511	40
0.810701	322.65869	47
0.806806	321.10889	162
0.800870	318.74609	166
0.792209	315.29907	34
0.780693	310.71558	142
0.780047	310.45850	158
0.778477	309.83374	146
0.756243	300.98438	4
0.749424	298.27051	72
0.748208	297.78687	171
0.745033	296.52295	122
0.703675	280.06250	32
0.681591	271.27295	65
0.659698	262.55981	94

FOOTNOTES

¹Richard W. Tinnell, "A Task Inventory of Technical Teachers in Oklahoma" (Unpub. Ed.D. Dissertation, Oklahoma State University, 1975), pp. 46-66.

CHAPTER V

SUMMARY AND CONCLUSIONS

The hypothesis of this study, as stated in Chapter I, was: There is no significant difference in the results of data obtained by the task inventory administered to the same technical-occupation instructors under varying occupational emphasis at different times during the academic year. In addition to this hypothesis, three assumptions were made:

- A. Instructor tasks vary from time to time through a semester (term). For example, at the beginning of a semester course planning is important; later executing of instruction overshadows planning; and near the end, student evaluation becomes the main focus.
- B. Current activities at any given time tend to dominate an instructor's immediate perception of his or her job. An instructor tends to place relatively more importance on the task at hand than on those of the past or future.
- C. Instructors will respond to a task inventory in a manner which reflects their immediate perception of their job. Their responses will be given in light of the way they see their job at the time the questionnaire is completed.

Interest in the above hypothesis was created by the necessity for using technical-occupation-faculty-prepared data in the completion of

forms used in requesting local, state, and federal approval and assistance and a need to determine how the faculty view the requirement of having to supply data: (1) Is it something to be ignored? (2) Is it something to be viewed as a necessary nuisance? or (3) Is the response determined by the time of year the data was requested?

A review of the literature revealed that very little attention has been given to determine the best time to request information which would be valid. Brzezinski¹ in her study was concerned with improving questionnaire techniques by studying such items as: (1) length of questionnaire, (2) number of questions, (3) lack of anonymity, and (4) development of questions that would have the same meaning to all respondents. The difficulty of marking the questionnaire was viewed by Rummell² as having an effect on its validity. Several of the earlier studies partially looked at the effect of the time period on a questionnaire's validity: Byers³ to avoiding holidays, Schaefer⁴ to avoiding stressful periods, and Topping to the selection of the best time period during the semester.

The present study was interested in finding the best time period for securing valid data from technical-occupation instructors. Two identical questionnaires were mailed to 139 instructors at 18 post-secondary institutions in Oklahoma. The 139 potential respondents were those instructors who had returned the Tinnell instrument in October (139 of 171 from 23 institutions). The 139 questionnaires were mailed in either November (Group I), January (Group II), February (Group III), or April (Group IV). The four time periods reflect different job emphasis periods: beginning of a semester (January), middle of a semester (February), and the end of the semester (November and April).

All of these results from the 115 who responded were compared to the Tinnell time period (October, middle of semester).

Although the questionnaire contains many interesting items, how each instructor viewed each duty-task presented in the task inventory is of no major interest to this study. The major emphasis was the consistency - - not the manner of answering - - with which an instructor responded to the Tinnell study and the current study.

TABLE XXXI

TOP DECILE - - NUMBER OF RESPONDENTS WHO REPORTED PERFORMING EACH TASK COMPARED WITH THE TINNELL STUDY AND THE PRESENT STUDY

Duty-Task	Tinnell Study Comp.	Present Study Groups			
		I	II	III	IV
I-5 Maintain an instructional materials file		X	X	X	X
I-13 Organize lesson plans	X	X	X	X	X
I-15 Prepare lecture outlines	X	X	X	X	X
I-16 Select course content	X	X	X	X	X
I-17 Select student projects		X	X	X	X
I-21 Set up demonstrations	X		X		
I-23 Write course objectives	X	X	X		
I-25 Write lesson objectives			X		X
I-26 Write student handout sheets	X	X	X	X	X
II-8 Employ oral questioning			X		
II-11 Give students assistance in laboratory		X	X	X	X
II-14 Present lessons through problem solving	X	X	X	X	X
II-9 Give homework assignments	X		X		
II-10 Give lectures	X	X	X	X	X
II-22 Present lessons with a chalkboard	X	X	X	X	
II-25 Present principles by demonstration			X	X	X
II-26 Supervise student laboratory work			X		X
II-30 Work problems before class		X	X	X	X
III-1 Administer written tests	X	X	X		X
III-6 Determine final grades	X	X	X		X
III-9 Formulate completion test questions					X
III-12 Formulate multiple choice questions				X	
III-17 Grade student projects				X	
III-18 Grade written tests					X
III-19 Grade students class performance	X	X	X		X
IV-2 Attend faculty meetings	X	X	X	X	X
IV-8 Maintain attendance records				X	X
VI-3 Advise students about employment		X			X
VI-4 Advise students about further education					X
VI-6 Advise students with scholastic problems	X				X
VII-2 Attend professional meetings	X	X	X	X	X
VII-4 Participate in professional organizations	X				
VII-8 Read professional journals	X	X	X	X	X
VII-9 Read text books	X	X		X	
VII-10 Read technical journals	X			X	

TABLE XXXII

BOTTOM DECILE -- NUMBER OF RESPONDENTS WHO REPORTED PERFORMING EACH TASK COMPARED WITH THE TINNELL STUDY AND THE PRESENT STUDY

Duty-Task	Tinnell Study Comp.	Present Study Groups			
		I	II	III	IV
II-1	Coordinate a cooperative work program	X		X	
II-21	Present lessons using video tape	X	X	X	X
II-29	Teach extension classes	X	X	X	X
III-5	Conduct drop-out studies		X		
III-8	Formulate case-study problems				X
III-25	Rate other teachers	X			
IV-3	Collect fees	X		X	X
IV-5	Handle petty cash	X		X	X
IV-10	Maintain financial records	X	X	X	X
V-1	Administer laboratory clean-up	X			
V-7	Manage a tool room				X
V-17	Select classrooms				X
V-19	Select laboratory (shop) space	X	X		X
VI-1	Administer counseling tests	X		X	X
VI-2	Administer placement tests	X	X	X	X
VI-11	Conduct home visits	X	X	X	X
VI-13	Evaluate student selection data	X	X	X	X
VI-18	Select students for the program	X	X	X	X
VI-19	Set student selection criteria	X	X	X	X
VII-3	Conduct research				X
VII-5	Participate in research studies				X
VII-13	Take correspondence courses	X	X	X	X
VII-17	Write professional articles	X	X	X	X
VII-18	Write technical journal articles	X	X	X	X
VIII-1	Adapt occupational surveys to local needs	X		X	
VIII-2	Analyze occupational clusters		X		
VIII-4	Conduct occupational needs surveys	X		X	X
VIII-20	Write proposals for funding	X		X	X
IX-5	Collect money for charities	X		X	X
IX-6	Collect tickets at school activities	X	X	X	X
IX-7	Drive a school bus	X	X	X	X
IX-9	Prepare news releases		X		
IX-10	Sell activities tickets	X	X	X	X

TABLE XXXIII

TOP DECILE -- TOTAL RELATIVE TIMES REPORTED SPENT ON EACH TASK
 COMPARED WITH THE TINNELL STUDY AND THE PRESENT STUDY

Duty-Task	Tinnell Study Comp.	Present Study Groups			
		I	II	III	IV
I-5 Maintain an instructional materials file	X	X	X	X	X
I-13 Organize lessons plans	X	X	X	X	X
I-15 Prepare lecture outlines	X	X	X	X	X
I-16 Select course content	X	X	X	X	X
I-17 Select student projects	X	X		X	X
I-21 Set up demonstrations		X			X
I-23 Write course objectives					X
I-26 Write student handout sheets		X	X	X	
II-6 Direct student skill practice	X	X	X		
II-8 Employ oral questioning	X	X	X		X
II-10 Give lectures	X	X	X	X	X
II-11 Give students assistance in laboratory		X	X	X	X
II-14 Present lessons through problem solving	X	X	X		X
II-22 Present lessons with a chalkboard	X	X	X		X
II-25 Present principles by demonstration	X	X	X	X	X
II-26 Supervise student laboratory work	X	X	X	X	X
II-30 Work problems before class	X	X	X	X	X
III-1 Administer written tests	X	X	X	X	X
III-6 Determine final grades	X	X	X	X	X
III-12 Formulate multiple choice questions				X	
III-17 Grade student projects	X	X		X	
III-18 Grade students class performance	X	X	X	X	
III-19 Grade written tests	X	X		X	X
IV-2 Attend faculty meetings	X				X
IV-8 Maintain attendance records					X
VI-3 Advise students about employment				X	X
VI-4 Advise students about further education					X
VI-6 Advise students with scholastic problems					X
VII-9 Read text books	X		X	X	X
VII-10 Read technical journals					X
VIII-8 Identify appropriate program content					X

TABLE XXXIV

BOTTOM DECILE -- TOTAL RELATIVE TIMES REPORTED SPENT ON EACH TASK
 COMPARED WITH THE TINNELL STUDY AND THE PRESENT STUDY

Duty-Task	Tinnell Study Comp.	Present Study Groups			
		I	II	III	IV
II-21 Present lessons using video tape	X	X	X	X	X
II-29 Teach extension classes	X	X	X	X	X
III-5 Conduct drop-out studies			X		
III-8 Formulate case-study problems				X	
III-25 Rate other teachers	X				
IV-3 Collect fees		X		X	X
IV-5 Handle petty cash	X	X	X	X	X
IV-10 Maintain financial records	X	X	X	X	X
V-17 Select classrooms					X
V-19 Select laboratory (shop) space	X	X		X	
VI-1 Administer counseling tests	X	X	X	X	X
VI-2 Administer placement tests	X	X	X	X	X
VI-11 Conduct home visits	X	X	X	X	X
VI-13 Evaluate student selection data	X	X	X	X	X
VI-18 Select students for the program	X		X	X	
VI-19 Set student selection criteria	X		X	X	X
VII-3 Conduct research		X		X	X
VII-5 Participate in research studies					X
VII-13 Take correspondence courses	X	X	X	X	X
VII-17 Write professional articles	X	X	X	X	X
VII-18 Write technical journal articles	X	X	X	X	X
VIII-2 Analyze occupational clusters	X				
VIII-4 Conduct occupational needs surveys			X	X	X
VIII-20 Write proposals for funding	X	X	X	X	
IX-5 Collect money for charities		X	X	X	
IX-6 Collect tickets at school activities	X	X	X	X	X
IX-7 Drive a school bus	X	X	X	X	X
IX-9 Prepare news releases		X	X	X	
IX-10 Sell activities tickets	X	X	X	X	X

TABLE XXXV

TOP DECILE OF THE PRODUCT RANKINGS COMPARED WITH
THE TINNELL STUDY AND THE PRESENT STUDY

Duty-Task	Tinnell Study Comp.	Present Study Groups			
		I	II	III	IV
I-5 Maintain an instructional materials file	X	X		X	X
I-13 Organize lesson plans	X	X	X	X	X
I-15 Prepare lecture outlines	X	X	X	X	X
I-16 Select course content	X	X		X	X
I-17 Select student projects	X	X	X		X
I-21 Set up demonstrations	X		X		X
I-23 Write course objectives				X	X
I-25 Write lesson objectives				X	
I-26 Write student handout sheets	X	X	X	X	X
II-6 Direct student skill practice		X	X		
II-8 Employ oral questioning	X	X	X	X	X
II-9 Give homework assignments			X		
II-10 Give lectures	X	X	X	X	X
II-11 Give students assistance in laboratory	X	X	X	X	X
II-14 Present lessons through problem solving	X	X	X		X
II-22 Present lessons with a chalkboard	X	X	X		X
II-25 Present principles by demonstration		X	X		X
II-26 Supervise student laboratory work	X	X	X	X	X
II-30 Work problems before class	X	X	X	X	X
III-1 Administer written tests	X	X	X	X	X
III-6 Determine final grades	X	X	X	X	X
III-12 Formulate multiple choice questions				X	
III-17 Grade student projects				X	
III-18 Grade students class performance					X
III-19 Grade written tests	X	X		X	X
IV-2 Attend faculty meetings	X	X	X		X
IV-8 Maintain attendance records				X	X
VI-3 Advise students about employment		X		X	X
VI-4 Advise students about further education					X
VII-2 Attend professional meetings					X
VII-8 Read professional journals	X			X	X
VII-9 Read text books	X		X	X	X
VII-10 Read technical journals	X				X

TABLE XXXVI

BOTTOM DECILE OF THE PRODUCT RANKINGS COMPARED
WITH THE TINNELL STUDY AND THE PRESENT STUDY

Duty-Task	Tinnell Study	Present Study Groups				
		Comp.	I	II	III	IV
II-18	Present lessons using flip charts	X				
II-21	Present lessons using video tape	X	X	X	X	X
II-29	Teach extension classes	X	X	X	X	
III-5	Conduct drop-out studies			X		
III-8	Formulate case-study problems				X	
III-25	Rate other teachers	X				
IV-3	Collect fees			X		X
IV-5	Handle petty cash		X	X	X	X
IV-10	Maintain financial records	X	X	X	X	X
IV-19	Prepare travel claims			X		
V-17	Select classrooms					X
V-19	Select laboratory (shop) space	X			X	X
VI-1	Administer counseling tests	X	X	X	X	X
VI-2	Administer placement tests	X	X	X	X	X
VI-5	Advise students with personal problems	X				
VI-11	Conduct home visits	X	X	X	X	X
VI-13	Evaluate student selection data	X	X	X	X	X
VI-18	Select students for the program	X	X	X	X	X
VI-19	Set student selection criteria	X	X		X	X
VII-3	Conduct research				X	X
VII-5	Participate in research studies					X
VII-13	Take correspondence courses	X	X	X	X	X
VII-17	Write professional articles	X	X	X	X	X
VII-18	Write technical journal articles	X	X	X	X	
VIII-1	Adapt occupational surveys to local needs		X	X		
VIII-4	Conduct occupational needs surveys		X	X	X	X
VIII-20	Write proposals for funding	X	X		X	X
IX-5	Collect money for charities		X		X	X
IX-6	Collect tickets at school activities	X	X	X	X	X
IX-7	Drive a school bus	X	X	X	X	X
IX-9	Prepare news releases			X		
IX-10	Sell activities tickets	X	X	X	X	X

TABLE XXXVII

TOP DECILE OF THE MEAN RANKINGS COMPARED TO
THE TINNELL STUDY AND THE PRESENT STUDY

Duty-Task	Tinnell Study Comp.	Present Study Groups				
		I	II	III	IV	
I-5	Maintain an instructional materials file			X	X	X
I-13	Organize lesson plans	X	X	X	X	X
I-15	Prepare lecture outlines	X	X	X	X	X
I-16	Select course content	X	X	X	X	X
I-17	Select student projects	X	X	X		X
I-21	Set up demonstrations			X		X
I-23	Write course objectives					X
I-26	Write student handout sheets				X	X
II-2	Demonstrate manipulative skills	X	X	X	X	
II-6	Direct student skill practice	X	X	X	X	X
II-7	Direct student project work	X	X	X	X	
II-8	Employ oral questioning	X	X	X	X	X
II-10	Give lectures	X	X	X	X	X
II-11	Give students assistance in laboratory	X	X	X	X	X
II-14	Present lessons through problem solving	X	X	X		X
II-22	Present lessons with a chalkboard	X	X	X		X
II-25	Present principles by demonstration		X	X	X	X
II-26	Supervise student laboratory work	X	X	X	X	X
II-30	Work problems before class	X	X	X	X	X
III-1	Administer written tests		X		X	X
III-6	Determine final grades	X	X	X	X	X
III-16	Grade laboratory reports	X				
III-17	Grade student projects	X	X	X	X	
III-18	Grade students class performance	X	X	X	X	
III-19	Grade written tests	X	X		X	X
IV-2	Attend faculty meetings					X
IV-8	Maintain attendance records					X
VI-3	Advise students about employment				X	X
VI-6	Advise students with scholastic problems					X
VII-9	Read text books	X		X		X
VII-10	Read technical journals					X
IX-13	Take correspondence courses					X

TABLE XXXVIII

BOTTOM DECILE OF THE MEAN RANKINGS COMPARED WITH
THE TINNELL STUDY AND THE PRESENT STUDY

	Duty-Task	Tinnell Study Comp.	Present Study Groups			
			I	II	III	IV
I-2	Identify library resources	X				
I-3	Identify resource persons	X				
I-10	Operate a mimeograph machine	X	X			
II-1	Coordinate a cooperative work program				X	
II-21	Present lessons using video tape			X	X	X
II-29	Teach extension classes		X	X	X	X
III-5	Conduct drop-out studies		X			
III-8	Formulate case-study problems				X	
III-25	Rate other teachers			X		
IV-3	Collect fees	X			X	X
IV-5	Handle petty cash	X	X	X	X	
IV-10	Maintain financial records			X		X
IV-12	Maintain placement records			X		
IV-18	Prepare recruiting materials		X			
IV-19	Prepare travel claims		X			
V-17	Select classrooms					X
V-18	Solicit contributions from industry					X
V-19	Select laboratory (shop) space			X	X	X
VI-1	Administer counseling tests	X	X	X	X	X
VI-2	Administer placement tests	X	X	X	X	X
VI-8	Assist students in getting financial aids		X			
VI-11	Conduct home visits	X	X	X	X	X
VI-13	Evaluate student selection data	X		X	X	X
VI-16	Provide disciplinary action	X	X	X		
VI-18	Select students for the program				X	
VI-19	Set student selection criteria				X	X
VII-3	Conduct research		X			X
VII-5	Participate in research studies					X
VII-13	Take correspondence courses	X	X	X	X	X
VII-14	Take short courses	X				
VII-17	Write professional articles	X	X	X	X	X
VII-18	Write technical journal articles	X		X	X	X
VIII-2	Analyze occupational clusters	X			X	
VIII-4	Conduct occupational needs surveys			X	X	X
VIII-14	Read curriculum research reports	X				
VIII-20	Write proposals for funding		X	X	X	
IX-5	Collect money for charities	X	X		X	
IX-6	Collect tickets at school activities	X	X		X	X
IX-7	Drive a school bus	X	X	X	X	X
IX-9	Prepare news releases		X	X	X	
IX-10	Sell activities tickets	X	X	X	X	X

In Chapter IV, twenty-six tables were developed to give an insight into the various facets of this study. While this data is interesting, at the same time, it becomes very difficult to focus the data and gain an overview. Tables XXVII through XXXVIII summarize the data. Tables XXXI through XXXVIII give a comparison of the Tinnell study, a composite of this study and the four occupational emphasis periods: November, January, February, and April. Using those duty-tasks in the top decile of the Tinnell study as a basis of comparison, the following data was acquired for the number of respondents. In the top decile, Table XXXI, there was complete agreement (five of five) on six duty-tasks for 30 percent and near complete agreement (four of five) on six duty-tasks for 30 percent or a combined total of 60 percent. In the bottom decile, Table XXXII, there was complete agreement (five of five) on 10 duty-tasks for 50 percent and near complete agreement (four of five) on four duty-tasks for 20 percent or a combined total of 70 percent.

On total relative time in the top decile, Table XXXIII, there was complete agreement (five of five) on six duty-tasks for 30 percent and near agreement (four of five) on 11 duty-tasks for 55 percent or a combined total of 85 percent. In the bottom decile, Table XXXIV, there was complete agreement (five of five) on 13 duty-tasks for 65 percent and near complete agreement (four of five) on four duty-tasks for 15 percent or a combined total of 80 percent.

The top decile, Table XXXV, of the products provided complete agreement (five of five) on five duty-tasks for 25 percent and near agreement (four of five) on 11 duty-tasks for 55 percent or a combined total of 80 percent. In the bottom decile, Table XXXVI, there was complete agreement (five of five) on 11 duty-tasks for 55 percent and

near complete agreement (four of five) on four duty-tasks for 20 percent or a combined total of 75 percent.

In the bottom decile, Table XXXVIII, there was complete agreement (five of five) on eight duty-tasks for 40 percent and near complete agreement (four of five) on three duty-tasks for 15 percent or a combined total of 55 percent.

In summation:

	Duty								
	Number of Times Duty Appears								
	I	II	III	IV	V	VI	VII	VIII	IX
Top Decile									
Number of Respondents	9	9	6	2	0	3	5	0	0
Total Relative Time	8	9	6	2	0	3	2	1	0
Product	9	10	6	2	0	2	4	0	0
Mean	8	11	6	2	0	2	2	0	1
Bottom Decile									
Number of Respondents	0	3	3	3	4	6	5	4	5
Total Relative Time	0	2	3	3	2	6	5	3	5
Product	0	3	3	4	2	7	5	3	5
Mean	3	3	3	6	3	8	6	4	5

Nine duty categories were presented in the task inventory. For the purpose of this study three basic assumptions were made. These focused on the fact that the time period of job emphasis and its surrounding events would have a definite effect on the manner in which technical-occupation instructors view their various tasks.

Conclusions

As indicated in the data presented in Chapters IV and V and summarized above, these assumptions were not supported. The duty-task has more impact than the period of job emphasis. Note the consistency with which tasks are reported. For example: category I duties are presented in the top decile at 9, 8, 9, and 8. Similarly, in the bottom decile of category I duties are 0, 0, 0, and 3. The latter is the mean and as

such reflects the extremes in range.

In addition:

	<u>Top Decile Duty-Task</u>		<u>Bottom Decile Duty-Task</u>	
	5	4 & 5	5	4 & 5
Number of Responses	30%	60%	50%	70%
Total Relative Time	30%	85%	65%	80%
Product	25%	80%	55%	75%
Mean	25%	75%	40%	55%

While Maureen Byers⁵ found that certain time periods were to be avoided, Lorents⁶ in his study which was based on one semester, found no difference existed between the beginning and middle of a semester. The findings of this study concur with Lorents and expand his findings in that no difference occurs throughout the academic year, i.e., the beginning, the middle, and the end of a semester. Data of the same degree of consistency is obtainable throughout the academic year.

As indicated in the duty-task rankings and the high results on the Kendall Coefficient of Concordance, a conclusion can be drawn that there is no significant difference in the results of data obtained by a task inventory administered to the same technical-occupation instructors under varying occupational emphasis at different times during the academic year. Therefore, this study fails to reject the hypothesis.

Data of the same consistency is available at any time it is retrieved during the academic year. Job emphases periods such as enrollment and early course planning periods, mid-semester and semester examinations, periods of heavy involvement in extra-curricular activities, and holidays and vacation periods are not serious factors in data retrieval. The data on which this study is based proves that technical-occupation faculty will give consistent data -- good or bad -- regardless of when the data is requested.

Current activities do not dominate an instructor's immediate perception of his or her job. The consistency of the data strongly indicates that the retrieving of data -- good or bad -- is explained by individual differences rather than by current activities.

Job emphasis periods have no effect on data retrieved from post-secondary technical-occupation instructors in Oklahoma. Those deviations in the data are contributed to factors other than that of time periods.

Finally, it should be observed that the reliability and validity of the instrument used to collect the data was assumed to be sufficiently high as to make the results meaningful.

FOOTNOTES

¹Evelyn J. Brzezinski and Blaine R. Worthen, An Experimental Study of Techniques for Increasing Return Rates in Mail Surveys (Paper presented at American Educational Research Association, New Orleans, 1973), p. 3.

²J.F. Rummel, An Introduction to Research Procedures in Education (New York, 1958), p.87.

³Maureen Byers, Personal Communication, April 2, 1975.

⁴Carl Schaefer, A Rationale for Comprehensive Personnel Development in a State, (Ohio, 1972), pp. 3-4.

⁵Byers, Personal Communication.

⁶Alden C. Lorents, Faculty Activity and Planning Models in Education (Minnesota, 1971), pp. 58-62.

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APPENDIX A

THE INSTRUMENT

*task
inventory*



**OCCUPATIONAL
EDUCATION**



*technical
education*



PURPOSE OF THE INVENTORY

THIS TASK INVENTORY IS DESIGNED TO HELP IDENTIFY THE KINDS OF TASKS THAT OCCUPATIONAL TEACHERS DO ON THEIR JOBS AND THE RELATIVE TIME THEY SPEND DOING THEM. SUCH INFORMATION CAN BE VERY HELPFUL IN PLANNING TRULY RELEVANT TEACHER EDUCATION PROGRAMS.

GENERAL INSTRUCTIONS

COMPLETING THE INVENTORY FORM IS VERY EASY AND IT REQUIRES LESS THAN ONE-HALF HOUR TO DO. FIRST FILL IN THE PROFESSIONAL INFORMATION REQUESTED ON PAGE TWO. THEN READ THE INSTRUCTIONS AND EXAMINE THE EXAMPLE ON PAGE THREE. THE INSTRUCTIONS WILL TELL YOU HOW TO PROCEED WITH THE REMAINDER OF THE INVENTORY.

LASTLY, PLEASE RETURN THE WHOLE BOOKLET PROMPTLY.

000194

PROFESSIONAL INFORMATION

HOW MANY YEARS HAVE YOU TAUGHT IN YOUR PRESENT POSITION? _____

HOW MANY TOTAL YEARS HAVE YOU TAUGHT? _____

CHECK THE TYPE OF INSTITUTION THAT YOU WORK FOR:COMMUNITY-JUNIOR COLLEGE VOCATIONAL SCHOOL TECHNICAL INSTITUTE 4 YEAR COLLEGE (OR UNIV.) -----
CHECK ALL OF THE DEGREES THAT YOU HOLD AND GIVE THE MAJOR SUBJECTS

MAJOR

CERTIFICATE _____ASSOCIATE _____BACHELORS _____MASTERS _____DOCTORATE _____-----
WHAT OCCUPATIONAL SPECIALTY DO YOU TEACH? _____HOW MANY YEARS OF NON-TEACHING EMPLOYMENT EXPERIENCE HAVE YOU HAD IN YOUR
SPECIALTY? _____

INSTRUCTIONS FOR COMPLETING THE TASK INVENTORY

CAREFULLY READ EACH OF THE TASK STATEMENTS AND PLACE A CHECK MARK (✓) IN THE COLUMN LABELED CHECK FOR EACH TASK WHICH YOU PERFORM ON YOUR PRESENT JOB.

AFTER CHECKING ALL THE TASKS WHICH YOU PERFORM, RATE ONLY THE TASKS YOU HAVE CHECKED BY PLACING A CHECK MARK (✓) IN THE APPROPRIATE COLUMN LABELED TIME SPENT.

TIME SPENT MEANS THE RELATIVE TIME YOU SPEND ON THE TASK YOU ARE RATING, COMPARED WITH THE TIME YOU SPEND ON EACH OF THE OTHER TASKS YOU DO. IT DOES NOT IMPLY THE IMPORTANCE OF THE TASK TO YOUR JOB. SOME VERY IMPORTANT TASKS TAKE LITTLE TIME WHILE SOME UNIMPORTANT ONES REQUIRE A LOT OF TIME.

AT THE END OF ANY SECTION WRITE IN AND RATE ANY TASKS YOU DO WHICH ARE NOT LISTED.

EXAMPLE:

OCCUPATIONAL EDUCATION TASK INVENTORY

Listed below is a duty and tasks which it includes, check all tasks which you perform. Add any tasks you do which are not listed, then rate the tasks you have checked.	Check	Time Spent				
	✓	1. Very little	2. Below average	3. About average	4. Above average	5. Very much
— DUTY —	If	check (✓) the appropriate column				
PREPARING FOR INSTRUCTION.	Done	1	2	3	4	5
— TASKS —						
1. Develop student safety procedures	✓		✓			
2. Identify library resources	✓		✓			
3. Identify resource persons						
4. Identify terminal evaluative criteria	✓				✓	
5. Maintain an instructional materials file						
OTHER TASKS						
6. <i>Prepare Visual Aids</i>	✓			✓		

Please rate by TIME SPENT rather than importance of task

OCCUPATIONAL EDUCATION TASK INVENTORY

<p>Listed below is a duty and tasks which it includes, check all tasks which you perform. Add any tasks you do which are not listed, then rate the tasks you have checked.</p>	<p>Check ✓</p>	<p>Time Spent</p> <p>1. Very little 2. Below average 3. About average 4. Above average 5. Very much</p> <p>check (✓) the appropriate column</p>				
<p>— DUTY —</p> <p>PREPARING FOR INSTRUCTION</p>	<p>If Done</p>	<p>1 2 3 4 5</p>				
<p>— TASKS —</p>						
1. Develop student safety procedures						
2. Identify library resources						
3. Identify resource persons						
4. Identify terminal evaluative criteria						
5. Maintain an instructional materials file						
6. Make mimeograph masters						
7. Make photo (thermo) copy masters						
8. Make spirit duplicator masters						
9. Make visual aids						
10. Operate a mimeograph machine						
11. Operate a photo (thermo) copy machine						
12. Operate a spirit duplicator						
13. Organize lesson plans						
14. Plan field trips						
15. Prepare lecture outlines						
16. Select course content						
17. Select student projects						
18. Select text books						
19. Select training packages						
20. Select visual aids						

Please rate by TIME SPENT rather than importance of task

OCCUPATIONAL EDUCATION TASK INVENTORY

<p>Listed below is a duty and tasks which it includes, check all tasks which you perform. Add any tasks you do which are not listed, then rate the tasks you have checked.</p>	<p>Check ✓</p>	<p>Time Spent</p> <p>1. Very little 2. Below average 3. About average 4. Above average 5. Very much</p>				
<p>— DUTY —</p> <p>PREPARING FOR INSTRUCTION</p>	<p>If Done</p>	<p>check (✓) the appropriate column</p>				
<p>— TASKS —</p>		1	2	3	4	5
21. Set up demonstrations						
22. Set up laboratory equipment						
23. Write course objectives						
24. Write laboratory exercises						
25. Write lesson objectives						
26. Write student handout sheets						
27. Write unit objectives						
OTHER TASKS						

Please rate by TIME SPENT rather than importance of task

OCCUPATIONAL EDUCATION TASK INVENTORY

<p>Listed below is a duty and tasks which it includes, check all tasks which you perform. Add any tasks you do which are not listed, then rate the tasks you have checked.</p>	<p>Check ✓</p>	<p>Time Spent</p>				
<p>— DUTY — EXECUTING INSTRUCTION</p>	<p>If Done</p>	<p>1. Very little 2. Below average 3. About average 4. Above average 5. Very much check (✓) the appropriate column</p>				
<p>— TASKS —</p>		1	2	3	4	5
1. Coordinate a cooperative work program						
2. Demonstrate manipulative skills						
3. Derive mathematical equations						
4. Direct group discussions						
5. Direct programmed instruction						
6. Direct student skill practice						
7. Direct student project work						
8. Employ oral questioning						
9. Give homework assignments						
10. Give lectures						
11. Give students assistance in laboratory						
12. Implement rules of acceptable conduct						
13. Implement safety procedures						
14. Present lessons through problem solving						
15. Present lessons using analogies						
16. Present lessons using audio tape						
17. Present lessons using filmstrips						
18. Present lessons using flip charts						
19. Present lessons using models						
20. Present lessons using photo slides						

Please rate by TIME SPENT rather than importance of task

OCCUPATIONAL EDUCATION TASK INVENTORY

<p>Listed below is a duty and tasks which it includes, check all tasks which you perform. Add any tasks you do which are not listed, then rate the tasks you have checked.</p> <p style="text-align: center;">— DUTY —</p> <p style="text-align: center;">EXECUTING INSTRUCTION</p>	Check	<p style="text-align: center;">Time Spent</p> <p>1. Very little 2. Below average 3. About average 4. Above average 5. Very much</p> <p style="text-align: center;">check (✓) the appropriate column</p>
	✓	
— TASKS —	If Done	1 2 3 4 5
21. Present lessons using video tape		
22. Present lessons with a chalkboard		
23. Present lessons with motion pictures		
24. Present lessons with overhead projector		
25. Present principles by demonstration		
26. Supervise student laboratory work		
27. Supervise field trips		
28. Teach evening classes		
29. Teach extension classes		
30. Work problems before class		
OTHER TASKS		

Please rate by TIME SPENT rather than importance of task

OCCUPATIONAL EDUCATION TASK INVENTORY

<p>Listed below is a duty and tasks which it includes, check all tasks which you perform. Add any tasks you do which are not listed, then rate the tasks you have checked.</p>	<p>Check ✓</p>	<p>Time Spent</p> <p>1. Very little 2. Below average 3. About average 4. Above average 5. Very much</p>				
<p>— DUTY — EVALUATING INSTRUCTION</p>	<p>If Done</p>	<p>check (✓) the appropriate column</p>				
<p>— TASKS —</p>		1	2	3	4	5
1. Administer written tests						
2. Analyze tests for reliability						
3. Analyze tests for validity						
4. Check graduate performance with employer						
5. Conduct drop-out studies						
6. Determine final grades						
7. Devise laboratory performance tests						
8. Formulate case-study problems						
9. Formulate completion test questions						
10. Formulate essay test questions						
11. Formulate matching test questions						
12. Formulate multiple choice questions						
13. Formulate tech-math problems						
14. Formulate true-false questions						
15. Grade homework assignments						
16. Grade laboratory reports						
17. Grade student projects						
18. Grade students class performance						
19. Grade written tests						
20. Have advisory committee evaluate courses						

Please rate by TIME SPENT rather than importance of task

OCCUPATIONAL EDUCATION TASK INVENTORY

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<p align="center">— DUTY —</p> <p align="center">EVALUATING INSTRUCTION</p>	<p>If Done</p>	<p align="center">1 2 3 4 5</p>				
<p align="center">— TASKS —</p>						
<p>21. Have students evaluate course content</p>						
<p>22. Have students evaluate teacher</p>						
<p>23. Obtain program evaluation from graduates</p>						
<p>24. Prepare progress charts</p>						
<p>25. Rate other teachers</p>						
<p>26. Serve on self-study committees</p>						
<p>27. Use a self-evaluation form</p>						
<p>28. Write lesson objectives</p>						
<p>29. Write student evaluation criteria</p>						
<p align="center">OTHER TASKS</p>						

Please rate by TIME SPENT rather than importance of task

OCCUPATIONAL EDUCATION TASK INVENTORY

<p>Listed below is a duty and tasks which it includes, check all tasks which you perform. Add any tasks you do which are not listed, then rate the tasks you have checked.</p>	<p>Check ✓</p>	<p style="text-align: center;">Time Spent</p> <p>1. Very little 2. Below average 3. About average 4. Above average 5. Very much</p> <p style="text-align: center;">check (✓) the appropriate column</p>				
<p>— DUTY —</p> <p>ADMINISTERING INSTRUCTIONAL SERVICES</p>	<p>If Done</p>					
<p>— TASKS —</p>		1	2	3	4	5
1. Assign students to classes						
2. Attend faculty meetings						
3. Collect fees						
4. Coordinate teaching in several programs						
5. Handle petty cash						
6. Identify prospective teachers						
7. Interview prospective employees						
8. Maintain attendance records						
9. Maintain counseling records						
10. Maintain financial records						
11. Maintain follow-up records						
12. Maintain placement records						
13. Maintain purchasing records						
14. Make teaching assignments						
15. Plan the budget						
16. Prepare class schedules						
17. Prepare promotional brochures						
18. Prepare recruiting materials						
19. Prepare travel claims						
20. Recruit new students						

Please rate by TIME SPENT rather than importance of task

OCCUPATIONAL EDUCATION TASK INVENTORY

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<p>— DUTY —</p>		<p>1. Very little 2. Below average 3. About average 4. Above average 5. Very much</p>				
<p>ADMINISTERING INSTRUCTIONAL SERVICES</p>	<p>If Done</p>	<p>check (✓) the appropriate column</p>				
<p>— TASKS —</p>		1	2	3	4	5
<p>21. Specify teacher qualifications</p>						
<p>22. Supervise other teachers</p>						
<p>OTHER TASKS</p>						

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OCCUPATIONAL EDUCATION TASK INVENTORY

<p>Listed below is a duty and tasks which it includes, check all tasks which you perform. Add any tasks you do which are not listed, then rate the tasks you have checked.</p>	Check	<p>Time Spent</p> <p>1. Very little 2. Below average 3. About average 4. Above average 5. Very much</p> <p>check (✓) the appropriate column</p>																																																																																																																														
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<p>— DUTY —</p> <p>PROVIDING STUDENT SERVICES</p>	<p>If Done</p>	<p>check (✓) the appropriate column</p>				
<p>— TASKS —</p>		1	2	3	4	5
1. Administer counseling tests						
2. Administer placement tests						
3. Advise students about employment						
4. Advise students about further education						
5. Advise students with personal problems						
6. Advise students with scholastic problems						
7. Assess student academic ability						
8. Assist students in getting financial aids						
9. Conduct counseling sessions						
10. Conduct a graduate follow-up program						
11. Conduct home visits						
12. Contact prospective employers						
13. Evaluate student selection data						
14. Interview prospective students						
15. Place graduates with employers						
16. Provide disciplinary action						
17. Provide placement services						
18. Select students for the program						
19. Set student selection criteria						
20. Write letters of recommendation						

Please rate by TIME SPENT rather than importance of task

OCCUPATIONAL EDUCATION TASK INVENTORY

<p>Listed below is a duty and tasks which it includes, check all tasks which you perform. Add any tasks you do which are not listed, then rate the tasks you have checked.</p>	<p>Check /</p>	<p>Time Spent</p>				
<p>— DUTY — PARTICIPATING IN PROFESSIONAL DEVELOPMENT</p>	<p>If Done</p>	<p>1. Very little 2. Below average 3. About average 4. Above average 5. Very much</p>				
<p>— TASKS —</p>		<p>check (✓) the appropriate column</p>				
<p>1. Assist new teachers</p>		1	2	3	4	5
<p>2. Attend professional meetings</p>						
<p>3. Conduct research</p>						
<p>4. Participate in professional organizations</p>						
<p>5. Participate in research studies</p>						
<p>6. Participate in seminars</p>						
<p>7. Practice new specialty skills</p>						
<p>8. Read professional journals</p>						
<p>9. Read text books</p>						
<p>10. Read technical journals</p>						
<p>11. Serve as an officer of an organization</p>						
<p>12. Take college courses</p>						
<p>13. Take correspondence courses</p>						
<p>14. Take short courses</p>						
<p>15. Visit other schools</p>						
<p>16. Work in industry</p>						
<p>17. Write professional articles</p>						
<p>18. Write technical journal articles</p>						
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<p style="text-align: center;">— DUTY —</p> <p style="text-align: center;">DEVELOPING INSTRUCTIONAL PROGRAMS</p>	✓	1. Very little 2. Below average 3. About average 4. Above average 5. Very much				
— TASKS —	If Done	check (✓) the appropriate column				
1. Adapt occupational surveys to local needs		1	2	3	4	5
2. Analyze occupational clusters						
3. Assess relevancy of program offerings						
4. Conduct occupational needs surveys						
5. Determine staff and faculty requirements						
6. Establish program goals						
7. Examine curricula of other schools						
8. Identify appropriate program content						
9. Identify entry level skills						
10. Make job analyses						
11. Meet with advisory committees						
12. Organize advisory committees						
13. Plan advisory committee meetings						
14. Read curriculum research reports						
15. Read vocational education needs surveys						
16. Select programs to be offered						
17. Sequence courses within the program						
18. Serve on a curriculum committee						
19. Write program objectives						
20. Write proposals for funding						

Please rate by TIME SPENT rather than importance of task

OCCUPATIONAL EDUCATION TASK INVENTORY

19

Listed below is a duty and tasks which it includes, check all tasks which you perform. Add any tasks you do which are not listed, then rate the tasks you have checked.	Check	Time Spent				
	If Done	1. Very little 2. Below average 3. About average 4. Above average 5. Very much check (✓) the appropriate column				
— DUTY — DEVELOPING INSTRUCTIONAL PROGRAMS OTHER TASKS		1	2	3	4	5

Please rate by TIME SPENT rather than importance of task

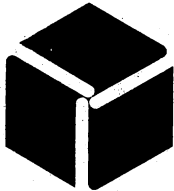
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<p>— DUTY —</p>		<p>check (✓) the appropriate column</p>				
<p>PARTICIPATING IN NON-INSTRUCTIONAL ACTIVITIES</p>	<p>If Done</p>	<p>1 2 3 4 5</p>				
<p>TASKS</p>						
<p>1. Assist with institutional maintenance</p>						
<p>2. Attend civic club meetings</p>						
<p>3. Attend school related social functions</p>						
<p>4. Chaperon student activities</p>						
<p>5. Collect money for charities</p>						
<p>6. Collect tickets at school activities</p>						
<p>7. Drive a school bus</p>						
<p>8. Participate in community activities</p>						
<p>9. Prepare news releases</p>						
<p>10. Sell activities tickets</p>						
<p>11. Serve on committees</p>						
<p>12. Sponsor student clubs</p>						
<p>13. Visit with other teachers</p>						
<p>14. Work as a consultant</p>						
<p>OTHER TASKS</p>						

Please rate by TIME SPENT rather than importance of task

APPENDIX B

NCHEM'S-WICHE LETTERS



National Center for Higher Education Management Systems

WESTERN INTERSTATE COMMISSION FOR HIGHER EDUCATION
 P.O. Drawer P Boulder, Colorado 80302 (303) 449-3333
 an equal opportunity employer

April 2, 1975

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 Director

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 University of Maine

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 University of Michigan

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 Minnesota State College Board

GORDON OSBORN
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 State University of New York

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 University of West Florida

KEITH W. STOEHR
 Gateway Technical Institute

JACK E. TOLBERT
 The Bryman-Mellis School

MARVIN WACHMAN
 Temple University

FRED WELLMAN
 Illinois Community College Board

JACQUELINE WEXLER
 Hunter College

Dr. J. D. Wilhoit
 Chairman
 Division of Technology
 Northeastern Oklahoma A & M College
 Miami, OK 74354

RE: TIMING OF MAIL QUESTIONNAIRES

Dear Dr. Wilhoit:

NCHEMS has developed questionnaires in two areas: (a) to survey faculty activities and (b) to survey instructional outcomes of students who complete their program of study. I am enclosing some material that addresses the question "When is the appropriate time to administer a faculty questionnaire?" NCHEMS has not examined the similar questions for students although we recommend that the student questionnaire be administered approximately six weeks before the student leaves the institution.

For further information regarding the appropriate time to administer student questionnaires, you might contact:

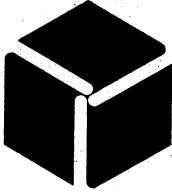
Dr. Alexander Astin
 Graduate School of Education
 320 Moore Hall
 University of California
 Los Angeles, CA 90024

I hope this material can be of some use to you.

Sincerely,

James R. Topping
 James R. Topping

lyh
 Enclosure



National Center for Higher Education Management Systems

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Illinois Community College Board

April 15, 1975

Dr. J. D. Wilhoit, Chairman
 Division of Technology
 Northeastern Oklahoma A & M College
 Miami, Oklahoma 74354

Dear Dr. Wilhoit:

Please excuse the delay in responding to your question regarding questionnaires. I have only found one source to the question you pose. A former Colorado graduate student did a research paper on questionnaires. I have been unable to obtain a copy of it to review, but I have located her address. I am told she mails out copies on request for a minimal duplication cost. Her address is:

Evelyn Brzezinski
 Research Evaluation and Assessment Service
 Michigan Department of Education
 Lansing, Michigan 48902.

I intend to write for a copy myself. You pose an interesting question, and I am curious to see what Evelyn has said regarding it. I hope this is helpful.

Sincerely yours,

Edward M. Myers
 Research Associate

EMM:cw

STATE OF MICHIGAN

DEPARTMENT OF EDUCATION

Lansing, Michigan 48902



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Dear J.D. Wilhoit:

Thank you for your request for a copy of the paper written by Blaine R. Worthen and me, "An Experimental Study of Techniques to Improve Response Rates of Mailed Questionnaires." Unfortunately, we have no copies available for distribution. The document may be ordered, however, from the ERIC Document Reproduction Service, P. O. Drawer O, Bethesda, Maryland 20014. The order number is ED 078 088. The cost of the report on microfiche is \$.65; reproduced on paper (hard copy), the report costs \$6.58.

A summary of the report appears as part of the research paper series of the Laboratory of Educational Research, University of Colorado. The title of the paper is "An Experimental Study of Techniques for Increasing Return Rates in Mail Surveys (RP No. 64). That paper may be ordered for \$.75 from the Laboratory of Educational Research, University of Colorado, Boulder, Colorado 80302.

Thank you very much for your interest.

Sincerely,

Evelyn J. Brzezinski

Evelyn J. Brzezinski
Educational Research Consultant

I am enclosing this paper. If you need more detailed information, I would suggest you request the full report from ERIC. EJB



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GRADUATE SCHOOL OF EDUCATION
LOS ANGELES, CALIFORNIA 90024

June 20, 1975

Mr. J. D. Wilhoit
Chairman
Division of Technology
Northeastern Oklahoma A & M College
Miami, Oklahoma 74354

Dear Mr. Wilhoit:

I am sorry to have delayed so long in replying to your letter of April 25. I am not sure there is any "best time" for administering questionnaires. Much depends on the people being surveyed and the nature of the survey.

As far as undergraduate students are concerned, there is clearly no better time than freshman orientation or registration. Any time after that, students are hard to find and much more reluctant to cooperate. As far as follow up studies of undergraduates are concerned, the late summer seems to be as good a time as any.

We have done several faculty surveys, although we have no sense of what is the best time to do such surveys. I suspect that the academic year is to be preferred over the summer, although I have no data bearing directly on this question.

I hope this information has been of some use.

Sincerely yours,

A handwritten signature in cursive script that reads "Alexander W. Astin".

Alexander W. Astin
Professor

AWA:psv

APPENDIX C

COVER LETTERS

**OKLAHOMA STATE UNIVERSITY • STILLWATER**

Department of Technical Education
Classroom Building 406
(405) 372-6211, Ext. 6287

74074

October 16, 1974

Name
Institution
Address
City, State, Zip Code

Dear (Name):

Enclosed are the task inventory booklets that J. D. Wilhoit discussed with you a short time ago.

We would sincerely appreciate it if you would distribute them to the appropriate faculty members. As you will note in the cover letter attached to each booklet, the faculty members are instructed to return them to you after completion. To make getting them back to us more convenient we are also enclosing a stamped return envelope.

We very much appreciate your help in collecting this data and hope it isn't overly troublesome.

Cordially,

Donald S. Phillips
Head, Technical Education
Oklahoma State University

Enclosures



OKLAHOMA STATE UNIVERSITY • STILLWATER

Department of Technical Education
 Classroom Building 406
 372-6211, Ext. 6287

74074

October 16, 1974

Professor (Individual's Name)
 School of Technology
 Oklahoma State University

Dear Professor (Last Name):

We need your help! We are conducting a study that we believe you will find interesting and helpful to your profession. We are attempting to assemble and validate a list of jobs and tasks performed by professional occupational teachers.

The information we are seeking will be used in two current projects being conducted by J. D. Wilhoit and Dick Tinnell. We will use this information to revise existing teacher education curricula in order to improve the quality of training programs being offered for persons in our profession.

What we are asking for is a little of your time, and the results of your experience on the job; to review the enclosed task inventory for occupational teachers. Only you can tell us whether these lists are complete and accurate.

Please fill out the brief professional information page and follow the directions for checking and rating the tasks on the list. You will notice that the inventory booklet is numbered. The number is only for our use in follow-up and in accounting for the booklets. Your name will be held in the strictest confidence and will not be associated with the results.

We are depending on you to provide us with the necessary information for improving our teacher education program. Please complete the inventory TODAY and return it in the enclosed campus envelope.

It will take you about one-half hour.

Very sincerely,

Donald S. Phillips
 Head, Technical Education
 Oklahoma State University

Enclosures

**OKLAHOMA STATE UNIVERSITY • STILLWATER**

Department of Technical Education
Classroom Building 406
(405) 372-6211, Ext. 6287

74074

Early in October of this year, you cooperated with us in a Task Inventory Questionnaire. This instrument is being used to research several aspects of relevance to vocational-technical education. This task inventory questionnaire included with this letter is identical to the questionnaire you filled out earlier. No, it isn't a mistake. J. D. Wilhoit is appealing for your tolerance to assist in determining if the teachers' tasks are viewed differently during the course of the school year.

Please fill out the task inventory as though this is the first time you have seen it. Don't be concerned about how you filled it out in October. We are interested in the tasks as you now view them. Please do it as soon as you can, we promise to make this the last time.

Very sincerely,

Donald S. Phillips
Head, Technical Education
Oklahoma State University

Enclosure

APPENDIX D

INSTITUTIONS SURVEYED BY TINNELL

These institutions were:

1. Bethany Nazarene College, Bethany, Oklahoma
2. Cameron University, Lawton, Oklahoma
3. Carl Albert Junior College, Poteau, Oklahoma
4. Connors State College, Warner, Oklahoma
5. Eastern Oklahoma State College, Wilburton, Oklahoma
6. El Reno Junior College, El Reno, Oklahoma
7. Langston University, Langston, Oklahoma
8. Murray State College, Tishomingo, Oklahoma
9. Northeastern Oklahoma State University, Tahlequah, Oklahoma
10. Northeastern Oklahoma A&M College, Miami, Oklahoma
11. Northern Oklahoma College, Tonkawa, Oklahoma
12. Northwestern Oklahoma State University, Alva, Oklahoma
13. Oklahoma State University School of Technology, Stillwater, Oklahoma
14. Oklahoma State University Technical Institute, Oklahoma City, Okla.
15. Oklahoma State Tech, Okmulgee, Oklahoma
16. Oscar Rose Junior College, Midwest City, Oklahoma
17. Sayre Junior College, Sayre, Oklahoma
18. Seminole Junior College, Seminole, Oklahoma
19. Southeastern Oklahoma State University, Durant, Oklahoma
20. Southwestern College, Oklahoma City, Oklahoma
21. South Oklahoma City Junior College, Oklahoma City, Oklahoma
22. Tulsa Junior College, Tulsa, Oklahoma
23. Western Oklahoma State College, Altus, Oklahoma

This formulated a group of 171 technical-occupation instructors for the original study. Five (22 percent) of the 23 institutions with seven (four percent) of the 171 instructors, which was a very small percentage

of the total respondents due to the size of the institutions involved, failed to respond to the first questionnaire. In addition to this non-response, 25 (19 percent) of the remaining 164 instructors from the remaining 18 institutions failed to return the original questionnaire. This deletion consequently left 18 institutions and 139 responding technical-occupation instructors surveyed in this study.

VITA

John Douglas Wilhoit, Jr.

Candidate for the Degree of

Doctor of Education

Thesis: THE EFFECT OF VARIATION IN JOB EMPHASIS ON TASK INVENTORY RESULTS

Major Field: Vocational-Technical and Career Education

Biographical:

Personal Data: Born in Enid, Oklahoma, July 7, 1928, the son of Douglas and Florence Wilhoit.

Education: Graduated from Enid High School, Enid, Oklahoma, in 1946; received a Technology Certificate from the Oklahoma State University Technical Institute with a major in Drafting and Design Technology in May, 1951; received the Bachelor of Science degree from Oklahoma State University with a major in Technical Education in August, 1960; completed the requirements for the Master of Science degree with a major in Trade and Industrial Education in August, 1962; enrolled in graduate study at the University of Houston in 1964-65, University of Arkansas in 1967, and University of Tennessee in 1970; completed requirements for the Doctor of Education degree at Oklahoma State University in December, 1975.

Professional Organizations: American Institute of Design and Drafting, American Technical Education Association, American Vocational Association, Certified Senior Engineering Technician, Higher Education Alumni Council Association, Oklahoma Council of Local Administrators, Oklahoma Education Association, Oklahoma Technical Society (life member), Oklahoma Vocational Association, Phi Delta Kappa.

Professional Experience: Chief Draftsman, Westinghouse Air Brake, Failing Subsidiary, Enid, Oklahoma, from 1951-1959; Design and Drafting Instructor and Department Head, Northeastern Oklahoma A&M College from 1960-1971; Vocational-Technical Division Chairman and Assistant Dean for Vocational-Technical Education, Northeastern Oklahoma A&M College, Miami, Oklahoma, from 1971-1975.