AS AN INITIAL STEP TOWARD IMPROVING VOCATIONAL CURRICULUMS IN FOOD SERVICING, A SPECIAL RESEARCH TEAM DEVELOPED AND FIELD TESTED A SURVEY INSTRUMENT FOR OBTAINING UP-TO-DATE INFORMATION ABOUT MAJOR TYPES AND COMBINATIONS OF TASKS PERFORMED BY FOOD SERVICE WORKERS. THE INSTRUMENT COVERED THE FOLLOWING BASIC TASKS OF FOOD SERVICING: (1) FOOD PREPARATION, (2) MANAGEMENT AND SUPERVISION OF COMMERCIAL AND INSTITUTIONAL FOOD SERVICE ESTABLISHMENTS, (3) MISCELLANEOUS TASKS OF FOOD SERVICE ESTABLISHMENTS, INCLUDING MAINTENANCE, CASHIERING, AND CLERICAL AND SECRETARIAL SUPPORT, (4) FOOD PURCHASING, AND (5) FOOD SERVING AND MENU PLANNING. FIELD TESTING WAS DONE WITH FOOD SERVICE EMPLOYEES OF A MODERN HOSPITAL AND HOTEL, UNIVERSITY DINING HALLS, AND THREE HIGHWAY RESTAURANTS. A COPY OF THE COMPLETED INSTRUMENT WAS PRESENTED. THIS VOLUME REPRESENTS PART 9 OF A 13-PART FINAL REPORT ON THE VOCATIONAL-TECHNICAL EDUCATION RESEARCH AND DEVELOPMENT PROJECT OF WASHINGTON STATE UNIVERSITY. RELATED VOLUMES ARE ED 010 652 THROUGH ED 010 664. (JH)
A SURVEY INSTRUMENT FOR IDENTIFYING CLUSTERS OF KNOWLEDGE AND COMPETENCIES ASSOCIATED WITH PERFORMANCE OF FOOD SERVICE WORK

December 1966
A SURVEY INSTRUMENT FOR IDENTIFYING CLUSTERS OF
KNOWLEDGE AND COMPETENCIES ASSOCIATED WITH PERFORMANCE OF FOOD SERVICE WORK

Project No. ERD-257-65
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Report No. 9

by

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Catherine Cavanagh

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Department of Education, Washington State University, Pullman, Washington
State Board for Vocational Education, Olympia, Washington
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This research instrument represents the thought and judgment of many educators and people responsible for operation of modern food service establishments. The following have played especially helpful roles:

Marianne Andrews, Washington State Director of Home and Family Life Education, and Joane S. Wohlgenant, Washington State University Professor of Home Economics, helped conceptualize and organize the questionnaire. Dr. Alberta Hill, Professor of Home Economics, Iowa State University, provided invaluable consultant services. Mr. Albert Turnbul, Ridpath Hotel, Spokane, Washington; Mr. Robert Baden, Deaconess Hospital, Spokane, Washington; and Mrs. Frances Maier of Washington State University Food Services; Mr. Alton Kircher, Hilltop Steak House and their employees made generous contributions to pilot testing and revising the questionnaire. Graduate students Catherine Cavanagh and Betty Peasons conducted field tests and thoughtfully made numerous revisions.

Thanks are due Ranee Rantanen and Marilyn May for patient copy editing and preparation of the manuscript.
INTRODUCTION

Task and Knowledge Clusters Concepts

One major purpose of this project is to identify clusters of knowledge and competencies most likely to maximize the career-long occupational opportunity, competence, and choice of non-college bound youth in an evolving technological society.

This research is rooted in the philosophic premise that occupational freedom involves both informed choice of alternatives and competence to work effectively. The economy needs constantly larger numbers of workers possessing new capabilities. But youth can evaluate only those occupational choices that they perceive. They are free to perform only the kinds of work for which they acquire competence.

Choice and acquisition of competence may be needlessly impaired by limited outlooks and motivations. For those reasons, studies of occupational perceptions, aspirations constitute other dimensions of this project.

The objective of our clusters research is to obtain facts about what major types of tasks are actually performed in occupations most likely to provide employment opportunity for substantial percentages of non-college bound youth and to identify major types of knowledge most likely to prepare them for such work. On the basis of Bureau of Labor Statistics projections, the following occupational areas were selected for study: office, general merchandise retailing, building trades, electronics, food services, and child care.

To obtain task and knowledge data for clustering, the staff, in consultation with employers, employees, and vocational teachers, prepared questionnaire check lists designed to identify specific major tasks actually performed by workers in each of the occupational areas listed above.

Questionnaires were designed to obtain from employees data on age, sex, major types of tasks presently performed, length of time on present job, and other types of work done in the past five years.

Those questionnaires have been administered to representative samples of workers in each occupational area. To maximize the predictive value of data, questionnaires were administered only to employees in modernized leading-edge firms in which tasks are most likely to represent those prevailing in the foreseeable future.

Results provide data on (1) combinations of major tasks groups of workers on a construction job or in a firm or agency presently perform, (2) combinations of major tasks performed on entry jobs, and (3) combinations of tasks generally performed by workers with various degrees of experience, and (4) some data on 5-year combinations of worker experience.
From analysis of the above data, we have obtained up-to-date facts about combinations of major tasks performed by major categories of workers.

Knowledges associated with performance of each task are being identified by juries of employees, supervisors, and vocational teachers.

Both task and knowledge items are being coded so various patterns of relationships can be identified by computer.

From analysis of the above data, we are obtaining definitions of both tasks and knowledges involved in entry jobs and in positions into which workers can move as they gain experience. We are identifying (1) some clusters of knowledge useful within each occupational area and (2) some clusters that are commonly useful in two or more areas.

Facts about currently useful tasks and knowledge are being supplemented by studies of ways they will be affected by equipment, processes, and materials now being developed by leading-edge industries.

**Purpose and Objectives**

Vocational educators need a means of identifying major types of tasks involved in food service work and the knowledges and competencies involved in their performance.

The objective of this phase of Project ERD-257-65 is to develop a survey instrument for identification of major tasks performed by workers employed in establishments and institutions providing food service. The instrument will be utilized to obtain data that will provide up-to-date facts about combinations of work done by various categories of food service workers; provide a base for identification of clusters of knowledges and competencies essential for effective performance of those tasks; and ascertain the degrees to which such knowledges and competencies are congruent with those essential for work in other non-professional occupations.

**Hypothesis**

Experience and data indicate the logic of a hypothesis that many of the major tasks performed by food service workers require clusters of similar knowledges and competencies and that some types of work require specialized knowledges. For example, it is likely that many persons in a variety of jobs use knowledge of health regulations and sanitation principles in the preparation of foods. Likewise, a smaller group of persons working in nursing homes and hospitals are likely to need knowledge of specialized medical diets.

Schools preparing youth for food service occupations have need for up-to-date information about widely useful clusters of tasks and knowledges and about those that are more specialized. It is assumed that identification
of both common and specialized knowledges and competencies along with their relationships to work in other occupations will provide a base for development of useful instructional programs.

Related Research

U.S. Department of Commerce data shows that between 1954 - 1964 expenditures for purchased meals and beverages have increased 28.4 per cent(1). Projections indicate that that upward trend will continue.

The 1966-67 Edition of the Occupational Outlook Handbook (2) estimates that through the mid 1970's food service will annually provide approximately 150,000 openings. Ehle (3) notes trends toward enhancement of hospitality services and predicts acceleration of that trend.

Week (4) projects a steady expansion of restaurant services through 1985. He indicates the industry's heavy reliance on schools to train food service workers and emphasizes the need to identify the nature of "the more common jobs" and to identify the capabilities required for their performance.

A 1965 report (5) on 338 food service training projects financed by Manpower Development and Training Act funds can be assumed to reflect general employment opportunity for bakers, chefs, cooks, countermen, kitchen helpers, pantrymen, waiters, waitresses and roundmen.

Ryan (6) predicts that further development of automated equipment and preprocessed foods will tend to reduce need for unskilled restaurant kitchen workers.

The 1961 U.S. Department of Health, Education and Welfare report on the Food Service Industry, Training Programs and Facilities (7) foresees expanding opportunity for employment in food service managerial, production, sales, service and sanitation work. The report also conceptualizes tasks associated with performance of such work.

In 1964 USOE issued a Suggested Training Program: Supervised Food Service Worker (8) that lists tasks performed by some major categories of food service employees.

METHOD

Conceptualization of Tasks

A team of Home Economists, managers of food service establishments from Washington State University and the Washington State Department of Education and food service employees worked cooperatively to conceptualize
the tasks listed on the instrument reproduced in Appendix A. The items are arranged on the instrument in clusters congruent with structures that are deemed useful by subject matter experts and are also recognized as realistic by employees who utilize the instrument. Throughout the conceptualization phase, there was repeated checking and rechecking of items to increase their clarity. Food service personnel offered many useful comments during this phase of the work.

**Field Testing**

The initial draft of the instrument was field tested with food service employees of a modern hospital and hotel, University dining halls, and three highway restaurants. Those establishments constitute major elements of the food service industry. The questionnaire was administered to a representative sample of employees in those establishments. It was also used as a basis for personal interview with the same persons. Comparison of the results of the two methods of obtaining the data and discussions with the subjects who had completed the instrument provided a basis for revision.

The results obtained from questionnaires checked by employees and that obtained from employee interviews were found to be in very close agreement. Space had been provided on the questionnaire for the employees to list additional tasks which they performed, but which were not listed in the questionnaire. Employees added only six additional tasks. In some cases, added items reflected a misunderstanding of wording of some original items. In these cases, the original task items were modified to clarify their meaning.

**RESULTS**

A copy of the completed questionnaire is reproduced in Appendix A.

**RECOMMENDATIONS**

A representative sample of commercial and institutional food service employees is being identified. It is recommended that the instrument be utilized to obtain data that will (1) provide up-to-date facts about combinations of work done by various categories of food service workers, (2) provide a base for identification of clusters of knowledges and competencies essential for effective performance of tasks constituting work patterns, and (3) ascertain the degrees to which such knowledges and competencies are congruent with those essential for work in other non-professional occupations.
DISCUSSION

The major types and combinations of tasks performed by various categories of food service workers can be conceptualized and identified. Experience derived from other phases of Project ERD-257-65 work indicate that the task items listed on the questionnaire can be utilized to identify clusters of knowledges and competencies common to entry and later-career work patterns. Those unique to specialized tasks can also be identified. That information will provide partial bases for planning curriculum and developing instructional materials that will increase pupils' vocational capabilities.

The cooperative nature of this project has increased communication between vocational educators and personnel directing food service establishments and institutions. This closer working relationship provides a base for more mutually beneficial working relationships in the future.

SUMMARY

The steady growth of the food service industry offers substantial employment opportunity for more non-college bound youth. To plan appropriate training programs, vocational educators need means of obtaining accurate information about the nature of tasks involved in modern food service occupations, the knowledge and competencies essential for performance of those tasks, and the similarities of such elements to those required for work in other occupations. In cooperation with employers and employees, this Project has developed a questionnaire that will enable educators to obtain such information.

The instrument can be utilized to obtain data that will (1) provide up-to-date facts about combinations of work done by various categories of food service workers, (2) provide a base for identification of clusters of knowledges and competencies essential for effective performance of tasks constituting work patterns, and (3) ascertain the degrees to which such knowledges and competencies are congruent with those essential for work in other non-professional occupations.
REFERENCES


APPENDIX A

FOOD SERVICE TASK SURVEY INSTRUMENT

You can help our schools give your sons and daughters the kinds of education they need to earn good incomes.

As you know, many changes are taking place in the kinds of work people do. Schools need up-to-date facts about exactly what kinds of work are being done. Those facts will help schools provide useful training.

You have been selected to help with a nation-wide study to show what actual kinds of work people in various occupations do.

The information will be STRICTLY CONFIDENTIAL.

Your cooperation is appreciated and will help your schools prepare young people to earn good incomes.

After you have completed the attached questionnaire, return it promptly, in the enclosed self-addressed envelope. No postage is necessary.

This Project is sponsored by:

Washington State University
University of Idaho
Washington State Board for Vocational Education
Idaho State Board for Vocational Education
1. Name ________________________________

2. Present Job Title ____________________________

3. Name of Employing Agency ____________________________

4. Address of Employing Agency ____________________________

5. □ Male  □ Female

6. Age: □ Under 20 □ 20-30 □ 31-50 □ Over 50

7. Draw a circle around the highest grade you completed in school:
   - grade 6   - High school graduate
   - grade 7   - 1 year of college
   - grade 8   - 2 years of college
   - grade 9   - 3 years of college
   - grade 10  - College graduate
   - grade 11  

8. For how many years have you been in your present occupation?
   - Less than 1 year
   - 1-5 years
   - More than 5 years

9. How many times have you changed jobs in the past 5 years? Check the correct box below.
   - 0 times
   - 1 - 2 times
   - 3 or more times

10. Please list other types of work you have done in the past 5 years.

   __________________________________________

   __________________________________________

   __________________________________________

   __________________________________________

   __________________________________________

   __________________________________________

   __________________________________________

   __________________________________________
INSTRUCTIONS

The following pages list tasks some people who work in food service occupations do.

Please read each task listed

Check (✓) "YES" for all of the tasks you perform as part of your work.
Check (✗) "NO" beside all of the tasks you do not perform as part of your work. PLEASE CHECK ALL ITEMS.

DO NOT CHECK A TASK "YES" UNLESS YOU HAVE ACTUALLY PERFORMED IT IN THE LAST TWO (2) YEARS.

PLEASE BE SURE TO CHECK EACH ITEM EITHER "YES" OR "NO".

Here is an example of how to check items:

YES   NO

✓     Prepare beverages (A check of "YES" means that you do prepare beverages as part of your work.)

✗     Wash dishes (A check of "NO" means that you do not wash dishes as part of your work.)
Check (✓) "YES" beside the tasks you do as part of your work. Check (✓) "NO" beside the task you do not do as part of your work. PLEASE CHECK EACH TASK EITHER "YES" OR "NO"

FOOD PREPARATION

YES NO
Prepare beverages
Prepare baked foods (breads, pastries, etc.)
Prepare desserts
Prepare soups
Prepare sandwiches
Prepare dehydrated or concentrated foods (reconstitute dry milk, instant potatoes)
Care of equipment
Store food
Wash dishes
Organize work area
Read menu
Prepare vegetables and fruits
Prepare meats, poultry, fish, eggs (protein foods)
Prepare salads
Prepare cereals
Selection and operation of equipment and utensils
Disposal of waste
Store equipment and utensils
Control pests and rodents
Comply with health and sanitation laws and regulations

MANAGEMENT

YES NO
Hire employees
Train employees
Determine policies, example: Portion size control, price setting, special services, safety
Interview prospective employees
Schedule and allocate work load
Comply with health and sanitation laws and regulations
Plan overall operational functions
### PLEASE CHECK EACH TASK EITHER "YES" OR "NO"

#### MAINTENANCE
- **YES**  
- **NO**  
  - Wash dishes  
  - Clean and care for equipment  
  - Repair equipment  
  - Dispose of wastes  
  - Store food  
  - Control pests and rodents  
  - Operate equipment  
  - Replace parts  
  - Clean floors, windows, wood work, counters  
  - Store equipment and utensils  
  - Comply with health and sanitation regulations

#### CASHIERING, CLERKING, SECRETARIAL
- **YES**  
- **NO**  
  - Operate cash register  
  - Make change  
  - Check food orders  
  - Keep records and inventory  
  - Type menus, correspondence, etc.  
  - Answer telephone  
  - Check food to be served with menu  
  - Prepare bills

#### SUPERVISION
- **YES**  
- **NO**  
  - Train employees  
  - Supervise employees  
  - Comply with health and sanitation laws and regulations  
  - Schedule and allocate work load  
  - Administer first aid

#### PURCHASING
- **YES**  
- **NO**  
  - Order food  
  - Purchase food  
  - Order supplies  
  - Purchase supplies  
  - Establish records for purchasing goods  
  - Purchase equipment  
  - Storeroom control  
  - Write specifications
<table>
<thead>
<tr>
<th>Task</th>
<th>YES</th>
<th>NO</th>
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</thead>
<tbody>
<tr>
<td>Plan menus</td>
<td></td>
<td></td>
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<tr>
<td>Serve food</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Store food</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Read menu</td>
<td></td>
<td></td>
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<tr>
<td>Set up table or tray</td>
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<td></td>
</tr>
<tr>
<td>Arrange food for service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clear away food</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serve equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comply with health and sanitation laws and regulations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bus soiled dishes, etc.</td>
<td></td>
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</table>
A team of home economists, managers of commercial and institutional food service establishments, and food service employees conceptualized and field tested a survey instrument to obtain up-to-date facts about major types and combinations of tasks performed by food service workers.

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### Identifiers
- Vo-Tech. Ed. R and D project
- ERD-257-65

Figure 3. ERIC Document Resume
INSTRUCTIONS FOR COMPLETING ERIC DOCUMENT RESUME

The resume is to be used for storing summary data and information about each document abstracted, processed, and stored within the ERIC system. In addition to serving as a permanent record of each document in the collection, the resume is also the primary means of dissemination. The upper left corner of the form (fields 1-14) is designed to conform to descriptive cataloging standards set forth by the Committee on Scientific and Technical Information (COSATI). Read the following instructions and complete the resume as directed.

A. GENERAL INSTRUCTIONS:

1. Read each entry point. If any point is not applicable, place "N.A." in the appropriate field. Except for those which you are instructed to leave blank, all fields must be completed with either the required information or "N.A."

2. Enter date of completion of the resume in space provided in upper right corner.

3. Entry must fit into space provided; if necessary use standardized abbreviation as cited by the American Psychological Association Publication Manual. (Publication Manual may be obtained from the American Psychological Association, Order Department, 1200 17th Street, NW., Washington, D.C. 20036.)

4. SPECIFIC INSTRUCTIONS:

Field 1. Accession No.: Leave blank. A permanent ED number will be assigned to each report and entered as documentation record(s) they are processed in the ERIC system.

Field 2. ERIC Satellite Code: Enter 3-digit code number assigned by ERIC to clearinghouse operation. If no code has been assigned, leave blank.

Field 3. Clearinghouse Control No.: If you are acting as a clearinghouse, enter the identifying number you have assigned to the document.

Field 4. Source: Enter corporate author, corporate source, or institutional affiliation of the author who originated the document. Include complete name and complete address of source, where possible. The Atomic Energy Commission Corporate Author. Entering, TID-5015 (6th Rev.) will be the authority for corporate source citations. (AEC Corporate Author Entries may be obtained from Clearinghouse for Federal Scientific and Technical Information, 9200 Corporate Center Dr., National Association of Educational Broadcasters, Springfield, Virginia.)

Field 5. Title: Enter full document title. If document comprises only a portion of the total publication or release, refer to field 12. Include subtitl e s; they add significantly to information in the title proper. Enter volume numbers or part numbers, where applicable, as an added entry following the title.

If the document has been identified with a project number, enter the project number as an added entry following the volume or part numbers.

Include the type of report (whether proposal, in-progress, final, followup) as an added entry following the project number, where applicable. Following the type of report, enter the inclusive dates covered by the report, by month and year. (Example: 1163 - 7/65.)

Field 6. Author(s): Enter personal author(s) (corporate author as entered in field 4), last name first. (Example: Doe, John.)

If two authors are given, enter both. In the case of three or more authors, list only the principal author followed by "and others," or, if no principal author has been designated, the first author given followed by "and others." (Example: Doe, John and others.)

Field 7. Date: Enter date of release of document by month and year. (Example: 12/65.)

Field 8. Pagination: Enter total number of pages of document, including illustrations, appendices, etc. (Example: 155 p.)

Field 9. References: Enter number of references cited in the bibliography of the document. (Example: 206 ref.)

Field 10. Report/Series No.: Enter any unique number assigned to the document by the publisher or corporate source. (Example: OE-55015; LX-135.) Do not enter project numbers; these are added entries field #5.

Also enter journal citations by name of journal, volume number, and pagination. (Examples: MAEB Journal, v. II, pp. 27-35.)

Do not include date; date is entered in field #7.

Field 11. Contract No.: If document has been supported by the U.S. Office of Education, enter the OE contract number.

Field 12. Publication Title: If document abstracted comprises only a portion of the total publication or release, enter complete title of publication. (Examples: Four Case Studies of Programmed Instruction; The Automation of School Information Systems.) For journal titles, spell out all abbreviations. (Example: Journal of General Education, Vol. VIII, No. 4.)

Field 13. Editors(s): Enter editor(s) last name first. (Example: Doe, Mary.) If two editors are given, enter both. In the case of three or more editors, list only the principal editor followed by "and others," or, if no principal editor has been designated, the first editor given followed by "and others." (Example: Doe, Mary and others.)

Field 14. Publisher: Enter name and location. (Example: McGraw-Hill, New York, New York.)

Field 15. Abstract: Enter abstract of document, with a maximum of 250 words.

Field 16. Retrieval Terms: Enter conceptually structurable terms which, taken as a group, adequately describe the content of the document. If terms do not fit into space provided on recto, use space allowance on verso for additional terms. Codes: Leave blank. Codes will be assigned for internal retrieval purposes.

Field 17. Identifiers: Enter all terms which would not fit into a structured vocabulary. Examples are: trade names, equipment model names and numbers, organizations, project names (Project Headstart, Project English), code names, code numbers.