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DISSERTATION

ASSESSMENT OF DEPARTMENT STORE SELLING COMPETENCY

Submitted by

Robert L. Russell

In partial fulfillment of the requirements

for the Degree of Doctor of Philosophy

Colorado State University

Fort Collins, Colorado

June, 1971

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COLORADO STATE UNIVERSITY

June, 1971

WE HEREBY RECOMMEND THAT THE DISSERTATION PREPARED UNDER OUR SUPERVISION BY ROBERT L. RUSSELL ENTITLED ASSESSMENT OF DEPARTMENT STORE SELLING COMPETENCY BE ACCEPTED AS FULFILLING IN PART REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY.

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ABSTRACT OF DISSERTATION

ASSESSMENT OF DEPARTMENT STORE SELLING COMPETENCY

The purpose of this study was to develop an instrument for measuring department store selling competencies among categories of salespersons and to analyze the differences of the test scores among the three sample groups.

The population selected was composed of one hundred salespeople with formal education and training in distributive education, one hundred salespeople without formal distributive education and one hundred employees classified as nonsalespeople. The respondents were selected by the personnel directors of five branch stores and the distributive center of Macy's California department stores located in the San Francisco Bay Area.

The first assumption was that the salespeople can be differentiated on the basis of sales competency. It was assumed that an instrument could be developed that would measure sales competency. Another assumption was that different levels of sales competency exists among department store salespeople.

The hypotheses were tested by a two-phase data analysis procedure. The Retail Selling Competency Battery of one hundred multiple-choice items was administered to the three sample groups by the testing and training directors of the

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participating stores. An analysis of variance, multiple comparison of differences, t tests, and chi square tests of significance were used for determining the difference among the sample groups.

Conclusions determined on the basis of the findings of this study are:

1. The test battery mean scores differentiated the salespeople groups from the nonsalespeople group significantly.

2. A test battery was developed which measures retail selling competencies of department store employees.

3. The multiple comparison test of differences among three sample groups resulted in rejecting the hypothesis of homogeneity of variance.

4. There were significant differences among the variances of the test scores based on the three samples. The single exception being that the distributive education salespeople did not differ from the nondistributive education salespeople significantly.

Further investigation is recommended of the relationship between the battery and other standardized tests. More validation of the battery with other department store salespeople is also recommended. Cross validation of the norm data is needed before the battery should be used in screening and certification.

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TABLE OF CONTENTS

Chapter		Page
I.	INTRODUCTION	1
	Problem	4
	Need for the Study	4
	Purpose of the Study	5
	Objectives	5
	Basic Assumptions	6
	Delimitations	7
	Definitions	7
II.	REVIEW OF RELATED RESEARCH	10
	Measurement-Evaluation-Assessment	10
	Comparative Studies in Distributive Education	29
	Summary	36
	Development of Hypotheses	40
III.	PROCEDURES	41
	Data Collection	52
	Development of the Retail Selling Competency Battery	58
IV.	FINDINGS	60
	Introduction	60
	Data Analysis	61
	Additional Data	74
V.	SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS	84
	Summary	84
	Conclusions	86
	Recommendations	88
REFERENCES CITED		92
APPENDIXES		99

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APPENDIX TABLE OF CONTENTS

Appendix		Page
A	Retail Selling Competency Battery	99
B	Department Store Retail Sales Survey . . .	105
C	Proportion of Employee Groups Answering Items Correctly and Chi Squares for Differences of the Retail Selling Competency Battery	107
D	Department Store Retail Sales Survey for Four Stores and Distribution Center of Macy's California	122
E	Sample Breakdown of Employees According to Sex and Mean Score	131
F	Sample Breakdown According to Group and Department Store Location	132

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LIST OF TABLES

Table		Page
1.	Sample Breakdown According to Group and Forms of Instruments	51
2.	Percentage Composition of the Three Sample Groups According to Age, Education and Work Experience	56
3.	Chi Square Tests of Differences Among the Three Sample Groups Classified by Age and Education Levels	57
4.	Means and Standard Deviations, Between the Three Employee Sample Groups for the Retail Selling Competency Battery	62
5.	Analysis of Variance of the Three Employee Sample Groups' Responses to the Retail Selling Competency Battery	63
6.	Tukey's Test	64
7.	Means, Standard Deviations, and t Tests Between Groups Classified by Age, Education, and Work History of the Total Sample for the Retail Selling Competency Battery	65
8.	Chi Square Comparisons for Differences in the Three Groups of Employees' Answers for Item Analysis of the Retail Selling Competency Battery	67
9.	Split-Half Reliability Coefficient of the Item Analysis Sample for the Retail Selling Competency Battery	74
10.	Proportionate Length of Time Employed with Macy's California Stores	75
11.	Highest Grade of School Completed	76
12.	Completed Diplomas, Certificates or Degrees	76

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LIST OF TABLES--Continued

Table		Page
13.	Distributive Education Courses and Work Experience Completed at the High School Level	77
14.	Distributive Education Courses and Work Experience Completed at the College Level .	79
15.	Employees Who Would Have Participated in a Work-Experience Program in High School if They Had the Opportunity	80
16.	Type of Work-Experience Program Preferred . .	80
17.	How Well School Courses Prepared Employees for First Job	81
18.	Mean Rating of High School Education	82

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LIST OF FIGURES

Figure		Page
1.	Two-Way Specification Table for Measuring Department Store Selling Competencies . . .	53

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CHAPTER I

INTRODUCTION

The variety of measuring instruments which examine the occupational interests, attitudes, and abilities are numerous. Many vocational competency examinations are custom-made for evaluation of specific skills and are not available for general distribution. Vocational achievement tests have been designed for clerical jobs. Typewriting, stenography, and bookkeeping achievement tests are the most frequently used as illustrated by the Seashore-Bennett Stenographic Proficiency Test. Some commercially written trade tests are concerned, not with job skills, but with technical information. Examples of these trade information tests are provided by the series of Purdue Personnel Tests. These tests measure technical information for such occupations as carpentry, sheet metal work and welding, and engine lathe operations. Oral trade tests covering some 250 occupations have been developed by the United States Employment Service.

There is an increased use of standardized tests in selection of candidates for the professions. Such tests are available for the selection of candidates for schools of medicine, dentistry, law, business, engineering, nursing and other professional fields. The Medical College Admission

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Test (MCAT) consists of four separately scored parts: verbal, quantitative, general information, and science. The Association of American Medical Colleges has employed this test since 1948. Since 1948, the Law School Admission Test (LSAT) has been administered to law school candidates on a national basis. A test designed for selection of candidates for graduate engineering training as well as for industrial jobs, is the Minnesota Engineering Analogies Test (Anastasi, 1968).

There has been little research on the development of achievement tests in distributive education. One obstacle to the development of tests appropriate for use in distributive education has been the inability of the leaders in the field to agree upon goals and outcomes of achievement. Only two distributive education studies reported contained refined tests designed for the study in which they were used. Several studies used existing achievement tests which were appropriate to the purpose for which the tests were designed but did not measure important outcomes in competencies used in distribution. Individuals conducting research in distributive education have made little use of tests up to the present time. The development of tests designed for the measurement of specific distributive education outcomes is a necessity.

The procedures for development of a test in business or industry are described by Anastasi (1968) as follows:

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1. Conducting a job analysis to define the problem and to identify the principal traits to be measured;
2. assembling a trial battery of tests to measure the traits identified in the job analysis;
3. validating each preliminary test against a criterion of job success and choosing tests for final battery;
4. formulating a strategy for personnel decisions, i.e. determining how scores on the chosen tests will be used in making operational decisions.

In an effort to meet the need to determine competencies of creative personal selling, Lucy Crawford (1967) at Virginia Polytechnic Institute, initiated a vocational development project. A portion of her work was concerned with the identification of critical tasks of selected distributive workers, competencies needed to perform the tasks, and a cross-tabulation of competencies needed by workers in selected categories of business. The report of the research project, *A Competency Pattern Approach to Curriculum Construction in Distributive Teacher Education,* (Crawford, 1967), is presented in four volumes. While Crawford was not concerned with assessing achievement, her findings have implications for all phases of the distributive education program. The fact that the vast majority of the leadership in distributive education has agreed upon definitions, aims and objectives, curriculum, guidance, coordination, administration and teacher education as applied to this field indicates that these findings can serve as a theoretical structure on which related research can be erected.

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Problem

Distributive education teacher-coordinator programs generally lack valid and reliable instruments for assessing competencies needed to conduct an effective distributive education program in the secondary and post-secondary school.

Competency tests serve at least three purposes:

1. To screen qualified applicants for better than average ability and range of occupational experiences in distribution as required for temporary certification according to the requirements outlined in most state plans of Vocational Education.
2. To establish sufficient and professionally acceptable evidence of competency for issuance of undergraduate credits toward a degree or for advanced certification in a teacher-training institution.
3. To identify an individual's status on the department store sales continuum with respect to an established standard of performance.

Need for the Study

There is a need for additional research to determine the degree to which high school and post-high school Distributive Education programs attain the objectives for which they are designed. To provide for better selection,

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placement, and general counseling service it is necessary to study sales worker populations. The study needs to include both general and vocational programs in order to identify differences and similarities in background factors, achievement levels, and career choices. As a basis for curriculum evaluation and improvement there is a need to assess the competencies of large groups of department store salespeople who are graduates of cooperative distributive education programs.

Purpose of the Study

The main purpose was to develop an instrument for measuring department store retail selling competencies among categories of salespersons based upon Crawford's investigation. Another purpose of the study was to analyze the differences of the Retail Selling Competency Battery's scores among the groups of salespeople who participated in cooperative distributive education programs at the high school and post-high school levels, salespeople without formal training in distributive education, and nonsalespeople in large department stores.

Objectives

The major purpose of this study was to develop an instrument for measuring professional department store retail selling competencies of individual groups of salespersons. Retail selling measurement of competency is concerned with the level of attainment along the continuum of professional

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to validate the battery. Nine variables were used in assessing an individual's level of selling competency. These include the following factors:

1. Human Relations
2. Retail Selling
3. Retail Merchandising
4. Product and/or Service Technology
5. Merchandise Mathematics
6. Operations and Management
7. Advertising
8. Communications
9. Display

These objectives are stated as measurable products and were administered to the three sample groups.

Basic Assumptions

In order to accomplish the objectives of this study, the following assumptions were made. The first assumption was that the department store retail salespeople can be differentiated on the basis of professional sales competency. It was also assumed that a retail selling test battery could be developed that would differentiate individual professional selling competencies reflecting higher and lower levels on the sales continuum. Another assumption was that different levels of professional retail sales competency exist in various groups of department store employees, and that an employees membership in a group is, in part, related to his measurement level of sales competencies. The foundation assumption was that a continuum of professional retail sales competency exists on which various classes or types of individuals can be located.

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Delimitations

The study was limited to an assessment of 100 salespeople with formal training and education in distributive education, 100 salespeople without formal distributive education, and 100 employees who were not salespeople. The 300 individuals were employed by Macy's California department stores in the San Francisco Bay Area in the State of California. The respondents were selected by the personnel directors of five branch stores and the distribution center of the company.

Definitions

Cooperative Distributive Education Program

Cooperative distributive education in the high school and post-high school is a program of instruction designed to prepare students for initial entry jobs in areas of marketing, merchandising, and management. This occupational preparation aids the student-learner in acquiring general skills and knowledges applicable to all distributive occupations. In addition, specialized skills and knowledges are acquired through on-the-job experience at the training station. Also, this background prepares the student-learner for upward mobility on the job.

Criterion-Referenced Test

An instrument used to identify an individual's status with respect to an established standard of performance.

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Department Store

As used in this study a department store has 25 or more workers and engages in selling items consisting of these three groups: 1) furniture, home furnishings, and appliances, 2) a general selection of clothing for men, women, and children, and 3) household linens and yard goods.

Group 1*--Cooperative Distributive Education Salespeople Sample

A group of 100 department store employees who have participated in a cooperative distributive education program and are employed in a selling type of distributive occupation. These individuals are classified as professional salespersons at all three levels of the sales career continuum, entry, first step and second step, in selected large department stores.

Group 2**--Noncooperative Distributive Education Salespeople Sample

A group of department store salespeople who have not participated in a high school or post-high school cooperative distributive education program, but who are employed in a selling type of distributive occupation. These individuals are classified as professional salespersons at all three levels of the sales career continuum, entry, first step and second step, in selected large department stores.

*For remainder of the study, Group 1 will be referred to as distributive education salespeople.

**For remainder of the study, Group 2 will be referred to as nondistributive education salespeople.

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Group 3--Nonsalespeople Sample

A group of department store employees who have not completed a distributive education program and are not presently employed in a distributive occupation. A group of randomly selected individuals employed in clerical and office, technical, hospitality, trades and industry and service occupations in a large department store.

Retail Selling Competency

The knowledges, understandings, skills and attitudes necessary to perform agreed-upon critical tasks by a department store salesperson.

Retail Selling Competency Battery

For this study the battery consists of nine subtests designed to measure a salesperson's knowledges and understandings of the critical tasks needed in a large department store.

Knowledge

The recall of specifics and universals, the recall of methods, processes and of a pattern.

Understanding

The power to make experience intelligible by applying concepts and theories; the comprehension of ideas and the ability to use abstractions in particular and concrete situations.

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CHAPTER II

REVIEW OF RELATED RESEARCH

The literature reviewed has been divided into two categories which were relevant to formulating the hypotheses of this study. The first category deals with measurement, evaluation, and assessment studies. The second category cites the limited number of comparative studies of distributive and nondistributive education students.

There has been little research on the development of achievement tests in distributive education. Several studies used existing achievement tests which were appropriate to the purposes for which the tests were designed, but they did not measure the objectives of distributive education programs. A selected number of comparative studies showing outcomes of cooperative part-time programs in distributive education will be considered last.

Measurement-Evaluation-Assessment

Prior to constructing an instrument for assessing the competencies of department store salespeople, it seemed necessary to review the work of the leading authorities and investigators in vocational psychology. Differential psychology, occupationology, and occupational differences are the foundations of vocational psychology identified by

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Crites (1969). It would be remiss on the part of this investigator if the work of Anastasi, Super, Crites, and Flanagan in measuring instruments were not utilized to the fullest extent.

The ultimate success of any training program may be determined only by observing whether its graduates successfully perform the job tasks for which they have been trained. Any criterion other than that based upon observations or absence of certain operationally defined, critical (Flanagan, 1950) job behaviors merely approximates the degree to which training and education is likely to be effective. Because it is neither experimentally desirable nor administratively feasible it becomes necessary to approximate the hypothetically "true" order of success of a job by developing intermediate criteria which, through rational or empirical analysis, demonstrates a high degree of relevancy to the ultimate objectives.

Methodologically, this can be best realized in identifying a representative sample of tasks which are unbiased reflections of the total universe of behaviors necessary for success in a particular activity. This activity could be the tasks, knowledges and understandings of a department store salesperson.

Competency Measurement

Popham (1969) makes an interesting distinction for researchers to keep in mind when attempting to measure individual competencies.

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> During the past several years measurement and instructional specialists have distinguished between norm-referenced and criterion-referenced measure used to identify an individual's performance in relation to the performances of others on the same measure. A criterion-referenced test is used to identify an individual's status with respect to an established standard of performance. . . .
>
> . . . . . .
>
> . . . On the other hand, in situations where one is only interested in whether an individual possesses a particular competence, and there are no constraints regarding how many individuals can possess that skill, criterion-referenced measures are suitable. Theoretically, at the close of many instructional programs we might hope that all learners would display "maximum" proficiency on measures reflecting the instructional objectives.
>
> . . . . . .

Criterion-referenced measures are validated primarily in terms of the adequacy with which they represent the criterion. Therefore, content validity approaches are more suited to such tests. A carefully made judgment, based on the test's apparent relevance to the behaviors legitimately inferred from those delimited by the criterion, is the general procedure for validating criterion-referenced measures.

For criterion-referenced tests the use of discrimination indices must be modified. An item which doesn't discriminate need not be eliminated. If it reflects an important attribute of the criterion, such an item should remain in the test.

Occupational Analysis

The foundations of vocational psychology are treated superbly by Crites (1969).

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> 'To indicate what is meant by 'occupational analysis' it is necessary first to distinguish among these terms, which are sometimes erroneously used interchangeably: position, job and occupation. Shartle (1959) defines these terms as follows:
>
> Position: a group of tasks performed by one person. There are always as many positions as there are workers in a plant or office.
>
> Job: a group of similar positions in a single plant, business establishment, educational institution, or other organizations. There may be one or many persons employed in the same job.
>
> Occupation: a group of similar jobs found in several establishments.

These definitions imply that there is an increasing generality from position, through job, to occupation. The personnel psychologist is primarily concerned with positions and jobs because of his role in appraising and selecting workers for an employer. This is referred to as "position analysis" and "job analysis." The vocational psychologist is basically interested in occupations.

Occupational analysis is focused primarily on the work environment. After analyzing and describing the occupations, they are usually classified according to their similarities and differences.

> Occupational measurement differs from occupational classification, in that it involves the ordering of occupations along some dimension according to the postulates of scaling (Guilford, 1954). Caplow (1954) and others have raised the question: Is there a single occupation hierarchy? The answer should become apparent when you look at various occupational scales which have been constructed. These include: 1) socio-economic scales, 2) prestige scales, 3) an intelligence scale, and 4) a behavior-control scale. Interrelationships of several different occupational scales are multidimensional measurement systems (Crites, 1969).

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The analysis, classification, and measurement of occupations is essential for writing a competency test in a specialized area, i.e. department store sales test.

An individual can be located on a physical maturation continuum by assessing those variables that relate to physical growth. Vocational maturity, like physical maturity, can be assessed by specific variables. Professional selling competency development will be assessed by measuring the subject's cognitive knowledge in the areas of human relations, selling, merchandising, product and/or service technology, mathematics, operations and management, advertising, communications and display. Salespeople can be located on a continuum of competency.

One of the first systematic presentations of abilities of persons with diverse occupations resulted from the wholesale testing with the Army Alpha during World War I. Fryer (1922) compiled Alpha scores for 96 occupations from about 3,500 draft inductees, resulting in a table of mean scores and ranges, presented in descending order of ability.

Borow (1964) compiled the chronology of notable events in the history of vocational guidance. A number of events related to job analysis, classification and measurement were selected because they are relevant to this study. The following summary statements represent the milestones in occupational measurement of abilities during the years from 1934 through 1945.

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In 1934, the Occupational Research Program of the U.S. Employment Service (USES) was established "to furnish public employment offices and other cooperating agencies with operating tools which will facilitate the proper counseling, classification, and placement of workers." The USES conducts a program of testing, counseling and placement services, job analysis and worker analysis research. In addition, their occupational information compiling and publishing activities is one of the largest and most diversified in the world.

Louis L. Thurstone at the University of Chicago published a monograph on primary mental abilities. In 1938, Thurstone and his wife, Thelma Gwinn Thurstone, completed a battery of tests to measure a number of basic intellectual traits. These traits were thought to contribute to performance in a wide variety of educational and occupational activities.

Manpower problems became critical during World War II. The Personnel Research Section of the Adjutant General's Office developed new classification and assignment procedures with tests and selection tools. Instruments were developed for the Army Specialized Training Program. Similar research and classification procedures were developed for the Navy by the Bureau of Naval Personnel. In the Army Air Forces, selection and training of crews were charged to the Technical Training Command. Pilot selection research was assigned to three Psychological Research Units attached to air bases. Among the instruments contributed by military personnel

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research units were the Army General Classification Test, a variety of new psychomotor tests, refined procedures for the validation and standardization of test batteries, and the stanine method of converting raw scores to standard scores.

E. K. Strong, Jr., published his *Vocational Interests of Men and Women,* on the measurement of interests in 1943.

During 1945 experimental use of the USES General Aptitude Test Battery was initiated. The development of the GATB was influenced by the research of the Minnesota Employment Stabilization Research Institute on occupational abilities and by that of the Thurstones on primary mental abilities. The GATB offered a multitrait approach to the establishment, through research, of occupational aptitude patterns for many occupations.

Borow's milestones mentioned above can be found in *Man in a World of Work,* also edited by Henry Borow.

Persons who have different occupations differ in the amount and kinds of abilities they possess. During the twentieth century it has become possible to demonstrate the differences with objective tests of ability. Occupational and personnel psychologists have turned to measures of interests, values, and personality. As a result, predictions of entry and success has improved. The Minnesota Occupational Rating Scales (MORS), of Paterson, Gerken, and Hahn (1953) expanded the catalog of differences to several abilities. The MORS rates 432 jobs for seven abilities: academic, mechanical, social intelligence, clerical,

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musical, artistic-graphic, and physical agility, on four-level scales. Unfortunately, the ratings do not represent empirical data, but rather the pooled judgment of a number of experts.

Fine (1957) classified 4,000 jobs in the Functional Occupational Classification Project. They included estimates of aptitudes, temperaments, interests, physical capacities, working conditions, and general education.

The trend which the MORS illustrates, was further developed in the application of factored aptitude tests by the U.S. Employment Service's General Aptitude Test Battery (GATB). The GATB provides scores on eleven factors. Patterns of scores relevant to success in a number of occupational groups have been developed empirically.

E. E. Ghiselli (1966) has published an integration of validities of tests for the prediction of occupational success. It is apparent that occupations differ in the amount and kinds of abilities they require of the individuals after reviewing Ghiselli's publication. He admits that his validity coefficients came from diverse sources, their potential to be unreliable, and the criterion of performance a very complex problem. He nevertheless reduces the differential predictors of success to four general cognitive factors, and one noncognitive factor. When one combines occupations into groups of functional similarity, they differ distinctly in relative content of the five factors.

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The U.S. Department of Labor (1966) has published a supplement to the *Dictionary of Occupational Titles* giving the physical demands, working conditions, and training time for a great number of occupations.

Super and others (1967) have attempted to assess vocational maturity and traditional personality and achievement variables. Through extensive cross-sectional sampling, Crites (1965) managed to develop and standardize readily employable instruments for measuring aspects of vocational behavior.

Lawler (1966) hypothesizes that ability level should act as a moderator of the relationship between job attitudes and job performance. He is aware of the contamination that probably exists between the superior's rating of "ability" and job performance. He points out that future research should attempt to use relevant ability tests in place of superior's ratings. Lawler appears to have been measuring degree of job fit rather than level of ability as his moderator variable. Lawler's study was carried out in three organizations, all of which were divisions of state governments. Overall, 237 of 258 questionnaires were returned. For the purpose of this study 211 were usable. The sample is not a random sample of managers in general, and therefore the conclusions must be restricted to the organizations studied.

The results of the study clearly supported the point that an ability measure can serve as an effective moderator

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of the relationship between contingency attitudes and job performance. Lawler believes that there should be an improvement of the simple job performance criterion, either by adding measures of ability, or perhaps by measuring effort or some other behavior related to motivation.

The results of this study also supported the hypothesis that performance = f (ability x motivation), if, as seemed likely, the attitude measure is a reflection of motivation. The evidence indicates that for an adequate understanding of job performance, measures of motivation as well as measures of ability are required. It should not be surprising to conclude that job satisfaction would be closely related with job performance when the individual has the ability required by his job tasks.

Altman (1966) studied the vocational capabilities that are needed in several jobs and occupational areas. He identified, through a factor analysis of test items on performance tests for several skilled jobs, six curriculum areas in which workers need competence: mechanical, electrical, spatial, chemical and biological, symbolic, and "people."

A broadly prepared individual with both skills and cognitive experience for a cluster of occupations is presumed to be better prepared. The individual can adjust to technological developments that affect his occupational field. Maley (1966) conducted a study to define the "cluster concept."

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A breakdown by occupations or skills is the most useful breakdown for an educational planner. An occupational analysis where manpower requirements by skills, types, and level of training is relatively easy to accomplish. The difficulty is the forecasting of occupational mobility.

Medvin (1967) described methods which are currently employed by the government in forecasting long-term manpower requirements. The Bureau of Labor Statistics prepared an economic model by building up the demand for each product in an industry, the manpower requirements of each industry consistent with this demand, and finally, the development of an occupational matrix. The other approach is the area skill survey which depends primarily on the employers' own estimates of future occupational requirements. Many people have questioned the reliability of this method.

There are two schools of thought on the question of occupational data for educational planning. One group maintains that the need is urgent while the other group denied that increased data would improve educational planning (Swedloff, 1966).

Scoville (1966) tried to obtain education and training requirements on an occupational basis and to relate this information to the mobility characteristics of occupations. If estimates can be obtained of the amounts of various types of training required to fill certain jobs, then projections of changing occupational patterns will yield predictions for requirements of the educational and training system. It is

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more realistic to plan and train for occupational clusters than for specific occupations.

Selected Vocational Measurement Studies

This will serve as a guide to those who undertake the assignment of writing an occupational competency test in a specialized field, working in collaboration with a teacher educator, faculty advisor, or other qualified staff members. Information is given on the purpose and nature of occupational competency tests, test development procedures, test construction, test administration procedures, and evaluation of test results. A bibliography of related reading which date from 1935 - 1960 is included. The appendix contains objectives in selecting suggested performance jobs, suggestions and examples for test writing, instructions for examiners, rating sheets, and samples of test types (The Ohio State University, Department of Education, 1962).

Measurement of individual traits and separate factors of intelligence followed by empirical combinations of these measures into aptitude test batteries should be the basis for selection of students for vocational training. During the past 14 years, Los Angeles Trade-Technical College has developed and validated such test batteries for some 55 trade and technical curriculums, testing over 8,000 applicants annually. The student-selection process involves both the testing program and the applicant-counselor-instructor interview. Significant correlations on aptitude tests and

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instructors and other psychometric data are given in this report by Margaret L. Crawford (1966).

In studying competencies critical to the homemaking teacher, Luehning (1954), constructed an instrument to discern the degree to which a given teacher possessed these competencies. Through interview and re-interviews with 60 leaders in the field of Homemaking Education 22 traits were deemed to be objective, valid, comprehensive, and to have bearing on the issue. In order to conform to the criteria personality factors were ruled out. An instrument composed of five parts was used. A small sample of the homemaking teachers was used in obtaining ratings which required an average of 15 hours for each teacher subject.

McFadden's (1967) purpose for a pilot project was to develop and validate tests to assess student achievement in twelfth grade vocational printing programs. The Ohio Printing Achievement Test and a new test developed by the project and the Ohio Printing Performance Test were administered to a sample of students who were nearing completion of the four-year vocational printing course in 77 high schools in 29 states and the District of Columbia. National norms were established. A job performance criterion measure was developed with which to validate the two achievement measures. A measure of job performance was obtained from the job supervisors or graduates who had participated in the norming administration. It was concluded that the tests were valid and reliable and that vocational graduates who

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entered printing occuaptions had significantly greater mean level of achievement than the total norm group.

Weiss, et al., (1964) constructed two questionnaires for measuring vocational needs. Need was defined as "need for specified reinforcing conditions in the work environment." The N-Factors Questionnaire consisted of 48 two-response choice items and four items for each of 12 scales. The scales were achievement, authority, co-worker, creativity and challenge, dependence, independence, moral values, recognition, security, self-expression, social service and social status. The questionnaire was completed by 1,014 employees, (521 disabled and 493 nondisabled). The data analysis indicated that only five scales had adequate reliabilities. The Minnesota Importance Questionnaire was developed by revising and expanding the N-Factors Questionnaire. New scales were ability utilization, activity, advancement, company policies and practices, compensation, responsibility, supervision-human relations, technical, variety and working conditions. The Minnesota Importance Questionnaire was completed by 2,308 employees (disabled and nondisabled) representing blue collar, nonskilled white collar, skilled white collar and managerial groups, and 503 college students. The Minnesota Importance Questionnaire scales were shown to have high reliabilities and appeared to be useful in vocational diagnosis. Data supported the assumption that disability affects personality.

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The evaluation of an educational program typically implies measurement. Measurement, in turn, implies testing in one form or another. In order to carry out the testing necessary for evaluation of an educational program, researchers often develop a complete testing sub-program. The evaluation of the total project may depend upon the testing of the sub-program. If the testing program is something less than adequate, the evaluation of the total project may be suspected. Researchers should pay as much attention to the evaluation of a testing sub-program as they do to the evaluation of the total project. The proposed model for evaluating a testing sub-program includes the following steps which are adapted from a general evaluation model by C. M. Lindvall: 1) define the unique objectives of the testing program, 2) define the testing program in regard to personnel and facilities, planned and actual functions and products, 3) plan and carry out evaluation of the testing program concurrent and consistent with the total program evaluation. This would include objectives assessing the achievement of the testing program objectives and observing any unplanned results of the testing program, and 4) attach a valuation to the testing program to answer the question, "can an evaluation of the total project based upon this testing program be considered sound?" (Unks, Cox, 1968).

The objective of the study was to develop a dynamic system for adapting data on human occupational resources for use in developing vocational education programs to meet

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current and future occupational needs. In the first of four phases, the objectives were to develop: 1) data gathering instruments designed to continuously assess human resources, employment opportunities, and educational programs, 2) a system for assessing job opportunities which cluster required job skills and mental processes, and 3) manuals of procedure for use by field personnel in administering data gathering instruments and employing the clustering system, survey questionnaires to be used with students, dropouts, employees, and employers, secondary school vocational programs, community college vocational programs, and proprietary schools were developed, field tested, analyzed and modified. A two-dimensional clustering system which combined worker functions and processes was developed. Jobs in occupational areas representing mechanical, electrical, and symbolic skills were used as samples in developing task descriptions and numerical loading from which clusters were formed. Guidelines were prepared for administering data gathering instruments and employing the clustering system. Included were: 1) detailed description of instrument development, 2) a bibliography, and 3) extensive appendixes containing related information, an instrument analysis, the guide for administering instruments, the instrument, a supplement to instrument utilization, task descriptions and classification headings (Oregon State System of Higher Education, Monmoth, Oregon, 1967).

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Studies related to teacher competency have been made in each of the vocational and practical arts areas (Street, 1953). As part of the Southwest States Cooperative Program in Education Administration, he also developed a competency pattern for industrial arts. His dissertation had a profound influence on the design of this study.

The findings of this investigation are relevant to the improvement of educational programs in general, and to teacher training programs more specifically. Competency is basic to the construction of a curriculum for teacher education. Out of such a consideration of desired competency come the aims, objectives, and learning experiences which constitute a valid program of teacher training. Competency is (or should be) basic to any state plan for teacher certification, and to be certified, the prospective teacher must demonstrate a required degree of competency. Adequate descriptions of the desired competencies are basic to all in-service programs designed to facilitate teacher growth. In like manner, evaluation of teacher growth and teacher upgrading in terms of state certification and salary schedule, must be related to a higher level of professional competence. For these reasons, teacher training institutions should be evaluated in terms of adequate programs designed to equip teachers with the needed elements of competency.

The purpose of this project was to determine more effective vocational teacher certification procedures in Michigan with particular emphasis on the development of

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competency examinations for use in certification of trade and industrial teachers. State plans from 31 states were reviewed. Kazanas and Kieft (1966) mailed questionnaires to state directors to collect information and opinions concerning the use of competency examinations in various states and territories. Analysis of this data aided in the construction of written, oral, and performance examinations. Several trade analyses were combined for each trade area to derive a comprehensive analysis which was then reviewed by research staff and an appropriate teacher educator. Approximately 1,500 test items were prepared for each trade area. These were screened, evaluated and divided into three forms for each trade area. Each form contained about 300 items. The committees which evaluated the written examinations also made recommendations concerning performance test content and developed a list of experiences. It was concluded: 1) well designed examinations have a value in teacher certification, 2) phase II will decide their usefulness and validity, and 3) examinations can be effective in determining technical knowledge, increasing the number of teachers, indicating weakness in those persons who fail, and improving the quality of teachers. The data-collecting instrument and letters are included in this study.

Hoffman (1968) developed an instrument to assess the composite subject matter achievement of secondary cooperative distributive education students. Statements of objectives and content of distributive education were drawn from a

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review of the literature and submitted to Ohio coordinators for validation. The instrument was developed from this data and submitted for evaluation and validation to a group of non-Ohio distributive educators. A pre- and post-test of the instrument was administered to the senior secondary distributive education students. There was a high level of agreement among Ohio coordinators concerning the objectives, program phases, and instructional content of cooperative distributive education at the secondary level. They found that it is possible to develop an instrument which can measure the related composite subject matter learning of distributive education students. Hoffman felt that his findings supported the proposition that more effort should be made by distributive educators to specify instructional objectives and to isolate the effect of their educational program on the accomplishment of those objectives.

In a technical report, Moss (1968) states that the identification and measurement of the program outcomes which are to serve as evaluative criteria is one of the most critical aspects of program evaluation, and the one that has been overlooked the most. He identified and treated eight dimensions of evaluation. First and most important, he stressed that the criteria by which instructional programs are to be evaluated must be outcomes--the products of instruction. Program characteristics cannot be used as evaluative criteria because it is assumed rather than proved that those characteristics are good.

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Comparative Studies in Distributive Education

In distributive education, numerous studies have attempted to investigate the employment history of former students, but little attempt has been made to compare the employment patterns of graduates of specific vocational programs and graduates of general programs. Similarly, few studies have been made to compare, in terms of important background factors, enrollees of specific distributive education programs with general education students.

Wallace (1960) conducted a study to determine whether creative thinking ability contributed to high sales productivity for experienced female salespeople and whether it affected the amount of service the salesperson gave a customer. He found that: 1) the mean scores of those employed in high-service departments were significantly higher than those employed in low-service departments, 2) mean scores of those with high sales productivity were significantly higher than low producers, and 3) the performance of the group classified as low in both variables was considerably lower than the other groups in measured creativity while the high group in both variables obtained higher mean scores. There was no significant interaction between the two variables and the differences between total mean scores were significant at the .05 level.

Mason, (1961) as a part of his study, compared distributive education and nondistributive education graduates. His comparisons were made with respect to:

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1. Progression of the distributive and nondistributive education graduates as shown by the salary earned, knowledge and experience required on the job, skill and abilities required on the job, and job turnover.
2. Length of time the distributive education graduates remained employed in distributive occupations.
3. The progress of distributive education graduates in distributive occupations.
4. The attitudes of businessmen regarding the progression of distributive education graduates in distributive occupations.

Employer opinion gave stronger indication of growth and advancement of the graduates of the program as compared to those who were not graduates. Distributive education graduates were relatively more in the top management bracket than those who were not distributive education graduates. Indications were that the graduates were prepared for advanced positions rather than entry positions. There was no clear indication of what business wanted from the training program and what teacher-coordinators did in providing the training.

Clark and Sloan (1962) studied the education and research carried on by 36 of the largest 38 American retailing concerns using a variety of information sources. They found the amount of formal education conducted by retail establishments extremely limited as compared with that of

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industry. Clark and Sloan divided education by retail corporations into three categories: 1) rank-and-file orientation training, 2) more intensive training for person-to-person selling, and 3) managerial development programs. The report contains a report of a U.S. Department of Agriculture study which concluded that the performance of retail salesclerk can be improved considerably by carefully planned instruction.

Hecht (1963) conducted a follow-up study of high school graduates of three New York State high schools to determine why they had selected distributive education, whether a substantial number remained in the field, and what their evaluation of the program was after obtaining store experiences. Six hundred and fifty questionnaires were sent and 231 replies were received. Forty-six per cent of the respondents said that the training helped them advance more rapidly in their careers. They felt that they knew more than other part-time workers. They said that they chose distributive education for vocational reasons and because the field offered advancement and opportunities.

Wallace (1964) followed up his earlier study (1960) with a study of creative thinking as a factor in the performance of industrial salesmen. The following is one of his conclusions: salesmen ranked high in self-motivation are likely to be high in three kinds of creative thinking abilities--1) ideational fluency, 2) originality, and 3) figural imagination.

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Pappas (1964) conducted a study to evaluate the post-secondary Ohio Wholesale Management Development Program. He found that the program met the objectives expected by the trainees and the employers. The trainees progressed much faster in the areas of personal appearance, capacity for growth, quality and quantity of work, and human relations than the control group which had not had the training. The control group progressed faster than the trainees in the area of job knowledge, product knowledge, customer service, and accuracy with figures. The program attracted trainees of a higher caliber than those normally employed by the wholesaler. The program was able to hold the majority of the trainees. The employer, in most cases, offered the trainees important jobs upon graduation.

Robertson (1965) gathered information to appraise the effect of cooperative education programs in the secondary schools on beginning workers, using selected factors which were related to job success and satisfaction. Mean scores on the Job Satisfaction Scale were 66.29 for the cooperative group and 64.49 for the noncooperative group; on the employee rating form it was 38.44 for the cooperative group and 37.09 for the noncooperative. Of the cooperative employees, 58.82 per cent began work immediately after graduation compared with 34.28 per cent of the noncooperative group. Gross weekly wages for the cooperative employees was $86.03 and for the noncooperative group, $81.56.

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Occupational change stimulated a search for general vocational capabilities exemplified in a study directed by Gagne (1966). The author of the study suggested that vocational content might be ordered along some underlying continuum such as hardware-to-people: 1) mechanical, 2) electrical, 3) special, 4) chemical and geological, 5) symbolic, and 6) people. Content categories along the hardware-to-people continuum were found to be highly compatible with a cross-cutting set of psychological processes arranged in a hierarchy of complexity--a) sensing, b) detecting, c) role sequencing (chaining), d) discrimination or identifying, e) coding, f) classifying, g) discrete estimating, h) continuous tracking, i) logical manipulation, j) rule using, k) decision making, and l) problem solving.

Ferguson (1968) concentrated on the teaching of two competencies--economic understanding and sales comprehension --in order to compare effectiveness of the project and cooperative methods of teaching high school distributive education. He found the scores of the cooperative method classes and the project method classes on the tests of sales comprehension were significant, with the cooperative method classes scoring higher. There were no significant differences between scores of the two distributive education groups on the test of economic understanding.

In a report Haines (1968) assessed the employment status of trainees 10 months after graduation from a secondary school where they participated in a cooperative

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occupational education program. Under this type of cooperative plan of vocational education the student enrolls either for the eleventh or twelfth grade or for the twelfth grade alone. He was placed with an employer who provided occupational training, was paid a regular wage, and worked 15-25 hours a week.

The population for the study was made up of public high school students in Michigan who graduated at the end of the 1965 spring semester and who were, at the time of graduation, trainees in a reimbursable cooperative occupational program in office, distributive or industrial occupations.

From a qualified list of 8,720 graduates usable replies to the mailed questionnaire card were received from 4,424 trainees, or 54 per cent of the population.

Each trainee was mailed a questionnaire card and a letter explaining the purpose of the study. A follow-up letter was sent out two weeks later to those who had not responded. The complete information from the questionnaire was transferred to punch cards, stored and available for longitudinal studies in future years. Tabulation and data analysis was done on the CDC 3600 computer at the Computer Center of Michigan State University.

The major findings of the study reveal the following information. The unemployment rate was low--hardly more than one per cent were unemployed 10 months after graduation. A significantly large number of trainees--almost four out of 10--were attending college or enrolled in a school beyond

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the high school on either a full or part-time basis. Twenty-six per cent of the trainees were not in the labor market, but were listed as housewives, students or military.

Most of the trainees were working in the fields for which they had been trained, e.g., 89 per cent of the office trainees were working in an office occupation, 47 per cent of the distributive trainees were working in a distributive occupation, and 70 per cent of the industrial trainees were working in an industrial occupation.

Based on the experience gained in this study, the author recommended that schools keep better records so that evaluation by follow-up can become an integral phase of the evaluation of vocational education and its contributions. They suggested that local programs should be looked at closely to see if student placements accurately reflect the occupational instructions being received.

While the schools offering cooperative education programs increased 54 per cent, the number of students participating in the program almost doubled. Graduates attending post-high school institutions increased from 29 per cent to 37 per cent. The direct relationship of training received to the field of study in post-high school institutions increased from 29 per cent to 37 per cent. The direct relationship of training received to the field of study in post-high school institutions increased in office work from 44 per cent in 1963, to 79 per cent in 1965; in Distributive Education from 21 per cent to 70 per cent; and in Trades and

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Industries from 44 per cent to 73 per cent. Comparisons of other relationships varied by only a few percentage points.

Summary

Differential psychology, occupationology, and occupational differences are foundations of vocational psychology. Although both norm-referenced and criterion-referenced tests are used to make decisions about individuals, there is usually a difference in the two contexts in which these decisions are made. A criterion-referenced test is used to identify an individual's status with respect to an established standard of competency. This is important for screening, undergraduate credit or advanced certification in a teacher-training institution.

Training is more likely to be effective if the measurement of the job tasks is effective. Occupational analysis differs from occupational measurement in that it involves the systematic method of obtaining information while measurement is the ordering of occupations along some dimension. Occupational classification systems include the scaling of different abilities.

Individuals like Spearman, Kelley, the Thurstones and government agencies have contributed many years to the study of human abilities. The United States Employment Service's (USES) occupational analysis program is one of the largest and most diversified in the world. The USES's GATB was influenced by the research of the Minnesota Employment Stabilization Research Institute.

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Prediction of entry and success in an occupation has been enhanced by more sophistication in ability test construction. Lawler's study supported the hypothesis that ability level should act as a moderator of the relationship between job attitudes and job performance. The sample was not a random sample of managers in general; therefore, the conclusions must be restricted to the organizations studied.

Altman identified, through a factor analysis of test items on performance tests for several skilled jobs, six curriculum areas in which workers need competence. Maley's research for identifying clusters of occupations gives support to the broadly prepared individual. An individual with both skills and cognitive experience for a cluster of occupations is more adaptable to technological changes.

The Bureau of Labor Statistics has prepared an economic model for the forecasting of long-term manpower requirements. Mobility characteristics of occupations has made it difficult to estimate the amount of various types of training and education needed for changing occupational patterns.

Aptitude test batteries for selection of students for vocational training have been developed and validated by Los Angeles Trade-Technical College. It has been concluded that the Ohio Printing Performance Test is valid and reliable for assessing student achievement at the twelfth grade level. The Minnesota Importance Questionnaire scales were shown to be useful in vocational diagnosis.

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Researchers at the Oregon State System of Higher Education laboratory developed a two-dimensional clustering system which combined worker functions and processes. Street advocates that competency is (or should be) basic to any state plan for teacher certification. Teacher training institutions should be evaluated in terms of adequate programs designed to equip teachers with the needed elements of competency. Hoffman developed an instrument to assess the composite subject matter achievement of secondary cooperative distributive education students. Instructional programs must be evaluated through the outcomes--the products of instruction. Therefore, measurement instruments of program outcomes which are to serve as evaluative criteria is one of the most critical aspects of program evaluation.

Comparative Studies

Wallace found the mean scores of female salespeople in high-service departments were significantly higher than those employed in low-service departments. The mean scores of those with high sales productivity were significantly higher than low producers. The performance of the low group in both variables, high-service and high sales productivity, was considerably lower than the other groups in measured creativity.

As a part of his study, Mason compared distributive education and nondistributive education graduates. It was interesting to note that employers felt distributive education graduates grow and advance more rapidly than those who

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were not graduates. Distributive education graduates were relatively more in the top management bracket.

Clark and Sloan's study revealed that the amount of formal education conducted by retail establishments extremely limited as compared with that of industry.

Ferguson compared effectiveness of the project and cooperative methods of teaching economic understanding and sales comprehension at the high school level in distributive education. The cooperative method classes scored significantly higher than the project method classes.

Based on experience gained in his study, Haines recommended that schools should keep better records. Evaluation by follow-up can then become an integral phase of the vocational education program. Comparisons of other relationships seems to indicate a dramatic increase in vocational activities.

While the schools offering cooperative education programs increased 54 per cent, the number of students participating in the program almost doubled. Post-high school institutions increased their direct training in office work from 44 per cent in 1963, to 79 per cent in 1965; in Distributive Education from 21 per cent to 70 per cent; and in Trades and Industries from 44 per cent to 73 per cent.

The analysis, classification, and measurement of occupations is an essential substantive foundation for the development of vocational behavior. Different occupational groups will have different traits and factors.

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Development of Hypotheses

The current theory and research reviewed in this chapter were quite compatible with the development of an instrument for measuring department store retail selling competencies among categories of salespersons. The following hypotheses were postulated concerning constructing an instrument for measuring selling competencies and analyzing the differences between employees who participated in cooperative distributive education programs and those who have not.

Hypothesis 1: A test battery of approximately 100 or more multiple-choice items can be developed that will measure professional department store retail selling competencies.

Hypothesis 2: There will be no difference among the selling competencies of the distributive education salespeople, nondistributive education salespeople, and the nonsalespeople.

Hypothesis 3: There will be no difference among the variances of the test scores based on the three samples.

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CHAPTER III

PROCEDURES

The purpose of this study was to develop an instrument for evaluating salespeople's knowledge and understanding for competency in the nine major areas of department store selling. The nine variables that were used in assessing an individual's level of retail selling competency include the following factors as validated by Crawford's (Vol. II, 1967) study.

Area of Human Relations

1. Knowledge of how to dress appropriately for the job and maintain a well-groomed appearance;
2. Knowledge of how to build morale in employees;
3. Knowledge of how to recognize the accomplishments of others;
4. Knowledge of how to develop and maintain a pleasant working environment;
5. Knowledge of how to be orderly and systematic;
6. Knowledge of how to show an interest in others;
7. Knowledge of how to build sound working relationships in "forced" associations;
8. Knowledge of how to motivate others for best performance;
9. Knowledge of morale as being the term frequently used to describe employee attitudes toward their jobs, employer and fellow employees;
10. Understanding that a positive attitude is usually reflected in one's work;
11. Understanding that human relations in the retail organization consists of an interdependence with fellow employees, supervisors and customers; and
12. Knowledge of the ways to effectively handle difficult customers.

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Area of Selling

1. Knowledge of the ways to show or display merchandise to create interest and desire in customers;
2. Knowledge of the ways to demonstrate merchandise to create interest and desire in customers;
3. Knowledge of how to get merchandise into the customer's hands to create desire and attachment to the item;
4. Knowledge of how to provide information about merchandise which will create desire or interest in customers;
5. Knowledge of how to suggest related items, accessory items or larger quantities to customers in order to increase the amount of the sale;
6. Knowledge of how to handle individual differences in customers;
7. Knowledge of the ways to help a customer make a buying decision;
8. Knowledge of the customer approaches such as greeting, merchandise service, or combination which may be used when opening a sale;
9. Knowledge of the procedures involved in conducting a cash sale transaction;
10. Knowledge of the procedures for conducting a charge sale transaction;
11. Knowledge of how to properly handle charge plates during a charge sales transaction;
12. Knowledge of how to operate a cash register correctly;
13. Knowledge of the store's procedures for handling merchandise being returned by the customer for exchange, cash refund or charge credit;
14. Knowledge of how to make change and count it back to the customer;
15. Knowledge of the procedures to use when writing out saleschecks;
16. Knowledge of the ways to determine how and when to close a sale;
17. Knowledge of the importance of credit as a selling tool;
18. Knowledge of how to translate product knowledge into customer benefits;
19. Knowledge of the ways to handle customer complaints according to store policy;
20. Knowledge of the store's credit policies, terms and credit plans;
21. Knowledge of how to handle sales where merchandise alterations are needed;
22. Knowledge of department and merchandise locations within the store;
23. Knowledge of the selling features of products and/or services;

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24. Understanding that customer loyalty can be built with timely merchandise and friendly service;
25. Understanding that stock shortages and overages are created by ringing an incorrect amount for a sale on the cash register or ringing the sale onto the wrong department key;
26. Knowledge of how to analyze customer needs;
27. Knowledge of how to handle C.O.D. sales, lay-away sales and installment credit sales;
28. Knowledge of how to process checks received in payment for merchandise purchases;
29. Knowledge of the store's policies concerning Will-call or Lay-away Department;
30. Knowledge of the store's delivery schedule;
31. Knowledge of how to fill mail or telephone orders for merchandise;
32. Knowledge of how to prepare or organize stock for accurate and fast counting during an inventory;
33. Knowledge of how to arrange stock in a selling department by color, size, style, price, etc.;
34. Knowledge of how to best utilize selling space with volume or best sellers;
35. Knowledge of the housekeeping duties which must be performed in connection with proper stock care;
36. Knowledge of how to make minor repairs to merchandise to return it to selling condition;
37. Understanding that a combination of seeing, hearing and participation on the part of the customer helps strengthen a sales presentation;
38. Understanding that effectively handling merchandise builds respect for the goods in the customer's mind and helps to emphasize value; and
39. Understanding that the effects of underselling are often as harmful as overselling.

Area of Merchandising

1. Knowledge of the store's price line structure and pricing policies;
2. Knowledge of the ways prices psychologically affect consumers;
3. Knowledge of federal and state laws applicable to pricing;
4. Knowledge of the procedures for analyzing and interpreting past sales record and performance in planning future sales and making purchases;
5. Knowledge of the uses of forms and records necessary in inventory control;
6. Understanding that the stock counts are taken for inventory control purposes and for ordering purposes;
7. Knowledge of available resources and characteristics of individual manufacturing firms;

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8. Knowledge of the procedure for properly recording the transfer of stock to branch stores to prevent inventory shortages;
9. Knowledge of the ways to handle special orders of merchandise for customers;
10. Knowledge of the store's method or procedures used for changing retail stock prices up or down;
11. Knowledge of the reasons for making returns of merchandise to manufacturers;
12. Knowledge of the procedures involved in a merchandise count for physical inventory;
13. Knowledge of the uses of the information available from unit inventory control systems;
14. Knowledge of the use of ticket stubs and special forms to keep records of merchandise sold by classification; and
15. Knowledge of the store's procedures for recording markups and markdowns, additional markups and revisions of retail down.

Area of Product and/or Service Technology

1. Knowledge of the ways to interpret the features of a product in terms of benefits to customers;
2. Understanding that since sizes vary according to manufacturers and price lines, it is necessary to judge each customer's size requirements;
3. Knowledge of the ways to show that an item of merchandise is suited for the purpose the customer has in mind;
4. Knowledge of sources of merchandise information such as the merchandise itself, handtags and labels, leaflets, box covers and price tags;
5. Knowledge of the delivery area served by the store, delivery schedules and delivery changes;
6. Knowledge of the ways to handle merchandise when placing it in stock or on display as well as how to keep it clean;
7. Knowledge of the various locations of merchandise on the selling floor and in reserve stock;
8. Knowledge of the sizes, colors, styles and prices in which merchandise is available;
9. Knowledge of substitute items that are used for formerly well-known products, what they are substitutes for and superior points of the substitute;
10. Knowledge of the uses of specific merchandise and differences between similar articles so that merchandise may be selected to meet a customer's needs;
11. Knowledge of the values of advertising information to the salesperson;
12. Understanding that adequate merchandise information will enable the salesperson to increase sales as well as his earning capacity;

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13. Understanding that merchandise information is a useful tool in opening a sales conversation with a customer;
14. Understanding that merchandise guarantees and directions protect both the customer and the store and help increase sales;
15. Knowledge of current merchandise fashion trends, product innovations, etc.;
16. Knowledge of the product features and customer acceptance of competing products;
17. Knowledge of protective measures behind standards, grades and labels;
18. Understanding that labels taking the form of tags, stamps, wrappers, etc., identify products as to their content;
19. Understanding that brand or trade names identify products by producer or distributor;
20. Understanding that brand or trade names are an advertising device used to encourage customer retention;
21. Understanding that standardization provides a basis upon which grading can be determined and aids customers in buying goods and services to fit their needs.
22. Knowledge of the provisions in the Pure Food, Drug and Cosmetic Act;
23. Knowledge of Federal Trade Commission protective measures as they apply to various products; and
24. Knowledge of the various agencies that give protection to the customer in his buying.

Area of Retail Mathematics

1. Knowledge of mathematical manipulations up to and including first degree algebraic expressions; and
2. Knowledge of how to determine a cash register error, the amount and how to correct it on the proper form.

Area of Operations and Management

1. Knowledge of how to interpret credit policies to customers when opening accounts;
2. Knowledge of the functions of store maintenance;
3. Understanding that proper care of store equipment and proper stock arrangements can help prevent accidents;
4. Understanding that although management plans expense control budgets, the actual control must be carried out by the cooperative effort of all store employees;

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5. Understanding that seemingly small savings in some expense areas can mean a substantial gain in profits;
6. Understanding that careful use of supplies will help control expenses;
7. Knowledge of the customer gift wrapping services available--those that are free and those charged for;
8. Knowledge of how to authorize customer checks according to the store's policy;
9. Understanding mail and telephone order services not only build customer goodwill but also help increase sales;
10. Knowledge of the availability and location of customer facilities;
11. Understanding that impulse and convenience goods are located on lower floors or near the entrance while staple or shopping goods are located to the back or on upper floors;
12. Knowledge of the most efficient methods to wrap and/or pack customers' purchases;
13. Understanding that prepackaging of merchandise by either the retailer or the manufacturer helps by speeding up selling service, reducing damages and handling costs, and eliminating packing activities;
14. Knowledge of how to "close out" the department at the end of a selling day;
15. Knowledge of how to record and report federal and state sales taxes;
16. Knowledge of procedures for reporting and handling damaged merchandise;
17. Knowledge of how to use sales sheets in the reporting of daily sales in a department;
18. Knowledge of the amount on-hand of various items which is considered an adequate supply;
19. Knowledge of the procedures involved in checking merchandise in against an invoice;
20. Knowledge of the uses of forms and reports necessary in stockkeeping;
21. Knowledge of how to operate price-marking machines;
22. Knowledge of how to put price tickets on various types of merchandise;
23. Knowledge of the terms used in connection with the merchandise receiving and marking process such as buyer's order, invoice, apron, price code, blind check, receiving record, bill of lading, vendor and vendee;
24. Knowledge of various types of storage--within-store (stockroom), outside-the-store (warehouse), and returned goods;
25. Knowledge of how to contend with cases of shoplifting according to the store's policies and procedures; and

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26. Knowledge of how to take care of employees' and customers' accidents in the store.

Area of Advertising

1. Knowledge of the uses of promotional and institutional advertising;
2. Knowledge of the types of media that are available for advertising--periodicals (newspapers, magazines, trade journals), mass media (radio, T.V., billboards) and direct advertising (catalogs, circulars, letters);
3. Knowledge of prices, available sizes, colors, styles or models of merchandise being advertised in order to better promote or sell;
4. Knowledge of the merchandise features to analyze when making comparison shoppings of a competitor's merchandise;
5. Knowledge of the factors to consider when checking advertising proofs for corrections;
6. Knowledge of the procedures for handling mail and telephone orders in response to ads;
7. Knowledge of the various methods which can be used to inform customers of special events;
8. Knowledge of the significance of brand names in that they are likely to create customer preference and establish a company or product in the public mind;
9. Knowledge of the supply of merchandise available to back up an ad effectively;
10. Knowledge of the ways in which past advertisements can be helpful in planning future ads; and
11. Understanding that an appealing advertising headline gains the customer's attention.

Area of Communications

1. Knowledge of how to suggest changes to management;
2. Knowledge of how to use written communications in forms and reports;
3. Knowledge of how to address other people in a business-like manner whether they are customers, fellow employees, supervisors or management;
4. Knowledge of the differences that exist in communications used in selling over the telephone and over the counter;
5. Knowledge of the situations in which to use a technical language or commonly understood language;
6. Knowledge of when to keep communications confidential;
7. Understanding that valuable information can be gained by reading manufacturers' handtags, labels, and directions; and

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8. Understanding that since interpretations placed on the spoken word vary with different people, one must be careful to speak so that correct interpretation can be made by individual listeners.

Area of Display

1. Knowledge of how to develop copy for point-of-sale signs;
2. Knowledge of the procedures for having point-of-sale signs printed;
3. Knowledge of the use of various types of display fixtures for the most advantageous display of merchandise;
4. Knowledge of how to employ seasonal or storewide themes in department displays;
5. Knowledge of the housekeeping procedures necessary for the proper upkeep of department displays of merchandise;
6. Knowledge of the various types or arrangements of displays (pyramid and stair-step) which can be used in window or interior displays of merchandise;
7. Knowledge of the principles of color, harmony, balance and proportion in display construction;
8. Knowledge of the uses of price cards as "silent salesmen;"
9. Knowledge of the ways to letter and design a simple sign;
10. Knowledge of principles of mass display;
11. Knowledge of the ways to develop displays that feature merchandise as nearly as possible to the way it will be used;
12. Knowledge of the best arrangements for advertising merchandise on counters, tables and shelves;
13. Knowledge of how to dress mannequins for displays; and
14. Knowledge of how to handle customer requests for clothes on mannequins or other merchandise on display.

The procedures used in obtaining the data were as follows:

The pilot test was developed based on Crawford's (1967) study using the competency pattern approach for identifying the critical tasks and competencies needed by department store salespeople. In developing the instrument, a corollary purpose was to determine the instrument's

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capabilities by comparing the subject matter achievement scores of salespeople who had taken distributive education classes in either high school or post-high school, nondistributive education salespeople, and nonsales employees.

The development of the pilot instrument involved the following steps:

1. Developed an item pool for trying out with the department store retail salespeople.
2. Selected sales and nonsalespeople, total of 26 by the Personnel Director at Macy's Stanford, California department store.
3. Analyzed the data of the 190 item pilot test for selecting the 100 most suitable items which were used to measure an employee's knowledge and understanding of the critical tasks required by a department store salesperson. Used a two-way specification table for maintaining a balance of content.
4. Validated the 100 items which would measure the objectives identified in the Crawford (1967) study by using a panel of judges, a personnel director, testing and training director, and a store manager.
5. The multiple choice statements and questions were assigned equal value within the above nine areas of competency which are based on Lucy C. Crawford's study, *A Competency Pattern Approach to Curriculum*

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Construction in Distributive Teacher Education, Volume II, Department and Variety Stores, (1967).

6. The tests were hand scored, as was the recorded data from the sales survey. An electronic calculator was used to analyze the differences of the three sample groups.

These three groups were selected because their responses to the Retail Selling Competency Battery were assumed to represent different points on the sales maturity continuum. The distributive education salespeople were expected to represent the upper end of the achievement scoring maturity continuum. The salespeople with training and education in distributive education were expected to achieve a higher mean score because of their commitment to a more specialized study and work. These subjects were believed to be more behavioral and task oriented in department store sales competency. It was assumed this group would be more homogeneous than the nonsales group.

The nonsalespeople's test scores were assumed to represent the lower end of the sales achievement and maturity continuum. The achievement scores of this group were expected to reflect less knowledge and understanding of salesmanship because of their history of nonsales occupations. They were assumed to differ significantly from the distributive education group and the nondistributive education group.

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The scores of the nondistributive education salespeople were expected to represent the middle range of the sales achievement and maturity continuum. Their knowledge and understanding in department store sales competency were expected to be average, since their education was not as specialized as the distributive education salespeople sample, and their work experience would tend to vary more like the nonsalespeople group. This group was assumed to be more similar in sales competency with the distributive education salespeople than the nonsalespeople. Their sales work experience would tend to make them more homogeneous than the nonsalespeople group.

The breakdown of the total sample into the test battery and retail salesperson's survey is presented in Table 1.

TABLE 1

SAMPLE BREAKDOWN ACCORDING TO GROUP AND FORMS OF INSTRUMENTS

Instrument	DE	NonDE	Nonsales	Total
Retail Selling Competency Battery	100	100	100	300
Dept. Store Retail Survey	100	100	100	300
TOTAL SUBJECTS				600

The three groups of subjects, distributive education salespeople, nondistributive education salespeople and nonsalespeople were obtained through the cooperation of the

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Macy's California department stores' main personnel office located in San Francisco, California. The assistant to the vice president for personnel was contacted to explain the action research and the need for his cooperation to select a representative sample for the three groups. Initial data were collected in the Stanford store from 26 subjects.

One hundred items were selected by the panel of judges after studying the item analyses of the pilot test consisting of 190 multiple choice items (Figure 1). These items representing the nine major areas of department store sales competency identified in Crawford's (1967) study, were compiled in a booklet. The personnel directors of the stores located in San Jose, San Mateo, Concord and San Francisco selected employees and administered the Retail Selling Competency Battery according to the policies of the company for testing.

Data Collection

The assessment package included the Retail Selling Competency Battery and the Department Store Sales Survey with specific directions. Also a one page prepared typewritten statement was included with each assessment package. The package was then administered to the employees by the testing and training director. The prepared statement read as follows:

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Knowledge and Understanding of:	Advertising	Communications	Display	Human Relations	Mathematics	Merchandising	Operations and Management	Product and/or Service Technology	Selling	Totals
1. Vocabulary				2		1				3
2. Principles of Distribution						4				4
3. Approach								1	2	3
4. Sales Presentation		3	1					1	3	8
5. Handling Objections									1	1
6. Suggestion Selling									1	1
7. Closing Sale					1				6	7
8. Information Customer Expects	1							2		3
9. Special Skills in Selling	4						2			6
10. Showing Merchandise			10							10
11. Sales Mathematics					13					13
12. Design and Color			2							2
13. Merchandise Information	2	1				5		5	1	14
14. Federal Consumer Laws								6	1	7
15. Selling Personality		2		4						6
16. Store Policies		1	1			1	4		2	9
17. Store Services							2		1	3
Totals	7	7	14	6	14	11	8	15	18	100

Figure 1.--Two-Way Specification Table for Measuring Department Store Selling Competencies

Memo to each employee:

Colorado State University is conducting a study and they are asking for your cooperation in filling out a questionnaire concerning your feelings about the relevance of your education and your choice of answers to the 100 multiple choice item test. Your answers are important to the success of this study. It will take only forty-five to sixty minutes of your time. All answers will be held in strict confidence and will be handled by CSU.

Directions:

1. Complete both sides of the survey.
2. Record your answers for the Retail Selling Competency Battery on the IBM answer sheet. The success of this study depends upon your cooperation in completing the test without the aid of reference materials and/or of other individuals.
3. Please return the test booklet, answer sheet and survey on Monday, June 15, 1970.
4. Your cooperation will make this study a success.

Thank you

Employees who participated by completing the test and the survey were selected by the personnel director of the store in which they were employed. Thus, the scores and demographic data are subject to biases of any selected group. The biasing effect was not accounted for in this investigation. The sample consisted of salespeople and nonsalespeople with a wide range of age, education and work experience.

The distributive education salespeople sample was obtained at the Macy's California stores located in San Jose, San Mateo, Concord and San Francisco, California. Responses from 43 subjects were obtained at the San Jose store, 26 subjects at the San Mateo store, 21 employees at the Concord store and 10 sales clerks at the Stanford store. There were 100 employees in the group.

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Assessment instruments completed by the employees varied with the policies of each testing and training director at each of the branch stores.

The 100 nondistributive education salespeople sample consisted of 54 subjects at the San Jose store, 33 salespeople at the San Mateo location and 13 sales clerks at the Stanford store.

The third group of the sample was 100 nonsalespeople distributed as follows: 48 workers at the distribution center, San Francisco, 42 at the main store in San Francisco, eight at the San Jose store, one at the San Mateo store and one at the Concord store. The sample included employees working in numerous areas of nonsales which included office occupations, stock control, rug cutting, warehouse supervising, order checking, marking, merchandise adjusting, stock clerking, business machine operators and warehousing.

The breakdown of the three sample groups according to age, highest educational level obtained, and work experience is found in Table 2. The nondistributive education salespeople were slightly older than the other two groups. The distributive education sales employees were the youngest group.

Chi square tests of differences among the three sample groups classified by age and education levels are presented in Table 3. The Chi square value of 9.75 for the age level classification was greater than the tabled value of 9.21 based on two degrees of freedom. Similarly, a Chi square value of 25.07 was greater than 9.21 based on two degrees

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TABLE 2

PERCENTAGE COMPOSITION OF THE THREE SAMPLE GROUPS ACCORDING TO AGE, EDUCATION AND WORK EXPERIENCE

	Sample Group		
	DE Sales (100)	NonDE Sales (100)	Nonsales (100)
Age Level	%	%	%
10 - 19	25	21	3
20 - 29	42	28	44
30 - 39	8	7	23
40 - 49	10	18	18
50 - 59	12	19	10
60 - 69	3	7	2
TOTAL	100	100	100
Education Level			
12th grade or less	25	42	60
2 yrs. College or less	69	45	20
More than 2 yrs. College	6	13	20
TOTAL	100	100	100
Work Experience in Years			
Less than 1 yr.	33	25	31
1 yr. through 6 yrs.	51	49	57
7 yrs. or more	17	26	12
TOTAL	100	100	100

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TABLE 3

CHI SQUARE TESTS OF DIFFERENCES AMONG THE THREE SAMPLE GROUPS CLASSIFIED BY AGE AND EDUCATION LEVELS

	Sample Group						Total
	DE Salespeople		NonDE Salespeople		Nonsalespeople		
Age Level	Actual	Expected	Actual	Expected	Actual	Expected	
Below 30	67	54.33	49	54.33	47	54.33	163
30 and Above	33	45.67	51	45.67	53	45.67	137
TOTAL	100		100		100		300
Chi square = 9.75**							
Education Level							
12th Grade or Less	25	42.33	42	42.33	60	42.33	127
Post Secondary	75	57.67	58	57.67	40	57.67	173
TOTAL	100		100		100		300
Chi square = 25.07**							

**Significant at the .01 level based on 2df.

of freedom for the educational level. The results indicated that each of the sample groups differed at the .01 level of significance. The effect of these differences on the results of the study is reflected by the t test analyses of age and educational differences on the measure. The results of these analyses are presented in Table 7, Chapter IV.

Development of the Retail Selling Competency Battery

The department store selling competency battery was constructed for measuring an employee's level of knowledge and understanding in department store retail selling. The battery was developed from the list of knowledges and understandings of retail sales occupations identified by Lucy Crawford (1967) at the Virginia Polytechnical College. Her study utilized the competency pattern approach for identifying the critical tasks and competencies of department store salespersons. These statements served as the behavioral objectives upon which more than 600 items were written covering the nine major areas of department store retail selling competency. From the initial pool of items, 190 items were selected and placed on the two-way specification table for better assurance of a balance of content.

The pilot test of the Retail Selling Competency Battery consisted of a multiple-choice type of instrument with a correct answer and three appropriate distractors. Support demographic data from the Department Store Retail Sales

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Survey was secured including the employees personal information, education, training and evaluation of their education.

The assessment package was administered to 26 salespeople and nonsalespeople at the Stanford store. Upon completing the item analysis, the 100 most suitable items were validated by a personnel manager, a testing and training director and a store manager. The 100 items were arranged in test form under nine major areas. The areas are: human relations, operations and management, merchandising, selling, mathematics, product and/or service technology, communications, advertising, and display.

The hypotheses of this study were tested by a two-phase data analysis procedure. The first phase of the analysis involved analysis of variance and Tukey's test for multiple comparison of differences. The second phase consisted of conducting an item analysis of the Retail Selling Competency Battery. In addition, information which served to describe the three groups in the sample and their differences was reported. The results of these analyses are presented in Chapter IV.

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CHAPTER IV

FINDINGS

Introduction

The main purpose of this cooperative action research was to develop an instrument for measuring department store retail selling knowledges and understandings in salespeople. As a result of Crawford's task analysis and cross-tabulation of competencies for department store salespeople, the Retail Selling Competency Battery was constructed to assess the competencies of department store salespeople. The battery is a 100 item multiple choice test consisting of nine major areas. The nine areas are: 1) human relations, 2) retail selling, 3) retail merchandising, 4) product and/or service technology, 5) mathematics (merchandise), 6) operations and management, 7) advertising, 8) communications, and 9) display.

Three sample groups were selected to validate the battery. The first was 100 cooperative distributive education salespeople. The second group was a sample of 100 noncooperative distributive education salespeople. A sample of 100 nonsalespeople comprised the third group. All of the participants were employed at Macy's California department stores in the San Francisco Bay Area. These three groups'

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total scores on the Retail Selling Competency Battery were to be compared with one another to determine if sales competency, as defined in this study, could be quantitatively measured. That is, differences in total score between the three groups on the battery would validate the sensitivity of the instrument to measure department store sales competency.

In addition, the Department Store Retail Sales Survey was administered for the purpose of collecting demographic data. The only general information items reported are those in which apparent group differences existed.

Data Analysis

The hypotheses of this action research study were tested by a two-phase procedure. The first phase involved the use of various tests of differences between the three sample groups. The second phase consisted of conducting an item analysis of the Retail Selling Competency Battery. In addition, general information which described the three groups and their differences was gleaned from the Department Store Sales Survey.

Phase One

The 300 salespeople, the total sample, representing a return of 100 per cent was divided into the three groups. For each of the three sample groups the total scores were used to compute means and standard deviations. The results of this analysis are presented in Table 4. A comparison of the three groups of employees revealed the nondistributive

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education salespeople had the highest mean, 68.1 and the nonsalespeople had the lowest mean, 57.4. On the Retail Selling Competency Battery a higher achievement score was associated with the nondistributive education salespeople and distributive education salespeople than with the non-salespeople. It was noted that the standard deviation was greatest for the nonsalespeople group, and the lowest for the nondistributive education salespeople.

TABLE 4

MEANS AND STANDARD DEVIATIONS, BETWEEN THE THREE EMPLOYEE SAMPLE GROUPS FOR THE RETAIL SELLING COMPETENCY BATTERY

Sample Groups	Retail Selling Competency Battery		
	N	M	SD
DE Salespeople	100	65.3	10.1
NonDE Salespeople	100	68.1	9.2
Nonsalespeople	100	57.4	12.4

To investigate the differences in scores between the three groups in another manner, analysis of variance was computed. The results of this analysis is presented in Table 5, and the F value for the Retail Selling Competency Battery was significant at the .01 level.

The higher mean scores of the salespeople groups when compared to the nonsalespeople was indicative of a higher level of competency with regard to knowledges and understandings of department store sales. The nonsalespeople had

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the greatest variability with a standard deviation of 12.4. In addition to the analysis of variance, Tukey's test for multiple comparison between sample means was computed and the results are shown in Table 6 (Glass and Stanley, 1970). The F value for the Retail Selling Competency Battery was 21.73, and exceeded the .01 level of significance.

When the number is constant for all three sample groups, the hypothesis that the samples' variances squared will be equal was tested by the F_{max} statistic. The observed F_{max} value of 1.81 was greater than the tabled value associated at the .01 level test of significance. Therefore, the hypothesis of homogeneity of variance was rejected.

TABLE 5

ANALYSIS OF VARIANCE OF THE THREE EMPLOYEE SAMPLE GROUPS' RESPONSES TO THE RETAIL SELLING COMPETENCY BATTERY

Source	Degrees of Freedom	Sum of Squares	Mean Square	F
Groups	2	6,193.13	3,096.57	21.73**
Within	297	42,316.79	142.48	
TOTAL	299	48,509.92		

**Significant at the .01 level of confidence

Tukey's T method test resulted in a difference between the distributive education salespeople and the nonsalespeople at the .01 level. The nondistributive education salespeople and the nonsalespeople differed at the same level (Table 6). The distributive education salespeople and nondistributive

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education salespeople scores, however, did not differ significantly. The results of Tukey's test showed that two of the three pairs of samples differed significantly for the Retail Selling Competency Battery.

The probability for significance is increased if two of the three sample groups significantly differ from one another (Hays, 1963).

TABLE 6

TUKEY'S TEST

Contrast	Difference Between Means	F
DE Salespeople-NonDE Salespeople	- 2.77	-2.322
DE Salespeople-Nonsalespeople	7.95	6.664**
NonDE Salespeople-Nonsalespeople	10.72	8.986**

**Significant at the .01 level of confidence

After examining the relationship between age, education, and the work history groups, and total score on the Retail Selling Competency Battery, differences were determined by t tests. In Chapter III, it was noted that age, education, and work history backgrounds differed among the three samples. Education and work history were related to performance on the Retail Selling Competency Battery.

The results of the age, education, and work history analyses are presented in Table 7. For the age level

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TABLE 7

MEANS, STANDARD DEVIATIONS, AND t TESTS BETWEEN GROUPS CLASSIFIED BY AGE, EDUCATION, AND WORK HISTORY OF THE TOTAL SAMPLE FOR THE RETAIL SELLING COMPETENCY BATTERY

Age Groups	Age Analysis			
	N	M	SD	t
Below 30	163	63.1	11.9	.94
30 and above	137	64.4	15.1	

Education Groups	Education Analysis			
	N	M	SD	t
High School Graduate or less	127	61.2	12.4	2.92**
Post High School	173	65.3	10.1	

Work History Groups	Work History Analysis			
	N	M	SD	t
Salespeople with company training	89	65.0	10.8	2.08*
Salespeople without company training	111	68.0	9.2	

*Significant at the .05 level of confidence
**Significant at the .01 level of confidence

differences in total score the sample, those below 30 years old and those over 30, no significant differences were noted. Differences between employees according to highest grade completed are also presented in Table 7. The three sample groups were divided into those who had less than a high school education and those who had at least completed high

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school. The mean of the high school group was 61.2 while that of the group with more formal education was 65.3. Thus, there was a significant difference at the .01 level between the two educational-level groups. For the work history analysis the employees were divided into those who had participated in company training and those who had not had any company training. Only the distributive education and non-distributive salespeople were used in this analysis. The salespeople with company training had a mean of 65.0 and salespeople without company training had a mean of 68.0. The two work history groups differed at the .05 level as shown in Table 7.

Phase Two

The chi square test between groups was used to analyze the 100 items in the Retail Selling Competency Battery.

Table 8 contains the comparison of answers between the three groups of department store employees for assessment of competencies of a salesperson which were significant at the .01 level of confidence. The chi square values were computed from a 3 x 2 contingency table.

There were 26 items significant at the .01 level, 15 significant at the .05 level, and five more approaching the .05 level. A breakdown of the nine major areas of sales competency revealed the selling section to have the most items significant at the .01 level. The least number significant at the .01 level were shared by two sections of the battery, human relations and operations and management.

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TABLE 8

CHI SQUARE COMPARISONS FOR DIFFERENCES IN THE THREE GROUPS OF EMPLOYEES' ANSWERS FOR ITEM ANALYSIS OF THE RETAIL SELLING COMPETENCY BATTERY

Item No.	Statement or Question	Employee Groups: DE Sales N=100 Correct	DE Sales N=100 Wrong	NonDE Sales N=100 Correct	NonDE Sales N=100 Wrong	Nonsales N=100 Correct	Nonsales N=100 Wrong	Chi Square
		(Items=100)						
	Human Relations							
5	A person who has the ability to see a job to be done and the courage to go ahead and do it is said to possess	97	3	95	5	86	14	10.105**
	Operations and Management							
8	What increases sales volume and reduces selling costs and results in increased profits?	65	35	74	26	44	56	19.924**
	Merchandising							
16	A lower-than-average markup is generally justified when	58	42	75	25	48	52	15.572**
17	All merchandising, including advertising, displaying, buying and market researching appeals to	85	15	89	11	67	33	17.385**

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TABLE 8--Continued

Item No.	Statement or Question	Employee Groups						Chi Square
		DE Sales N=100		NonDE Sales N=100		Nonsales N=100		
		Correct	Wrong	Correct	Wrong	Correct	Wrong	
		(Items=100)						
20	Valuable information for sales planning and sound purchasing can be achieved better	90	10	87	13	73	27	11.856**
23	An inventory system in which value of goods on hand can be determined without bothering to count the goods is	66	34	72	28	48	52	13.243**
	Selling							
26	When a customer is interested in an item for a specific reason, it is wise to use a remark that	88	12	97	3	84	16	9.569**
29	Which of the following approaches is most desirable when the salesperson sees a customer examining an item?	42	58	48	52	21	79	17.246**

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TABLE 8--Continued

Item No.	Statement or Question	Employee Groups: DE Sales N=100 Correct	DE Sales N=100 Wrong	NonDE Sales N=100 Correct	NonDE Sales N=100 Wrong	Nonsales N=100 Correct	Nonsales N=100 Wrong	Chi Square
		(Items=100						
34	Regular customers, less price-consciousness, buying more freely, building confidence, attracting a preferred trade, smoothing out business peaks, and building retail profits are advantages of	47	53	43	57	27	73	9.416**
36	Legislation which requires that cost of credit on each transaction be revealed before purchase in terms of an annual interest rate is the	60	40	71	29	48	52	10.998**
37	Misrepresenting merchandise, high pressure selling, incorrect delivery information and errors in billing or crediting accounts are reasons for complaints and returns caused by	79	21	84	16	61	39	15.472**
38	Related merchandise, a larger quantity, new products, and specials are kinds of	72	28	68	32	44	56	19.340**

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TABLE 8--Continued

Item No.	Statement or Question	Employee Groups: DE Sales N=100 Correct	DE Sales N=100 Wrong	NonDE Sales N=100 Correct	NonDE Sales N=100 Wrong	Nonsales N=100 Correct	Nonsales N=100 Wrong	Chi Square
		(Items=100)						
	Mathematics							
48	A wool fabric is priced at $7.40 per yard. A customer buys 2 yards and 9 inches of the material and must also pay a 5% state sales tax. Figure the amount of the sale.	74	26	76	24	56	44	11.278**
57	As a general rule, what is the best procedure to follow after a salesperson over-rings the sale?	91	9	88	12	57	43	42.227**
	Product and/or Service Technology							
60	Why is it necessary for a salesperson to be responsible for maintaining a wide selection of fresh, clean forward stock and for knowing where it is and how to get it easily?	96	4	98	2	84	16	16.874**

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TABLE 8--Continued

Item No.	Statement or Question	Employee Groups						Chi Square
		DE Sales N=100		NonDE Sales N=100		Nonsales N=100		
		Correct	Wrong	Correct	Wrong	Correct	Wrong	
		(Items=100)						
63	Information on how to use and care for products and information on their construction can often be obtained from	71	29	75	25	55	45	10.131**
64	If the customer enters a department hurriedly and seems anxious to buy what type of approach should the salesperson use?	81	19	87	13	68	32	10.670**
	Communications							
74	What are the three main parts of a sales check?	71	29	80	20	50	50	21.438**
75	Products must be described realistically in	71	29	68	32	48	52	13.317**
79	Which meaning of a word causes the salesperson the most difficulty?	43	57	47	53	26	74	10.485**

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TABLE 8--Continued

Item No.	Statement or Question	Employee Groups: DE Sales N=100 Correct	DE Sales N=100 Wrong	NonDE Sales N=100 Correct	NonDE Sales N=100 Wrong	Nonsales N=100 Correct	Nonsales N=100 Wrong	Chi Square
		(Items=100)						
	Advertising							
81	Periodicals (newspapers, magazines, trade journals, mass media (radio, T.V., billboards) and direct advertising (catalogs, circulars, letters) are types of	90	10	92	8	74	26	15.554**
83	(1) Is it arresting? (2) Is it distinctive? (3) Is it clear? and (4) Does it quickly communicate the idea of interest to the reader? These questions along with others should be answered when checking	83	17	85	15	68	32	10.288**
	Display							
89	The elements of the design spread out like rays from a central point are called	83	17	95	5	73	27	17.757**
90	The stimulating colors-yellow, orange, and red are called	65	35	72	28	51	49	9.774**

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TABLE 8--Continued

Item No.	Statement or Question	Employee Groups						Chi Square
		DE Sales N=100		NonDE Sales N=100		Nonsales N=100		
		Correct	Wrong	Correct	Wrong	Correct	Wrong	
		(Items=100)						
94	Most displays are best if the color selection is	71	29	86	14	63	37	13.943**
98	Why is the open display effective?	93	7	94	6	75	25	20.671**

**Significant at the .01 level of significance

2 d.f. at the .01 level of significance

In Appendix Table C, the nondistributive education salespeople had higher mean scores on eight of the nine sections. The one exception was the mathematics section where the distributive education salespeople had the higher mean score. The nonsalespeople had the lowest mean score on each of the nine areas of sales competency.

A split-half reliability estimate was computed for the 100 item Retail Selling Competency Battery. The results of the reliability analysis are presented in Table 9. According to the table, the uncorrected split-half reliability estimate was above the .80 level. After the Spearman-Brown correction formula was applied the reliability estimate was .90.

TABLE 9

SPLIT-HALF RELIABILITY COEFFICIENT OF THE ITEM ANALYSIS SAMPLE FOR THE RETAIL SELLING COMPETENCY BATTERY

	Retail Selling Competency Battery (N=300)
Uncorrected Correlation	.82
Spearman-Brown Corrected Correlation	.90

Additional Data

Department Store Retail Sales Survey

The survey was administered at the same time the employee was given the Retail Selling Competency Battery.

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Only those survey items which seemed to be the most relevant to this study are reported as group comparisons in Tables 10 through 18.

Comparisons of the three groups, as shown in Table 10, showed that 24 per cent of the nondistributive education salespeople had been working for Macy's seven years or more. Whereas, the distributive education salespeople had the smaller percentage who had worked seven years or more.

TABLE 10

PROPORTIONATE LENGTH OF TIME EMPLOYED WITH MACY'S CALIFORNIA STORES

Time	Sample Groups			Total
	DE Sales (100)	NonDE Sales (100)	Nonsales (100)	
Less than one year	26	23	25	74
One to three years	43	37	36	116
Four to seven years	16	16	21	53
Seven years or more	15	24	18	57
TOTAL	100	100	100	300

Study of Table 11, reveals that a greater percentage of distributive education salespeople attended college than either of the other two sample groups. The nonsalespeople's group had the smallest percentage who had attended college.

Table 12 indicates that the nonsalespeople group had the greater number with Bachelor's Degrees while the distributive education employees had the least. However, the

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distributive education group reported having the most high school diplomas and Associate of Arts Degrees.

TABLE 11

HIGHEST GRADE OF SCHOOL COMPLETED

	Sample Groups			Total
	DE Sales (100)	NonDE Sales (100)	Nonsales (100)	
Less than 10th grade		3	4	7
10th and 11th grades	3	4	11	18
Twelfth grade	22	35	50	107
Community College	71	51	21	143
College of University	4	7	14	25
TOTAL	100	100	100	300

TABLE 12

COMPLETED DIPLOMAS, CERTIFICATES OR DEGREES

	Sample Groups			Total
	DE Sales (100)	NonDE Sales (100)	Nonsales (100)	
High School	71	72	60	203
Community College	21	14	11	46
Bachelor's Degree	5	7	14	26
TOTAL	97	93	85	275

Distributive education courses completed in high school are reported in Table 13. The total distributive education sales sample have taken either distributive education courses or had on-the-job training. Only 36 per cent of the

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nondistributive education sales group had some form of on-the-job training and 47 per cent of the nonsalespeople participated in one or more distributive activities. It is to be noted that the nondistributive education salespeople achieved the higher mean total score while participating considerably less in distributive education activities than the other two sample groups.

TABLE 13

DISTRIBUTIVE EDUCATION COURSES AND WORK EXPERIENCE COMPLETED AT THE HIGH SCHOOL LEVEL

	Sample Groups			Total
	DE Sales (100) Frequency	NonDE Sales (100) Frequency	Nonsales (100) Frequency	Frequency
Classes				
Retailing	16	0	6	22
Salesmanship	16	0	4	20
Introduction to Marketing and Merchandising	20	0	7	27
Subtotal	52	0	17	69
Work Experience				
Distribution I	2	0	1	3
Distribution II	1	0	2	3
On-the-Job Training only	71	36	41	148
Subtotal	74	36	44	154
TOTAL	126	36	61	223
Individuals who participated in one or more activities				
TOTAL PER CENT	100	36	47	

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Distributive education courses and work experience completed at the college level is shown in Table 14. The distributive education salespeople sample, represented by 72 per cent, have participated or are now participating in post-secondary distributive education programs. In contrast, 37 per cent of the nonsalespeople and only 26 per cent of the nondistributive salespeople have or are now experiencing distributive educational activities. Again, it is to be noted that the sample group of nondistributive education salespeople recorded the higher mean total score with the least amount of education and training in distribution.

The majority of the three employees' sample groups as indicated in Table 15 would have participated in a work-experience program in high school if they had the opportunity.

The type of work experience program preferred is shown in Table 16. The sample groups were approximately evenly divided in their choices of summer employment, part-time work, and on-the-job training related to their major field of study.

How well the school courses prepared the employees, the three sample groups for their first job, is given in Table 17. Only approximately 16 per cent felt they were exceptionally well-prepared. It is to be noted that 23 per cent of the distributive education group stated that they were exceptionally well-prepared for their first job. This ratio

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ran approximately two to one when comparing the vocationally trained to the other employee of the samples.

TABLE 14
DISTRIBUTIVE EDUCATION COURSES AND WORK EXPERIENCE COMPLETED AT THE COLLEGE LEVEL

	Sample Groups			Total
	DE Sales (100) Frequency	NonDE Sales (100) Frequency	Nonsales (100) Frequency	Frequency
Classes				
Retail Mid-Management	17	0	2	19
Fashion Merchandising	7	0	4	11
Wholesaling	4	0	2	6
Industrial Sales	2	0	3	5
Subtotal	30	0	11	41
Work Experience				
School-Work Related	10	1	3	14
School-Work Non-Related	18	7	8	33
On-the-Job Training Only (Related to Major Field)	16	4	8	28
On-the-Job Experience (Not Related to Major Field	34	16	25	75
Subtotal	78	28	44	150
Total	108	28	55	191
Individuals who participated in one or more activities				
TOTAL PER CENT	72	26	37	

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TABLE 15

EMPLOYEES WHO WOULD HAVE PARTICIPATED IN A WORK-EXPERIENCE PROGRAM IN HIGH SCHOOL IF THEY HAD THE OPPORTUNITY

	Sample Groups			Total
	DE Sales (100)	NonDE Sales (100)	Nonsales (100)	
Yes	77	56	57	190
No	15	33	22	70

TABLE 16

TYPE OF WORK-EXPERIENCE PROGRAM PREFERRED

	Sample Groups			Total
	DE Sales (100)	NonDE Sales (100)	Nonsales (100)	
Summer Employment	25	21	12	58
Part-time Work	21	20	20	61
On-the-Job Training	24	19	27	70
Apprenticeship	3	2	7	12
TOTAL	73	62	66	201

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TABLE 17

HOW WELL SCHOOL COURSES PREPARED EMPLOYEES FOR FIRST JOB

	Sample Groups			Total
	DE Sales (100)	NonDE Sales (100)	Nonsales (100)	
Exceptionally well-prepared; training covered all essentials required for your first full-time job	23	11	13	47
Well-prepared on the whole; but there were some important gaps in training	36	21	30	87
Poorly prepared; much that I needed to know was not covered in vocational course	27	17	26	70
No answer	14	51	31	96
TOTAL	100	100	100	300

Eleven items concerning the employees' high school education were rated and reported as a mean rating score in Table 18. The distributive education salespeople sample rated their formal education and training the highest. The nonsalespeople recorded the lowest rating while the nondistributive education salespeople scores were in between these two groups.

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TABLE 18

MEAN RATING OF HIGH SCHOOL EDUCATION

		N	DE Sales	N	NonDE Sales	N	Non-Sales	Total
1.	Quality of instruction from DE instruction	79	2.2	21	1.9	56	2.0	2.0
2.	Quality of instruction from academic teachers	96	2.8	73	3.1	81	2.7	2.9
3.	Condition of DE equipment	80	2.1	22	1.9	55	2.1	2.0
4.	General physical condition of school	97	3.1	78	3.0	82	2.9	3.0
5.	Interest shown by teachers in student problems	96	2.7	78	2.8	80	2.6	2.7
6.	Reputation of the school in the community	96	3.2	78	3.4	83	3.0	3.2
7.	Strictness of school in maintaining discipline	96	3.0	78	3.2	80	3.0	3.1
8.	Counseling for occupations and careers	94	2.5	74	2.3	76	2.0	2.3
9.	Help given students to find jobs	93	1.9	66	1.8	76	1.9	1.9
10.	Opportunity for extra-curricular activities	74	3.9	76	2.9	79	2.7	3.2
11.	On the whole, the education you received in high school	96	2.9	80	3.0	83	2.7	2.9
	Total Mean Rating of Education		2.75		2.66		2.51	2.65

1 = Poor 2 = Satisfactory 3 = Good 4 = Excellent

The three sample groups highest composite mean rating was an identical 3.2 for: 1) Number 10. Opportunity for extra-curricular activities, and 2) Number 6. Reputation of the school in the community. The lowest mean ratings were given to: 1) Number 9. Help given students to find jobs, 2) Number 1. Quality of instruction from DE instruction, 3) Number 3. Condition of DE equipment, and 4) Number 8. Counseling for occupations and careers.

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CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The main purpose of this cooperative field research was to develop an instrument for measuring competencies of department store salespeople. A second purpose was to analyze the differences between the salespeople groups which participated in cooperative distributive education programs at the high school and post-high school levels. Included were those without formal education and training in distributive programs and employees who are not engaged in selling activities in several large department stores. A final purpose was to gather demographic data with which department store employees could be described.

The instrument constructed for the measuring of competencies needed by department store salespeople was based upon the critical tasks and competencies identified in Lucy C. Crawford's study. Competencies needed to perform the critical tasks were organized into nine areas: advertising, communications, display, human relations, mathematics, merchandising, operations and management, product and/or service technology and selling.

A criterion-referenced test battery consisting of 100 multiple-choice items was the final instrument used to

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assess the competency of the three sample employees' groups of salespeople and nonsalespeople. Nine subscale scores and means, as well as, total scores and their means were determined for each of the 300 employees participating in this study.

The first phase involved obtaining total scores, dividing the total sample into three groups, and analyzing their differences. Data was handscored and analyzed using an electronic calculator for determining means, and standard deviations. Additionally, an analysis of variance and Tukey's multiple comparison test were used to discriminate between the sample employees' groups.

The results indicated that the salespeople groups differed significantly from the nonsalespeople group. Moreover, the mean scores for the three samples fell along a continuum. The results of the age level analysis indicated that the older employees' mean was slightly higher than that of the younger group. The educational level analysis resulted in the post-high school group scoring significantly higher than the group with high school education or less. The analysis of the data for the work history groups indicated that the salespeople without company training scored significantly higher than those salespeople with company training.

The second phase of the data analysis consisted of using the chi square test for conducting an item analysis of the Retail Selling Competency Battery. Of the 100 item test there were 26 items significant at the .01 level, 15

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significant at the .05 level, and five more approaching the .05 level of confidence.

A split-half reliability correlation was computed for the Retail Selling Competency Battery. The uncorrected correlation coefficient was .82 and the corrected coefficient was .90.

The final stage of the data analysis was the reporting of general demographic data for describing the employees. Only that information which was relevant to this study was analyzed and shown in comparative forms.

Conclusions

The three hypotheses tested in this cooperative field research study and a summary of the results are listed below:

Hypothesis 1: A test battery of approximately 100 or more multiple-choice items can be developed that will measure professional department store retail selling competencies.

The nondistributive education trained salespeople were considered to have the highest level of competence with a mean of 68.1, the nonsalespeople had the lowest mean, 57.4, and the distributive education group's mean, 65.3, fell in between the other two groups. The mean scores differentiated the salespeople groups from the nonsalespeople group at the .01 level of significance. Therefore, the hypothesis was supported.

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Hypothesis 2: There will be no difference among the selling competencies of the distributive education salespeople, nondistributive education salespeople, and the nonsalespeople.

The analysis of variance resulted in an F value of 21.73 exceeding the .01 level of significance. Tukey's T method test for multiple comparison between sample means showed that two of the three pairs of samples differed significantly. When comparing the distributive education salespeople with the nonsalespeople an F value of 6.664 was significant at the .01 level. Additionally, an F of 8.986 exceeding the .01 level of significance was computed for the variance between nondistributive education salespeople and the nonsalespeople.

The results of the statistical analysis indicated that the differences in selling competencies between the salespeople and the nonsalespeople are highly significant. Consequently, the hypothesis was rejected.

Hypothesis 3: There will be no difference among the variances of the test scores based on the three samples.

Under the hypothesis that the three samples will be homogeneous the observed F_{max}, which had a value of 1.81, was greater than the tabled value associated at the .01 level test of significance. Therefore, the hypothesis of homogeneity of variance was rejected. Hypothesis 3 was not supported.

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Recommendations

Since the validation of the Retail Selling Competency Battery, as used in this study, was limited by several factors the following specific recommendations are listed:

1. Further investigation of the relationship between the battery and other standardized tests is needed. An accurate estimate of correlation between the Retail Selling Competency Battery and measures of intelligence would be helpful.
2. More validation of the battery with other department store salespeople is needed. The employee sample groups selected for this study did not represent the total department store salespeople population.
3. More standardization of the Retail Selling Competency Battery is desirable. Norm data needs to be collected for sex, age, education, geographic areas, and ethnic groups. Cross validation of the norm data is important before the battery should be used in screening and certification.
4. A more valid reliability measure would provide evidence for a reliable battery. A test-retest procedure with the same groups of salespeople would establish stability over a period of time.

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5. A refinement of the battery for measuring needed competencies of the distributive education teacher-coordinator is needed.

Additional Research

It is further recommended that the following investigations be considered:

1. A study to determine the relationship of a salesperson's score on the Retail Selling Competency Battery to their sales production record.
2. A study to determine the relationship of a salesperson's score on the Retail Selling Competency Battery to their overall rating as evaluated by their supervisor, personnel manager, etc.
3. Construction and validation of an instrument for measuring identified attitudes related to department store selling competencies and the changes of attitudes in employees who are participating in a post-secondary distributive education program with those salespeople who are participating in the training program.
4. An analysis of the significance of positive attitudes toward work on the performance of the competencies needed for a salesperson in a department store and the relationship these attitudes have to the employee's evaluation and rating report.

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5. A study to determine the effectiveness of the sales supervisors' training methods on the learning of sales competencies needed by a salesperson in a department store.
6. There is a need for increasing the item pool and then recompute each successive administration of the Retail Selling Competency Battery to better determine the correlation with the criterion and the other tests in the battery.

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APPENDIXES

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APPENDIX A

RETAIL SELLING COMPETENCY BATTERY

prepared by

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RETAIL SELLING COMPETENCY BATTERY

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MULTIPLE CHOICE

Directions: On the Answer Sheet, write the letter that represents the word, or group of words, that best completes the question or statement.

HUMAN RELATIONS

1. The employee who does not destructively criticize the firm is a form of
   A) rating
   B) loyalty
   C) venturesome spirit
   D) industriousness

2. To succeed in retailing one must succeed in
   A) product knowledge
   B) being aggressive
   C) remaining quiet
   D) human relations

3. By respecting the opinion and ideas of one's fellow worker, praising their efforts and making them feel important in their work will
   A) cause others to be industrious
   B) help others to acquire tact
   C) result in a profit for the store
   D) motivate others to their best performance

4. Steady, earnest, diligent effort is
   A) industriousness
   B) enthusiasm
   C) "passing the buck"
   D) eagerness

5. A person who has the ability to see a job to be done and the courage to go ahead and do it is said to possess
   A) enthusiasm
   B) tact
   C) initiative
   D) loyalty

6. What helps the salesperson to handle customer complaints satisfactorily?
   A) Definite store policies and follow recommended procedures.
   B) Refer the customer to the supervisor.
   C) Making exchanges.
   D) Suggest that you will try to get them an adjustment when you have the time.

OPERATIONS AND MANAGEMENT

7. The most common credit plan is the
   A) bank credit plan
   B) open or regular account
   C) deferred or revolving account
   D) installment plan

8. What increases sales volume and reduces selling costs and results in increased profits;
   A) Efficient stockkeeping
   B) Controlled economy
   C) Service advertising
   D) Variable expense

9. If it is not a personalized check, most stores require
   A) that he cash the check at his bank
   B) that the customer write his address and telephone number on the back
   C) a bank authorization
   D) that the customer write his social security number on the back

10. The type of goods located to the back or on upper floors are generally
    A) customer services
    B) staple or shopping goods
    C) impulse goods
    D) convenience goods

11. The method of wrapping which speeds up selling service, reduces damages and handling costs and eliminates packing is
    A) packing
    B) wrapping
    C) prepacking
    D) bagging

12. A summary of all sales checks written during the day, totaled and given to the department manager with sales checks and money is
    A) a customer's ledger
    B) a deposit book
    C) a tally
    D) cycle billing

13. What is the procedure for checking to see if the quantity and style are the same as ordered, that the price is correct, that proper cash discount has been given and that the shipping instructions were followed?
    A) The invoice is checked against the original purchase order.
    B) The packages are opened by the receiving clerk.
    C) The invoice is checked against the bill of lading.
    D) The bill of lading is checked against the purchase order.

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14. Name the document used to order goods from a salesman in person or by phone.
A) Sales-Check
B) Purchase order
C) Invoice
D) Bill of lading

MERCHANDISING

15. Charging all customers the same price for a particular article is known as a
A) floor price
B) cash-retail price
C) staple price
D) one-price policy

16. A lower-than-average markup is generally justified when
A) customers expect a greater amount of personal service
B) the goods are exclusive
C) the expenses of handling are to be greater than normal
D) customers expect little personal service.

17. All merchandising, including advertising, displaying, buying and market researching appeals to
A) marketing policies
B) customer buying motives
C) rational motives
D) product motives

18. Buying in many of the large department stores is based upon
A) the private brands
B) a study of customer demand
C) the availability of national brands
D) staple goods

19. Perpetual inventory data processed by a computer from a paper tape and returned in a final report back to the retailer is recorded by a
A) basic stock list
B) cash-register control
C) sales-check control
D) reserve requisition

20. Valuable information for sales planning and sound purchasing can be achieved better
A) on memorandums
B) by reducing slow-moving merchandise
C) by an inventory system
D) by a quantity discount

21. What information provides salespeople with convincing evidence that builds their confidence in the products they sell?
A) technical information
B) showing and demonstrating
C) using visual sales aids
D) talking with the customer

22. Merchandise should be arranged with these three goals in mind: (1) it aids in the sale of goods; (2) it allows the new salesperson to learn the location of the stock; and (3) it
A) should increase selling space
B) should speed delivery
C) aids in the handling of complaints
D) facilitates the control of stock

23. An inventory system in which value of goods on hand can be determined without bothering to count the goods is
A) a physical inventory
B) a perpetual inventory
C) an opening inventory
D) a closing book inventory

24. If the store counts its stock at inventory time at cost rather than retail price, the cost price is nearly always indicated on the price ticket
A) by digits
B) as the original retail price
C) for easier retail pricing
D) in code

25. Advance-marking from the purchase order is called
A) cost price
B) preretailing
C) marking
D) initial markup

SELLING

26. When a customer is interested in an item for a specific reason, it is wise to use a remark that
A) appeals to the average customer
B) appeals to the latest fashion
C) appeals to that interest
D) will result in an argument

27. The basic steps of a retail sale listed in correct order are
A) the approach and determining the need, the presentation, overcoming objections, closing the sale, and suggestion selling
B) suggestion selling, the presentation, overcoming objections, the approach and determining the need, and closing the sale
C) the presentation, the approach and determining the need, overcoming objections, suggestion selling, and closing the sale
D) the approach and determining the need, the presentation, suggestion selling, overcoming objections, and closing the sale

28. When a customer participates in the sales presentation, his interest changes into
A) studying the merchandise
B) desiring to own the merchandise
C) a need for more product information
D) indifference to owning the merchandise

29. Which of the following approaches is most desirable when the salesperson sees a customer examining an item?
A) Greeting approach
B) Service approach
C) Merchandise approach
D) Stall approach

30. Customer identification for a charge transaction is usually done in one of the three ways: (1) recognizing him, (2) by credit card, or
A) calling the local credit bureau
B) references of three former employers
C) by requesting authorization from the credit department
D) customer's social security number

31. When the credit card is inserted into the charge-posting cash register the sale is
A) printed on the customer's ledger account card
B) registered on a credit memorandum
C) printed on the customer's monthly statement
D) printed on the bank credit card

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32. A document numbered in order, each accounted for, with the original copy kept by the store, the duplicate is the customer's copy and the triplicate copy remains in the sales book is called a
A) purchase order
B) cash-record
C) sales register
D) sales check

33. Helping the customer to reach a decision to buy is called
A) overcoming objections
B) closing the sale
C) suggestion selling
D) hard sell

34. Regular customers, less price-consciousness, buying more freely, building confidence, attracting a preferred trade, smoothing out business peaks, and building retail profits are advantages of
A) department stores
B) cash-take sales
C) credit plan
D) chain stores

35. When the salesperson helps the customer to understand what it will mean to do without merchandise, then this is answering
A) specific-feature objections
B) need objections
C) price objections
D) "decision" excuses

36. Legislation which requires that cost of credit on each transaction be revealed before purchase in terms of an annual interest rate is the
A) Fair-trade laws
B) Truth-in-Lending Bill
C) Unfair-practices laws
D) Robinson-Patman Act

37. Misrepresenting merchandise, high pressure selling, incorrect delivery information and errors in billing or crediting accounts are reasons for complaints and returns caused by
A) the sales promotion division
B) the merchandising division
C) the finance and control division
D) store personnel

38. Related merchandise, a larger quantity, new products, and specials are kinds of
A) the merchandise approach
B) customer needs
C) buying decisions
D) suggestion selling

39. Which service ranks second to credit and that which the sales personnel should be well informed about?
A) delivery service
B) personal shopping service
C) gift-wrapping service
D) return goods service

40. An essential part of mail and phone orders is
A) delivery service
B) charge accounts
C) discount sales
D) exchanges

41. With women's shoes, color becomes
A) a fad
B) an important factor
C) a major merchandise classification
D) a minor merchandise classification

42. When reserve stock is kept in drawers or on shelves on the sales floor, it is called
A) reserve stock
B) under-the-counter stock
C) warehouse reserve
D) perimeter stock

43. Communication with gestures, isolating the goods, handling merchandise meaningfully, and visualizing the product in use are
A) the basic steps of retail selling
B) means to display goods effectively
C) selling according to need and desires
D) variations in buying procedure

MATHEMATICS

44. Find the total amount of the sale.
4 panels, French-fold draperies @ $80.00
2 twin straight sheets @ $4.80
2 twin fitted sheets @ $5.80
4 pillowcases @ $1.20
2 twin bedspreads @ $14.95
2 traverse rods @ $15.00
A) $300.50
B) $405.90
C) $625.75
D) $452.50

45. A salesman sold a suit to a fellow employee for $80. A 5% state tax and a 1% city tax must be charged. The employee is allowed a 15% discount by the store. How much should the employee pay for the suit?
A) $64.00
B) $72.00
C) $72.08
D) $68.25

46. During a recent week the women's ready-to-wear sold 95 children's dresses at $9.95 each; 150 teen dresses at $15.95 each; and 108 women's casual dresses at $12.95 each. What were the total dress sales of the department?
A) $4736.35
B) $8200.50
C) $5265.70
D) $3775.00

47. A salesman in the houseware department sold an electric blender to a customer. The price of the blender was $49.50, and the customer decided to pay $9 a month for 6 months, plus a $6 down payment. How much would the customer have saved if he had paid cash?
A) $10.50
B) $49.50
C) $9.00
D) $4.50

48. A wool fabric is priced at $7.40 per yard. A customer buys 2 yards and 9 inches of the material and must also pay a 5% state sales tax. Figure the amount of the sale.
A) $20.35
B) $17.48
C) $21.16
D) $16.35

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49. If the amount of sales in a department last week was $44,698.50 and if the sales represented 1050 sales transactions, what was the amount of the average sale for the week?
A) $42.57
B) $72.50
C) $82.07
D) $40.57

50. If department sales amount to $80,000, the average stock amounts to $10,000, what is the rate of turn?
A) 8
B) 7
C) 4
D) 10

51. If 42 is 3/5 of a number, what is 1/10 of the number?
A) 2.52
B) 4.2
C) 7.0
D) 25.2

52. A commission of 16-2/3% is paid on all sales over $200,000. Sales last month were $254,000. Find the amount of commission paid.
A) $33,333.00
B) $6,750.00
C) $82,333.00
D) $9,000.00

53. During one month the $5,000 advertising expenditure of a department store was distributed among two of the departments as follows: men's clothing, $1250 and furniture, $500. The remainder was allocated to other departments. Compute the percentage of the total that each department mentioned spent for advertising.
A) 25% and 50%
B) 25% and 10%
C) 25% and 5%
D) 12.5% and 10%

54. Retail, $26; markup, 30%. Find (a) cost price and (b) markup in dollars. (Based on the retail).
A) (a) $20.00 (b) $6.00
B) (a) $27.80 (b) $7.80
C) (a) $17.33 (b) $8.67
D) (a) $18.20 (b) $7.80

55. Which equation is used to find the cost price of an item when the retail price and the markup are known?
A) Markup % = $\frac{\text{Markup in \$}}{\text{Retail Price}}$
B) M = R − C
C) C + M = R
D) C = R − M

56. Retail, $30; markup, $10. Find (a) cost and (b) markup percent based on the cost.
A) (a) $20.00 (b) 50%
B) (a) $40.00 (b) 25%
C) (a) $40.00 (b) 50%
D) (a) $20.00 (b) 33-1/3%

57. As a general rule, what is the best procedure to follow after a salesperson over-rings the sale?
A) (1) Ring a "No Sale"
(2) Re-ring the sale correctly
(3) Void the incorrect cash-register receipts and
(4) Give it to the supervisor immediately
B) (1) Check the cash-register window for the correct amount
(2) Ring a "No Sale"
(3) Void the incorrect cash-register receipt and
(4) Turn in the cash-register receipt and the cash at the end of the day
C) (1) Note the amount of over-ring on the cash-record form
(2) Have it approved by the supervisor and
(3) Turn in the change fund and the money received during the day to the cashier's office
D) (1) Re-ring the sale correctly
(2) Void the incorrect cash-register receipt
(3) Have it approved by a supervisor, if required, and
(4) Turn it in with the cash at the end of the day

PRODUCT AND/OR SERVICE TECHNOLOGY

58. Product information should be organized according to the
A) policies of the store
B) customer's buying decisions
C) five basic steps of selling
D) principles of marketing

59. A merchandising tool which gives the essential facts about the product is a
A) customer survey
B) testimonial
C) label
D) special course

60. Why is it necessary for a salesperson to be responsible for maintaining a wide selection of fresh, clean forward stock and for knowing where it is and how to get it easily?
A) caveat emptor
B) increased customer satisfaction and profits
C) to prevent injury to other personnel
D) for checking stock with the receiving book

61. The salesperson interprets the features of a product in terms of benefits to customers
A) by comparison shopping
B) through the wholesaler
C) by comparing and studying several grades of merchandise
D) through community services

62. Trade papers or journals
A) are published just for home furnishings
B) report on new products and items that are enjoying popular demand
C) are infrequently read by salespeople
D) are given free to retailers by the local Chamber of Commerce

63. Information on how to use and care for products and information on their construction can often be obtained from
A) mail order catalogues
B) the warranty
C) descriptive labels
D) informative labels

64. If the customer enters a department hurriedly and seems anxious to buy what type of approach should the salesperson use?
A) approach in an unhurried manner but with an intense interest
B) approach briskly showing a real desire to satisfy him quickly
C) ask many questions to discover the customer's needs
D) omit the greeting, concentrate on technical information alone

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65. Information attached to merchandise to aid the customer in making a wise buying decision is found on
A) the warranty
B) the trade mark
C) the brand mark
D) merchandise labels

66. What kind of information gives the customer the assurance that the article will provide the values he deserves?
A) interior displays
B) consumer research
C) characteristics of a product
D) information from other retail stores

67. What legislation requires that the label specify weight and condition of wool and the weight of nonwool material?
A) Truth-in-Packaging Bill
B) Fur Label
C) Wool Products Labeling Act
D) Textile Fiber Products

68. Name the agency which issues guidelines to prevent deceptive and dishonest retail pricing practices
A) Fair Trade Code
B) Better Business Bureau
C) Consumers League
D) Federal Trade Commission

69. "Vogue ®" on a garment label means the trademark is
A) registered with the Federal Trade Commission
B) the name of the manufacturing company
C) identifying the quality of the garment
D) the brand name of the garment

70. The act which protects producers and consumers against misbranding and false advertising of fiber content of textile fiber products is the
A) Federal Trade Commission Act, 1941
B) Textile Fiber Identification Act, 1958
C) National Food, Drug and Cosmetics Act, 1938
D) Robinson-Patman Act, 1936

71. The Flammable Fabrics Act was passed in order to
A) protect the public from adulterated goods
B) assure the consumer protection against hazards of using products containing toxic substances
C) prohibit the sale in interstate commerce of clothing materials that are a fire hazard
D) protect the customer from products not properly packaged or labeled

72. The seal of approval for both the seller and the consumer that electrical appliances are free from fire and shock hazards is furnished by the
A) Federal Trade Commission Act
B) Underwriters Laboratories, Inc.
C) Fair Packaging and Labeling Bill
D) Fair-trade laws

COMMUNICATIONS

73. If an employee has a new idea, he should
A) report it in the written monthly report
B) discuss it with the store manager
C) try it out with a fellow employee
D) discuss it with his supervisor

74. What are the three main parts of a sales check?
A) (1) the address label
(2) the body and
(3) the voucher
B) (1) selection factors
(2) quantities and
(3) service and location demands
C) (1) address label
(2) cost of goods and
(3) discount
D) (1) date
(2) type of transaction and
(3) cash balance

75. Products must be described realistically in
A) direct selling
B) telephone selling
C) internal selling
D) a cooperative store

76. The successful salesperson matches his product information with the
A) price that the customer can afford
B) buyer's wants and needs
C) customer's knowledge
D) customer's objections

77. Which choice of answers best describes the foundation of sales professionalism?
A) personal integrity
B) constant aspiring toward perfection
C) hard work
D) decision making

78. The three types of information that may be attached to goods are
A) (1) the color
(2) style and
(3) packaging regulations
B) (1) the trade discount
(2) bank credit plan and
(3) the delivery terms
C) (1) a code price
(2) a list price and
(3) the sales price
D) (1) a descriptive label
(2) an informative label and
(3) a grade label

79. Which meaning of a word causes the salesperson the most difficulty?
A) literal meaning
B) emotional meaning
C) perceptual meaning
D) acceptation

ADVERTISING

80. Stores use institutional advertising to
A) create a desire for their merchandise
B) introduce a new model and style of a specific product
C) generate customer traffic for the sale
D) build goodwill

81. Periodicals (newspapers, magazines, trade journals), mass media (radio, T.V., billboards) and direct advertising (catalogs, circulars, letters) are types of
A) public services
B) local resources for research
C) agencies which furnish lists of customers
D) media that are available for advertising

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82. Which of the choices help to answer the question "where should it be purchased?"
A) the history of the store's management
B) adequacy of the assortment from which to choose
C) where advertising costs are low
D) from a chain store

83. (1) Is it arresting? (2) Is it distinctive? (3) Is it clear? and (4) Does it quickly communicate the idea of interest to the reader? These questions along with others should be answered when checking
A) a media plan for a layout
B) display space
C) advertising layouts
D) fundamentals of design

84. The newspaper, direct-mail, enclosures, outdoor and public transportation, radio and television, window and store displays are used
A) to inform customers of special events
B) for internal selling
C) to control the amount of advertising
D) for planning future sales

85. Why do some stores have to spend more on advertising than competitors?
A) high incomes of salespeople
B) low quality stock
C) location
D) lack of continual advertising

86. The type of customer a retailer wishes to attract, what goods he is advertising and how much money he wishes to spend determines
A) the advertising standards
B) how much will be advertised
C) the value of advertising
D) the selection of advertising media

DISPLAY

87. Keep the display fixtures and the merchandise clean, where possible, show the merchandise as it would be used and change the displays often are necessary for the proper upkeep of
A) under-the-counter stock
B) reserve stock
C) window and interior displays
D) the physical inventory

88. To be effective, point-of-sale devices should
A) not contain space for the price
B) be functional
C) be out of the customers' reach
D) be concentrated on staple items only

89. The elements of the design spread out like rays from a central point are called
A) zig-zag
B) stair-step
C) pyramid
D) radiation

90. The stimulating colors—yellow, orange, and red are called
A) receding colors
B) advancing colors
C) secondary colors
D) primary colors

91. The soothing colors—blue, green, and violet suggest dignity and relaxation and are called
A) receding colors
B) advancing colors
C) secondary colors
D) primary colors

92. The lines and characteristics of an article that make it different from other articles of the same kind are known as
A) style
B) high fashion
C) fad
D) fashion

93. Which relationship between merchandise and background makes a display more interesting?
A) contrast in texture
B) same in texture
C) use of numerous colors
D) two colors of the same value

94. Most displays are best if the color selection is
A) achromatic
B) complex
C) nonharmonious
D) simple

95. A design that uses items of the same general nature and aligns them in exactly the same height, spacing or angle is called
A) repetition
B) stair-step
C) zig-zag
D) interference

96. Thumbnail sketches, generous margins, balance and emphasis of the important copy are
A) general rules for preparing a sales letter
B) simple rules for creating show cards
C) principles of design
D) rules for planning interior displays

97. Composition, dominance, balance and proportion are four principles of
A) advertising
B) retail promotion
C) design
D) buying

98. Why is the open display effective?
A) because the customer cannot handle the goods
B) only one specific kind of goods are used
C) it is the area just inside the front door
D) the customer can handle the merchandise.

99. Planning the display and checking the display for its effect in selling merchandise are the two most important steps for
A) creating a layout
B) direct-mail advertising
C) direct selling
D) creating a display

100. Care in folding, draping, concealing pins and tags, skillful use of color and design principles are important
A) steps for omnibus advertising
B) when dressing mannequins for displays
C) points in institutional advertising
D) duties handled by the sales director

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APPENDIX B

DEPARTMENT STORE RETAIL SALES SURVEY

prepared by

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1. Your name _____ 2. Female _____ Male _____ 3. Date of Birth _____

4. Name of firm where currently employed _____

5. Address _____

6. Job classification _____ 7. Length of time in this position _____

8. Length of time with this company
   - _____ 1. Less than one year
   - _____ 2. One to three years
   - _____ 3. Four to seven years
   - _____ 4. Eight to twelve years
   - _____ 5. Thirteen to twenty years
   - _____ 6. Twenty-one to thirty years
   - _____ 7. Over thirty years

9. Circle highest grade of school completed:
   1. 1 2 3 4 5 6 7 8 9 10 11 12 13 14
   2. High school course studied (Vocational, General) _____

10. Completed diploma, certificates or degrees:
    - _____ 1.
    - _____ 2.
    - _____ 3. Bachelors Degree
    - _____ 4. Masters Degree

11. Check the Distributive Education (DE) courses you have completed at the high school level (Insert no. for grade level; 9,10,11,12).

Classes	Work Experience
_____ 1. Retailing	_____ 4. Distribution I
_____ 2. Salesmanship	_____ 5. Distribution II
_____ 3. Introduction to marketing and merchandising	_____ 6. On-the-Job Training only

12. Check the Distributive Education courses you have completed at the community college and college level (Insert no. for grade level; 13, 14, or 15,16).

Classes	Work Experience
_____ 1. Retail mid-management	_____ 5. School-work related
_____ 2. Fashion merchandising	_____ 6. School-work non-related
_____ 3. Wholesaling	_____ 7. On-the-Job Training only (Related to major field)
_____ 4. Industrial sales	_____ 8. On-the-Job Experience (No training-not related to major field

13. Type of DE curricula you participated in:
    - _____ 1. Project Method (Instruction only, without employment)
    - _____ 2. Plan B (One year of instruction, with employment)
    - _____ 3. Plan A (Two years of instruction, with employment)
    - _____ 4. Specialized DE (Soft goods merchandise, food distribution or home furnishings, etc., instruction with employment)
    - _____ 5. Specialized DE (without employment)

14. Does your employer have a training program?
    _____ 1. Yes _____ 2. No _____ 3. Unknown

15. If you answered yes to No. 14, please check the courses taken and insert approximate no. of hours of training:
    - _____ 1. Salesmanship
    - _____ 2. Human Relations in Business
    - _____ 3. Merchandising
    - _____ 4. Product Technology
    - _____ 5. Business Arithmetic
    - _____ 6. Business Machines
    - _____ 7. Business English
    - _____ 8. Advertising & Display
    - _____ 9. Mid-management
    - _____ 10. Wholesaling

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16. Check languages which you speak and understand in addition to English.
_____ 1. Spanish _____ 4. German _____ 7. Other: write in _____
_____ 2. French _____ 5. Russian
_____ 3. Italian _____ 6. Portuguese

17. Does your employer give added recognition for these courses when considering promotions?
_____ 1. Yes _____ 2. No _____ 3. Unknown

18. Do you plan to take any distributive education courses?
_____ 1. Yes _____ 2. No _____ 3. Unknown

19. (If you answered No. 18, yes, then . . .) Check your reason for taking distributive education courses:
_____ 1. At the request of my employer _____ 3. As general education
_____ 2. On my own initiative for advancement possibilities _____ 4. To improve my sales production record

20. Would you have participated in a work-experience program (i.e., Distributive Education, Office Occupations, etc.) if you had had the opportunity while attending high school?
_____ 1. Yes _____ 2. No

If yes, what type of program?
_____ 1. Summer employment _____ 3. On-the-Job Training
_____ 2. Part-time work _____ 4. Apprenticeship

21. Indicate how well your school courses prepared you for your first full-time job.
_____ 1. Exceptionally well-prepared; training covered all essentials required by first job.
_____ 2. Well-prepared on the whole; but there were some important gaps in training.
_____ 3. Poorly prepared; much that I needed to know was not covered in vocational course.

22. Please give your frank opinion about the following items concerning your high school education. (Mark one answer for each item using the number one (1) for "poor"; the number two (2) for "satisfactory"; the number three (3) for "good"; and the number four (4) for "excellent".
_____ 1. Quality of instruction from Distributive Education instructors.
_____ 2. Quality of instruction from academic teachers.
_____ 3. Condition of Distributive Education equipment.
_____ 4. General physical condition of school.
_____ 5. Interest shown by teachers in student problems.
_____ 6. Reputation of the school in the community.
_____ 7. Strictness of school in maintaining discipline.
_____ 8. Counseling for occupations and careers.
_____ 9. Help given students to find jobs.
_____ 10. Opportunity for extra-curricular activities.
_____ 11. On the whole, the education you received in high school.

23. Please mark all kinds of education obtained since leaving high school, and provide the information requested about each. Put an asterisk (*) behind those you are presently attending. If you have not had any additional education since high school, mark here _____.

Mark Here		Type of Education	Av.hrs.per wk.in school	Major subject or course(s)	Dates attended Give mo. and yr.	
_____	0	Two-year or junior college	_____	_____	From:	To:
_____	1	Four-year college/university	_____	_____	From:	To:
_____	2	Post-college graduate school	_____	_____	From:	To:
_____	3	Private trade/technical	_____	_____	From:	To:
_____	4	Public trade/technical	_____	_____	From:	To:
_____	5	Business-commercial school	_____	_____		To:
_____	6	Adult continuation school	_____	_____	From:	To:
_____	7	Military specialist school	_____	_____	From:	To:
_____	8	Company course or school	_____	_____	From:	To:
_____	9	Correspondence schools	_____	_____	From:	To:
_____	10	Other (specify)	_____	_____	From:	To:

24. Marital Status
_____ 1. Single _____ 2. Married _____ 3. Other

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APPENDIX TABLE C

PROPORTION OF EMPLOYEE GROUPS ANSWERING ITEMS CORRECTLY AND CHI SQUARES FOR DIFFERENCES OF THE RETAIL SELLING COMPETENCY BATTERY

Item No.	Statement or Question	Employee Groups: DE Sales N=100	Employee Groups: NonDE Sales N=100	Employee Groups: Non-Sales N=100	Chi Square
	Human Relations				
1.	The employee who does not destructively criticize the firm is a form of	82	80	79	.295
2.	To succeed in retailing one must succeed in	54	61	45	5.176
3.	By respecting the opinion and ideas of one's fellow worker, praising their efforts and making them feel important in their work will	84	83	86	.253
4.	Steady, earnest, diligent effort is	76	81	70	3.295
5.	A person who has the ability to see a job to be done and the courage to go ahead and do it	97	95	86	10.105**
6.	What helps the salesperson to handle customer complaints satisfactorily?	95	91	87	3.907
	TOTAL MEAN SCORE	81.3	81.8	75.5	
	Operations and Management				
7.	The most common credit plan is the	45	61	55	5.255
8.	What increases sales volume and reduces selling costs and results in increased profits	65	74	44	19.924**

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APPENDIX TABLE C--Continued

Item No.	Statement or Question	Employee Groups			Chi
		DE Sales N=100	NonDE Sales N=100	Non-Sales N=100	
9.	If it is not a personalized check, most stores require	37	45	58	9.027*
10.	The type of goods located to the back or on upper floors are generally	37	41	23	8.000*
11.	The method of wrapping which speeds up selling service, reduces damages and handling costs and eliminates packing is	49	57	58	1.964
12.	A summary of all sales checks written during the day, totaled and given to the department manager with sales checks and money is	86	89	76	6.781*
13.	What is the procedure for checking to see if the quantity and style are the same as ordered, that the price is correct, that proper cash discount has been given and that the shipping instructions were followed?	57	67	65	2.402
14.	Name the document used to order goods from a salesman in person or by phone	66	75	70	1.949
	TOTAL MEAN SCORE	55.3	63.2	56.1	

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APPENDIX TABLE C--Continued

Item No.	Statement or Question	Employee Groups: DE Sales N=100	Employee Groups: NonDE Sales N=100	Employee Groups: Non-Sales N=100	Chi Square
	Merchandising				
15.	Charging all customers the same price for a particular article is known as a	41	51	38	3.774
16.	A lower-than-average markup is generally justified when	58	75	48	15.572**
17.	All merchandising, including advertising, displaying, buying and market researching appeals to	85	89	67	17.385**
18.	Buying in many of the large department stores is based upon	75	75	68	1.645
19.	Perpetual inventory data processed by a computer from a paper tape and returned in a final report back to the retailer is recorded by a	44	41	38	.744
20.	Valuable information for sales planning and sound purchasing can be achieved better	90	87	73	11.856**
21.	What information provides salespeople with convincing evidence that builds their confidence in the products they sell?	32	39	35	1.080

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APPENDIX TABLE C--Continued

Item No.	Statement or Question	Employee Groups: DE Sales N=100	Employee Groups: NonDE Sales N=100	Employee Groups: Non-Sales N=100	Chi Square
22.	Merchandise should be arranged with these three goals in mind: (1) it aids in the sale of goods; (2) it allows the new salesperson to learn the location of the stock; and (3) it	71	66	65	.940
23.	An inventory system in which value of goods on hand can be determined without bothering to count the goods is	66	72	48	13.243**
24.	If the store counts its stock at inventory time at cost rather than retail price, the cost price is nearly always indicated on the price ticket	70	76	67	2.040
25.	Advance-marking from the purchase order is called	36	35	51	6.659*
	TOTAL MEAN SCORE	60.7	64.2	54.4	
	Selling				
26.	When a customer is interested in an item for a specific reason, it is wise to use a remark that	88	97	84	9.569**
27.	The basic steps of a retail sale listed in correct order are	13	13	11	.201

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APPENDIX TABLE C--Continued

Item No.	Statement or Question	Employee Groups: DE Sales N=100	Employee Groups: NonDE Sales N=100	Employee Groups: Non-Sales N=100	Chi
28.	When a customer participates in the sales presentation, his interest changes into	54	55	43	3.547
29.	Which of the following approaches is most desirable when the salesperson sees a customer examining an item?	42	48	21	17.246**
30.	Customer identification for a charge transaction is usually done in one of the three ways: (1) recognizing him, (2) by credit card, or	97	97	91	5.053
31.	When the credit card is inserted into the charge-posting cash register the sale is	22	28	21	1.587
32.	A document numbered in order, each accounted for, with the original copy kept by the store, the duplicate is the customer's copy and the triplicate copy remains in the sales book is called a	71	73	69	.389
33.	Helping the customer to reach a decision to buy is called	38	33	47	-26.303
34.	Regular customers, less price-consciousness, buying more freely, building confidence, attracting a preferred trade, smoothing out business peaks, and building retail profits are advantages of	47	43	27	9.416**

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APPENDIX TABLE C--Continued

Item No.	Statement or Question	Employee Groups: DE Sales N=100	Employee Groups: NonDE Sales N=100	Employee Groups: Non-Sales N=100	Chi Square
35.	When the salesperson helps the customer to understand what it will mean to do without merchandise, then this is answering	67	63	55	3.159
36.	Legislation which requires that cost of credit on each transaction be revealed before purchase in terms of an annual interest rate is the	60	71	48	10.998**
37.	Misrepresenting merchandise, high pressure selling, incorrect delivery information and errors in billing or crediting accounts are reasons for complaints and returns caused by	79	84	61	15.472**
38.	Related merchandise, a larger quantity, new products, and specials are kinds of	72	68	44	19.340**
39.	Which service ranks second to credit and that which the sales personnel should be well informed about?	36	35	51	6.658*
40.	An essential part of mail and phone orders is	81	83	79	.519
41.	With women's shoes, color becomes	29	31	19	4.261
42.	When reserve stock is kept in drawers or on shelves on the sales floor, it is called	53	52	47	.826

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APPENDIX TABLE C--Continued

Item No.	Statement or Question	Employee Groups: DE Sales N=100	Employee Groups: NonDE Sales N=100	Employee Groups: Non-Sales N=100	Chi Square
43.	Communication with gestures, isolating the goods, handling merchandise meaningfully, and visualizing the product in use are	33	34	25	2.289
	TOTAL MEAN SCORE	54.6	56.0	45.2	
	Mathematics				
44.	Find the total amount of the sale. 4 panels, French-fold draperies @ $80.00 2 twin straight sheets @ $4.80 2 twin fitted sheets @ $5.80 4 pillowcases @ $1.20 2 twin bedspreads @ $14.95 2 traverse rods @ $15.00	93	91	95	1.228
45.	A salesman sold a suit to a fellow employee for $80. A 5% state tax and a 1% city tax must be charged. The employee is allowed a 15% discount by the store. How much should the employee pay for the suit?	89	87	81	2.823
46.	During a recent week the women's ready-to-wear sold 95 children's dresses at $9.95 each; 150 teen dresses at $15.95 each; and 108 women's casual dresses at $12.95 each. What were the total dress sales of the department?	86	90	87	.801

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APPENDIX TABLE C--Continued

Item No.	Statement or Question	Employee Groups: DE Sales N=100	Employee Groups: NonDE Sales N=100	Employee Groups: Non-Sales N=100	Chi Square
47.	A salesman in the houseware department sold an electric blender to a customer. The price of the blender was $49.50, and the customer decided to pay $9 a month for 6 months, plus a $6 down payment. How much would the customer have saved if he had paid cash?	93	92	94	4.306
48.	A wool fabric is priced at $7.40 per yard. A customer buys 2 yards and 9 inches of the material and must also pay a 5% state sales tax. Figure the amount of the sale.	74	76	56	11.278**
49.	If the amount of sales in a department last week was $44,698.50 and if the sales represented 1050 sales transactions, what was the amount of the average sale for the week?	92	89	83	3.988
50.	If department sales amount to $80,000, the average stock amounts to $10,000, what is the rate of turn?	87	80	77	-7.245*
51.	If 42 is 3/5 of a number, what is 1/10 of the number?	75	67	64	3.005
52.	A commission of 16-2/3% is paid on all sales over $200,000. Sales last month were $254,000. Find the amount of commission paid.	69	64	54	4.969

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APPENDIX TABLE C--Continued

Item No.	Statement or Question	Employee Groups: DE Sales N=100	Employee Groups: NonDE Sales N=100	Employee Groups: Non-Sales N=100	Chi Square
53.	During one month the $5,000 advertising expenditure of a department store was distributed among two of the departments as follows: men's clothing, $1250 and furniture, $500. The remainder was allocated to other departments. Compute the percentage of the total that each department mentioned spent for advertising.	77	76	61	7.857*
54.	Retail, $26; markup, 30%. Find (a) cost price and (b) markup in dollars. (Based on the retail).	53	49	49	.426
55.	Which equation is used to find the cost price of an item when the retail price and the markup are known?	68	58	59	2.566
56.	Retail, $30; markup, $10. Find (a) cost and (b) markup percent based on the cost.	44	45	42	.189
57.	As a general rule, what is the best procedure to follow after a salesperson over-rings the sale?	91	88	57	42.227**
	TOTAL MEAN SCORE	77.9	75.1	68.5	

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APPENDIX TABLE C--Continued

Item No.	Statement or Question	Employee Groups: DE Sales N=100	NonDE Sales N=100	Non-Sales N=100	Chi Square
	Product and/or Service Technology				
58.	Product information should be organized according to the	22	21	13	3.205
59.	A merchandising tool which gives the essential facts about the product is a	83	84	70	7.353*
60.	Why is it necessary for a salesperson to be responsible for maintaining a wide selection of fresh, clean forward stock and for knowing where it is and how to get it easily?	96	98	84	16.874**
61.	The salesperson interprets the features of a product in terms of benefits to customers	80	87	76	4.028
62.	Trade papers or journals	83	88	78	3.543
63.	Information on how to use and care for products and information on their construction can often be obtained from	71	75	55	10.131**
64.	If the customer enters a department hurriedly and seems anxious to buy what type of approach should the salesperson use?	81	87	68	10.670**
65.	Information attached to merchandise to aid the customer in making a wise buying decision is found on	81	79	64	9.128*

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APPENDIX TABLE C--Continued

Item No.	Statement or Question	Employee Groups: DE Sales N=100	Employee Groups: NonDE Sales N=100	Employee Groups: Non-Sales N=100	Chi
66.	What kind of information gives the customer the assurance that the article will provide the values he deserves?	50	41	37	3.625
67.	What legislation requires that the label specify weight and condition of wool and the weight of nonwool material?	55	59	60	.574
68.	Name the agency which issues guidelines to prevent deceptive and dishonest retail pricing practices	48	48	45	.240
69.	"Vogue ®"on a garment label means the trademark is	56	53	47	1.682
70.	The act which protects producers and consumers against misbranding and false advertising of fiber content of textile fiber products is the	70	79	69	3.054
71.	The Flammable Fabrics Act was passed in order to	61	70	52	6.809*
72.	The seal of approval for both the seller and the consumer that electrical appliances are free from fire and shock hazards is furnished by the	65	71	51	8.972*
	TOTAL MEAN SCORE	66.8	69.3	57.3	

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APPENDIX TABLE C--Continued

Item No.	Statement or Question	Employee Groups: DE Sales N=100	NonDE Sales N=100	Non-Sales N=100	Chi Square
	Communications				
73.	If an employee has a new idea, he should	84	78	82	1.229
74.	What are the three main parts of a sales check?	71	80	50	9.128*
75.	Products must be described realistically in	71	68	48	13.317**
76.	The successful salesperson matches his product information with the	69	73	59	4.704
77.	Which choice of answers best describes the foundation of sales professionalism?	55	60	51	1.645
78.	The three types of information that may be attached to goods are	46	60	52	3.958
79.	Which meaning of a word causes the sales-person the most difficulty?	43	47	26	10.485**
	TOTAL MEAN SCORE	62.7	66.5	62.7	
	Advertising				
80.	Stores use institutional advertising to	19	12	16	1.866
81.	Periodicals (newspapers, magazines, trade journals), mass media (radio, T.V., billboards) and direct advertising (catalogs, circulars, letters) are types of	90	92	74	15.554**

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APPENDIX TABLE C--Continued

Item No.	Statement or Question	Employee Groups: DE Sales N=100	NonDE Sales N=100	Non-Sales N=100	Chi Square
82.	Which of the choices help to answer the question "where should it be purchased?"	74	78	64	5.158
83.	(1) Is it arresting? (2) Is it distinctive? (3) Is it clear? and (4) Does it quickly communicate the idea of interest to the reader? These questions along with others should be answered when checking	83	85	68	10.288**
84.	The newspaper, direct-mail, enclosures, outdoor and public transportation, radio and television, window and store displays are used	74	86	74	5.594
85.	Why do some stores have to spend more on advertising than competitors?	67	73	58	5.080
86.	The type of customer a retailer wishes to attract, what goods he is advertising and how much money he wishes to spend determines	69	67	52	7.380*
	TOTAL MEAN SCORE	68.0	70.4	58.0	

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APPENDIX TABLE C--Continued

Item No.	Statement or Question	Employee Groups: DE Sales N=100	Employee Groups: NonDE Sales N=100	Employee Groups: Non-Sales N=100	Chi Square
	Display				
87.	Keep the display fixtures and the merchandise clean, where possible, show the merchandise as it would be used and change the displays often are necessary for the proper upkeep of	78	78	77	.038
88.	To be effective, point-of-sale devices should	77	80	63	8.418*
89.	The elements of the design spread out like rays from a central point are called	83	95	73	17.757**
90.	The stimulating colors--yellow, orange, and red are called	65	72	51	9.774**
91.	The soothing colors--blue, green, and violet suggest dignity and relaxation and are called	63	69	56	3.619
92.	The lines and characteristics of an article that make it different from other articles of the same kind are known as	77	81	71	2.804
93.	Which relationship between merchandise and background makes a display more interesting?	66	66	58	1.837

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APPENDIX TABLE C--Continued

Item No.	Statement or Question	Employee Groups			Chi Square
		DE Sales N=100	NonDE Sales N=100	Non-Sales N=100	
94.	Most displays are best if the color selection is	71	86	63	13.943**
95.	A design that uses items of the same general nature and aligns them in exactly the same height, spacing or angle is called	85	88	73	8.537*
96.	Thumbnail sketches, generous margins, balance and emphasis of the important copy are	29	23	16	4.830
97.	Composition, dominance, balance and proportion are four principles of	78	76	64	5.773
98.	Why is the open display effective?	93	94	75	20.671**
99.	Planning the display and checking the display for its effect in selling merchandise are the two most important steps for	58	66	48	6.650*
100.	Care in folding, draping, concealing pins and tags, skillful use of color and design principles are important	79	83	85	1.283
	TOTAL MEAN SCORE	71.6	75.5	62.4	

*Significant at the .05 level of confidence
**Significant at the .01 level of confidence

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APPENDIX TABLE D

DEPARTMENT STORE RETAIL SALES SURVEY FOR FOUR STORES AND DISTRIBUTION CENTER OF MACY'S CALIFORNIA

Statements		DE Sales (100)	NonDE Sales (100)	Nonsales (100)
8. Length of time with this company:				
Less than one year		26	23	25
One to three years		43	37	36
Four to seven years		16	16	21
Eight to twelve years		8	13	14
Thirteen to twenty years		7	11	4
Twenty-one to thirty years		0	0	0
Over thirty years		0	0	0
	TOTAL	100	100	100
9. Highest grade of school completed:				
(1)	Sixth	0	0	1
	Seventh	0	1	0
	Eighth	0	1	2
	Ninth	0	1	1
	Tenth	1	2	4
	Eleventh	2	2	7
	Twelfth	22	35	50
College --	Thirteenth	31	21	7
	Fourteenth	40	30	17
	Fifteenth	2	3	5
	Sixteenth	1	4	4
Graduate --	First year	0	0	2
School	Second year	0	0	1
	No answer	1	0	0
	TOTAL	100	100	100

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APPENDIX TABLE D--Continued

Statements	DE Sales (100)	NonDE Sales (100)	Nonsales (100)
(2) High school course studied			
Vocational	3	7	2
General	79	75	69
No answer	18	18	29
TOTAL	100	100	100
10. Completed diploma, certificates or degrees:			
High School	50	44	31
Community College	21	14	11
Bachelors Degree	5	7	14
Masters Degree	0	0	0
No answer	24	35	0
TOTAL	100	100	100
11. Distributive Education courses completed at the high school level:			
Classes			
Frequency			
Retailing	16	0	6
Salesmanship	16	0	4
Introduction to marketing and merchandising	20	0	7
Work Experience			
Frequency			
Distribution I	2	0	1
Distribution II	1	0	2
On-the-Job Training only	71	36	41
No answer	17	64	0

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APPENDIX TABLE D--Continued

Statements	DE Sales (100)	NonDE Sales (100)	Nonsales (100)
12. Distributive Education courses completed at the community college and college level:			
Classes -- Frequency			
Retail mid-management	17	0	2
Fashion merchandising	7	0	4
Wholesaling	4	0	2
Industrial sales	2	0	3
Work Experience -- Frequency			
School-work related	10	1	3
School-work non-related	18	7	8
On-the-Job Training only	16	4	8
On-the-Job Experience	34	16	25
No answer	27	72	0
13. DE curricula participated in:			
Project Method (Instruction only, without employment)	12	0	5
Plan B (One year of instruction, with employment)	7	0	1
Plan A (Two years of instruction, with employment)	4	0	1
Specialized DE (Soft goods merchandise, food distribution or home furnishings, etc., instruction with employment)	3	1	6
Specialized DE (Without employment)	3	0	0
No answer	49	99	0
14. Does your employer have a training program?			
Yes	75	53	42
No	10	13	19
Unknown	8	21	28
No answer	7	13	11

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APPENDIX TABLE D--Continued

Statements	DE Sales (100)	NonDE Sales (100)	Nonsales (100)
15. Check courses taken:			
Salesmanship	50	44	6
Human Relations in Business	19	11	5
Merchandising	18	10	6
Product Technology	3	2	1
Business Arithmetic	10	4	2
Business Machines	31	12	8
Business English	2	1	1
Advertising & Display	5	2	1
Mid-management	1	0	1
Wholesaling	0	0	1
16. Check languages which you speak and understand in addition to English.			
Spanish	27	13	18
French	18	7	10
Italian	3	4	9
German	5	7	4
Russian	1	2	1
Portuguese	0	0	0
Other	5	11	16
17. Does your employer give added recognition for these courses when considering promotions?			
Yes	18	7	4
No	24	17	23
Unknown	55	63	54
No answer	3	13	19

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APPENDIX TABLE D--Continued

Statements	DE Sales (100)	NonDE Sales (100)	Nonsales (100)
18. Do you plan to take any distributive education courses?			
Yes	17	5	12
No	52	52	39
Unknown	28	31	34
No answer	3	12	14
19. (If you answered No. 18, yes, then . . .) Check your reason for taking distributive education courses:			
At the request of my employer	1	1	0
On my own initiative for advancement possibilities	14	2	11
As general education	8	2	4
To improve my sales production record	2	1	0
No answer	27	0	0
20. Would you have participated in a work-experience program (i.e., Distributive Education, Office Occupations, etc.) if you had had the opportunity while attending high school?			
Yes	77	56	57
No	15	33	22
No answer	8	11	21
If yes, what type of program?			
Summer employment	25	21	12
Part-time work	21	20	20
On-the-Job Training	24	19	27
Apprenticeship	3	2	7

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APPENDIX TABLE D--Continued

Statements	DE Sales (100)	NonDE Sales (100)	Nonsales (100)
21. Indicate how well your school courses prepared you for your first full-time job.			
Exceptionally well-prepared; training covered all essentials required by first job.	23	11	13
Well-prepared on the whole; but there were some important gaps in training.	36	21	30
Poorly prepared; much that I needed to know was not covered in vocational course.	27	17	26
No answer	14	51	31
22. Please give your frank opinion about the following items concerning your high school education. (Mark one answer for each item using the number one (1) for "poor"; the number two (2) for "satisfactory"; the number three (3) for "good"; and the number four (4) for "excellent".			
Mean Ratings			
Quality of instruction from Distributive Education instructors.	2.2	1.9	2.0
Quality of instruction from academic teachers	2.8	3.1	2.7
Condition of Distributive Education equipment	2.1	1.9	2.1
General physical condition of school	3.1	3.0	2.9
Interest shown by teachers in student problems	2.7	2.8	2.6
Reputation of the school in the community	3.2	3.4	3.0
Strictness of school in maintaining discipline	3.0	3.2	3.0
Counseling for occupations and careers	2.5	2.3	2.0
Help given students to find jobs	1.9	1.8	1.9
Opportunity for extra-curricular activities	3.9	2.9	2.7
On the whole, the education you received in high school	2.9	3.0	2.7

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APPENDIX TABLE D--Continued

Statements	DE Sales (100)	NonDE Sales (100)	Nonsales (100)	Total
23. Breakdown of sample according to type of education beyond high school.				
Type of Education				
Two-year or junior college	56	33	23	112
Four-year college/university	30	35	26	91
Post-college graduate school	2	4	5	11
Private trade/technical	5	1	3	9
Public trade/technical	3	0	0	3
Business-commercial school	7	7	8	22
Adult continuation school	4	2	5	11
Military specialist school	5	2	5	12
Company course or school	4	2	2	8
Correspondence schools	2	0	2	4
Other	4	4	6	14
*TOTAL	122	90	85	297
*Employees could have participated in one or more types of post-secondary education.				
Breakdown of sample according to major subjects studied in school and/or special courses.				
Subjects or Special Courses				
Aeronautical Engineering	0	0	1	1
Airline Personnel	0	0	1	1
Anthropology	2	0	0	2
Art	3	6	3	12
Biology	1	1	0	2
Business	24	9	20	53
Business Office Education	4	6	1	11
Chemistry	0	2	0	2

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APPENDIX TABLE D--Continued

Statements	DE Sales (100)	NonDE Sales (100)	Nonsales (100)	Total
Cosmetology	1	0	1	2
Data Processing	0	1	1	2
Dental Technician	3	0	0	3
Diesel Mechanics	1	0	0	1
Dry Cleaning	0	0	1	1
Electronics	2	1	0	3
Engineering	1	2	1	4
English	7	8	8	23
Fashion Modeling	0	0	1	1
Foreign Language	3	0	1	4
General Education	27	5	11	43
General Science	3	1	1	5
Geography	0	0	1	1
Heavy Equipment Operator	0	0	1	1
History	2	0	3	5
Home Economics	7	4	4	15
Journalism	0	1	0	1
Law Enforcement	1	0	0	1
Mathematics	2	2	2	6
Mechanical Engineering	0	1	0	1
Medical Technician	0	1	0	1
Merchant Marine	0	2	1	3
Music	2	0	1	3
Nursing	0	3	1	4
Photography	1	0	0	1
Physical Education	1	1	0	2
Physical Therapy	1	0	0	1
Political Science	1	2	1	4
Pre-Law	1	0	0	1
Pre-Medical	1	1	0	2

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APPENDIX TABLE D--Continued

Statements	DE Sales (100)	NonDE Sales (100)	Nonsales (100)	Total
Pre-Veterinary Medicine	1	0	0	1
Psychology	3	4	3	10
Public Administration	0	0	1	1
Red Cross First Aid & Lifesaving	0	0	1	1
Speech & Drama	1	1	2	4
Sociology	7	7	3	17
Teacher Education	0	2	3	5
Tool Design	0	1	0	1
TOTAL	114	75	80	269
24. Breakdown of sample according to marital status.				
Single	52	40	32	124
Married	42	51	50	143
Other	1	6	7	14
No answer	5	3	11	19
TOTAL	100	100	100	300

APPENDIX TABLE E

SAMPLE BREAKDOWN OF EMPLOYEES ACCORDING TO SEX AND MEAN SCORE

Group	Sex				Total	
	Female		Male			
	N	M	N	M	N	M
DE Salespeople	81	64.6	19	68.2	100	65.3
NonDE Salespeople	79	68.1	21	67.9	100	68.1
Nonsalespeople	67	56.3	33	59.5	100	57.4
TOTAL	227	63.4	73	64.2	300	63.6

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APPENDIX TABLE F

SAMPLE BREAKDOWN ACCORDING TO GROUP AND DEPARTMENT STORE LOCATION

Store Name Location	Group DE Sales	Group NonDE Sales	Group Non-Sales	Total
Stanford Plaza, Stanford, Ca.	10	13		23
Valley Fair, San Jose, Ca.	43	54	8	105
Hillsdale, San Mateo, Ca.	26	33	1	60
Sun Valley, Concord, Ca.	21		1	22
San Francisco, S. F., Ca.			42	42
Distribution Center, S. F., Ca.	___	___	48	48
TOTAL EMPLOYEES	100	100	100	300

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