

A DESCRIPTIVE ANALYSIS OF CURRENT ACTIVITIES
OF TRAINING AND DEVELOPMENT/
HUMAN RESOURCE DEVELOPMENT
PROFESSIONALS

by

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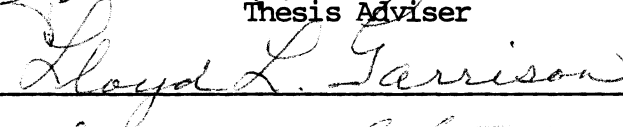


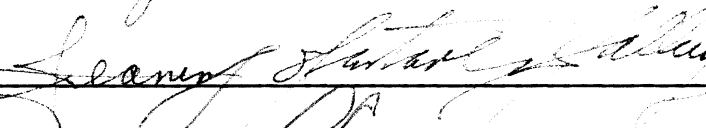
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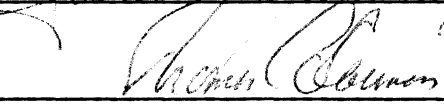
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TABLE OF CONTENTS

| Chapter | Page |
|---|------|
| I. THE RESEARCH PROBLEM | 1 |
| Introduction. | 1 |
| Statement of Problem. | 1 |
| Null Hypotheses. | 2 |
| Need for Study. | 3 |
| Need for Training and Development Professionals. | 3 |
| Linkage Between Industry and Education | 7 |
| Limitations | 12 |
| Definitions of Terms. | 12 |
| II. REVIEW OF RELATED LITERATURE | 14 |
| Introduction. | 14 |
| Progressive Review of the Needs of Training and Development Professionals. | 14 |
| Profile of Training and Development Academic Programs | 31 |
| Pinto and Walker--A Study of Professional Training and Development Roles and Competencies | 46 |
| Summary of Related Literature | 52 |
| III. RESEARCH DESIGN AND PROCEDURES | 53 |
| Introduction. | 53 |
| Selection of the Population | 53 |
| Training and Development Professionals | 54 |
| University Faculty Members of Training Development Master's Degree Programs. | 54 |
| Construction and Design of the Questionnaire. | 55 |
| Collection of the Data. | 56 |
| Procedures for Initial Mailing | 56 |
| Procedures for Follow-Up | 57 |
| Response Rate of the Mailed Questionnaire. | 57 |
| Method of Data Analysis | 58 |
| Description of Statistical Technique | 58 |
| IV. ANALYSIS OF THE DATA | 61 |
| Introduction. | 61 |
| Objectives | 61 |
| Null Hypotheses. | 62 |

| Chapter | Page |
|---|------|
| V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS | 85 |
| Summary | 85 |
| Null Hypotheses | 86 |
| Description of the Sample | 86 |
| Conclusions | 93 |
| Recommendations | 95 |
| SELECTED BIBLIOGRAPHY | 96 |
| APPENDIX A--THE QUESTIONNAIRE | 103 |
| APPENDIX B--COVER LETTER. | 112 |
| APPENDIX C--RETURN ENVELOPE, POSTAGE PAID | 114 |
| APPENDIX D--POSTCARD REQUESTING ABSTRACT OF RESULTS, POSTAGE PAID | 116 |
| APPENDIX E--FOLLOW UP LETTER. | 118 |
| APPENDIX F--FOLLOW UP POSTCARD. | 120 |
| APPENDIX G--LETTER FROM JAMES W. WALKER | 122 |
| APPENDIX H--PINTO AND WALKER QUESTIONNAIRE. | 124 |
| APPENDIX I--LOADING OF JOB ACTIVITIES FOR FOURTEEN FACTORS | 133 |
| APPENDIX J--COMPARISON OF FACTOR ANALYSIS BETWEEN PRESENT STUDY AND PINTO AND WALKER STUDY | 152 |
| APPENDIX K--IDENTIFICATION OF YEARS IN TRAINING AND DEVELOPMENT, YEARS IN PRESENT ORGANIZATION, LEVEL OF EDUCATION, AND MAJOR FIELD OF STUDY. | 171 |
| APPENDIX L--HYPOTHESES ONE--LSD TESTS | 176 |

LIST OF TABLES

| Table | Page |
|---|------|
| I. McLagan and Bedrick Fifteen Roles and Definition of Training and Development Field | 29 |
| II. McLagan and Bedrick Thirty-One Competency Groups in the Training and Development Competency Model | 30 |
| III. Leonard Nadler's Activities and Roles of the Human Resource Developer. | 35 |
| IV. George Washington University, School of Education and Human Resource Development Course Listing. | 37 |
| V. Kennedy Study, Credit Hours Derived from Percentage Points Assigned by Delphi Panalist. | 40 |
| VI. Smith and Lutz Research Findings of Course Work/Experiences for the Counseling and Human Resource Management Doctorate and Masters Programs at East Texas State University. | 44 |
| VII. Pinto and Walker Study-Frequencies for the Top 25 Items Performed by Training and Development Professionals. | 48 |
| VIII. Objectives and Null Hypotheses of the Study and Statistical Technique Utilized | 59 |
| IX. Role Model for Training and Development Professionals by Factor Analysis | 63 |
| X. Comparison of Role Models Between Present Study and Pinto and Walker Study | 65 |
| XI. Identification of the Job Activities Most Important to the Performance of Training and Development Professionals. | 66 |
| XII. Identification of the Job Activities Least Important to the Performance of Training and Development Professionals. | 68 |
| XIII. Comparison of Number of Years in Training and Development Between the Present Study and Pinto and Walker Study | 71 |
| XIV. Comparison of Number of Years in Organization Between the Present Study and Pinto and Walker Study | 71 |

| Table | Page |
|--|------|
| XV. Comparison of Level of Education Between Present Study and Pinto and Walker Study | 72 |
| XVI. Results of Analysis of Variance Test for Null Hypotheses One: There Is No Significant Difference Among the Number of Years the Respondents Have Worked in the Training and Development Field as Measured by Each of the Fourteen. | 74 |
| XVII. Years in Training and Development and Factor Two--Program Design and Development, LSD Test | 75 |
| XVIII. Years in Training and Development and Factor Ten--Job Performance Related Training | 76 |
| XIX. Years in Organization Factor Twelve--Conduct and Prepare for Classroom Training | 77 |
| XX. Results of Analysis of Variance Test for Null Hypotheses Two: There Is No Significant Difference Among the Number of Years the Respondents have Worked in the Organization as Measured by the Fourteen Factors | 78 |
| XXI. Results of Analysis of Variance Test for Null Hypotheses Three: There Is No Significant Difference in the Level of Education of the Respondents Measured by the Fourteen Factors | 79 |
| XXII. Null Hypotheses Four: Chi Square Between Pinto and Walker Study and Present Study Comparing Years in Training and Development. | 81 |
| XXIII. Null Hypotheses Five: Chi Square Between Pinto and Walker Study and Present Study Comparing Years in Present Organization | 82 |
| XXIV. Null Hypotheses Six: Chi Square Between Pinto and Walker Study and Present Study Comparing Level of Education | 82 |
| XXV. Results of t Test for Null Hypotheses Seven: There Is No Significant Difference Between the Responses of the Practitioners and Responses of the University Faculty Members as Measured by Each of the Fourteen Factors. | 84 |
| XXVI. Role Model for Training and Development Professionals by Factor Analysis | 89 |
| XXVII. Comparison of Role Models Between Present Study and Pinto and Walker Study. | 90 |
| XXVIII. Manage Internal and External Resources. | 135 |

| Table | Page |
|---|------|
| XXIX. Program Design and Development | 137 |
| XXX. Training Research | 139 |
| XXXI. Professional Development. | 141 |
| XXXII. Manage Working Relationships with Management. | 142 |
| XXXIII. Individual Development Planning and Counseling. | 143 |
| XXXIV. Planning for Training Performances | 145 |
| XXXV. Group and Organization Development. | 146 |
| XXXVI. Needs Analysis and Diagnosis. | 147 |
| XXXVII. Job/Performance Related Training. | 148 |
| XXXVIII. Develop Material Resources. | 149 |
| XXXIX. Conduct and Prepare for Classroom Training. | 150 |
| XL. Develop Evaluation Methods | 151 |
| XLI. Determine Course Criteria | 152 |
| XLII. Manage Internal and External Resources. | 154 |
| XLIII. Program Design and Development. | 156 |
| XLIV. Training Research | 158 |
| XLV. Professional Development. | 160 |
| XLVI. Manage Working Relationships with Management. | 161 |
| XLVII. Individual Development Planning and Counseling. | 162 |
| XLVIII. Planning for Training Performance | 164 |
| XLIX. Group and Organization Development. | 165 |
| L. Needs Analysis and Diagnosis. | 166 |
| LI. Job Performance Related Training. | 167 |
| LII. Develop Material Resources. | 168 |
| LIII. Conduct and Prepare for Classroom Training. | 169 |

| Table | Page |
|---|------|
| LIV. Develop Evaluation Methods. | 170 |
| LV. Determine Cost Criteria | 171 |
| LVI. Identification of Number of Years in Training and Development | 173 |
| LVII. Identification of Number of Years in Present Organization. | 174 |
| LVIII. Identification of Level of Education. | 175 |
| LVIX. Identification of Major Field of Study. | 176 |
| LX. Manage Internal and External Resources. | 178 |
| LXI. Planning for Training Performance | 179 |
| LXII. Needs Analysis and Diagnosis. | 180 |
| LXIII. Conduct and Prepare for Classroom Training. | 181 |
| LXIV. Develop Evaluation Methods. | 182 |
| LXV. Determine Course Criteria | 183 |

LIST OF FIGURES

| Figure | Page |
|--|------|
| 1. McLagan and Bedrick's Human Resource Wheel | 28 |
| 2. Nadler's Model for Professional Development. | 33 |
| 3. Pinto and Walker's Factor Analysis in a Model: What Training and Development Professionals Do—Fourteen Factors . | 51 |

CHAPTER I

THE RESEARCH PROBLEM

Introduction

The training and development/human resource development practitioner is becoming increasingly important to society. Technology, problems of productivity, and societal needs for drawing women, minorities, and the undereducated have brought about rapid changes in the workplace. The need for qualified training and development/human resource development professionals is growing. Because colleges and universities are designed and staffed to meet educational needs, it would seem appropriate for colleges to assist in meeting the needs of these practitioners.

Statement of Problem

The principle objective of this study was to determine new developments in job activities for training and development professionals since the Pinto and Walker study of 1978. More specifically, the objective of the study was to gather information relative to the following points:

1. Establishment of a role model by a factor analysis of current job activities of training and development professionals.
2. Comparison of factor analysis and role model results to Pinto and Walker results.

3. Identification of the job activities most and least important to the performance of training and development professionals.

4. Comparison of ranking of job activities between the present study and the Pinto and Walker study.

5. Identification of years in training and development, years in present organization, and level of education (including major area of study) of respondents in the study.

6. Comparison of results of demographic information between the present study and the Pinto and Walker study.

Null Hypotheses

Following are the null hypotheses specifically tested in the study:

1. There will be no significant difference among the number of years respondents have worked in the training and development field as measured by each of the 14 factors.

2. There will be no significant difference in the number of years respondents have worked in the organization as measured by each of the 14 factors.

3. There will be no significant difference in the level of education respondents have achieved as measured by each of the 14 factors.

4. There will be no significant difference between years of experience in the training and development field in the present study and years of experience in the Pinto and Walker study.

5. There will be no significant difference between years in the organization in the present study and years in the organization in the Pinto and Walker study.

6. There will be no significant difference between the level of education in the present study and the level of education in the Pinto and Walker study.

7. There will be no significant difference between responses of the practitioners and responses of the faculty members as measured by each of the 14 factors.

Need for Study

For many years, scholars in many disciplines have viewed training as a highly specialized field. Practitioners in the field of training have broadened their scope to include techniques and concerns that have been considered part of the literature of organizational development and human resource development. Many campuses across the United States are providing for the many changes that have taken place in higher education and the field of training and development since the early 1960's.

The need for this study includes a review of the needs of training and development professionals and linkages between industry and education.

Need for Training and Development Professionals

Organizations need to train their employees as effectively as possible. Clark (1971) cited three major reasons why a business organization should institute a training program: (1) to reduce costs in organizations, (2) to meet competition from other organizations, and (3) to keep the organization up-to-date. The responsibility of such training programs is often assigned to training and development/human resource development professionals.

Loen (1972) stated that the cost of hiring and training new employees at all levels is increasing. Loen believed it is a mistake to hire training and development professionals who use slow and inefficient training methods.

The emphasis for training in the 1980's was identified by Knowles (1978) as the "concept and theory of competency." He said that trainers need to develop skills in constructing these competency models, and they need to become facilitators and resource persons for self-directed learners. Knowles also indicated that trainers need to assist line managers to perform the educational role.

McQuigg (1980) said that business views training employees as an investment rather than an expense. She explained that interest in training activities peaks while an organization is growing because of the employees, especially if companies are committed to promoting from within.

Early training programs in industry were usually viewed as an expensive burden and difficult to justify because the return on investment was a long time coming, according to Schwaller (1980). Schwaller concluded, however, that many corporations today view cost-effective training as one means of increasing their earnings.

Loen (1974) emphasized that in planning a training program one must (1) establish training needs and set goals, (2) choose training methods, and (3) evaluate results. He also believed that it is wise to train the trainer. Since skilled workers are not always the best teachers, Loen suggested they may be taught to be trainers through taking college courses, joining professional organizations, and reading periodicals published for trainers. Specialized training at universities is often

published for trainers. Specialized training at universities is often costly but usually worthwhile for trainers. Loen indicated that supplementing education with in-house training would make it easier for employees to develop training skills from persons already in the organization.

Wiggs (1971) studied the development of a conceptual model for achieving professionalization of the training and development/human resource development occupation. The purpose of his study was: to identify, through development of a conceptual model, how occupations become professionalized and how their association furthers the process of professionalization within the occupations, and to apply the conceptual model to the training and development/human resource development occupation. Wiggs concluded the three stages of professionalization of an occupation are: (1) Birth: creation and survival, (2) Youth: stability, pride and reputation, and (3) Maturity: uniqueness, adaptability and contribution. Each is respectively developed by: definition of field, differentiation of field, standard setting, technological refinement, respectability, justification, and understanding of the dynamics of the field. According to Wiggs, professionalism of Human Resource Development (HRD) in the early stages was dominated by the American Society for Training and Development (ASTD). However, licensing or certification of HRD practitioners or ASTD members was a failure until institutions of higher education began attempting to teach a systematic theory of training and development. Wiggs recommended in order for the profession of training and development to advance it must: (1) continue to define a body of knowledge exclusive to HRD and competencies to perform the occupation, (2) continue to define its function in order to earn the respect of

higher management, clients, and national membership, and (3) make its position heard in legislatures.

Broadwell (1982) explained that most trainers are in the training field because they are experts in what they intend to train others to do, because "policy" says it is good experience for those moving up in the organization to have spent time in a training department, or because they are at the right place at the right time. It seems as though few trainers have the necessary skills for doing the job well. New trainers need to be aware of the training philosophy in a company and be able to comprehend the concept of needs analysis, and design courses in a timely and effective manner, perform the instructor role and understand the teacher-learner relation. Finally, the new trainer should understand effective evaluation methods.

Five aspects of training in industry were observed by Woodington (1980). One of these was that management lacked an understanding of both the training program as an instructional system and the evaluation process of training programs. Woodington observed that trained personnel are needed in the utilization and implementation of evaluation methods.

Houser and Hershey (1976) surveyed 182 employees (including top management and support personnel) of selected mid-western firms. They concluded that several areas of industrial needs could be met by business educators. The selection, training and development, utilization and assessment practices of office employees represent specific areas needing refinement, according to Houser and Hershey. They were of the opinion that educators should be able to determine the skills needed for various positions, initiate and evaluate existing programs, and evaluate the effectiveness of selected training efforts.

The joint involvement between the industrial world and the educational world has been the topic for the growth of many professions. The same holds true in the training and development profession.

Linkage Between Industry and Education

DeCarlo and Robinson (1966) believed that if education and business are to render maximum potential, educators in business should acquire knowledge of modern teaching methods, devices, and practices and acquaint themselves with findings of research. They advocated that industrial educators return periodically to the working environment to keep their programs up to date. The proper selection, training and supervision of teachers, according to DeCarlo and Robinson, is one of the most important educational activities of an organization. They emphasized an urgent need for research on the policies governing the selection and appointment of teachers in industry, such as: What background is required for prospective teachers? What are the most effective forms of recognition and compensation? What opportunities are there for advanced study? DeCarlo and Robinson asserted that most of the teachers in industries are only temporary and look at it as an enrichment job to further their career.

The American Council on Education (1978) and the New York State Board of Regents worked on a project to provide credit from sponsoring colleges for courses taken through industry. Approximately 13 million people participate in formal organizational training every year, according to the American Council on Education. The aim of the Project on Non-Collegiate Sponsored Instruction is to facilitate tasks of relating formal course work taken through organizations to programs of colleges and universities, according to the American Council on Education. The

council and the New York State Board of Regents reported that recommendations are established in terms of educational credit for courses offered in business and industry. An evaluation committee reviews programs that qualify and issues the National Guide to Credit Recommendations for Non-Collegiate Courses. The 1978 guide contained over 500 courses from 46 organizations; and estimates were that, in 1979, the guide would contain over 900 courses from 70 organizations. The evaluation process for recommendations is done by a team made up of industrial specialists as well as academic specialists. The following areas are evaluated: course content, staff competency, subject matter and instruction, instructional method, and evaluation of student performance. The results of these recommendations are used by colleges and universities to determine if credit will be issued to individuals who complete courses successfully.

Leonard Nadler (1975) believed that the Project on Non-Collegiate Sponsored Instruction is a worthwhile effort but recognized some problem areas. These areas included evaluation of student performance, staff competency, and site visits. He believed the team must be aware of the emphasis on job performance in industry. The evaluation process in industry may in reality be job performance, according to Nadler. He noted that these cautions are few, and the advantages are much greater for those involved in this project.

Linkages are defined as any kind of purposeful relationship between two or more businesses or educational institutions. This definition was given by Strobach (1976), who indicated that mutual benefits for business and education from such linkages could include joint cost analysis of financing college and continuing education courses, joint planning of

continuing education curriculum, and joint discussion of education and career matters.

Dean (1980) reported on education and training at International Business Machines (IBM). In 1978 a task force advised IBM to have a centralized department to provide for an exchange and coordination of information. Because IBM is involved in new and productive ways of doing things, people who sell, install, and maintain products must be educated continually, according to Dean.

Luxenberg (1980) described American Telephone and Telegraph Company's (AT&T) educational program as the biggest private program in the world. AT&T spends about one billion dollars per year on its one million employees in the largest system of educational programs in the United States. The programs are designed to train employees to perform similarly no matter what area of the country they are in.

Corrigan (1980) believed a distinction exists between trainers in industry and educators in universities because business has specific goals for specific outcomes, whereas education is expected to provide "trainable" people who read, write, and listen. Corrigan indicated that business feels teachers lack "real work" experience. He believed teachers who want to enter a training field in industry should emphasize their human relations qualifications, adult teaching experience, technical subject experience, ability to learn new tasks, and leadership skills.

Broderick (1982) interviewed Lloyd Cooper, head of New Mexico State University's Department of Educational Management and Development in Las Cruces. Cooper believed training directors could expand their training power by brokering existing programs. He further recommended training directors should maintain files on existing programs in the community,

improve contacts with other training professionals, develop contacts with university personnel, and utilize ideas from other training departments. Broderick reported on the Mercedes-Benz Truck Company in Hamilton, Virginia, that depended largely on Virginia's Thomas Nelson Community College to hire fifty production workers. The primary program--a six hour course--covered working with the metric system and, most importantly, concepts of teamwork. Only two of the original fifty have left the company since the May, 1980, program. That low turnover rate represents money saved.

Over \$200 billion of tax money is spent each year on public schools and universities and \$100 billion of corporate funds for training in industry, according to Broderick. Brigham Young University studied the nagging question of waste of funds. Five reasons were given for problems concerning cooperation between industry and education: (1) lack of mutual understanding of purpose, (2) practice of educational institutions' inability to meet industry's real world needs, (3) education of taxpayers and corporate concern for stockholders are divergent loyalties that complicate cooperation, (4) trainers' apparent distrust for academics, and (5) slow process of government red tape. Broderick's recommendation for remedying such problems included the suggestion that academia and industry become closer, that more studies be made of philosophical differences, and that graduate programs in educational administration for training directors be developed.

Olson (1980) reported on the December, 1979, invitational conference on "Academic Preparation of Practitioners in Training and Development/ Human Resources Development" sponsored by the Professional Development Committee of ASTD in Washington, DC. Thirty-four academicians repre-

senting twenty-six institutions participated. The purpose of the conference was to explore existing training and development/human resources development programs by analyzing the elements of the programs.

Eight issues identified as being important and vital to curriculum development for Human Resource Development/Training and Development (HRD/T&D) were discussed by participants at the conference: (1) Should "Human Resource Development" be defined in relation to a profession or work done in an organization? (2) Should a core curriculum for preparing all HRD professionals be identified? (3) Should a network of interested schools be sought to facilitate continuing interaction with ASTD? (4) Should models be sought for effective interrelationships among schools, ASTD and employees of HRD professionals at the local level, and can professional development be defined to produce a common goal? (5) Are university curricula in organizational development and human resource development contributing to healthful relationships between the two, or to their polarization? (6) How does the concern for quality of work life fit in with HRD professional preparation and responsibilities? (7) Is it desirable to define parameters to HRD functioning in organizations? (8) Should universities have an identifiable, special group within ASTD?

Huddleston and Ferwick (1983) urged educators and business leaders to become more aggressive in their leadership roles, or the two will go separate ways. Duplication of services with resources overlapping will result unless something changes. Joint efforts through research and development, exchange of personnel, cooperative education and use of facilities would result in increased productivity which produces a continuous challenge for human resource development.

This study reviews the current activities of the training and development profession and will produce some implications for the educational field. The research reviewed in this need for the study outlines some of the implications in the literature.

Limitations

This study was limited to the national members of the American Society for Training and Development in region seven. Members on the state level have the choice of being a national member. Names and addresses were obtained from the Who's Who Directory of American Society for Training and Development, 1982. Care should be exercised when comparing results of the present study with the 1978 study of Pinto and Walker because of these population differences. The Pinto and Walker study is described in detail in Chapter II. Data obtained from the survey of training and development professionals were not compared as to type or size of industry which the respondents represented.

Administrators of master's degree programs in training and development were listed with the programs identified in the American Society for Training and Development Directory of Academic Programs in Training and Development/Human Resource Development, 1981, located in region seven. The person listed in the directory as being the main individual to contact provided names of those faculty members involved in the program.

Definitions of Terms

To clarify the interpretation of data, the following terms are defined as used in this study:

Activities: For purposes in this study activities are specific skills, activities, and abilities necessary for effective performance of the roles of training and development professionals.

American Society for Training and Development: The American Society for Training and Development (ASTD) is a nonprofit educational organization serving the needs of practitioners, administrators, managers, educators, and researchers in the field of human resource development.

Training and Development Professional: The training and development professional is any person in any organization whose major responsibility is the training and development of personnel. The term "training and development professional" is used synonymously with training director, human resource developer, education director, training representative, or training manager. This interpretation is necessary in order to present the writings of educators and researchers in the review of literature and to report the findings of this research.

University Faculty Members for Master's Degree in Training and Development: A university administrator refers to the faculty members identified by the designated person for Master's Degree in the 1982 ASTD Directory of Academic Programs in T&D/HRD in region seven of ASTD.

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

The purpose of this section is to summarize research studies and related literature in the following three areas: (1) progressive review of the needs of training and development professionals, (2) profile of training and development academic programs, and (3) Pinto and Walker 1978--A Study of Professional Training and Development Roles and Competencies. The search of literature of the needs of training and development professionals reveal just a few researchers in the sixties and a significant amount of interest through the latter seventies and early eighties.

Progressive Review of the Needs of Training and Development Professionals

The following review of needs of the training profession begins with Finley (1962), at which time the training responsibility was incorporated into the personnel administrator's role. By the late 1970's the training and development profession had been defined and research began. Research included developing role models, developing competency lists, and developing curriculum. Finley described responsibilities of the personnel administrator as including the following seven factors: (1) department administration--policies, costs, records, etc., (2) employment and

placement--recruiting, interviewing, promotion, layoff, testing, (3) training and management development--analysis of needs, job appraisal, supervision and management development, progress recording, (4) collective bargaining--negotiating, labor relations, (5) wage and salary administration, (6) benefits and services, and (7) personnel research.

When comparing these responsibilities of the personnel administrator in this article with more recent readings, the author notes that responsibilities are shifting from the personnel administrator to the training and development professional.

Early research on the needs of training and development professionals was conducted by Gossage (1967). The qualifications and educational needs of the industrial training director were considered. His study was directed at those training directors who were members of the American Society of Training and Development in 1966 and who worked for industrial firms in the United States. The hypothesis that industrial training directors are required to perform educational duties for which they have not received appropriate organized instruction was tested and verified. Gossage indicated that training directors believed colleges should offer programs and courses to assist them in acquiring the competencies to accomplish their duties. Colleges should offer coursework dealing with the ability to: (1) develop and supervise training programs, (2) understand educational theory and practice, (3) communicate effectively, (4) understand principle of business administration, and (5) conduct classes. Based on his study, Gossage recommended that training and development programs should be graduate-level programs at either the master's or doctoral level. The programs should also be flexible and accommodate participants with varied backgrounds and

employment aspirations. Furthermore the programs should emphasize business, education, psychology, and written and oral communication, and include an internship program. Gossage suggested that practitioners and universities with programs for training and development professionals should utilize their talents and personalities in a cooperative spirit.

Nadler (1970) conducted research in the Pennsylvania area to determine if higher education could assist in meeting the educational needs of training directors. He proposed that individuals could move directly into training positions in industry after obtaining degrees in higher education. Nadler felt that such academic degrees would be an effective prerequisite for employees and organizations to utilize. An employee could achieve an academic degree through intermediate phases of school and work. Nadler specifically addressed the subject of employers' hiring graduates with master's degrees. He suggested that the demand for individuals with master's degrees is probably similar to the general labor market where persons with degrees are being sought more than ever. When employers ask for Masters of Education degrees, likewise there will be an increase in those asking for Doctor of Philosophy and Doctor of Education degrees. Nadler stated that employers are seeking persons with Master of Science degrees in education to help with human resource development activities and noted that this movement is worthy of further exploration. He concluded that few institutions for higher learning are prepared to educate the individuals for human resource development divisions. He believed that the human resource developer could come from teacher trainer institutions and have formal training supplemented by actual experience. The human resource development specialist will require more skills and more preparation before coming to the job and must have a

greater recognition of the impact he/she will have on individuals and organizations.

Chalofsky (1972) conducted a study of graduate-level education for professionals performing the training function in government. He recommended that a graduate-level adult education program utilizing a competency-based curriculum for training professionals be adopted for existing programs. He recommended that program development, adult learning, administration, and adult counseling be included in the curriculum. He encouraged colleges and universities to develop graduate programs for training and development professionals based on his findings.

Hodapp (1974) conducted a study with a two-fold purpose related to the training practitioner: first, to study which basic skills are needed; and second, to determine which academic courses will contribute most to the professional development of these skills at the trainee level, the practitioner level, and the managerial level.

This study provided a general understanding of the role of the training and development practitioner in business, industry and government. Emphasis was placed on: (1) the essential skills at each level (trainee, practitioner, and managerial); (2) the guidance and counseling information necessary for career development; and (3) the academic development needs of personnel currently employed as training and development practitioners. Hodapp surveyed 10 percent of the ASTD national membership, and 873 responded. He noted that, despite splintering in federal expenditures, all forms of funding for education and manpower development increased during the period of 1964 to 1972 from \$175,000 to \$975,000.

Hodapp concluded that training and development practitioners:

1. No longer consider on-the-job training adequate as a means of development and growth.

2. Tend to feel that institutions of higher education should establish degrees at the undergraduate level.
3. Believe that training and development should be a separate, integral part of an organization.
4. Support an empirical relationship between skills and academic development needs.
5. Enjoy a high level of job satisfaction.
6. Need academic career development and suggest the Business Administration Department to house the program (p. 172).

Hodapp further suggested that researchers should:

1. Elaborate on more vocational skills.
2. Conduct task analysis of training and development practitioners to determine duties and responsibilities.
3. Study organization qualification standards and recruitment criteria including expectations at entry, practitioner and managerial levels.
4. Survey specialized courses by higher education to develop a truly meaningful curriculum at academic level.
5. Analyze the level of interest in what has been done and what needs to be done in the area of professionalism of practitioners (p. 172).

Farnsworth (1975) outlined a criterion for selecting organizational training officers. They should (1) be a graduate (indicating that they are doers and knowledgeable about opportunities as well as leaders), (2) have four to five years of experience in industry, (3) be knowledgeable about the training career and the process of training in industry, (4) be aware of the different abilities to communicate, to influence, and to persuade, and (5) possess such personal qualities as logic, enthusiasm, and leadership which would establish the officers as effective workers and improve their relationships with employees.

Chalofsky and Cerio (1975) conducted research set up by the United States Civil Service Commission to design and implement a professional

development program to increase the effectiveness of employee development specialists (EDS). The four roles identified for employee development specialists were learning specialist, consultant, program manager, and administrator. The findings included a description of each role, and listed the duties and responsibilities of each role as well as activities necessary to perform the function.

Chalofsky and Cerio recommended that personnel managers, supervisors, and employee development specialists use these findings to aid them in determining the training needs of training and development specialists. The list of activities included being able to: (1) organize different activities, (2) select appropriate instructional methods, (3) write concisely, (4) organize informational content of training, (5) formulate behavioral learning objectives, (6) outline materials, (7) conduct classroom training, (8) compile information, (9) locate and procure previously identified learning materials and equipment, (10) establish rapport with people, (11) speak clearly and distinctly, (12) acquire knowledge of unit goals, objectives, and work processes, (13) be aware of modern theory including motivational theory, and (14) compile characteristics, advantages, and disadvantages of major instructional methodologies.

Craig (1976) identified three roles of the training and development professional. He indicated that the training and development professional is a learning specialist, an administrator, and a consultant. The learning specialist is one who has the skill to apply learning theory and methods to meet training needs. The administrator role of the training and development professional is to recruit, select, and develop the training staff, plan programs, set up the communication

process and carry out financial planning of training effort and administrative steps to process the training function in the organization. The consultant concentrates on problem solving, change, and organizational development. Craig's analysis of the roles for the training and development professional directly agreed with studies done by Lippitt and Nadler (1979). Craig noted that successful performance of roles requires skills for the specific role, and knowledge of the organization. He observed that in choosing someone from in-house the person would have organizational knowledge but lack the skills for the specific role. In this case, he was of the opinion that the company may not want to spend money to train properly, which may result in high turnover in the training staff.

The purpose of Castellucis' (1976) study was to identify types of training required by business, to identify the plans of business to meet these needs, and to identify and document the commitment of Oklahoma businesses to assist the educational community in establishing programs for retraining and upgrading the professional workforce. Castellucis surveyed all members of the Tulsa and Oklahoma City Chapters of the ASTD except those members who were from public educational institutions. Castellucis concluded that a need for training of employees existed in the businesses he surveyed. The greatest need was for supervisory training. Upgrading training ranked second. He also concluded that Oklahoma businesses have specific plans and programs for meeting the training needs of their employees. Much of the training will be carried out in-house by the companies themselves. Most of the businesses surveyed were not open to the idea of offering assistance to the educational community for the purpose of establishing training programs for

their employees. The smaller businesses seemed to be more open to the idea of offering assistance than were the larger businesses. The businesses interviewed were, however, willing to allocate both time and money for the training needs of their own employees. Castellucis recommended that more studies of this type should be conducted. Needs assessments could be done through cooperative efforts of local ASTD chapters and state departments of education. Castellucis stated that businesses with training needs should initiate contacts with schools, because in his opinion it is easier for businesses to identify a school which could provide training than for schools to identify businesses with a particular training need. He further recommended that in order for businesses and educational communities to work together better they should share their manpower.

Jorz and Richards (1977) conducted further study to develop a curriculum for training professionals in federal government, particularly the employment and development specialist (EDS). The curriculum plan outlined tasks, competencies, and terminal objectives and suggested learning strategies and content in a series of modules for each of the five roles indicated. The roles identified was learning specialist, consultant, administrator, program manager, and career counselor. Notice that with subsequent research the roles of the training and development professional are expanding. Originally three roles were identified by Nadler and Lippitt (learning specialist, consultant, and administrator); Chalofsky added the fourth role (program manager) in an earlier study; and the fifth role emerged in this research.

Lusterman (1977) described the educational training programs among companies having 500 or more employees, explored factors that

might account for differences in their scope and character, and examined trends and some changes of the recent past in education in industry. His study was based on publications, interviews, correspondence with company officials, and responses from 610 private and nonagricultural companies on the twelve-page questionnaire, which represented a 20 percent return rate.

Lusterman's study revealed that only one out of five of the executives surveyed rejected the idea that business had anything to offer traditional institutions about educational methods. Most felt schools could learn from industrial methods of educating employees. The study also indicated that a majority of companies had no employees who devoted all of their time to educational and training duties. The majority of the company's training and educational specialists have other primary duties. Most of the full-time employees in training and education were found in the corporate level of the organization, training, or human resources department. Twenty-seven percent were in other corporate-level departments, such as sales and data processing.

Most colleges and universities are very responsive to companies' needs, offering courses during convenient times and on company sites, according to the findings of Lusterman's research. He also reported that firms which employ less than 1,000 people depend on persons already trained or on-the-job training. Smaller firms tend to use outside resources for training staff while larger firms are more likely to have in-house educational training staff and programs. The cost of the major educational training programs was analyzed in the study according to company size. The findings are as follows: for companies employing 10,000 or more, costs were \$67.20 per employee for in-house

programs and \$10.40 per employee for outside programs or a total of \$77.60 per employee. In comparison, companies employing fewer than 1,000 employees paid \$12.60 per employee for in-house programs and \$14.30 per employee for outside programs, totaling \$26.90 per employee for training. According to these findings, almost three times as much is spent for employee training in companies with more than 10,000 employees than in companies with fewer than 1,000 employees. The author notes that variables other than company size could account for the difference.

Lippitt (1979) advocated that the key to the preparation of human resource development professionals is having a mixed background of interdisciplinary education and experience. Lippitt (p. 66) stated, "It seems almost mandatory that they (human resource development professionals) should have university training in some discipline and preferably several disciplines." He suggested that psychiatry, general psychology, public administration, sociology, and anthropology would serve as a basic outline for areas of formal education. Lippitt proposed that the purpose of this mixed discipline is to give professionals general practice rather than narrow specialization.

Three roles of the training and development professional were reported by Lippitt and Nadler (1979): learning specialist, administrator, and consultant. Lippitt and Nadler found that in a small organization, the training and development professional may perform all three roles, and in a large organization several individuals would be responsible for the training function of the organization. They identified the major need for the consultant to recognize and use training as a tool for management problem solving in the following

ways: (1) help management recognize the organization's problems, (2) help management examine the contribution of training to solving problems, (3) help examine long-range and short-range objectives of training, (4) help explore alternatives to training and problem solving, (5) develop training plans with management, (6) explore resources for implementing goals, (7) provide consultation to management for follow-up steps to enforce the solution, and (8) explore the evaluation process.

Hamilton (1982) described modules used to enhance the skills of individuals who develop curriculum in occupational education programs. These materials could also be used to enhance the competencies of industry course developers. The modules consist of the following categories: (1) curriculum, (2) conducting task analysis and developing instructional objectives, (3) selecting instructional strategies and assessing student achievement, (4) relating learning difficulties and instructional methods, (5) selecting and preparing instructional materials, (6) evaluating vocational education curricula, and (7) preparing for curriculum change.

The 1978 study by Pinto and Walker provided background information for Digeorgio's 1982 study. Over 200 graduates and students in university continuing education training and development courses were surveyed. Training managers from 35 firms also provided extensive information about the training needs of entry-level training and development professionals. Three major conclusions were reached. The first conclusion was that two different audiences are likely to be drawn to university-sponsored continuing education programs in training and development and that separate programs should be offered, one for those persons currently working in training and development and another for those wanting to enter the field.

Digeorgio (1982) described a study by the New York Metropolitan Chapter of ASTD. The purpose of the study was to determine the needs of new entrants to the training field.

For entry-level trainers, Digeorgio (1982) recommended four core courses for entry-level developmental needs and suggested these four goals: (1) developing platform skills and leading training activities; (2) developing training materials; (3) designing training programs; and (4) analyzing training needs and evaluating training programs. Digeorgio suggested that four core courses be in-depth, graduate-level classes that lead to some form of diploma. Trainers who later pursue graduate degrees in business organization development and adult learning could apply this course work toward their degree. Digeorgio recommended that the program for the entry-level trainer be short, inexpensive, and aimed at helping participants make a transition into the training field.

He further suggested three major courses for the entry-level trainer as follows: (1) a training and development transition program consisting of an introductory course to give participants an overview of what the trainer does; (2) a workshop in conducting classroom activities for adults (the skill most important to entry level trainers), and (3) a workshop designed to help plan and execute a job search in training and development. In addition, Digeorgio suggested steps be taken to increase the credibility of continuing education programs. He concluded that universities should involve the training community in developing standards for university training programs by forming a committee of leading training managers to review course content and evaluation procedures.

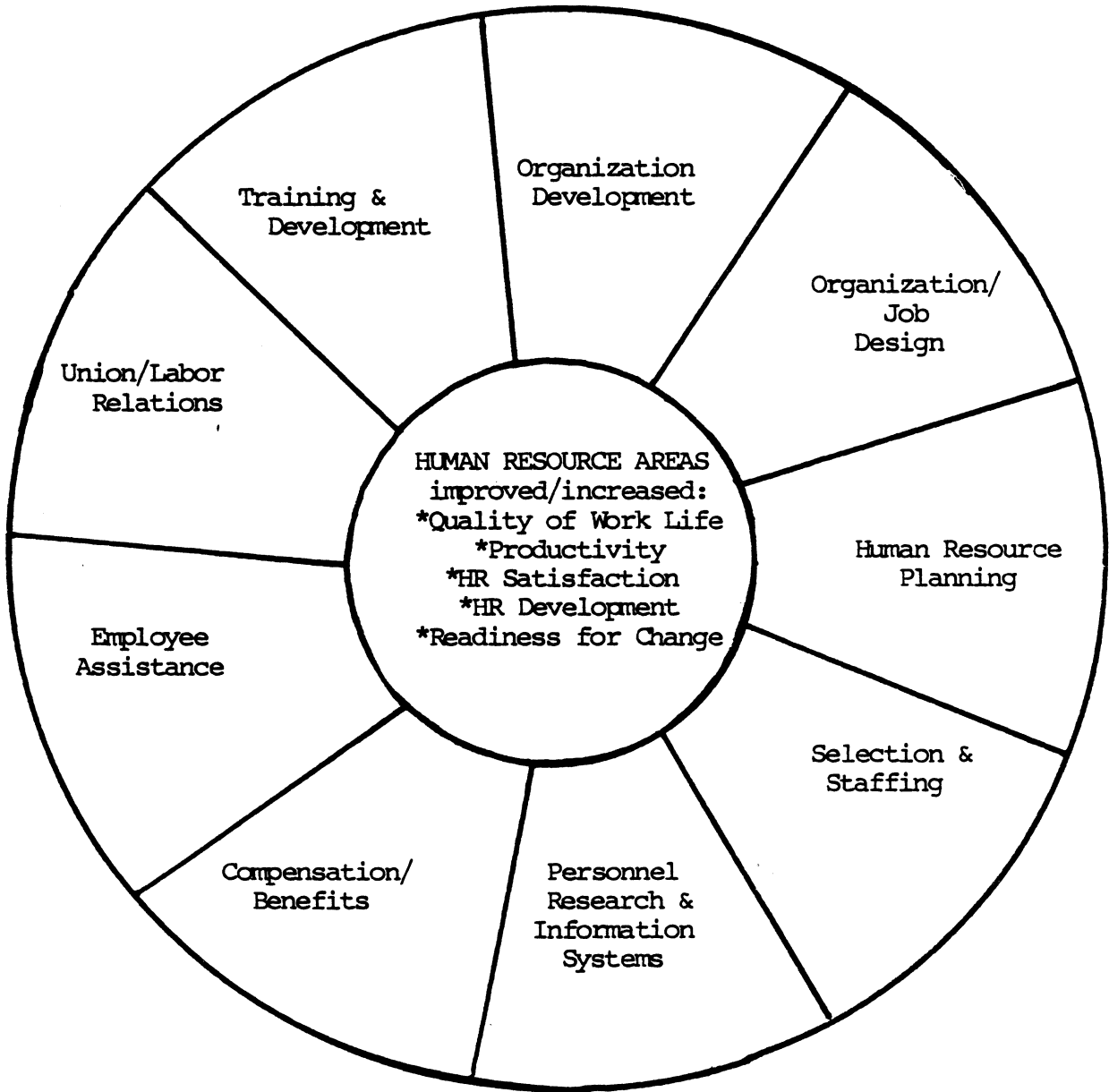
Nadler (1982) felt it essential for programs in human resource development to remain in step with "real world" needs. His program at George Washington University utilizes five sources to detect change: research, professional associations, external faculty work, students' field work, and advisory committees. Some of the recent changes include course offerings for students just entering the field Nadler noted. He has increased courses for technical training, education, and management of HRD programs. He also has internships and offers computer literacy.

The most recent research completed by the ASTD Professional Development Committee was performed by McLagan and Bedrick (1983) who engaged in the project in 1981 to define the training and development field. The purpose of the study was to define excellence in the training field to be used as

A standard of professional performance and development by ASTD, organizations, educational institutions, training and development departments and individuals practicing or expecting to practice in the training and development field (p. 10).

The results were gathered from literature reviews, questionnaires, of field experts, and ASTD project team reviews and analysis. Over 1000 individuals were reported to have been involved in the study. The procedure was a six step investigation: (1) determining roles, (2) determining environmental effects, (3) identification of outputs, (4) identification of competencies and their relation to roles, (5) study of competencies and their relation to each other, and (6) creation of behavioral anchors. These six steps produced nine products to be utilized by training and development professionals, managers, professors, ASTD and people interested in entering the field. Product 1: A Human Resource Wheel defines nine human resource practice areas of which training and development is one (see Figure 1).

Product 2: A Definition of Training and Development (McLagan and Bedrick, 1983, pg. 14) the unique focus for "identifying, assessing--and through planned learning--helping develop the key competencies which enable individuals to perform current or future jobs." Product 3: A List of 34 Forces Expected to Affect Training and Development Practices merged into seven categories. The seven forces include technological, organizational, educational system, learning, sociological lifestyles and values, economic, and governmental/political. Product 4: Fifteen Training and Development Roles which are listed in Table I. Product 5: 102 Outputs for the Training and Development Field which were categorized into 31 groups (see Table II). Product 6: Behaviorally Anchored Competency Model for the training and development field which takes each competency listed in product five and describes basic, intermediate and advanced behaviors. Product 7: Profiles Describing the Outputs and Competencies Important for Each Role combines the 15 roles and 102 outputs and competencies. Product 8: Four Role Clusters emerged to (1) Interface Cluster--group facilitator, instructor, marketer, and transfer agent, (2) Concept Development Cluster--instructional, writer, program designer, and theoretician, (3) Research Cluster--evaluator, needs analyst and task analyst, and (4) Leadership Cluster--manager and strategist. Product 9: The Roles and Competencies Matrix which charts the roles and competencies critical to each other. McLagan and Bedrick note this study to be a major step toward the professionalization of the field and ASTD's commitment to that end.



Source: McLagan and Bedrick (1983)

Figure 1: Human Resource Wheel

TABLE I

MCLAGAN AND BEDRICK FIFTEEN ROLES AND DEFINITION OF
TRAINING AND DEVELOPMENT FIELD

-
1. Evaluator
 2. Group Facilitator
 3. Individual Development Counselor
 4. Instructional Writer
 5. Instructor
 6. Manager of Training and Development
 7. Marketer
 8. Media Specialist
 9. Needs Analyst
 10. Program Administrator
 11. Program Designer
 12. Strategist
 13. Task Analyst
 14. Theoretician
 15. Transfer Agent
-

TABLE II

MCLAGAN AND BEDRICK THIRTY-ONE COMPETENCY GROUPS
IN THE TRAINING AND DEVELOPMENT COMPETENCY MODEL

| | |
|------------------------------------|---|
| 1. Adult Learning Understanding | 18. Objectives Preparation Skill |
| 2. A/V Skill | 19. Organization Behavior Understanding |
| 3. Career Development Knowledge | 20. Organization Understanding |
| 4. Competency Identification Skill | 21. Performance Observation Skills |
| 5. Computer Competence | 22. Personnel/HR Field Understanding |
| 6. Cost-Benefit Analysis Skill | 23. Presentation Skills |
| 7. Counseling Skill | 24. Questioning Skill |
| 8. Data Reduction Skill | 25. Records Management Skill |
| 9. Delegation Skill | 26. Relationship Versatility |
| 10. Facilities Skill | 27. Research Skills |
| 11. Feedback Skill | 28. Training and Development Field Understanding |
| 12. Futuring Skill | 29. Training and Development Techniques Understanding |
| 13. Group Process Skill | 30. Writing Skills |
| 14. Industry Understanding | 31. Negotiation Skill |
| 15. Intellectual Versatility | |
| 16. Library Skills | |
| 17. Model Building Skill | |

Profile of Training and Development

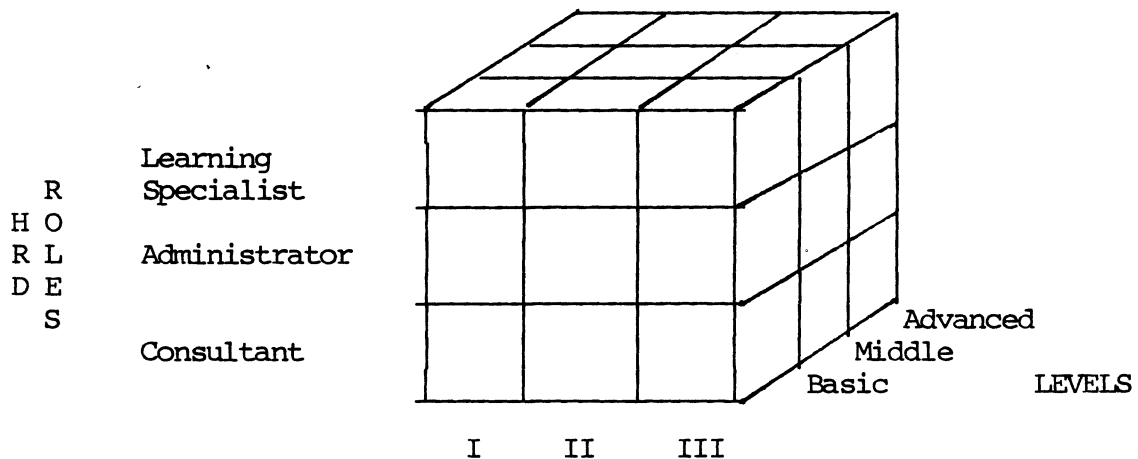
Academic Programs

Until the 1970's, few universities identified the training profession as an area of concentration for their graduates. As universities started analyzing the needs of the business community, academic programs for the training and development profession emerged. A few of those programs are described in this section.

Nadler (1981) based his model of a training and development professional on extensive research conducted over the previous 25 years and on job performance and expectations of human resource individuals. Nadler also described the carefully developed concept and working definition of HRD as: (1) an organized learning experience; (2) Within a stated period of time; and (3) having the objective of producing the possibility of performance change. All course work is graduate level.

The first course in the field was taught in 1948, and the program grew slowly with no full-time faculty until 1965. Nadler joined the faculty in 1965, after 25 years as a practitioner. By 1980, his department had grown to four full-time faculty members with a parallel increase in the number of students and course offerings. According to Nadler, the field of HRD requires people who have an interdisciplinary focus. Nadler's students had varying characteristics. For many years he attracted mainly practitioners who had middle - or high-level positions in HRD but lacked an academic background. Since the middle 1970's, however, an increasing number of students are entering the HRD field. This group lacks practical work experience, requiring Nadler to alter existing courses as well as develop additional course work.

As can be seen in Figure 2, the Nadler Model identifies three categories of people in the HRD field. The academic approach, requiring a degree, is appropriate only for Category One, the Professionally Identified, although some courses are available to other categories of practitioners. Nadler (1981, p. 79) described the Professionally Identified as people exemplified by the following statement, "I have been in HRD for three years, I am in it now, and I expect to stay in the field for at least another three years." The largest group, the Organizationally Identified group, was described by Nadler as individuals who have been temporarily assigned to the HRD function. Category Three was composed of those people who do not work full-time in HRD but who do become involved in the operations of HRD. It is possible for an individual to be in any one of the nine cells and at one of three levels: basic, middle or advanced.



PROFESSIONAL CATEGORIES:

I. Professionally Identified

II. Organizationally Identified

A. Time Indefinite

B. Time Definite

III. Collateral Duties

Source: Nadler (1981)

Figure 2: Nadler's Model for Professional Development

Nadler developed his model between 1970 and 1980 and based it on the following assumptions:

1. The core of the field of HRD is the theory of learning. If the HRD practitioner does not understand how adults learn, it is not possible for him or her to teach them.
2. An HRD practitioner must know more than learning.
3. Most HRD practitioners entered the field through routes other than the training field. Nadler's predication is that, within the next five years, a significant number of individuals will have taken academic work to prepare themselves for this field. He also predicts that increasing numbers of persons currently working in HRD will be returning to the universities to take courses in HRD.
4. The field of HRD is changing. Forces producing the changes are: concern about increasing productivity; new lifestyles and the resultant changes in work styles; the shift in population and work force by age, race, and sex; and the impact of technology on learning.

As presented in Table III, Nadler suggested various roles (including sub-roles) and activities for HRD specialists. One limitation of the model according to Nadler is the need for spelling out performance level and activities for each cell. He also noted a fourth dimension, not provided for in the model, is the differences found among organizations. For example, does the model vary, or need to be changed, if HRD people are in sales rather than manufacturing? Nadler indicated many universities are beginning to offer programs bearing the label of HRD. The model can be used to identify the core curriculum for the field. He was concerned that too long a delay in identifying a core

curriculum will result in many graduates with a degree in HRD but with no consistency in what was studied.

A listing of the courses offered at the George Washington University, and their relationship to the roles identified by Nadler can be seen in Table IV. The listing is for general information only, and Nadler noted that no student is forced to follow a particular track. Rather, an individual program which reflects the professional goals of the student is developed with the help of an advisor. Nadler would like to see the development of additional models which can help us understand the field. These models should be related to the professional development of HRD people. According to Nadler, the human resource development is on the threshold of significant advancement for professional development.

Chalofsky (1981), assistant professor of education at Virginia Tech-Dulles, described his program as having played a leading role in continuing and extension education throughout the state. Chalofsky noted that people in human resource development realize the need for more research on how adults learn. Chalofsky's goals are to develop professionals in this field who can understand the global nature of lifelong learning, yet can also help adults learn and grow in any setting. According to Chalofsky, it is imperative that graduate students begin their program with an understanding and appreciation of the tremendous influence adult lifelong learning will have in society, especially as we become a post-industrial learning society. At Virginia Tech-Dulles the students choose specialty areas such as HRD, adult education, and educational gerontology, and tracks, such as program administration, facilitation of learning, and counseling and consulting.

TABLE III

LEONARD NADLER'S ACTIVITIES AND ROLES
OF THE HUMAN RESOURCE DEVELOPER

Learning Specialist:

Learning Facilitator

Works directly with the learner as an instructor, teacher coach, counselor, or in conjunction with machine mediated instruction

Curriculum Builder

Designs learning experiences through appropriate uses of adult learning theory and frequently with subject matter specialists

Instructional Strategies Developer

Develops the methods, techniques, materials and devices to supplement the learning design

Administrator:

Developer of HRD Personnel

Provides for the continuing professional growth of HRD staff

Supervisor of HRD Programs

Performs the usual supervisory functions for programs being developed as well as those being conducted

Maintainer of Relations

Provides for continuous communication with various groups and individuals, both internal and external to the organization

Arranger of Facilities and Finance

Prepares budgets, plans for facility design and use

Consultant:

Advocate

Recommends appropriate actions to management regarding HRD

Expert

Provides management with the range of choices from which they can make the necessary management decisions about HRD

Stimulator

Encourages management to explore various areas of HRD as a response to problems

Change Agent

Assists management in identifying needed areas of change and provides assistance in planning for change

Their speciality area and track, plus outside electives, comprise the professional focus of their programs.

Niemi (1981), professor of adult education at Northern Illinois University (NIU), believed it to be important to have a mixture of students representing various geographic locations, different occupations and culturally diverse groups. The design of the master's degree program at NIU offers students an opportunity to acquire expertise in a specialist role. Although master's-level advising is handled by a full-time academic counselor in cooperation with the chairperson of adult and continuing education, each master's student is encouraged to have an adult and continuing education staff member (mentor) on his/her advisory committee. The M.S.E. or Ed.D. degree consists of core courses (Generalist), Specialist courses, internships, field studies, and research.

The University of Pittsburgh offers an HRD program called industrial communication and training through the Graduate School of Business and the Graduate School of Public and International Affairs. Seels and Spiro (1981), associate professors at the University of Pittsburgh, described their program goal as the development of professionals in the human resource area of an organization. The faculty at Pittsburgh assessed content needs in the following ways: surveying students and graduates, using advisory professional association assessment studies, and surveying the literature. Based on the needs assessment, they identified the following content needs: (1) Basic (core): adult learning, adult education, and educational research; (2) Career planning: professional associations, marketing oneself, and professional issues; (3) Instructional design: design of packages and programs, communication and innovation theory, psychology and media, CAI, and independent study

TABLE IV
 GEORGE WASHINGTON UNIVERSITY
 SCHOOL OF EDUCATION AND HUMAN DEVELOPMENT
 COURSE LISTING

| | Learning Specialist | Administrator Manager | Consultant |
|---|------------------------|--------------------------|------------|
| Supervised Experience in Adult Learning | X | X | X |
| Designing and Implementing Conferences and Meetings | X | | |
| Technical HRD Programs | X | | |
| Systems Approach to Instructional Design | X | | |
| Human Resource Development | X | X | X |
| Designing Training Programs in HRD | X | | |
| Group Theories and Techniques | X | X | X |
| Practicum in Adult Learning | X | X | X |
| Adult Learning: The Adult as a Learner | X | X | X |
| Instructional Strategies for Adults | X | X | X |
| Interviewing and Counseling for HRD | X | | |
| Evaluating for Adult Learning Programs | X | X | X |
| Current Issues in Adult Learning | X | X | X |
| Administration of Adult Learning Programs | | X | |
| Consultant-Client Relationship in HRD | | X | X |
| Seminar: HRD | X | X | X |
| International Experience (Ireland) | X | X | X |
| International Programs | X | X | X |
| International Experience (China) | X | X | X |

materials; (4) Production: television, multiimage, and scripting; (5) Utilization and selection: television, management, and media selection; (6) International training: cross-cultural considerations, economic considerations, and resources; (7) Electives: business, vocational education, group dynamics, and international affairs involvement; and (8) Field study: internships and field study. Seels and Spiro emphasized that students do not need and cannot take courses in all the areas noted, but the list represents the areas which students want and need. An advisory committee of practitioners from business and industry guides the continuing revision of the program.

Lipton (1981), assistant professor at the New School for Social Research, reported the growth rate of HRD programs has been exceeded by only a few other new or expanding professions. Lipton contends organizational demands in the environment have created this supply and that higher education, now plagued with the demand side of the equation, has responded with an interesting array of offerings. Lipton explained that the new School for Social Research in New York developed a program that defined,

human resources management in its most literal form creating an environment which will put people to work in productive and satisfying jobs, benefiting not only themselves but also the organizations with which they are associated (p. 122).

The definition dictated a broad based curriculum that would also be valued for the many specializations available within the field. The curriculum as described by Lipton encompassed a variety of courses aimed at providing the student with:

1. Expertise in personnel and human resources management in its different dimensions: recruitment and selection, compensation, performance evaluation, and organizational behavior;

2. Expertise in human resources development in its different dimensions: planning, administration, training, counseling and placement;

3. Expertise in labor relations. A sequence in this area provides the background knowledge and skills essential to the collective bargaining process and the implementation of labor agreements;

4. Knowledge of the structure and dynamics of the labor market, and an awareness of issues dealing with the structure of work;

5. Basic preparation in management theory and practice. Courses include the development of long-range plans and evaluation of programs, organizational behavior, problem diagnosis, strategies for effective change, productivity improvement, and preparation of budgets and proposals;

6. A grasp of the interplay among government, nonprofit organizations, and private business; and

7. Knowledge of urban issues and problems to provide an understanding of the setting in which graduates will function, (p. 123).

Riesett (1982), director for the Training Specialist Certificate Program of Georgetown University, considers his certificate program to be an effective alternative to the academic degrees. The nine-month program, from September to June, includes a series of six three-day workshops. The six workshops are spaced six to eight weeks apart and include the following topics: (1) Program Design: A Systems Approach, (2) Adult Learning and Adult Transition, (3) Program Design: Micro Design-Media and Graphics, (4) Evaluation of Training Programs, (5) Facilitating Learning in Small Groups, and (6) Trainer Platform Skills. The program design requirement includes a six-step needs assessment in the employing organization. The project must be completed for the award of the certificate, according to Riesett.

Kennedy (1982) completed a Delphi survey to rank competencies of the training profession and assign units of curricular time to each area. Sixty-two panelists were chosen on the following basis: (1)

received a graduate degree from educational technology programs at Indiana University, (2) worked or was working in training in business, and (3) had been associated with an academic program in the past ten years. She concluded that instructional development was the most important component of a proposed curriculum and should be composed of 12 credit hours (see Table V).

TABLE V
KENNEDY STUDY
CREDIT HOURS DERIVED FROM PERCENTAGE POINTS
ASSIGNED BY DELPHI PANELISTS

| <u>Major Curriculum Area</u> | <u>Percentages</u> | <u>Credit Hours</u> |
|------------------------------------|--------------------|---------------------|
| Instructional Development | 24% | 12 |
| Product Design and Development | 18% | 9 |
| Learning Theory | 14% | 7 |
| Basic Communications | 14% | 7 |
| Evaluation | 13% | 6.5 |
| Business Theory | 10% | 5 |
| Background Skills and Competencies | 7% | 3.5 |

According to Kennedy, the seven curriculum categories consisted of the following content areas: (1) instructional development, including skills such as analysis techniques and strategies; (2) product design and development, comprised of product knowledge and skills, instructional media theory, planning techniques, computer knowledge and skills, and production management skills; (3) learning theory, which is mainly instructional approaches and strategies; (4) basic communications, which covered written and interpersonal communications; (5) evaluation, including evaluation of programs for cost-effectiveness of the training effort; (6) business theory, which applied to specific content area of training and development as well as organizational development; and (7) background skills and competencies, comprised mainly of interaction strategies and organizational skills. The credit hours total 50 which, Kennedy notes, is above the normal master's level requirements and falls between the master's and specialist degrees in credit hours.

Kennedy compared the results of recommended content areas and curriculum categories with the current curriculum of Training Systems Technology at Indiana University. She found discrepancies in areas of research and statistics, educational foundations and measurement testing, all of which were requirements, but were not recommended by the findings of her Delphi study. Organizational development was emphasized too much in current programs. She also noted that instructional development (specifically analysis techniques), product design and development, and evaluation/management/administration were all recommended in the study, however, they were not emphasized in current programs.

Kennedy made the following recommendations that colleges and universities with graduate degrees in educational technology should:

(1) expand into the business and industry market, redesign curricula to meet their needs, and consider the findings in attempts to meet those needs; (2) reevaluate the prerequisite skills for the programs; (3) consider internships to meet the applied skills necessary in entering the business industry; and (4) cooperate with business and professional associations to strengthen programs and exchange information.

Smith and Lutz (1982), professors in the Counseling and Human Resource Management master's and doctoral degrees at East Texas State University, described the course work in their program. They have matched course work with the competency areas recommended in the Pinto and Walker study (see Table VI).

Bentley, Robson, and Hansen (1982) described their master's level Human Resource Administration (HRA) Program at Utah State University. They have taken the generalist approach to preparing professionals in the field with specialization areas also being offered. These three authors identified present and future issues of the professionals in human resources, then designed a curriculum for all students in general as well as for the in-service practitioner. Their program was placed in the Business and Economic Development Services Department, an extension and outreach unit within the College of Business, Department of Economics. The HRA Master's degree requires a minimum of 52 quarter hours consisting of 25 hours in Economics, 10 hours each in two disciplines like Business Administration, Public Administration, Psychology, or Sociology. Courses in research methodology, statistics, computer science, and a research paper are among the remaining requirements.

Bentley, Robson, and Hansen anticipated three career opportunities for the graduates and participants in the program: (1) personnel administration, (2) training and development, and (3) public manpower

programming. Personnel administration is described as including labor-management relations, manpower planning, productivity and quality of work life, and general personnel work in private and government sectors. The specialized area of training and development included organization development, instructional technology, and training administration. The third area of public manpower programming included remedial employment and training programs in the governmental sector such as job service, youth programs, CETA, and macro manpower planning.

Fork (1981) believed academics have for many years viewed training as a highly specialized endeavor which could not be compared with the altruistic goals of education as commonly found in colleges and universities. He noted important changes which have taken place in higher education and the field of training since the early 1960's. According to Fork, practitioners in the field of training have become more familiar with techniques and concerns of the organizational development and human resource development fields.

Fork cautioned about the risks involved when institutions commit to the starting-up of a new program such as training, as he believes it is politically sensitive and has questionable academic value. Because there are no agreed-upon competencies or established curriculums for such proposed programs, many administrators and other decision makers have taken a cautious attitude.

Political problems often arise over the issue of where such a program is to be housed. For example, in large institutions where more than one department has been actively involved with any of the various aspects of training, a decision to center such authority in one department will likely result in strained relations with the others.

TABLE VI
 SMITH AND LUTZ RESEARCH FINDINGS OF COURSE WORK/EXPERIENCES
 FOR THE COUNSELING AND HUMAN RESOURCE MANAGEMENT DOCTORATE
 AND MASTER'S PROGRAMS AT EAST TEXAS STATE UNIVERSITY

| <u>COMPETENCIES</u> | <u>COURSE WORK</u> |
|--------------------------------------|--|
| Needs Analysis | Personnel Methods Organization and Administration |
| Evaluation Techniques | Occupation Education |
| Program Design and Development | Counseling and Human Resource Dev. Organization and Administration |
| Develop Materials | Media in Business and Industry |
| Internal Resource Management | Personnel Methods |
| External Resource Management | Personnel Methods |
| Industry Planning/Counseling | Introduction to Counseling, Practical Counseling in Business/Industry |
| Job Performance-Related Training | Organization Behavior Practicum and Internship Seminar |
| Group and Organizational Development | Organization Behavior Group Counseling |
| Training Research | Research Counseling and Human Resource Dev. |
| Working Relationship Skills | Introduction to Counseling, Prac. Seminar |
| Administration-Management Skills | Personnel Methods Organization and Administration Seminar |
| Professional Self Development | Counseling and Human Resource Dev. Internship Practicum |

Fork noted that, in an attempt to circumvent such problems, some institutions have created loosely structured programs which draw upon faculty from a number of departments under the administration of a committee or coordinator. It would appear that a true test of the value placed upon such efforts comes when faculty members in such programs are reviewed for promotion and tenure by their home departments. An additional complication is the fact that there are no agreed-upon programs of study that a faculty member can undertake in order to prepare himself or herself.

Institutions considering the establishment of a program in training or HRD will need excellent leadership if such efforts are to be successful. In some situations, interested individuals within departments will take the initiative to put forth proposals for new or restructured courses. On approval of the proposals, a department may attempt to earn approval for an entire program. Fork considered some of the problems which arise in the context of a college program and are magnified when conflicts between colleges are introduced. In some instances, courses with similar content and title may be offered in more than one college on the same campus. Fork believed such situations become even more difficult when no effective mechanisms for resolving intercollegial differences related to curricular concerns are available.

Colleges and universities have many problems in the areas of curricular and organizational change which need to be solved, according to Fork. He also described some additional problems in the training profession which should be addressed. He would like to see some agreement on what direction is given to academic planners regarding competencies, roles, and theoretical boundaries of the training field. Where inadequate

information is available, he recommends that a means be found for sponsoring collaborative nationwide research efforts as well as joint planning efforts between local chapters of the American Society for Training and Development and interested colleges and universities. Fork concluded that the impetus for considering the establishment of new programs would be the joining together of interested learners with educational providers. He recognized that problems will always exist between higher education and the field of training, but he believed solutions should be sought.

Pinto and Walker--A Study of Professional
Training and Development Roles and
Competencies

The present research concentrates on the analysis of the current activities of training and development professionals, and comparison was made to those activities analyzed in the Pinto and Walker study. The following section describes in detail Pinto and Walker's study, their methodology, questionnaire development, and results.

Pinto and Walker (1978) conducted research for the American Society for Training and Development, Professional and Development Committee. This research was to identify the basic roles performed by the training and development practitioner and the basic competencies required to perform these activities. The training and development practitioners could use these core competencies for self-assessment, publications and workshops, and self-development. The committee felt a strong need for self-development in training and development practitioners because of the few resources available to the practitioners in the formal educational

systems. Pinto and Walker developed a list of activities from suggestions by national members of the American Society for Training and Development and had the entire membership rate these activities for frequency and importance.

A preliminary model of competencies was obtained, and 403 items were selected. Six local chapters in Texas (Houston), California (Los Angeles), Florida (Miami), Colorado (Rocky Mountain), Washington, D.C., and Wisconsin reviewed the questionnaire and made revisions. When the final questionnaires were mailed to the entire national membership, 2,790 were usable, which represented 20 percent of the population surveyed.

The final questionnaire utilized in the Pinto and Walker study contained 92 items about the training and development field, including open-ended questions and several multiple-choice questions concerning demographic information of the participants. The questions on training and development were rated by how much the activities were included in the respondents' work (0--Does Not Apply, 1--A Minor Part, 2--A Small Part, 3--A Substantial Part, 4--A Major Part, 5--A Most Significant Part).

Pinto and Walker stated that before professional development can take place, it is important to know what trainers actually do based on empirical analysis of their activities. Roles were reported using a statistical factor analysis. The analysis was based on common dimensions which account for relationships among the items. Pinto and Walker warned that what people really do as compared to what people plan to do, or should do, could be two or three different things. Answers from the practitioners contend Pinto and Walker, provide the most reliable information that can be obtained, as compared to reports about them from their superiors, subordinates, or colleagues.

A rank ordering of the median frequency of top 25 and bottom 25 items was also analyzed. According to Pinto and Walker, the following were revealed to be the most frequent activities performed by training and development professionals. The twenty-five activities listed in Table VII as the most frequent activities performed by training and development professionals are presented in rank order.

The demographic information of the training and development practitioners revealed that they spent 84 percent of their time in training and development, have been in their position for five to ten years, and were 35 to 44 years of age and predominantly male. Other information about the practitioners was that 15 percent had bachelor's degrees; 24 percent had some graduate study; 38 percent had master's degrees, and 9 percent had doctoral degrees.

TABLE VII
FREQUENCIES FOR THE TOP 25 ITEMS
PERFORMED BY TRAINING AND DEVELOPMENT PROFESSIONALS

-
1. Design specific programs to satisfy needs (e.g., management development supervisory training, technical development).
 2. Establish and maintain good working relationships with managers as clients.
 3. Determine program content (topics).
 4. Conduct training programs/activities.
 5. Explain recommendations to gain acceptance for them.
 6. Apply concepts of human development and growth in designing training and development programs.

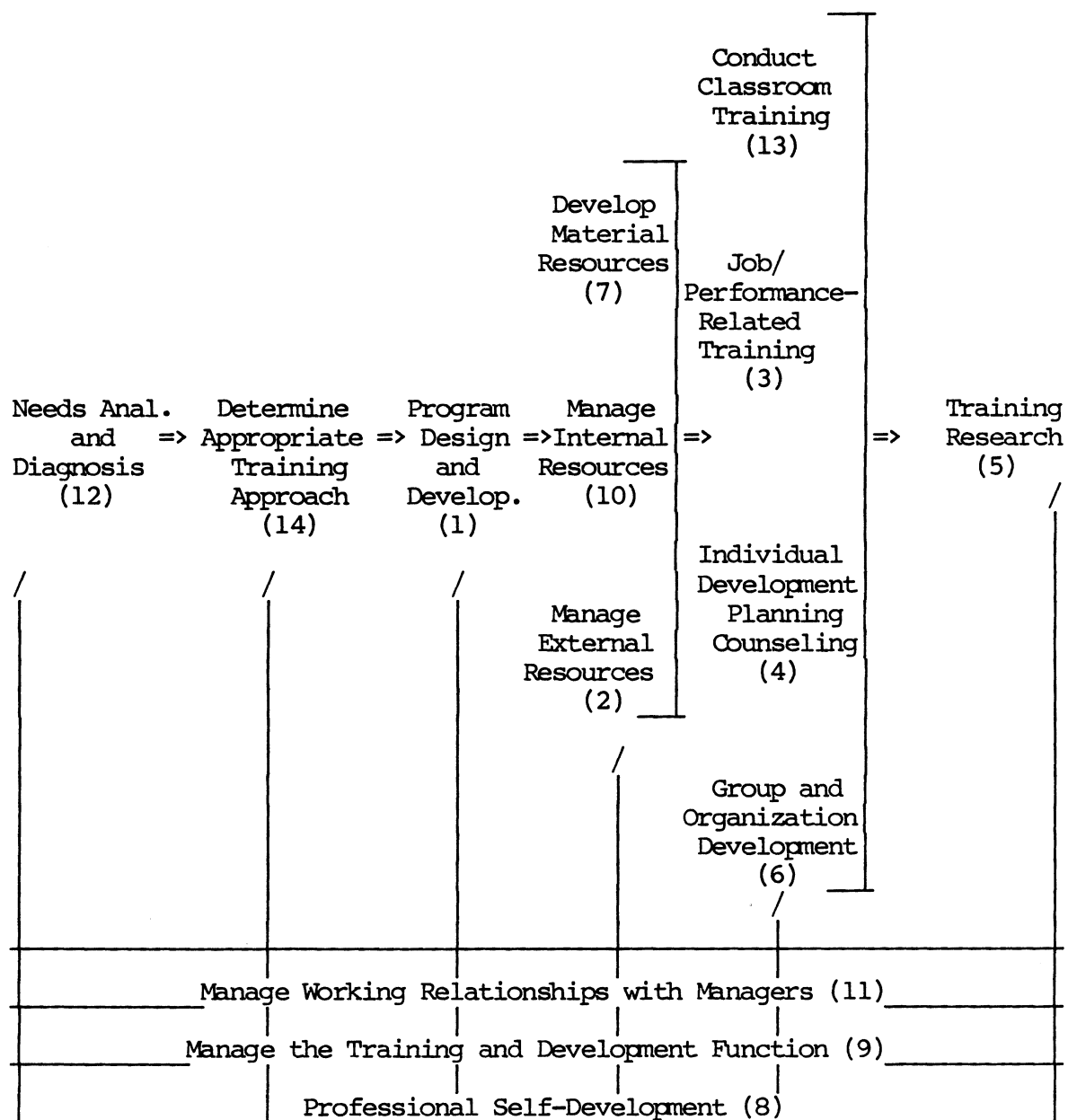
TABLE VII (Continued)

-
7. Apply adult learning theory/instructional principles in developing program content and materials.
 8. Technique: discussions (case, issues, etc.).
 9. Counsel with employees and supervisors on training and development.
 10. Keep abreast of training and development concepts, theory, techniques, and approaches.
 11. Establish objectives for programs (e.g., behavioral or learning objectives).
 12. Decide whether to use an existing program, purchase an external program or create a new one to satisfy needs.
 13. Determine program structure (length, number of participants, choice of techniques, seating configurations).
 14. Evaluate training and development needs to set program priorities.
 15. Evaluate alternative instructional methods (e.g., videotape, role-play, demonstration).
 16. Identify training and development needs through interviews or informal discussions.
 17. Prepare budgets (plans) for training and development programs and projects.
 18. Revise materials/programs based on evaluation feedback.
 19. Keep abreast of training and development activities in other organizations (e.g., competitors, other local firms).
 20. Develop training materials (e.g., workbooks, exercises, cases).
 21. Analyze performance problems to determine any applicable training and development solutions.
 22. Make formal management presentation plans for training and development programs and projects.
 23. Technique: lecture with or without media.
 24. Write memos or announcements.
 25. Project future training needs (relating to management succession, organization change, etc.).
-

Fourteen roles were identified through a factor analysis and, subsequently, a model was designed. These roles are filled at various times during the work life of the training and development professional. The Pinto and Walker Model represents a flow of stages in which trainers carry out responsibilities starting with the analysis of needs and going through training research.

The core in their model is professional self-development. All of the roles involve working relationships with managers and clients and the training and development functions. As a result of the research, Pinto and Walker concluded that the nature of the work for training and development professionals was more directed toward professionalism, with less concentration on classroom training than previously supposed (see Figure 3).

Clement, Walker, and Pinto (1979) revealed the findings to the open-ended questions in the Pinto and Walker research. They stated that activities have changed and are expanding in the training and development profession, but job emphasis is shifting—more time is spent on management duties. Clement, Walker, and Pinto professed that important skills and knowledges included human relations and communications for successful training and development professionals. The important behavior requirements were identified as work credibility and flexibility, and the emerging future requirements for the training and development professionals were to be knowledgeable of increased technical awareness and of increased behavioral science.



Source: Patrick R. Pinto, and James W. Walker, *A Study of Professional Training and Development Roles and Competencies*, 1978.

Figure 3: Factor Analysis in a Model: What Training and Development Professionals Do—Fourteen Factors

Summary of Related Literature

It appears in the last ten years that much emphasis has been placed on the training and development/human resource development profession. Organizations depend on the development of their employees for continuous growth and profits, as several authors indicated. The educational requirements and needs of the training and development professional resulted in roles and models of the profession outlined by Nadler (1981) Chalofsky (1972), Jorz and Richards (1977), Digeorgio (1982), Pinto and Walker (1978), and McLagan and Bedrick (1983).

The academic programs for training and development have been a product of the growing emphasis of the profession. It appears most of the programs evolved during the same time frame as the increased awareness on human resource development.

This research study emphasizes the current activities of the profession with results compared to Pinto and Walker's 1978 study. The procedure and research design is discussed in detail in Chapter III.

CHAPTER III

RESEARCH DESIGN AND PROCEDURES

Introduction

To determine new developments in job activities for training and development professionals since the Pinto and Walker study of 1978, a comparison of the results of the 1978 study and the present study was performed. Specifically, questionnaires were utilized to identify job activities most important to the profession, and then a factor analysis was performed to develop a role model for the profession.

The selection of the training and development professionals and university faculty members; description of the questionnaire; collection of the data, including mailing, follow-up procedures, and a response rate of the mailings are discussed in detail in the text of this chapter. Finally, the method of data analysis and description of statistical techniques are presented.

Selection of the Population

Two groups of individuals who have experiences, knowledge, interests and opinions concerning the roles and activities of training practitioners were surveyed. The two sources surveyed were training and development professionals and university faculty members involved in master's programs for the training practitioner.

Training and Development Professionals

The training and development professionals surveyed were members in region seven of the American Society for Training and Development. The names and addresses were obtained from the 1982 ASTD Who's Who Membership Directory. The national membership of 15,000 members would have been too great a number to manage for this research. Region seven represents the states of Oklahoma, Arkansas, Louisiana, Texas, and New Mexico and lists 376 national members. Of the 376 individuals surveyed, 157 responded, representing a 42 percent rate of return.

University Faculty Members of Training and Development Master's Degree Programs

College programs offering the master's degree in training and development in region seven of ASTD were identified in the 1981 ASTD Directory of Academic Programs in Training and Development/Human Resource Development. The faculty member identified as the contact individual in the directory was called and asked to name the individuals involved in their master's degree program. Seven universities in the region offered such master's degrees. The seven were East Texas State University in Commerce, Texas A & M University in College Station, University of Arkansas at Little Rock, University of Texas at Austin, University of Oklahoma at Norman, and two programs at Oklahoma State University in Stillwater. Twenty-five university faculty members were surveyed in this group; 12 responded, representing a 48 percent return rate. For both the training and development professional and the faculty members a total of 401 individuals were surveyed, 169 questionnaires were received which represented a 42 percent return rate.

Construction and Design of the Questionnaire

The research questionnaire utilized in this study was the same as the Pinto and Walker (1978) questionnaire with a few changes. The procedures and results of the Pinto and Walker study are described in Chapter II. The questionnaire Pinto and Walker utilized can be found in Appendix H. Pinto and Walker dropped five items of the multiple choice questions from their data analysis. In light of that, this study excluded them from the questionnaire entirely. Those items were numbers 31 (design community development programs), 43 (technique: internships/assistantships), 43 (technique: other), 74 (secure necessary copyrights or reprint permissions), and 85 (hire professionals to record cassettes).

As the main interest of this study was to review the current activities of the training and development professional since the Pinto and Walker research, only three demographic questions were asked. Those three questions determined the number of years the respondents had been in the training and development profession, the number of years the respondents had been in their respective organizations, and the level of formal education.

Training and development professionals and faculty members were asked to rate 89 activities in terms of importance to the occupation of training and development. All respondents rated the activities on a Likert-type scale from zero to five: 0—does not apply, is not part of my work, 1—minor aspect of my work, occurs rarely, 2—a small part of my work, 3—a substantial part of my work (either frequent but not important or infrequent but highly important), 4—a major part of my work, and 5—a most significant part of my work (both highly frequent and important). A copy of the questionnaire is included in Appendix A.

The three demographic questions included in the survey were multiple choice. The respondents were asked to mark the number of years they have been in training and number of years they have been in their present organization as to 0 to 4 years, 5 to 10 years, 11 to 24 years, or 25 years or more. In addition, they were asked to indicate their level of formal education as follows: some college, associate degree, bachelor's degree, some graduate study, master's degree, or doctorate. A place was provided for the respondents to identify a major field of study while in undergraduate college or appropriate graduate school.

The questionnaire was eight pages in length, reduced in size and printed on two sheets of paper. Both sides of the 8-1/2 by 11 inch paper were printed, folded in half and stapled in a small pamphlet form. Beige paper for the practitioners and white paper for the faculty members was chosen. Professional printing was utilized to insure a high-quality, attractive questionnaire.

Collection of the Data

The procedures followed for the collection of survey data from the two groups of respondents included the procedures for initial mailing, procedures for follow-up mailings, and a review of the response rate of the questionnaires.

Procedure for Initial Mailing

A cover letter and questionnaire were sent to each of the 401 training and development professionals and faculty members on March 7, 1983. Each was provided with a postage paid envelope and a response card requesting a copy of the completed abstract. The postcard was also

postage paid, and both were self-addressed, utilizing a business return permit through the post office. A copy of the questionnaire, letter, envelope, and postcard can be found in Appendices A, B, C, and D, respectively.

The majority of those returning the questionnaire completed the postcard requesting the abstract. Those not returning the postcard were identified for the follow-up. Ten questionnaires were returned by the post office as not deliverable.

Procedures for Follow-Up

Approximately one month after the initial request, two follow-up procedures were utilized. On April 1, 1983, a follow-up letter, questionnaire, return envelope, and postcard were sent to 230 individuals. During the first week in May, a follow-up postcard was sent asking those who had not responded to complete and return the questionnaire. A copy of the followup letter and follow-up postcard is included in Appendices E and F.

Response Rate of the Mailed Questionnaire

A total of 169 instruments were completed, returned, and used of the 401 mailed. Of the 169, 158 were from the training and development professionals group, and 11 were from the university faculty. The 169 respondents of the possible 401 questionnaires delivered represent an overall 42 percent return rate.

Method of Data Analysis

Responses obtained from the returned questionnaires were coded and punched on cards for use in computer tabulations. The Statistical Analysis System (Goodright, 1979) was used in analyzing the data on Oklahoma State University's IBM 3081D computer.

The comments of the respondents are reported in the various sections of the analysis. Those questions left blank were judged to be viewed by the respondents as "not a part of their work" and assigned a value of "0" when coding the cards. Two of the questionnaires had omitted entire pages, and these questions were assigned blanks instead of a "0" value.

Description of Statistical Technique

The Statistical Analysis System has many features for analyzing all types of data. Table VIII illustrates the objectives of the study and the null hypotheses with the applicable statistical technique.

The factor analysis was used to determine the groups of variables which appeared to be measuring aspects of the same job activities. The statistical procedure used to test Hypotheses 1, 2, and 3 as stated above was analysis of variance. Analysis of variance compares two or more means to see if there are significant differences between or among them. The least significant difference test (LSD) was used to examine the configuration of differences among the means after a significant F ratio had been observed in the analysis of variance.

TABLE VIII

OBJECTIVES AND NULL HYPOTHESES OF THE STUDY
AND STATISTICAL TECHNIQUE UTILIZED

| <u>Objectives of the Study:</u> | <u>Statistical Technique</u> |
|--|--|
| 1. Establishment of a role model by a factor analysis of current job activities of training and development professionals. | Factor Analysis |
| 2. Comparison of factor analysis and role model results to Pinto and Walker results. | Not Applicable |
| 3. Identification of the job activities most and least important to the performance of training and development professionals. | Mean Value |
| 4. Comparison of ranking of job activities between the present study and the Pinto and Walker study. | Not Applicable |
| 5. Identification of years in training and development, years in present organization, and level of education (including major area of study) of respondents in the study. | Not Applicable |
| 6. Comparison of results of demographic information between the present study and the Pinto and Walker study. | Not Applicable |
| <u>Null Hypotheses:</u> | |
| 1. There will be no significant difference among the number of years respondents have worked in the training and development field as measured by each of the 14 factors. | Analysis of Variance Least Significant Difference Test (LSD) |
| 2. There will be no significant difference among the number of years respondents have worked in the organization as measured by each of the 14 factors. | Same |
| 3. There will be no significant difference among the level of education respondents have achieved as measured by each of the 14 factors. | Same |

- | | | |
|----|---|------------|
| 4. | There will be no significant difference between years of experience in the training and development field in the present study and years of experience in the Pinto and Walker study. | Chi Square |
| 5. | There will be no significant difference between the years in the organization in the present study and the years in the organization in the Pinto and Walker study. | Chi Square |
| 6. | There will be no significant difference between the level of education in the present study and the level of education in the Pinto and Walker study. | Chi Square |
| 7. | There will be no significant difference between responses of the practitioners and responses of the faculty members for each of the 14 factors. | t Test |
-

The chi square contingency table analysis was used to examine categorical data for associations. Hypotheses 4, 5, and 6 were tested by the chi square technique. The chi square test was used to compare the results from the present study to similar results quoted in the Pinto and Walker study. The number of responses expected for any specific category was obtained by assuming that the proportions in each category would remain unchanged from those obtained by Pinto and Walker. The chi square test was based on departure of the observed data from that which would be expected under the assumption that the Pinto and Walker proportions remained constant.

The t-test was used to test Hypothesis 7 to determine differences between the present study's two groups. The t-test determined whether the practitioners answered differently from the faculty members.

CHAPTER IV

ANALYSIS OF THE DATA

Introduction

The principal goal of this study was to determine new developments in job activities for training and development professionals since the Pinto and Walker study of 1978. More specifically, the objective of the study was to gather information relative to the following points:

Objectives

1. Establishment of a role model by a factor analysis of current job activities of training and development professionals.
2. Comparison of factor analysis and role model results with Pinto and Walker results.
3. Identification of the job activities most and least important to the performance of training and development professionals.
4. Comparison of ranking of job activities between the present study and the Pinto and Walker study.
5. Identification of years in training and development, years in present organization, and level of education (including major area of study) of respondents in the study.
6. Comparison of results of demographic information between the present study and the Pinto and Walker study.

Null Hypotheses

Following are the null hypotheses specifically tested in the study:

1. There will be no significant difference among the number of years respondents have worked in the training and development field as measured by the 14 factors.

2. There will be no significant difference among the number of of years respondents have worked in the organization as measured by the 14 factors.

3. There will be no significant difference among the level of education respondents have achieved as measured by the 14 factors.

4. There will be no significant difference between years of experience in the training and development field in the present study and years of experience in the Pinto and Walker study.

5. There will be no significant difference between years in the organization in the present study and the years in the organization in the Pinto and Walker study.

6. There will be no significant difference between the level of education in the present study and the level of education in the Pinto and Walker study.

7. There is no significant difference between the responses of the practitioners and the responses of the faculty members for each of the fourteen factors.

The findings of the first six points and the results of the seven hypotheses tested are presented in this chapter.

Establishment of a Role Model by a Factor Analysis
of Current Job Activities of Training
and Development Professionals

A role model was established by a factor analysis of current job activities of training and development professionals. The Statistical Analysis System Procedure Factor was used to identify 14 factors which are shown in Appendix I. A generally accepted criterion for interpreting a factor is a loading of at least .30 between the factor and variable. The name of each factor was determined by an analysis of the highest loading items. Table IX identifies the 14 factors.

TABLE IX
ROLE MODEL FOR TRAINING AND DEVELOPMENT PROFESSIONALS
BY FACTOR ANALYSIS

| | |
|-----------|--|
| FACTOR 1 | Manage Internal and External Resources |
| FACTOR 2 | Program Design and Development |
| FACTOR 3 | Training Research |
| FACTOR 4 | Professional Development |
| FACTOR 5 | Manage Working Relationships with Management |
| FACTOR 6 | Individual Development Planning and Counseling |
| FACTOR 7 | Planning for Training Performance |
| FACTOR 8 | Group and Organizational Development |
| FACTOR 9 | Needs Analysis and Diagnosis |
| FACTOR 10 | Job Performance Related Training |
| FACTOR 11 | Develop Material Resources |
| FACTOR 12 | Conduct and Prepare for Classroom Training |
| FACTOR 13 | Develop Evaluation Methods |
| FACTOR 14 | Determine Course Criteria |

Comparison of Factor Analysis and Role Model
Results to Pinto and Walker Results

Factors identified in this study were compared with the corresponding items of Pinto and Walker's factor analysis. All but one of the factors in this study can be compared one-to-one with Pinto and Walker's study, or with a combination of Pinto and Walker's factors. Table X illustrates a comparison of the role models. Each individual factor comparison can be reviewed in Appendix J.

Identification of the Job Activities Most and Least
Important to the Performance of Training
and Development Professionals
and
Comparison of Ranking of Job Activities
Between Present Study and Pinto
and Walker Study

The respondents ranked 99 activities performed by training and development professionals on a six-point scale from 5—"a most significant part of my work, both highly frequent and important" to 0—"does not apply, is not part of my work."

The results of the most and least important activities are listed in Table XI and XII, by mean score, also included is the Pinto and Walker rankings. All but 3 of the top 25 items appear in both rankings. The bottom 25 were also very similar excluding six items.

TABLE X

COMPARISON OF ROLE MODELS BETWEEN PRESENT STUDY
AND PINTO AND WALKER STUDY

| <u>PRESENT STUDY</u> | | <u>PINTO AND WALKER STUDY</u> | |
|----------------------|--|-------------------------------|---|
| <u>FACTOR</u> | <u>ROLE</u> | <u>FACTOR</u> | <u>ROLE</u> |
| ONE | Manage Internal and External Resources | TWO TEN | Manage Internal Resources Manage External Resources |
| TWO | Program Design and Development | ONE FOURTEEN | Program Design & Develop. Determine Approp. Train. |
| THREE | Training Research | FIVE | Training Research |
| FOUR | Professional Development | EIGHT FIVE | Professional Self Develop. Training Research |
| FIVE | Manage Working Relationships with Management | ELEVEN NINE | Manage Work. Rela. w/Mgrs. Manage T & D Function |
| SIX | Individual Development Planning and Counseling | FOUR | Individual Development Planning and Counseling |
| SEVEN | Planning for Training Performance | THREE | Job/Performance Related Training |
| EIGHT | Group and Organizational Development | SIX | Group and Organization Development |
| NINE | Needs Analysis and Diagnosis | TWELVE | Needs Analysis and Diag. |
| TEN | Job Performance Related Training | THREE FOURTEEN | Job/Performance Train. Determ. Approp. Train. Approach |
| ELEVEN | Develop Material Resources | SEVEN SIX | Develop Material Resources Group & Org. Develop. |
| TWELVE | Conduct and Prepare for Classroom Training | THIRTEEN SEVEN | Conduct Classroom Train. Develop Material Resour. |
| THIRTEEN | Develop Evaluation Methods | ONE | Program Design & Develop. |
| FOURTEEN | Determine Course Criteria | --- | ----- |

TABLE XI
 IDENTIFICATION OF THE JOB ACTIVITIES
 MOST IMPORTANT TO THE PERFORMANCE
 OF TRAINING AND DEVELOPMENT PROFESSIONALS

Frequency for the Top 25 Items

| <u>ITEM NO.</u> | <u>JOB ACTIVITIES</u> | <u>MEAN</u> | <u>RANK</u> | <u>PINTO & WALKER RANK</u> |
|---------------------|--|-------------|-------------|--|
| 39. | Establish and maintain good working relationships with managers as clients | 3.8750 | 1 | 2 |
| 4. | Design specific programs to satisfy needs (e.g. management development, supervisory training, technical development) | 3.8698 | 2 | 1 |
| 5. | Determine program content (topics) | 3.6982 | 3 | 3 |
| 23. | Conduct training programs/activities | 3.6213 | 4 | 4 |
| 28. | Technique: Discussions (cases, issues, etc.) | 3.5857 | 5 | 8 |
| 40. | Explain recommendations to gain acceptance for them | 3.5808 | 6 | 5 |
| 79. | Keep abreast of training and development concepts, theory, techniques, and approaches | 3.5748 | 7 | 10 |
| 7. | Apply adult learning theory/instructional principles in developing program content and materials | 3.5680 | 8 | 7 |
| 6. | Apply concepts of human development & growth in designing training and development programs | 3.4911 | 9 | 6 |
| 3. | Establish objectives for programs (e.g. behavioral or learning objectives) | 3.4319 | 10 | 11 |
| 72. | Counsel with managers and supervisors on training and development | 3.2994 | 11 | 9 |
| 9. | Develop training materials (e.g. workbooks, exercise, cases) | 3.1597 | 12 | 20 |
| 8. | Evaluate alternative instructional methods | 3.1538 | 13 | 15 |

TABLE XI (Continued)

| <u>ITEM NO.</u> | <u>JOB ACTIVITIES</u> | <u>MEAN</u> | <u>RANK</u> | <u>PINTO & WALKER RANK</u> |
|--|---|-------------|-------------|--------------------------------|
| 74. | Keep abreast of training and development activities in other organizations (e.g., competitors, other local firms) | 3.1497 | 14 | 19 |
| 46. | Make formal management presentation plans for training and development programs and projects (e.g., videotape, roleplay, demonstration) | 3.1071 | 15 | 22 |
| 30. | Identify training and development needs through interviews or informal discussions configurations | 3.0769 | 16 | 16 |
| 87. | Write memos or announcements | 3.0476 | 17 | 24 |
| 28. | Technique: Lecture w/wo Media | 3.0414 | 18 | 23 |
| 33. | Evaluate training and development needs to set program priorities | 3.0295 | 19 | 14 |
| 80. | Attend seminars/conferences for your own professional development | 3.0239 | 20 | — |
| 24. | Decide whether to use an existing program, purchase an external program or create a new one | 3.0237 | 21 | 12 |
| 14. | Determine program structure (length, number of participants, choice of techniques, seating, manuals, exercises) | 3.0118 | 22 | 13 |
| 28. | Technique: Role Playing | 2.9881 | 23 | — |
| 26. | Revise materials/programs based on evaluation feedback | 2.9704 | 24 | 18 |
| 73. | Supervise the work of others (plan, organize, schedule, etc.) | 2.9640 | 25 | — |
| <u>Not Included in Current Sample:</u> | | | | |
| 27. | Analyze performance problems to determine any applicable training and development solutions | | | 21 |
| 47. | Prepare budgets (plans) for training and development programs and projects | | | 17 |
| 44. | Project future training needs (relating to management succession, organization change (etc.)) | | | 25 |

TABLE XII
 IDENTIFICATION OF THE JOB ACTIVITIES
 LEAST IMPORTANT TO THE PERFORMANCE
 OF TRAINING AND DEVELOPMENT PROFESSIONALS

Frequency for the Bottom 25 Items

| <u>ITEM NO.</u> | <u>JOB ACTIVITIES</u> | <u>MEAN</u> | <u>RANK</u> | <u>PINTO & WALKER RANK</u> |
|---------------------|---|-------------|-------------|--|
| 12. | Develop programmed learning or computer- managed instructional materials | 1.0177 | 1 | 3 |
| 69. | Prepare artwork and copy for slides | 1.1377 | 2 | 6 |
| 88. | Administer achievement tests/aptitude tests/questionnaires | 1.1845 | 3 | 10 |
| 28. | Technique: Laboratory Education/Sensitivity Training | 1.3195 | 4 | 9 |
| 28. | Technique: Job Rotation | 1.3491 | 5 | 8 |
| 58. | Administer tuition reimbursement program etc.) | 1.3952 | 6 | 5 |
| 54. | Design or use information system for data on programs, projects, participants, instructors, materials, etc. | 1.5748 | 7 | 17 |
| 83. | Write reports on manuals relating to training and development | 1.5868 | 8 | — |
| 75. | Communicate with government personnel on training and development matters (e.g., meetings, conversations, correspondence) | 1.5988 | 9 | 15 |
| 55. | Design data collection procedures to maintain privacy or confidentiality | 1.6347 | 10 | 11 |
| 77. | Keep abreast of OSHA regulations and related training and development practices | 1.6407 | 11 | 14 |
| 10. | Prepare scripts (for films, videotapes, etc.) | 1.6686 | 12 | 19 |
| 28. | Technique: Simulation/Advanced Gaming | 1.6804 | 13 | 25 |

TABLE XII (Continued)

| <u>ITEM NO.</u> | <u>JOB ACTIVITIES</u> | <u>MEAN</u> | <u>RANK</u> | <u>PINTO & WALKER RANK*</u> |
|---------------------------------------|---|-------------|-------------|---|
| 16. | Develop program or courses in collaboration w/ colleges, universities, or other institutions. | 1.6982 | 14 | 18 |
| 11. | Write cases based on personal experiences or observation (research) | 1.7396 | 15 | 20 |
| 81. | Interpret statistics and data (e.g., scatter plots, time series) | 1.7844 | 16 | 12 |
| 86. | Write articles (for periodicals, internal publications) | 1.7988 | 17 | 13 |
| 56. | Apply criteria for selecting program participants | 1.8023 | 18 | — |
| 21. | Develop exercises and tests for measurement of learning | 1.8284 | 19 | — |
| 34. | Identify training implications prior to implementing other personnel programs (benefit programs, recruiter training, labor relations) | 1.9112 | 20 | 22 |
| 82. | Present statistics and data (e.g., charts, tables) | 1.9341 | 21 | 16 |
| 70. | Operate audio-visual equipment | 1.9520 | 22 | 24 |
| 64. | Obtain/hire external instructors/program resource persons | 1.9640 | 23 | — |
| 28. | Technique: Simulation/Advanced Gaming | 1.9822 | 24 | 23 |
| 76. | Keep abreast of EEO/Affirmative Action regulations and related training and development practices | 2.0059 | 25 | — |
| <u>Not included in current sample</u> | | | | |
| 85. | Write speeches relating to training and development | | | 21 |

* Pinto and Walker's bottom item numbers 1, 2, 4, and 7 were not considered as part of this study.

Identification of the Years in Training and Development,
Years in Present Organization, and Level of Edu-
cation; Including Major Area of Study of
the Respondents in the Study

The entire sample (169) was analyzed for frequency and percentage of response. The study revealed 47 percent of the respondents had been in training and development from five to ten years and in their present organization less than five years (49 percent). More respondents (65 percent) indicated they had a master's degree. Appendix K summarizes the frequencies and percentages of the number of years in training and development, the number of years in the organization, the level of education and the major field of study.

Comparison of the Results of Demographic
Information Between Present Study and
Pinto and Walker Study

The frequencies and percentages of responses for the demographic questions are compared between the present study and the Pinto and Walker study. Tables XIII through XV illustrate those comparisons. It appears that respondents in the present study have been in training and development longer than those respondents in Pinto and Walker's study with 17 percent having 5 to 10 years experience (see Table XIII).

A slight difference appears in the number of years the respondent has served the organization in the 11 to 24 year group, but for the most part little difference appears (see Table XIV). The biggest difference in level of education in the two groups appeared in the doctorate level. The present study had 27 percent while Pinto and Walker had 9 percent (see Table XV).

TABLE XIII

COMPARISON OF NUMBER OF YEARS IN TRAINING AND DEVELOPMENT
BETWEEN THE PRESENT STUDY AND PINTO AND WALKER STUDY

| <u>Present Study Frequency & Percentage</u> | | <u>Number of Years</u> | <u>Pinto and Walker Study Frequency & Percentage</u> | |
|---|----------|----------------------------|--|----------|
| 35 | 21% | 0 - 4 | 900 | 32% |
| 79 | 47 | 5 - 10 | 1011 | 36 |
| 47 | 28 | 11 - 24 | 727 | 26 |
| 5 | 3 | 25 or more | 133 | 5 |
| <u>3</u> | <u>1</u> | No Response | <u>19</u> | <u>1</u> |
| 169 | 100% | | 2790 | 100% |

TABLE XIV

COMPARISON OF NUMBER OF YEARS IN ORGANIZATION
BETWEEN THE PRESENT STUDY AND PINTO AND WALKER STUDY

| <u>Present Study Frequency & Percentage</u> | | <u>Number of Years</u> | <u>Pinto and Walker Study Frequency & Percentage</u> | |
|---|----------|----------------------------|--|----------|
| 83 | 49% | 0 - 4 | 1280 | 46% |
| 48 | 29 | 5 - 10 | 786 | 28 |
| 22 | 13 | 11 - 24 | 524 | 19 |
| 9 | 5 | 25 or more | 180 | 6 |
| <u>7</u> | <u>4</u> | No Response | <u>20</u> | <u>1</u> |
| 169 | 100% | | 2790 | 100% |

TABLE XV
 COMPARISON OF LEVEL OF EDUCATION
 BETWEEN THE PRESENT STUDY AND PINTO AND WALKER STUDY

| <u>Present Study Frequency & Percentage</u> | | <u>Level of Education</u> | <u>Pinto and Walker Study Frequency & Percentage</u> | |
|---|----------|-------------------------------|--|----------|
| -- | -- | Less than College | 42 | 2% |
| 9 | 5% | Some College | 198 | 7 |
| 1 | 1 | Associate Degree | 72 | 3 |
| 17 | 10 | Bachelor's Degree | 436 | 16 |
| 28 | 16 | Some Graduate Study | 670 | 24 |
| 64 | 38 | Master's Degree | 1070 | 38 |
| 45 | 27 | Doctorate | 258 | 9 |
| <u>5</u> | <u>3</u> | No Response | <u>44</u> | <u>1</u> |
| 169 | 100% | | 2790 | 100% |

Null Hypotheses: There Is No Significant Difference
Among the Number of Years the Respondents Have
Worked in the Training and Development Field
as Measured by Each of the Fourteen Factors

Table XVI illustrates the results of the analysis of variance test calculated between each of the fourteen factors and the number of years the respondents have worked in the training and development field. The F value was computed, and for those factors where the P value was less than 0.05 a significant difference was found. This occurred for 8 of the 14 factors.

Since there are four groups of years of experience, the least significant difference (LSD) test was performed for those factors which were found to be significant. This test attempts to determine which of the groupings of years of experience are different, whereas the F test gave an overall finding that years of experience was related to a particular factor. The LSD test amounts to a set of all possible t tests between groups. This procedure was used in testing Hypotheses 1, 2, and 3.

Tables XVII and XVIII show where the difference was identified for Factors 2 and 10. The remaining LSD tests can be reviewed in Appendix L. The 5 to 10 year group answered differently in each factor comparison.

TABLE XVI

RESULTS OF ANALYSIS OF VARIANCE TEST FOR NULL HYPOTHESES ONE: THERE IS NO SIGNIFICANT DIFFERENCE AMONG THE NUMBER OF YEARS THE RESPONDENTS HAVE WORKED IN THE TRAINING AND DEVELOPMENT FIELD AS MEASURED BY EACH OF THE FOURTEEN FACTORS

| <u>Factors</u> | <u>F Value</u> | <u>P Value</u> |
|---|----------------|----------------|
| 1. Manage Internal and External Resources | 2.79 | .0417* |
| 2. Program Design and Development | 3.47 | .0174* |
| 3. Training Research | 2.21 | .0875 |
| 4. Professional Development | 2.50 | .0601 |
| 5. Manage Working Relationships with Management | 1.85 | .1387 |
| 6. Individual Development Planning and Counseling | 2.42 | .0672 |
| 7. Planning for Training Performance | 3.65 | .0140* |
| 8. Group and Organizational Development | 1.09 | .3538 |
| 9. Needs Analysis and Diagnosis | 2.87 | .0376* |
| 10. Job Performance Related Training | 6.11 | .0007* |
| 11. Develop Material Resources | 1.85 | .1383 |
| 12. Conduct and Prepare for Classroom training | 5.01 | .0026* |
| 13. Develop Evaluation Methods | 3.38 | .0195* |
| 14. Determine Course Criteria | 2.95 | .0341* |

All tabulations were performed with 3 degrees of freedom (df)

*Significance is determined to the .05 Level

Null hypotheses 1 is rejected when considering the years in training and development with factor 2. The alternative hypotheses is that there is a significant difference in the years in training and development and factor 2, Program Design and Development. The following table (Table XVII) illustrates where those differences can be identified.

TABLE XVII
YEARS IN TRAINING AND DEVELOPMENT AND
FACTOR TWO--PROGRAM DESIGN AND
AND DEVELOPMENT

| <u>Mean</u> | <u>N Years in T&D</u> | <u>Years</u> |
|-------------|---------------------------|--------------|
| 2.7000 | 5 | 25 or more |
| 2.5870 | 78 | 5 - 10** |
| 2.1444 | 47 | 11 - 24 |
| 1.9980 | 35 | 0 - 4 |

**LSD TEST: The difference can be identified between those in training and development from 5 - 10 years and those in training and development 0 - 4 years.

Null hypotheses 1 is rejected when considering the years in training and development with Factor 10. The alternative hypotheses is that there is a significant difference in the years in training and development and Factor 10, Job Performance Related Training. The following table (Table XVIII) illustrates where those differences can be identified.

TABLE XVIII
YEARS IN TRAINING AND DEVELOPMENT
AND FACTOR TEN--JOB PERFOR-
MANCE RELATED TRAINING

| <u>Mean</u> | <u>N Years in T&D</u> | <u>Years</u> |
|-------------|---------------------------|--------------|
| 3.0718 | 78 | 5 - 10** |
| 2.8800 | 5 | 25 or more |
| 2.4979 | 47 | 11 - 24 |
| 2.1943 | 35 | 0 - 4 |

**LSD TEST: The difference can be identified between those in training and development from 5 - 10 years and those in training and development 0 - 4 years and 11 - 24 years.

Null Hypotheses: There Is No Significant
Difference Among the Number of Years
the Respondents Have Worked in the
Organization as Measured by Each
of the Fourteen Factors

Table XX illustrates the results of the analysis of variance test calculated between each of the 14 factors and the number of years the respondents have worked in the organization. Only 1 of the 14 factors had values less than 0.05. Table XIX illustrates where those differences can be identified.

Null hypotheses 2 is rejected when considering the years in the organization with Factor 12. The alternative hypotheses is that there is a significant difference in the years in the organization and Factor 12, Conduct and Prepare for Classroom Training. The group with 25 years or more in the organization is where the difference appeared.

TABLE XIX
YEARS IN ORGANIZATION
FACTOR TWELVE--CONDUCT AND PREPARE
FOR CLASSROOM TRAINING

| <u>Mean</u> | <u>N Years in Organization</u> | <u>Years</u> |
|-------------|--------------------------------|--------------|
| 3.0152 | 22 | 11 - 24 |
| 2.8675 | 83 | 0 - 4 |
| 2.6633 | 49 | 5 - 10 |
| 2.0556 | 9 | 25 or more** |

**LSD TEST: The difference can be identified between those in the organization from 25 or more years and those in the organization 0 - 4 years and 11 - 24 years.

TABLE XX

RESULTS OF ANALYSIS OF VARIANCE TEST FOR NULL HYPOTHESES TWO: THERE IS NO SIGNIFICANT DIFFERENCE AMONG THE NUMBER OF YEARS THE RESPONDENTS HAVE WORKED IN THE ORGANIZATION AS MEASURED BY THE FOURTEEN FACTORS

| <u>Factors</u> | <u>F Value</u> | <u>P Value</u> |
|---|----------------|----------------|
| 1. Manage Internal and External Resources | 1.58 | .1808 |
| 2. Program Design and Development | .71 | .5854 |
| 3. Training Research | 1.66 | .1619 |
| 4. Professional Development | .80 | .5291 |
| 5. Manage Working Relationships with Management | 1.86 | .1202 |
| 6. Individual Development Planning and Counseling | .99 | .4126 |
| 7. Planning for Training Performance | .76 | .5559 |
| 8. Group and Organizational Development | .40 | .8051 |
| 9. Needs Analysis and Diagnosis | 1.25 | .2903 |
| 10. Job Performance Related Training | 1.43 | .2258 |
| 11. Develop Material Resources | 1.21 | .3099 |
| 12. Conduct and Prepare for Classroom Training | 2.43 | .0498* |
| 13. Develop Evaluation Methods | .71 | .5850 |
| 14. Determine Course Criteria | .56 | .6927 |

All tests were performed with 4 degrees of freedom (df)

*Significance is determined to the .05 Level

Null Hypotheses: There Is No Significant
Difference Among the Level of Educa-
tion as Measured by Each of
the Fourteen Factors

Table XXI illustrates the results of the analysis of variance test calculated between each of the 14 factors and the level of education. The F value was computed, and those factors with values smaller than 0.05 were answered with significant differences differently within the respondent's organization. Differences resulted with Factors 9 and 10.

TABLE XXI
RESULTS OF ANALYSIS OF VARIANCE TEST NULL
HYPOTHESES 3 THERE IS NO SIGNIFICANT
DIFFERENCE IN THE LEVEL OF EDUCA-
TION OF THE RESPONDENTS AS
MEASURED BY EACH OF THE
FOURTEEN FACTORS

| <u>Factors</u> | <u>F Value</u> | <u>P Value</u> |
|---|----------------|----------------|
| 1. Manage Internal and External Resources | .73 | .6065 |
| 2. Program Design and Development | .63 | .6820 |
| 3. Training Research | .33 | .8920 |
| 4. Professional Development | 1.08 | .3732 |
| 5. Manage Working Relationships | .47 | .8021 |
| 6. Individual Development Planning and Counseling | .65 | .6665 |
| 7. Planning for Training Performance | .79 | .5632 |
| 8. Group and Organizational Development | .80 | .5498 |
| 9. Needs Analysis and Diagnosis | .23 | .9481* |
| 10. Job Performance Related Training | .13 | .9826* |
| 11. Develop Material Resources | .43 | .8315 |
| 12. Conduct and Prepare for Classroom training | .42 | .8343 |
| 13. Develop Evaluation Methods | 1.12 | .3539 |
| 14. Determine Course Criteria | .33 | .8959 |

All tests were performed with 5 degrees of freedom (df)
*No significance

Null Hypotheses: There Is No Significant Difference Between Years of Experience in the Training and Development Field in the Present Study and Years Study and Years of Experience in the Pinto and Walker Study

Null Hypotheses: There Is No Significant Difference Between Years in Present Organization in the Present Study and Years in Organization in the Pinto and Walker Study

Null Hypotheses: There Is No Significant Difference Between the Level of Education in the Present Study and Level of Education in the Pinto and Walker Study

A chi square was used to test the fourth, fifth, and sixth hypotheses (refer to Tables XXII through XXIV.) The chi square compared results from the present study to similar results quoted in Pinto and Walker's study. The number of responses expected for any specific category was obtained by assuming the proportions in each category would remain unchanged from those obtained by Pinto and Walker. The chi square test is based on departure of the observed data from that which would be expected under the assumption that the Pinto and Walker proportions remained constant.

Null hypotheses 4 was rejected, mainly due to the number of individuals in the 0 to 4 year group. Null hypotheses 5 was not rejected, while null hypotheses 6 was rejected. There is a difference between the years of experience and the level of education between the present study and the Pinto and Walker study. The level of education difference is largely due to the number of doctorates in the present study. Although 11 of the doctorates were in the faculty member group, there still exists a chi square that indicated a significant difference.

TABLE XXII

NULL HYPOTHESES FOUR: CHI SQUARE BETWEEN PINTO AND WALKER STUDY AND PRESENT STUDY COMPARING YEARS IN TRAINING AND DEVELOPMENT

| Study | 0 - 4 Years | 5 - 10 Years | 11 - 24 Years | > 25 Years | Total N |
|----------------|-------------|--------------|---------------|------------|---------|
| Pinto & Walker | 900 | 1011 | 727 | 133 | 2790 |
| Expected | 55 | 61 | 44 | 8 | |
| Present | 35 | 79 | 47 | 7 | 169 |

$\chi^2 = 13.92^*$ $df = 3$

*Significant to the .01 level

TABLE XXIII

HYPOTHESES FIVE: CHI SQUARE BETWEEN
PINTO AND WALKER STUDY AND PRE-
SENT STUDY COMPARING YEARS
IN PRESENT ORGANIZATION

| Study | 0 - 4 Years | 5 - 10 Years | 11 - 24 Years | > 25 Years | Total N |
|-------------------|----------------|-----------------|------------------|---------------|------------|
| Pinto & Walker | 1280 | 786 | 524 | 180 | 2790 |
| Expected | 78 | 48 | 32 | 11 | |
| Present | 83 | 48 | 22 | 9 | 169 |

Chi Square = 3.81* df = 3

*No Significance

TABLE XXIV

HYPOTHESES SIX: CHI SQUARE BETWEEN
PINTO AND WALKER STUDY AND
PRESENT STUDY COMPARING
LEVEL OF EDUCATION

| Study | < Col. | Some College | Assoc. Degree | Bach. Degree | Some Grad. | Master Degree | Doctor- ate | Total |
|-------------------|--------|-----------------|------------------|-----------------|---------------|------------------|----------------|-------|
| Pinto & Walker | 42 | 198 | 72 | 436 | 670 | 1070 | 258 | 2790 |
| Expected | 3 | 12 | 4 | 26 | 41 | 65 | 16 | |
| Present | -- | 9 | 1 | 17 | 28 | 64 | 45 | 169 |

df = 6

Chi Square = 65.82*

Chi Square = 20.25* (Without 11 doctorate degrees due to faculty members included in present study, therefore 45 would become 34 for the present study.)

Significant past the .01 level

Null Hypotheses: There Is No Significant Difference Between the Responses of the Practitioners and the Responses of the Faculty Members as Measured by Each of the Fourteen Factors

The t-test was calculated to determine whether the practitioners answered differently than the faculty members. Only one of the factors was answered differently by the two groups. Null hypotheses 7 was rejected when considering the answers between the practitioners and the university faculty members and Factor 11, Develop Material Resources. Table XXV illustrates the F and P values for the t-test.

TABLE XXV

RESULTS OF T TEST FOR NULL HYPOTHESES SEVEN:
 THERE IS NO SIGNIFICANT DIFFERENCE BE-
 TWEEN THE RESPONSES OF THE PRACTI-
 TIONERS AND RESPONSES OF THE
 UNIVERSITY FACULTY MEMBERS
 AS MEASURED BY EACH OF
 THE FOURTEEN FACTORS

| <u>Factors</u> | F Value | | <u>P Value</u> |
|---|----------------|---------------------|----------------|
| | <u>Faculty</u> | <u>Practitioner</u> | |
| 1. Manage Internal and External Resources | .6876 | .5223 | .2311 |
| 2. Program Design and Development | -.4577 | -.5606 | .2042 |
| 3. Training Research | .6510 | .7298 | .4523 |
| 4. Professional Development | -.1496 | -.1884 | .1496 |
| 5. Manage Working Relationships with Management | 1.7550 | 1.6455 | .8390 |
| 6. Individual Development Planning and Counseling | 1.6753 | 1.1599 | .1089 |
| 7. Planning for Training Performance | -.1549 | -.1442 | .8110 |
| 8. Group and Organizational Development | .6194 | .6651 | .6101 |
| 9. Needs Analysis and Diagnosis | -.0168 | -.0194 | .3684 |
| 10. Job Performance Related Training | -.0998 | -.1056 | .6672 |
| 11. Develop Material Resources | -.7930 | -1.1107 | .0332* |
| 12. Conduct and Prepare for Classroom Training | 1.1191 | 1.4932 | .0709 |
| 13. Develop Evaluation Methods | .3633 | .4028 | .4914 |
| 14. Determine Course Criteria | .5991 | .6781 | .4210 |

*Significant to the .05 level

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

A summary of this study, conclusions drawn from the findings, and recommendations for future research are presented in this chapter.

Summary

The principal goal of this study was to determine new developments in job activities for training and development professionals since the Pinto and Walker study of 1978. More specifically, the objective of the study was to gather information relative to the following points:

1. Establishment of a role model by a factor analysis of current job activities of training and development professionals.
2. Comparison of factor analysis and role model results to Pinto and Walker results.
3. Identification of the job activities most and least important to the performance of training and development professionals.
4. Comparison of ranking of job activities between the present study and the Pinto and Walker study.
5. Identification of years in training and development, years in present organization, and level of education (including major area of study) of respondents in the study.
6. Comparison of results of demographic information between the present study and the Pinto and Walker study.

Null Hypotheses

Following are the null hypotheses specifically tested in the study:

1. There will be no significant difference among the number of years respondents have worked in the training and development field as measured by each of the 14 factors.
2. There will be no significant difference among the number of years respondents have worked in the organization as measured by each of the 14 factors.
3. There will be no significant difference in the level of education respondents have achieved as measured by each of the 14 factors.
4. There will be no significant difference between years of experience in the training and development field in the present study and years of experience in the Pinto and Walker study.
5. There will be no significant difference between years in the organization in the present study and the years in the organization in the Pinto and Walker study.
6. There will be no significant difference between level of education in the present study and the level of education in the Pinto and Walker study.
7. There will be no significant difference between responses of the practitioners and responses of the faculty members as measured by each of the 14 factors.

Description of the Sample

A comparison in the results of the 1978 study and the present study was performed through a survey. Specifically, questionnaires were

utilized to identify job activities most important to the profession, and then a factor analysis was performed to develop a role model for the profession. The sample ranked 99 activities performed by training and development professionals through the use of a six-point scale from 5—"a most significant part of my work, both highly frequent and important" to 0—"does not apply, is not part of my work."

Two groups of individuals who have experiences, knowledge, interests and opinions concerning the roles and activities of training practitioners were surveyed. The two sources surveyed were training and development professionals and university faculty members involved in master's programs for the training practitioner.

The training and development professionals surveyed were national members in region seven of the American Society for Training and Development. The names and addresses were obtained from the 1982 ASTD Who's Who Membership Directory. Region seven represents the states of Oklahoma, Arkansas, Louisiana, Texas, and New Mexico, and lists 376 national members. Of the 376 individuals surveyed, 158 responded, representing a 42.0 percent rate of return.

College programs offering the master's degree in training and development in region seven of the ASTD were identified in the 1981 ASTD Directory of Academic Programs in Training and Development/Human Resource Development. The faculty member identified as the contact individual in the directory was called and asked to name the individuals involved in their master's degree program. Seven universities in the region offered such master's degrees. The seven were East Texas State University in Commerce, Texas A & M University in College Station, University of Arkansas in Little Rock, University of Texas in Austin, University of

Oklahoma in Norman, and two programs at Oklahoma State University in Stillwater. A total of 25 university faculty members were surveyed in this group; 11 responded, representing a 44.0 percent return rate.

A total of 169 questionnaires were completed, returned, and used from the two groups of 401 surveyed, representing a 42.1 percent return rate.

The findings are summarized in the following paragraphs:

1. A role model was created by performing a factor analysis of job activities of training and development professionals. The Statistical Analysis System factor analysis program was used to compute a role model from the 99 job activities of training and development professionals. The role model consists of 14 factors as shown in Table XXVI. The job activities with a loading of at least .30 between the factor and variable were considered in the factor analysis. The items receiving the highest loading aided the author in naming each factor.

2. A comparison of the resulting role models in the present study and the Pinto and Walker study is shown in Table XXVII. Two new factors emerged: Develop Evaluation Methods--Factor 13, and Determine Course Criteria--Factor 14. While Factor 14 was completely new, Factor 13 was essentially new with some of the evaluation items loading out of Pinto and Walker's Factor 1, Program Design and Development.

In the new role model, Manage Internal and External Resources ranked first and Program Design and Development ranked second. Pinto and Walker's role model also ranked these first and second, but included other factor combinations.

TABLE XXVI
ROLE MODEL FOR TRAINING AND DEVELOPMENT
PROFESSIONALS BY FACTOR ANALYSIS

| | |
|-----------|--|
| FACTOR 1 | Manage Internal and External Resources |
| FACTOR 2 | Program Design and Development |
| FACTOR 3 | Training Research |
| FACTOR 4 | Professional Development |
| FACTOR 5 | Manage Working Relationships with Management |
| FACTOR 6 | Individual Development Planning and Counseling |
| FACTOR 7 | Planning for Training Performance |
| FACTOR 8 | Group and Organizational Development |
| FACTOR 9 | Needs Analysis and Diagnosis |
| FACTOR 10 | Job Performance Related Training |
| FACTOR 11 | Develop Material Resources |
| FACTOR 12 | Conduct and Prepare for Classroom Training |
| FACTOR 13 | Develop Evaluation Methods |
| FACTOR 14 | Determine Course Criteria |

TABLE XXVII
 COMPARISON OF ROLE MODELS BETWEEN PRESENT STUDY
 AND PINTO AND WALKER STUDY

| <u>PRESENT STUDY</u> | | <u>PINTO AND WALKER STUDY</u> | |
|----------------------|--|-------------------------------|---|
| <u>FACTOR</u> | <u>ROLE</u> | <u>FACTOR</u> | <u>ROLE</u> |
| ONE | Manage Internal and External Resources | TWO TEN | Manage Internal Resources Manage External Resources |
| TWO | Program Design and Development | ONE FOURTEEN | Program Design & Develop. Determine Approp. Train. |
| THREE | Training Research | FIVE | Training Research |
| FOUR | Professional Development | EIGHT FIVE | Professional Self Develop. Training Research |
| FIVE | Manage Working Relationships with Management | ELEVEN NINE | Manage Work. Rela. w/Mgrs. Manage T & D Function |
| SIX | Individual Development Planning and Counseling | FOUR | Individual Development Planning and Counseling |
| SEVEN | Planning for Training Performance | THREE | Job/Performance Related Training |
| EIGHT | Group and Organizational Development | SIX | Group and Organization Development |
| NINE | Needs Analysis and Diagnosis | TWELVE | Needs Analysis and Diag. |
| TEN | Job Performance Related Training | THREE FOURTEEN | Job/Performance Train. Determ. Approp. Train. Approach |
| ELEVEN | Develop Material Resources | SEVEN SIX | Develop Material Resources Group & Org. Develop. |
| TWELVE | Conduct and Prepare for Classroom Training | THIRTEEN SEVEN | Conduct Classroom Train. Develop Material Resour. |
| THIRTEEN | Develop Evaluation Methods | ONE | Program Design & Develop. |
| FOURTEEN | Determine Course Criteria | --- | ----- |

3. Mean scores were computed for each job activity in the questionnaire. The job activity receiving the highest score was item number 39: Establish and maintain good working relationships with managers as clients. The second highest score was item number 4: Design specific programs to satisfy needs. These job activities directly support factors one and two of the role model described in Table XXVI. The job activities receiving the two lowest scores were item numbers 12: Develop programmed learning or computer-managed instructional materials, and 69: Prepare artwork and copy for slides.

4. Twenty-two of the 25 highest scoring items were listed on both the Pinto and Walker list and the present study list. Furthermore, only one of the top ten items was different. Of the 25 lowest scoring job activities listed, six items were different; however, four items were excluded from the present study entirely based upon recommendations by Pinto and Walker because of the low frequency reported in their study.

5. Of the 169 respondents, 47 percent had been in the training and development field from 5 to 10 years. In the Pinto and Walker study 36 percent of the respondents were in the 5 to 10 year group. While 32 percent of Pinto and Walker's respondents had been in the training and development field less than 5 years, in the present study only 21 percent of the respondents were in the same group.

6. Forty-nine percent of the respondents said they had worked in their organization for fewer than five years. The respondents in the two studies were comparable in terms of years in the organization.

7. In the Pinto and Walker study and the present study, 38 percent of the respondents held master's degrees. Twenty-seven percent of the

respondents in the current study held doctoral degrees while only 9 percent held doctoral degrees in the Pinto and Walker Study.

8. Among the respondents in the present study, business was the most frequently mentioned major field of study. Next highest majors were psychology and education respectively. Pinto and Walker did not gather data on major fields of study.

9. An analysis of variance test was calculated using the Statistical Analysis System (SAS) for the three hypotheses measuring the difference among (1) the number of years in training and development, (2) number of years in the organization, and (3) level of education by each of the 14 factors. There was a significant difference between years of experience and 8 of the 14 factors. The 8 factors were: Factor 1—Manage Internal and External Resources, Factor 2—Program Design and Development, Factor 7--Planning for Training Performance, Factor 8--Needs Analysis and Diagnosis, Factor 10—Job Performance Related Training, Factor 12—Conduct and Prepare for Classroom Training, Factor 13--Develop Evaluation Methods, and Factor 14—Determine Course Criteria. In all eight of these factors the difference was significant at the .05 confidence level. Through the Least Significance Difference test (LSD), it was found that the major differences in the scores occurred with respondents in the 5 to 10 year group.

There was a significant difference between the number of years in the organization and Factor 12--Conduct and Prepare for Classroom Training. This factor was rejected at the .05 confidence level. Using the LSD test it was found that the major difference in scores occurred with respondents who had been in their organization 25 years or more.

There was a significant difference between the level of education of the respondents and Factor 9—Needs Analysis and Diagnosis, and Factor 10—Job Performance Related Training.

10. A chi square test was used to compare the results of the present study and Pinto and Walker's study in the following: Years of experience in the training and development field, years in organization, and level of education. The only significant difference between the two studies occurred in the two groups with fewer than five years in training and development. No differences occurred between the studies in the comparison of the years in the organization.

There was a significant difference in the level of education of the respondents in the two studies. There was a significant difference found between those individuals who had doctoral degrees in the present study and those who had doctoral degrees in Pinto and Walker's study. Although 11 of the doctorates were in the faculty member group, a significant difference exists between the two groups even when removing those 11 respondents.

11. A t-test was conducted to test whether faculty members and practitioners scored differently. Factor 11—Develop Material Resources was the only factor resulting in a significant difference between the scores of the faculty members and scores of the practitioners. In the other 13 factors, the two groups were in agreement.

Conclusions

When comparing the role models in the two studies many similarities were found. It would appear the professional field of training and

development has remained relatively stable since the Pinto and Walker study was conducted in 1978. However, there were some findings that would seem to have implications for the training and development professional.

The role model in the present study was created from 14 factors, including two new factors identified in the present study and did not appear in the previous research. Develop Evaluation Methods and Determine Course Criteria were the totally new factors which emerged for training and development professionals. It would seem, therefore, that more emphasis is being placed on the ability to critique and evaluate performance and course content by training and development professionals.

Twelve of the 14 factors in both studies demonstrate similarity. The factors were determined by the loading of job activities. The list of activities in each factor of the present study can be compared a similar list of activities in corresponding factors of the Pinto and Walker study. Additionally, the ranking of job activities in the two studies are similar. This duplication would imply the field of training and development has been relatively stable since 1978 and has not changed markedly since the Pinto and Walker study. With a steady growth in the field of training and development, the role model generated by this study could be used by both practitioners and university professionals. It would seem that because of the number of similarities between the two studies, the findings of the present study confirm credibility of the Pinto and Walker study.

The majority of the respondents in the present study have been in the training and development field from 5 to 10 years. Although the majority of the respondents in the Pinto and Walker study had also

been in the field 5 to 10 years, the percentage was smaller than in the present study. It would appear that more individuals are staying in the training and development field. It could also mean that the profession is just now in the stage where it has been identified as a vital part of the organization.

Another conclusion should be noted regarding the level of education of the respondents in the two studies. It would appear that more training and development professionals are continuing their education and professional self development as indicated by the increased number of doctorates in the present field. During the last three to four years, as described in the review of the literature, professional conferences sponsored by the American Society for Training and Development have focused on the academic preparation for training and development professionals perceive a need for continued growth.

Recommendations

The recommendations for further research and for application of this this research study are as follows:

1. Research should be conducted that compares the results of the factor analysis to curriculum programs in universities and possible effectiveness of programs through a follow-up of graduates.
2. Research studies should be conducted to determine further differences between the number of years of experience training and development professionals have, and the types of activities they perform.
3. This study should be duplicated in other regions of ASTD and results should be compared with this study.

4. Chapters of ASTD could use the results of this research to promote professional development of its members by using the role model.

5. Practitioners in training and development should use the factors resulting from this research to analyze their respective positions in training and development in their organization.

6. Employers should utilize the activities and factors to hire, promote, and analyze training and development individuals.

7. Employers should utilize the activities and factors to develop job descriptions for the training and development department within their organizations.

8. Universities should utilize the role model and corresponding factors to design programs in training and development and further aid in the professional development of the training and development profession.

9. As individuals gain more experience in the profession, practitioners and universities should participate in follow up activities of training and development graduates and develop course work and activities accordingly.

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APPENDICES

APPENDIX A

THE QUESTIONNAIRE

A SURVEY OF ACTIVITIES OF
TRAINING AND DEVELOPMENT PROFESSIONALS

Please complete and return this questionnaire in the
postage paid envelope provided for your convenience.
If you wish to receive an abstract of the results of
this questionnaire, please complete the postage paid
postcard.

Thank you,



Pam Glover
Research Director
Rt. 3 Box 104
Pine Bluff, AR 71601

EXPLANATION OF SCALE:

- 0: Does not apply, is not part of my work
 1: Minor aspect of my work, occurs rarely
 2: A small part of my work
 3: A substantial part of my work (either frequent but not important or infrequent but highly important)
 4: A major part of my work
 5: A most significant part of my work (both highly frequent and important)

| TRAINING AND DEVELOPMENT ACTIVITIES | 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 4. Design specific programs to satisfy needs (e.g. management development, supervisory training, technical development) | — | — | — | — | — | — |
| 5. Determine program content (topics) | — | — | — | — | — | — |
| 6. Apply concepts of human development & growth in designing training and development programs | — | — | — | — | — | — |
| 7. Apply adult learning theory/instructional principles in developing program content and materials | — | — | — | — | — | — |
| 8. Evaluate alternative instructional methods (e.g., videotape, roleplay, demonstration) | — | — | — | — | — | — |
| 9. Develop training materials (e.g. workbooks, exercises, cases) | — | — | — | — | — | — |
| 10. Prepare scripts (for films, videotapes, etc.) | — | — | — | — | — | — |
| 11. Write cases based on personal experiences or observation (research) | — | — | — | — | — | — |
| 12. Develop programmed learning or computer-managed instructional materials | — | — | — | — | — | — |
| 13. Evaluate "ready-made" courses or materials as to their applicability | — | — | — | — | — | — |
| 14. Determine program structure (length, number of participants, choice of techniques, seating configurations) | — | — | — | — | — | — |
| 15. Experiment with new training and development techniques (innovate or pilot test) | — | — | — | — | — | — |
| 16. Develop program or courses in collaboration w/ colleges, universities, or other institutions. | — | — | — | — | — | — |
| 17. Determine appropriate sequences of courses or programs (e.g. prerequisites, curricula) | — | — | — | — | — | — |
| 18. Train or coach trainers/program leaders | — | — | — | — | — | — |
| 19. Train managers and supervisors how to train | — | — | — | — | — | — |
| 20. Develop criteria for selecting program participants | — | — | — | — | — | — |

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- 3: A substantial part of my work (either frequent but not important or infrequent but highly important)
- 4: A major part of my work
- 5: A most significant part of my work (both highly frequent and important)

| TRAINING AND DEVELOPMENT ACTIVITIES | 0 | 1 | 2 | 3 | 4 | 5 |
|--|-----|-----|-----|-----|-----|-----|
| 21. Develop exercises and tests for measurement of learning | | | | | | |
| 22. Develop self-assessment tools (checklists, manuals, exercises) | --- | --- | --- | --- | --- | --- |
| 23. Conduct training programs/activities | --- | --- | --- | --- | --- | --- |
| 24. Decide whether to use an existing program, purchase an external program or create a new one to satisfy needs | --- | --- | --- | --- | --- | --- |
| 25. Design questionnaires for evaluating training and development programs (feedback) | --- | --- | --- | --- | --- | --- |
| 26. Revise materials/programs based on evaluation feedback | --- | --- | --- | --- | --- | --- |
| 27. Analyze performance problems to determine any applicable training and development solutions | --- | --- | --- | --- | --- | --- |
| 28. What training and development techniques do you use? (please mark each technique) | | | | | | |
| Lecture w/wo Media | --- | --- | --- | --- | --- | --- |
| Films | --- | --- | --- | --- | --- | --- |
| Videotape/Closed Circuit TV | --- | --- | --- | --- | --- | --- |
| Discussions (cases, issues, etc.) | --- | --- | --- | --- | --- | --- |
| Role Playing | --- | --- | --- | --- | --- | --- |
| Simulation/Advanced Gaming | --- | --- | --- | --- | --- | --- |
| Laboratory Education/Sensitivity Training | --- | --- | --- | --- | --- | --- |
| Programmed Instruction/Self-Instruction | --- | --- | --- | --- | --- | --- |
| Coaching/Counseling | --- | --- | --- | --- | --- | --- |
| On-the -Job Training/Job Instruction Training | --- | --- | --- | --- | --- | --- |
| Job Rotation | --- | --- | --- | --- | --- | --- |
| Organization Development Techniques | --- | --- | --- | --- | --- | --- |
| 29. Identify training and development needs through questionnaire surveys (perceived needs, attitudes) | --- | --- | --- | --- | --- | --- |
| 30. Identify training and development needs through interviews or informal discussions | --- | --- | --- | --- | --- | --- |
| 31. Identify training and development needs through analysis of job requirements (job descriptions, task analysis, observation, etc. | --- | --- | --- | --- | --- | --- |

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| TRAINING AND DEVELOPMENT ACTIVITIES | 0 | 1 | 2 | 3 | 4 | 5 |
|--|-----|-----|-----|-----|-----|-----|
| 32. Identify skills and knowledge requirements of jobs | --- | --- | --- | --- | --- | --- |
| 33. Evaluate training and development needs to set program priorities | --- | --- | --- | --- | --- | --- |
| 34. Identify training implications prior to implementing other personnel programs (benefit programs, recruiter training, labor relations etc.) | --- | --- | --- | --- | --- | --- |
| 35. Identify the impact of training and development on other personnel programs or policies | --- | --- | --- | --- | --- | --- |
| 36. Use organization development intervention techniques (e.g., team building, inter-group meetings) | --- | --- | --- | --- | --- | --- |
| 37. Determine managerial/employee awareness of the availability of programs | --- | --- | --- | --- | --- | --- |
| 38. Counsel individuals on career development | --- | --- | --- | --- | --- | --- |
| 39. Establish and maintain good working relationships with managers as clients | --- | --- | --- | --- | --- | --- |
| 40. Explain recommendations to gain acceptance for them | --- | --- | --- | --- | --- | --- |
| 41. Assist managers in implementing on-the-job training | --- | --- | --- | --- | --- | --- |
| 42. Assist others in implementing training and development programs | --- | --- | --- | --- | --- | --- |
| 43. Interpret data/statistics on training and development | --- | --- | --- | --- | --- | --- |
| 44. Project future training needs (relating to management succession, organization change etc.) | --- | --- | --- | --- | --- | --- |
| 45. Organize and staff training and development function or department | --- | --- | --- | --- | --- | --- |
| 46. Make formal management presentation plans for training and development programs and projects | --- | --- | --- | --- | --- | --- |
| 47. Prepare budgets (plans) for training and development programs and projects | --- | --- | --- | --- | --- | --- |
| 48. Maintain information on training and development costs and/or benefits | --- | --- | --- | --- | --- | --- |

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 4: A major part of my work
 5: A most significant part of my work (both highly frequent and important)

| TRAINING AND DEVELOPMENT ACTIVITIES | 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 49. Assess performance before and after training to measure training effects | — | — | — | — | — | — |
| 50. Establish/maintain a library (training resources, career development information) | — | — | — | — | — | — |
| 51. Identify and evaluate external training and development programs | — | — | — | — | — | — |
| 52. Prepare/disseminate internal and external training and development program announcements | — | — | — | — | — | — |
| 53. Arrange for participation in external training and development programs | — | — | — | — | — | — |
| 54. Design or use information system for data on programs, projects, participants, instructors, materials, etc. | — | — | — | — | — | — |
| 55. Design data collection procedures to maintain privacy or confidentiality | — | — | — | — | — | — |
| 56. Apply criteria for selecting program participants | — | — | — | — | — | — |
| 57. Maintain records of participation in training and development programs | — | — | — | — | — | — |
| 58. Administer tuition reimbursement program | — | — | — | — | — | — |
| 59. Identify equipment and supplies required for training and development program | — | — | — | — | — | — |
| 60. Evaluate proposals from outside consultants | — | — | — | — | — | — |
| 61. Obtain (contract with) outside consultants | — | — | — | — | — | — |
| 62. Obtain internal instructors/program resource persons | — | — | — | — | — | — |
| 63. Evaluate internal instructors/program resource persons | — | — | — | — | — | — |
| 64. Obtain/hire external instructors/program resource persons | — | — | — | — | — | — |
| 65. Evaluate external instructors/program resource persons | — | — | — | — | — | — |
| 66. Arrange program logistics (facilities, lodging, meals, communications, etc.) | — | — | — | — | — | — |
| 67. Supervise production of training and development materials (slides, films, cassettes, manuals, etc.) | — | — | — | — | — | — |

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| TRAINING AND DEVELOPMENT ACTIVITIES | 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 68. Contract with outside vendors (purchase materials, programs) | — | — | — | — | — | — |
| 69. Prepare artwork and copy for slides | — | — | — | — | — | — |
| 70. Operate audio-visual equipment | — | — | — | — | — | — |
| 71. Counsel with employees on training and development matters | — | — | — | — | — | — |
| 72. Counsel with managers and supervisors on training and development | — | — | — | — | — | — |
| 73. Supervise the work of others (plan, organize, schedule, etc.) | — | — | — | — | — | — |
| 74. Keep abreast of training and development activities in other organizations (e.g., competitors, other local firms) | — | — | — | — | — | — |
| 75. Communicate with government personnel on training and development matters (e.g., meetings, conversations, correspondence) | — | — | — | — | — | — |
| 76. Keep abreast of EEO/Affirmative Action regulations and related training and development practices | — | — | — | — | — | — |
| 77. Keep abreast of OSHA regulations and related training and development practices | — | — | — | — | — | — |
| 78. Attend seminars/conferences on training and development (e.g., ASTD meetings) | — | — | — | — | — | — |
| 79. Keep abreast of training and development concepts, theory, techniques, and approaches | — | — | — | — | — | — |
| 80. Attend seminars/conferences for your own professional development | — | — | — | — | — | — |
| 81. Interpret statistics and data (e.g., scatter plots, time series) | — | — | — | — | — | — |
| 82. Present statistics and data (e.g., charts, tables) | — | — | — | — | — | — |
| 83. Write reports on manuals relating to training and development | — | — | — | — | — | — |
| 84. Write proposals for programs or projects | — | — | — | — | — | — |
| 85. Write speeches relating to training and development | — | — | — | — | — | — |

EXPLANATION OF SCALE:

- 0: Does not apply, is not part of my work
- 1: Minor aspect of my work, occurs rarely
- 2: A small part of my work
- 3: A substantial part of my work (either frequent but not important or infrequent but highly important)
- 4: A major part of my work
- 5: A most significant part of my work (both highly frequent and important)

TRAINING AND DEVELOPMENT ACTIVITIES _____ 0 1 2 3 4 5

- 86. Write articles (for periodicals, internal publications) _____
- 87. Write memos or announcements _____
- 88. Administer achievement tests/aptitude tests/questionnaires _____
- 89. Other training and development activities you perform:
 - A. _____
 - B. _____
 - C. _____
 - D. _____

90. How many years have you been a training and development professional?

- 0 - 4 years _____ 11 - 24 years _____
- 5 - 10 years _____ 25 years or more _____

91. How many years have you been in your present organization?

- 0 - 4 years _____ 11 - 24 years _____
- 5 - 10 years _____ 25 years or more _____

92. Indicate your level of formal education attained and fill in boxes below for major field of study:

- Some College _____ Some Graduate Study _____
- Associate Degree _____ Master's Degree _____
- Bachelor's Degree _____ Doctorate _____

| | |
|----------|---------------------------|
| | Your Major Field of Study |
| | |
| College | |
| Graduate | |

APPENDIX B

COVER LETTER

March 7, 1983

Would you be interested in knowing what changes have occurred in the activities of training and development professionals since the mid 1970's? At that time, Pinto and Walker completed their study, "What Training and Development Professionals Really Do."

We are surveying the national members, in Region Seven, of the American Society for Training and Development to determine new developments in job activities for training and development professionals. We need your assistance in compiling this information.

You can complete the enclosed questionnaire in approximately fifteen to twenty minutes. Please use the envelope provided to return the questionnaire by March 21, 1983. If you are interested in reviewing the results of this research, give us your name and address on the enclosed postcard and we will see that you receive an abstract of the study.

Thank you.

Sincerely,

Pamela L. Glover
Research Director

Jeanine N. Rhea
Research Professor

PLG/JNR/jh

enclosures

APPENDIX C

RETURN ENVELOPE--POSTAGE PAID

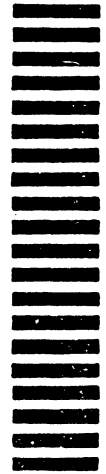
FIRST CLASS
PERMIT NO. 642
Pine Bluff, Ark.

BUSINESS REPLY MAIL

NO POSTAGE STAMP NECESSARY IF MAILED IN THE UNITED STATES

POSTAGE WILL BE PAID BY

PAM GLOVER
Rt. 3, Box 104
Pine Bluff,
Arkansas 71601



APPENDIX D

POSTCARD REQUESTING ABSTRACT OF RESULTS

POSTAGE PAID

FIRST CLASS
PERMIT NO. 642
Pine Bluff, Ark.

BUSINESS REPLY MAIL
NO POSTAGE STAMP NECESSARY IF MAILED IN THE UNITED STATES

POSTAGE WILL BE PAID BY

PAM GLOVER
Rt. 3, Box 104
Pine Bluff,
Arkansas 71601



I WISH TO RECEIVE A COPY OF THE ABSTRACT
OF THE Survey of Activities of Training
and Development Professionals:

Name _____

Address _____

APPENDIX E

FOLLOW UP LETTER

April 1, 1983

You recently received a questionnaire requesting your participation in a study, to determine new developments in job activities for training and development professionals since the mid-1970's. This is a regional survey involving the national members in Region Seven of the American Society of Training and Development and faculty members of universities offering graduate studies in this area. At the time this letter was mailed, a response had not been received from you. If the questionnaire has since been completed and returned, we thank you.

If not, would you please complete the enclosed questionnaire? The questionnaire should be returned by April 15, 1983. An addressed, postage paid envelope is enclosed for your convenience.

By providing your professional expertise, you are contributing toward the development of a more precise analysis of the needs of the training and development professional.

Sincerely,

Pamela L. Glover
Research Director

Jeanine N. Rhea
Research Professor

PLG/JNR/jh

enclosures

APPENDIX F

FOLLOW UP POSTCARD

April 25, 1983

Your response is desperately needed to the study researching new developments in job activities for training and development professionals since the mid 1970's.

Please complete the questionnaire you received several weeks ago and return it in the postage paid envelope provided.

Regards,

Pamela L. Glover
Research Director

APPENDIX G

LETTER FROM JAMES W. WALKER

TOWERS, PERRIN, FORSTER & CROSBY

600 THIRD AVENUE
NEW YORK, NEW YORK 10016
(212) 309-3853

JAMES W. WALKER
Vice President

February 16, 1983

Ms. Pam Glover
Route 3
Box 104
Pinebluff, Arkansas 71601

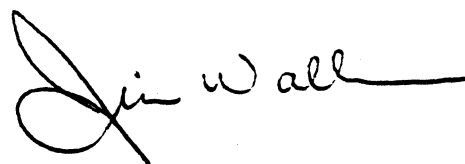
Dear Ms. Glover:

I've enjoyed discussing your research project with you and hope that you come up with data and findings which are useful comparisons to our original 1978 ASTD Study.

I am pleased to have you replicate our study using your area ASTD members as a sample. Certainly, as far as I am concerned, you may use the same questionnaire. Naturally, Pat Pinto and I would be interested in your results. As I have indicated to you, I would be very pleased to assist you in any way we can. I am sorry that I have been unable to find copies of the original data printouts. Should you wish to reach Pat, his telephone number (home) is (612) 645-7536.

By copy of this letter, I am alerting Bob Craig at ASTD to your work. I assume that ASTD would be very supportive of your study.

Best regards,



/ls
cc: Mr. Robert Craig, ASTD
Dr. Patrick Pinto

APPENDIX H

PINTO AND WALKER QUESTIONNAIRE

**WHAT DO
TRAINING & DEVELOPMENT PROFESSIONALS
*REALLY DO?***



a special survey of ASTD members

Each of us has an idea of what we think training and development people should be doing. And we think we know what we *are* doing. But across the membership of ASTD, there is little agreement on our professional roles and the skills, knowledge, and experience necessary to succeed in our profession. This makes it difficult to know just what kinds of courses, seminars, and other professional development activities are needed.

This questionnaire is being sent to all ASTD members to find out what activities are *really* performed, as a basis for identifying basic roles and competencies. The results will be helpful in developing self-assessment tools and other professional development aids. The overall study is being sponsored by ASTD's Professional Development Committee and conducted by the management consulting firm of Towers, Perrin, Forster & Crosby.

The questionnaire itself is the product of several months' work involving suggestions from more than 100 ASTD members across the continent. The data collected will be analyzed and a report of findings will be published by ASTD.

Please take a few minutes to complete this confidential questionnaire and put it in the mail. We need to know what *you really do* to make the study a complete success.

1. How has your organization's training and development activity changed during the past five years? (e.g., expansion, new functions, decentralization)

2. In what ways is your job changing? (e.g., how will it be different five years from now?)

3. What is the most important *skill or knowledge requirement* for success as a training and development professional?

4. What is the most important *behavioral requirement* for success as a training and development professional? (e.g., maintaining credibility, empathizing, being flexible, maintaining confidences, being creative)

WHAT DO TRAINING AND DEVELOPMENT PROFESSIONALS REALLY DO?

009745

5. Which of the following BEST describes your responsibility? (please mark only one, even though others may apply)
- training development practitioner
 - personnel generalist
 - full time academic teacher
 - full time student
 - vendor supplier
 - external consultant
 - retired
 - other

6. Approximately what part of your position is devoted to training and development?
- a very small part (20% or less)
 - less than half
 - about half
 - more than half
 - full time (100%)

7. How many other training and development professionals are employed in your organizational unit?
- none other 5 - 25
 - 1 - 4 more than 25


8. How many of these persons report to you (directly or indirectly)?
- none other 5 - 25
 - 1 - 4 more than 25

9. How many other employees report to you? (e.g., labor relations, compensation, clerical)
- none other 5 - 25
 - 1 - 4 more than 25

10. Approximately where does your position report in your organization? (which best describes?)
- top-level management
 - corporate staff, government department or administration
 - major division agency operating company
 - department or functional unit
 - plant or office location
 - only location of an organization
 - other (e.g., special assignment)

11. What levels of people do you primarily serve in your work?
- managers
 - supervisors foremen
 - professional, technical sales
 - other salaried
 - hourly
 - volunteers
 - general external public students
 - other

12. Total size of the organization you serve:
- less than 1,000 15,000 25,000
 - 1,000 5,000 more than 25,000
 - 5,000 15,000

DIRECTIONS FOR MARKING
 Use #2 or #2 1/2 black lead pencil only DO NOT use ink or ballpoint
 Make heavy black marks that fill the circle completely
 Erase cleanly any answer you wish to change - make no stray marks
 Examples of PROPER marks Examples of IMPROPER marks


13. Size of total population served in your work (active and prospective training and development participants)
- less than 500 5,000 15,000
 - 500 1,000 15,000 or more
 - 1,000 5,000

14. Total annual sales (or annual budget, if public sector or non-profit) of your organization
- under \$25 million \$100 to \$999 million
 - \$25 to \$99 million over \$1 billion

DEFINITION OF SCALES
 To what extent does your work include the following activities? Consider the importance and the frequency of occurrence of each activity and mark the answer that best describes what you do.

- 0 - does not apply, is not part of my work
- 1 - a minor aspect of my work; occurs rarely and is unimportant
- 2 - a small part of my work
- 3 - a substantial part of my work (either frequent but not necessarily important or infrequent but highly important)
- 4 - a major part of my work
- 5 - a most significant part of my work (both highly frequent and important)

EXAMPLE: Construct questionnaires for analysis of training and development needs

| DOES NOT APPLY | A MINOR PART | A SMALL PART | A SUBSTANTIAL PART | A MAJOR PART | A MOST SIGNIFICANT PART |
|-------------------------|-------------------------|-------------------------|------------------------------------|-------------------------|-------------------------|
| 0 <input type="radio"/> | 1 <input type="radio"/> | 2 <input type="radio"/> | 3 <input checked="" type="radio"/> | 4 <input type="radio"/> | 5 <input type="radio"/> |

DO NOT WRITE HERE

Constructing needs analysis questionnaires may be an important part of your work, but you may do it only once or twice a year. The appropriate response to this item, then, would be (3).

- 15. Construct questionnaires for analysis of training and development needs 0 1 2 3 4 5
- 16. Conduct needs analysis interviews 0 1 2 3 4 5
- 17. Establish objectives for programs (e.g., behavioral or learning objectives) 0 1 2 3 4 5
- 18. Design specific programs to satisfy needs (e.g., management development, supervisory training, technical development) 0 1 2 3 4 5
- 19. Determine program content (topics) 0 1 2 3 4 5
- 20. Apply concepts of human development and growth in designing training and development programs 0 1 2 3 4 5
- 21. Apply adult learning theory instructional principles in developing program content and materials 0 1 2 3 4 5
- 22. Evaluate alternative instructional methods (e.g., videotape, role-play, demonstration) 0 1 2 3 4 5

| | 5. A Most Significant Part | | | | | 5. A Most Significant Part | | | | | | | |
|--|----------------------------|---|---|---|---|----------------------------|---|---|---|---|---|---|---|
| | 4. A Major Part | | | | | 4. A Major Part | | | | | | | |
| | 3. A Substantial Part | | | | | 3. A Substantial Part | | | | | | | |
| | 2. A Small Part | | | | | 2. A Small Part | | | | | | | |
| | 1. A Minor Part | | | | | 1. A Minor Part | | | | | | | |
| | 0. Does Not Apply | | | | | 0. Does Not Apply | | | | | | | |
| 23. Develop training materials (e.g., workbooks, exercises, cases) | 0 | 1 | 2 | 3 | 4 | 5 | 43. What training and development techniques do you use? (please mark each technique) | 0 | 1 | 2 | 3 | 4 | 5 |
| 24. Prepare scripts (for films, videotapes, etc.) | 0 | 1 | 2 | 3 | 4 | 5 | lecture with or without media | 0 | 1 | 2 | 3 | 4 | 5 |
| 25. Write cases based on personal experiences or observation (research) | 0 | 1 | 2 | 3 | 4 | 5 | films | 0 | 1 | 2 | 3 | 4 | 5 |
| 26. Develop programmed learning or computer-managed instructional materials | 0 | 1 | 2 | 3 | 4 | 5 | videotape closed-circuit TV | 0 | 1 | 2 | 3 | 4 | 5 |
| 27. Evaluate "ready-made" courses or materials as to their applicability | 0 | 1 | 2 | 3 | 4 | 5 | discussions (cases, issues, etc.) | 0 | 1 | 2 | 3 | 4 | 5 |
| 28. Determine program structure (length, number of participants, choice of techniques, seating configurations) | 0 | 1 | 2 | 3 | 4 | 5 | role playing | 0 | 1 | 2 | 3 | 4 | 5 |
| 29. Experiment with new training and development techniques (innovate or pilot test) | 0 | 1 | 2 | 3 | 4 | 5 | behavior modeling | 0 | 1 | 2 | 3 | 4 | 5 |
| 30. Develop program or courses in collaboration with colleges, universities, or other institutions | 0 | 1 | 2 | 3 | 4 | 5 | simulation advanced gaming | 0 | 1 | 2 | 3 | 4 | 5 |
| 31. Design community development programs | 0 | 1 | 2 | 3 | 4 | 5 | laboratory education sensitivity training | 0 | 1 | 2 | 3 | 4 | 5 |
| 32. Determine appropriate sequences of courses or programs (e.g., prerequisites, curricula) | 0 | 1 | 2 | 3 | 4 | 5 | programmed instruction self instruction | 0 | 1 | 2 | 3 | 4 | 5 |
| 33. Train or coach trainers, program leaders | 0 | 1 | 2 | 3 | 4 | 5 | coaching counseling | 0 | 1 | 2 | 3 | 4 | 5 |
| 34. Train managers and supervisors how to train | 0 | 1 | 2 | 3 | 4 | 5 | on-the-job training job instruction training | 0 | 1 | 2 | 3 | 4 | 5 |
| 35. Develop criteria for selecting program participants | 0 | 1 | 2 | 3 | 4 | 5 | job rotation | 0 | 1 | 2 | 3 | 4 | 5 |
| 36. Develop exercises and tests for measurement of learning | 0 | 1 | 2 | 3 | 4 | 5 | internships assistantships | 0 | 1 | 2 | 3 | 4 | 5 |
| 37. Develop self-assessment tools (checklists, manuals, exercises) | 0 | 1 | 2 | 3 | 4 | 5 | organization development techniques | 0 | 1 | 2 | 3 | 4 | 5 |
| 38. Conduct training programs, activities | 0 | 1 | 2 | 3 | 4 | 5 | Other | 0 | 1 | 2 | 3 | 4 | 5 |
| 39. Decide whether to use an existing program, purchase an external program or create a new one to satisfy needs | 0 | 1 | 2 | 3 | 4 | 5 | 44. Identify training and development needs through questionnaire surveys (perceived needs, attitudes) | 0 | 1 | 2 | 3 | 4 | 5 |
| 40. Design questionnaires for evaluating training and development programs (feedback) | 0 | 1 | 2 | 3 | 4 | 5 | 45. Identify training and development needs through interviews or informal discussions | 0 | 1 | 2 | 3 | 4 | 5 |
| 41. Revise materials programs based on evaluation feedback | 0 | 1 | 2 | 3 | 4 | 5 | 46. Identify training and development needs through analysis of job requirements (job descriptions, task analysis, observation, etc.) | 0 | 1 | 2 | 3 | 4 | 5 |
| 42. Analyze performance problems to determine any applicable training and development solutions | 0 | 1 | 2 | 3 | 4 | 5 | 47. Identify skills and knowledge requirements of jobs | 0 | 1 | 2 | 3 | 4 | 5 |
| | | | | | | | 48. Evaluate training and development needs to set program priorities | 0 | 1 | 2 | 3 | 4 | 5 |
| | | | | | | | 49. Identify training implications prior to implementing other personnel programs (benefit programs, recruiter training, labor relations, etc.) | 0 | 1 | 2 | 3 | 4 | 5 |
| | | | | | | | 50. Identify the impact of training and development on other personnel programs or policies | 0 | 1 | 2 | 3 | 4 | 5 |
| | | | | | | | 51. Use organization development intervention techniques (e.g., team building, inter-group meetings) | 0 | 1 | 2 | 3 | 4 | 5 |
| | | | | | | | 52. Determine managerial employee awareness of the availability of programs | 0 | 1 | 2 | 3 | 4 | 5 |
| | | | | | | | 53. Counsel individuals on career development | 0 | 1 | 2 | 3 | 4 | 5 |
| | | | | | | | 54. Establish and maintain good working relationships with managers as clients | 0 | 1 | 2 | 3 | 4 | 5 |
| | | | | | | | 55. Explain recommendations to gain acceptance for them | 0 | 1 | 2 | 3 | 4 | 5 |



| | 5 | 4 | 3 | 2 | 1 | 0 | | | | |
|---|-------------------------|---|---|---|---|--------------|--------------------|--------------|--------------|----------------|
| | A Most Significant Part | | | | | A Major Part | A Substantial Part | A Small Part | A Minor Part | Does Not Apply |
| 56. Assist managers in implementing on-the-job training | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 57. Assist others in implementing training and development programs | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 58. Interpret data statistics on training and development | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 59. Project future training needs (relating to management succession, organization change, etc.) | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 60. Organize and staff training and development function or department | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 61. Make formal management presentation plans for training and development programs and projects | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 62. Prepare budgets (plans) for training and development programs and projects | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 63. Maintain information on training and development costs and/or benefits | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 64. Assess performance before and after training to measure training effects | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 65. Establish maintain a library (training resources, career development information) | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 66. Identify and evaluate external training and development programs | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 67. Prepare disseminate internal and external training and development program announcements | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 68. Arrange for participation in external training and development programs | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 69. Design or use information system for data on programs, projects, participants, instructors, materials, etc. | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 70. Design data collection procedures to maintain privacy or confidentiality | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 71. Apply criteria for selecting program participants | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 72. Maintain records of participation in training and development programs | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 73. Administer tuition reimbursement program | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 74. Secure necessary copyrights or reprint permissions | 0 | 1 | 2 | 3 | 4 | 5 | | | | |

| | 5 | 4 | 3 | 2 | 1 | 0 | | | | |
|---|-------------------------|---|---|---|---|--------------|--------------------|--------------|--------------|----------------|
| | A Most Significant Part | | | | | A Major Part | A Substantial Part | A Small Part | A Minor Part | Does Not Apply |
| 75. Identify equipment and supplies required for training and development program | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 76. Evaluate proposals from outside consultants | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 77. Obtain (contract with) outside consultants | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 78. Obtain internal instructors program resource persons | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 79. Evaluate internal instructors program resource persons | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 80. Obtain/hire external instructors program resource persons | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 81. Evaluate external instructors program resource persons | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 82. Arrange program logistics (facilities, lodging, meals, communications, etc.) | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 83. Supervise production of training and development materials (slides, films, cassettes, manuals, etc.) | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 84. Contract with outside vendors (purchase materials, programs) | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| X85. Hire professionals to record cassettes | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 86. Prepare artwork and copy for slides | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 87. Operate audio-visual equipment | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 88. Counsel with employees on training and development matters | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 89. Counsel with managers and supervisors on training and development | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 90. Supervise the work of others (plan, organize, schedule, etc.) | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 91. Keep abreast of training and development activities in other organizations (e.g., competitors, other local firms) | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 92. Communicate with government personnel on training and development matters (e.g., meetings, conversations, correspondence) | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 93. Keep abreast of EEO Affirmative Action regulations and related training and development practices | 0 | 1 | 2 | 3 | 4 | 5 | | | | |
| 94. Keep abreast of OSHA regulations and related training and development practices | 0 | 1 | 2 | 3 | 4 | 5 | | | | |



| | 5. A Most Significant Part | 4. A Major Part | 3. A Substantial Part | 2. A Small Part | 1. A Minor Part | 0. Does Not Apply |
|---|----------------------------|-----------------|-----------------------|-----------------|-----------------|-----------------------|
| 95. Attend seminars conferences on training and development (e.g., ASTD meetings) | 0 | 1 | 2 | 3 | 4 | 5 |
| 96. Keep abreast of training and development concepts, theory, techniques, and approaches | 0 | 1 | 2 | 3 | 4 | 5 |
| 97. Attend seminars conferences for your own professional development | 0 | 1 | 2 | 3 | 4 | 5 |
| 98. Interpret statistics and data (e.g., scatter plots, time series) | 0 | 1 | 2 | 3 | 4 | 5 |
| 99. Present statistics and data (e.g., charts, tables) | 0 | 1 | 2 | 3 | 4 | 5 |
| 100. Write reports or manuals relating to training and development | 0 | 1 | 2 | 3 | 4 | 5 |
| 101. Write proposals for programs or projects | 0 | 1 | 2 | 3 | 4 | 5 |
| 102. Write speeches relating to training and development | 0 | 1 | 2 | 3 | 4 | 5 |
| 103. Write articles (for periodicals, internal publications) | 0 | 1 | 2 | 3 | 4 | 5 |
| 104. Write memos or announcements | 0 | 1 | 2 | 3 | 4 | 5 |
| 105. Administer achievement tests, aptitude tests/questionnaires | 0 | 1 | 2 | 3 | 4 | 5 |
| 106. Other training and development activities you perform: | | | | | | |
| A. _____ | 0 | 1 | 2 | 3 | 4 | 5 |
| B. _____ | 0 | 1 | 2 | 3 | 4 | 5 |
| C. _____ | 0 | 1 | 2 | 3 | 4 | 5 |
| D. _____ | 0 | 1 | 2 | 3 | 4 | 5 |
| 107. Which of the following BEST describes your training and development specialization? | | | | | | |
| generalist | | | | | | <input type="radio"/> |
| trainer/instructor | | | | | | <input type="radio"/> |
| career development counselor | | | | | | <input type="radio"/> |
| organization development | | | | | | <input type="radio"/> |
| consultant | | | | | | <input type="radio"/> |
| community development | | | | | | <input type="radio"/> |
| other _____ | | | | | | <input type="radio"/> |
| 108. How many years have you been a training and development professional? | | | | | | |
| 0 - 4 years <input type="radio"/> | | | | | | |
| 5 - 10 years <input type="radio"/> | | | | | | |
| 11 - 24 years <input type="radio"/> | | | | | | |
| 25 years or more <input type="radio"/> | | | | | | |
| 109. How many years have you been in your present organization? | | | | | | |
| 0 - 4 years <input type="radio"/> | | | | | | |
| 5 - 10 years <input type="radio"/> | | | | | | |
| 11 - 24 years <input type="radio"/> | | | | | | |
| 25 years or more <input type="radio"/> | | | | | | |

110. What is the zip code where you work?

| Question 111 | | ZIP CODE | | | |
|---------------------------|--|----------|---|---|---|
| Your Major Field of Study | | 1 | 2 | 3 | 4 |
| High School | | 0 | 0 | 0 | 0 |
| | | 1 | 1 | 1 | 1 |
| | | 2 | 2 | 2 | 2 |
| College | | 3 | 3 | 3 | 3 |
| | | 4 | 4 | 4 | 4 |
| | | 5 | 5 | 5 | 5 |
| | | 6 | 6 | 6 | 6 |
| Graduate | | 7 | 7 | 7 | 7 |
| | | 8 | 8 | 8 | 8 |
| | | 9 | 9 | 9 | 9 |

111. Indicate your level of formal education attained and fill in boxes above for major field of study:

| | | | |
|----------------------|-----------------------|---------------------|-----------------------|
| some high school | <input type="radio"/> | bachelor's degree | <input type="radio"/> |
| high school graduate | <input type="radio"/> | some graduate study | <input type="radio"/> |
| some college | <input type="radio"/> | master's degree | <input type="radio"/> |
| associate degree | <input type="radio"/> | doctorate | <input type="radio"/> |

112. What is your age?

| | | | |
|----------|-----------------------|------------|-----------------------|
| Under 25 | <input type="radio"/> | 45 - 54 | <input type="radio"/> |
| 25 - 34 | <input type="radio"/> | 55 - 64 | <input type="radio"/> |
| 35 - 44 | <input type="radio"/> | 65 or over | <input type="radio"/> |

113. What is your salary level?

| | | | |
|---------------------|-----------------------|---------------------|-----------------------|
| under \$5,000 | <input type="radio"/> | \$25,000 - \$35,000 | <input type="radio"/> |
| \$5,000 - \$14,999 | <input type="radio"/> | over \$35,000 | <input type="radio"/> |
| \$15,000 - \$24,999 | <input type="radio"/> | | |

114. What is your sex?

| | | | |
|--------|-----------------------|------|-----------------------|
| female | <input type="radio"/> | male | <input type="radio"/> |
|--------|-----------------------|------|-----------------------|

115. What is your race?

| | |
|-----------------------------------|-----------------------|
| White | <input type="radio"/> |
| Black | <input type="radio"/> |
| Hispanic | <input type="radio"/> |
| Asian or Pacific Islander | <input type="radio"/> |
| American Indian or Alaskan native | <input type="radio"/> |
| Other _____ | <input type="radio"/> |

DO NOT WRITE IN THIS SPACE

| SPECIAL CODE | | | | | COMPUTER USE ONLY | | | |
|--------------|---|---|---|---|-------------------|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |

THANK YOU!

116. What new requirements do you feel are emerging as important for training and development professionals?

117. Which of the following best describes your personal long-term career objective?

- | | |
|---|---|
| <input type="checkbox"/> training and development specialist or manager | <input type="checkbox"/> educator/teacher/academician |
| <input type="checkbox"/> other personnel responsibilities (e.g., personnel director, labor relations) | <input type="checkbox"/> other: _____ |
| <input type="checkbox"/> other organizational functions (e.g., marketing, production) | _____ |
| <input type="checkbox"/> consultant (internal or external) | _____ |

118. Identify a specific resource that has been most useful in your own development as a training and development professional. (e.g., a course, seminar, book)

119. Please give examples of any behavior you have observed which you consider unethical or improper for a training and development professional.

120. What is the nature of the industry or organization where you work? (which best describes?)

- | | | | |
|---|---|---|---|
| <input type="checkbox"/> insurance | <input type="checkbox"/> commercial aviation | <input type="checkbox"/> chemicals; pharmaceuticals | <input type="checkbox"/> non-profit (voluntary, foundation, clergy) |
| <input type="checkbox"/> banking/savings & lending institution | <input type="checkbox"/> utilities | <input type="checkbox"/> computers/data processing | <input type="checkbox"/> trade/professional association |
| <input type="checkbox"/> retailing | <input type="checkbox"/> agriculture/natural resources | <input type="checkbox"/> automotive | <input type="checkbox"/> law enforcement |
| <input type="checkbox"/> communications/broadcasting/publishing | <input type="checkbox"/> mining | <input type="checkbox"/> electrical/electronic | <input type="checkbox"/> state and local government |
| <input type="checkbox"/> restaurants/food/hotel | <input type="checkbox"/> metals | <input type="checkbox"/> textiles | <input type="checkbox"/> federal government |
| <input type="checkbox"/> recreation/amusement | <input type="checkbox"/> petroleum | <input type="checkbox"/> industrial—general | <input type="checkbox"/> military |
| <input type="checkbox"/> transportation | <input type="checkbox"/> pulp and paper/forest products | <input type="checkbox"/> health care | <input type="checkbox"/> other _____ |
| | <input type="checkbox"/> construction | <input type="checkbox"/> educational institution | <input type="checkbox"/> other _____ |
| | <input type="checkbox"/> beverages/bottling/brewing | | |

APPENDIX I

LOADING OF JOB ACTIVITIES FOR FOURTEEN FACTORS

TABLE XXVIII
 FACTOR 1: MANAGE INTERNAL AND
 EXTERNAL RESOURCES

| <u>LOADING</u> | <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> |
|----------------|--------------------|--|
| .840 | 61. | Obtain (contract with) outside consultants |
| .839 | 60. | Evaluate proposals from outside consultants |
| .851 | 65. | Evaluate external instructors/program resource persons |
| .822 | 64. | Obtain/hire external instructors/program resource persons |
| .784 | 68. | Contract with outside vendors (purchase materials, programs) |
| .745 | 62. | Obtain internal instructors/program resource persons |
| .708 | 63. | Evaluate internal instructors/program resource persons |
| .646 | 47. | Prepare budgets (plans) for training and development programs and projects |
| .555 | 48. | Maintain information on training and development costs and/or benefits |
| .555 | 45. | Organize and staff training and development function or department |
| .492 | 57. | Maintain records of participation in training and development programs |
| .485 | 24. | Decide whether to use an existing program, purchase an external program or create a new one to satisfy needs |
| .472 | 66. | Arrange program logistics (facilities, lodging, meals, communications, etc.) |
| .466 | 73. | Supervise the work of others (plan, organize, schedule, etc.) |

TABLE XXVIII (Continued)

| <u>LOADING</u> | <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> |
|----------------|--------------------|--|
| .451 | 52. | Prepare/disseminate internal and external training and development program announcements |
| .432 | 58. | Administer tuition reimbursement program |
| .428 | 51. | Identify and evaluate external training and development programs |
| .422 | 59. | Identify equipment and supplies required for training and development program |
| .398 | 67. | Supervise production of training and development materials (slides, films, cassettes, manuals, etc.) |
| .396 | 54. | Design or use information system for data on programs, projects, participants, instructors, materials, etc. |
| .393 | 17. | Determine appropriate sequences of courses or programs (e.g. prerequisites, curricula) |
| .388 | 13. | Evaluate "ready-made" courses or materials as to their applicability |
| .379 | 53. | Arrange for participation in external training and development programs |
| .373 | 87. | Write memos or announcements |
| .368 | 35. | Identify the impact of training and development on other personnel programs or policies |
| .363 | 34. | Identify training implications prior to implementing other personnel programs (benefit programs, recruiter training, labor relations |
| .342 | 46. | Make formal management presentation plans for training and development programs and projects etc.) |
| .334 | 33. | Evaluate training and development needs to set program priorities |
| .312 | 56. | Apply criteria for selecting program participants |
| .304 | 76. | Keep abreast of EEO/Affirmative Action regulations and related training and development practices |

TABLE XXIX
 FACTOR 2: PROGRAM DESIGN
 AND DEVELOPMENT

| <u>LOADING</u> | <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> |
|----------------|--------------------|---|
| .748 | 5. | Determine program content (topics) |
| .745 | 4. | Design specific programs to satisfy needs (e.g. management development, supervisory training, |
| .679 | 9. | Develop training materials (e.g. workbooks, exercises, cases) |
| .646 | 7. | Apply adult learning theory/instructional principles in developing program content and materials |
| .600 | 14. | Determine program structure (length, number of participants, choice of techniques, seating configurations, technical development) |
| .588 | 6. | Apply concepts of human development & growth in designing training and development programs |
| .577 | 23. | Conduct training programs/activities |
| .545 | 8. | Evaluate alternative instructional methods (e.g., videotape, roleplay, demonstration) |
| .538 | 15. | Experiment with new training and development techniques (innovate or pilot test) |
| .507 | 3. | Establish objectives for programs (e.g. behavioral or learning objectives) |
| .472 | 28. | Technique: Lecture w/wo Media |
| .444 | 24. | Decide whether to use an existing program, purchase an external program or create a new one to satisfy needs |
| .442 | 26. | Revise materials/programs based on evaluation feedback |

TABLE XXIX (Continued)

| <u>LOADING</u> | <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> |
|----------------|--------------------|--|
| .364 | 13. | Evaluate "ready-made" courses or materials as to their applicability |
| .361 | 28. | Technique: Discussions (cases, issues, etc.) |
| .359 | 25. | Design questionnaires for evaluating training and development programs (feedback) |
| .357 | 28. | Technique: Role Playing |
| .355 | 33. | Evaluate training and development needs to set program priorities |
| .353 | 22. | Develop self-assessment tools (checklists, manuals, exercises) |
| .352 | 11. | Write cases based on personal experiences or observation (research) |
| .337 | 30. | Identify training and development needs through interviews or informal discussions |
| .336 | 17. | Determine appropriate sequences of courses or programs (e.g. prerequisites, curricula) |
| .328 | 28. | Technique: Films |
| .317 | 78. | Attend seminars/conferences on training and development (e.g., ASTD meetings) |
| .315 | 80. | Attend seminars/conferences for your own professional development |
| .314 | 10. | Prepare scripts (for films, videotapes, etc.) |
| .310 | 28. | Technique: Videotape/Closed Circuit TV |
| .305 | 70. | Operate audio-visual equipment |

TABLE XXX

FACTOR 3: TRAINING
RESEARCH

| <u>LOADING</u> | <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> |
|----------------|--------------------|---|
| .781 | 81. | Interpret statistics and data (e.g., scatter plots, time series) |
| .727 | 82. | Present statistics and data (e.g., charts, tables) |
| .626 | 55. | Design data collection procedures to maintain privacy or confidentiality |
| .597 | 43. | Interpret data/statistics on training and development |
| .557 | 83. | Write reports on manuals relating to training and development |
| .532 | 88. | Administer achievement tests/aptitude tests/questionnaires |
| .491 | 29. | Identify training and development needs through questionnaire surveys (perceived needs, attitudes) |
| .483 | 86. | Write articles (for periodicals, internal publications) |
| .482 | 54. | Design or use information system for data on programs, projects, participants, instructors, materials, etc. |
| .413 | 56. | Apply criteria for selecting program participants |
| .365 | 75. | Communicate with government personnel on training and development matters (e.g., meetings, conversations, correspondence) |
| .360 | 85. | Write speeches relating to training and development |
| .355 | 31. | Identify training and development needs through analysis of job requirements (job descriptions, task analysis, observation, etc.) |

TABLE XXX (Continued)

| <u>LOADING</u> | <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> |
|----------------|--------------------|---|
| .355 | 77. | Keep abreast of OSHA regulations and related training and development practices |
| .352 | 84. | Write proposals for programs or projects |
| .311 | 49. | Assess performance before and after training to measure training effects |
| .304 | 48. | Maintain information on training and development costs and/or benefits |

TABLE XXXI

FACTOR 4: PROFESSIONAL
DEVELOPMENT

| <u>LOADING</u> | <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> |
|----------------|--------------------|---|
| .710 | 78. | Attend seminars/conferences on training and development (e.g., ASTD meetings) |
| .691 | 80. | Attend seminars/conferences for your own professional development |
| .644 | 79. | Keep abreast of training and development concepts, theory, techniques, and approaches |
| .656 | 74. | Keep abreast of training and development activities in other organizations (e.g., competitors, other local firms) |
| .582 | 75. | Communicate with government personnel on training and development matters (e.g., meetings, conversations, correspondence) |
| .412 | 19. | Train managers and supervisors how to train |
| .393 | 85. | Write speeches relating to training and development |
| .381 | 18. | Train or coach trainers/program leaders |
| .369 | 15. | Experiment with new training and development techniques (innovate or pilot test) |
| .356 | 86. | Write articles (for periodicals, internal publications) |
| .353 | 16. | Develop program or courses in collaboration w/ colleges, universities, or other institutions. |
| .329 | 77. | Keep abreast of OSHA regulations and related training and development practices |
| .322 | 76. | Keep abreast of EEO/Affirmative Action regulations and related training and development practices |
| .313 | 38. | Counsel individuals on career development |

TABLE XXXII

FACTOR 5: MANAGE WORKING RELATION-
SHIPS WITH MANAGEMENT

| <u>LOADING</u> | <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> |
|----------------|--------------------|--|
| .722 | 39. | Establish and maintain good working relationships with managers as clients |
| .688 | 40. | Explain recommendations to gain acceptance for them |
| .531 | 46. | Make formal management presentation plans for training and development programs and projects |
| .479 | 84. | Write proposals for programs or projects |
| .464 | 72. | Counsel with managers and supervisors on training and development |
| .450 | 51. | Identify and evaluate external training and development programs |
| .430 | 42. | Assist others in implementing training and development programs |
| .358 | 85. | Write speeches relating to training and development |
| .340 | 41. | Assist managers in implementing on-the-job training |
| .335 | 13. | Evaluate "ready-made" courses or materials as to their applicability |
| .328 | 44. | Project future training needs (relating to management succession, organization change etc.) |
| .307 | 48. | Maintain information on training and development costs and/or benefits |

TABLE XXXIII

FACTOR 6: INDIVIDUAL DEVELOPMENT
PLANNING AND COUNSELING

| <u>LOADING</u> | <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> |
|----------------|--------------------|--|
| .584 | 52. | Prepare/disseminate internal and external training and development program announcements |
| .572 | 57. | Maintain records of participation in training and development programs |
| .539 | 53. | Arrange for participation in external training and development programs |
| .503 | 71. | Counsel with employees on training and development matters |
| .474 | 50. | Establish/maintain a library (training resources, career development information) |
| .463 | 56. | Apply criteria for selecting program participants |
| .462 | 58. | Administer tuition reimbursement program |
| .381 | 51. | Identify and evaluate external training and development programs |
| .374 | 28. | Technique: Discussions (cases, issues, etc.) |
| .353 | 72. | Counsel with managers and supervisors on training and development |
| .334 | 59. | Identify equipment and supplies required for training and development program |
| .331 | 20. | Develop criteria for selecting program participants |
| .320 | 49. | Assess performance before and after training |

TABLE XXXIII

| <u>LOADING</u> | <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> |
|----------------|--------------------|--|
| .320 | 14. | Determine program structure (length, number of participants, choice of techniques, seating configurations) |
| .312 | 37. | Determine managerial/employee awareness of the availability of programs |
| .307 | 24. | Decide whether to use an existing program, purchase an external program or create a new one to satisfy needs |

TABLE XXXIV

FACTOR 7: PLANNING FOR
TRAINING PERFORMANCES

| <u>LOADING</u> | <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> |
|----------------|--------------------|--|
| .680 | 35. | Identify the impact of training and development on other personnel programs or policies |
| .661 | 34. | Identify training implications prior to implementing other personnel programs (benefit programs, recruiter training, labor relations etc.) |
| .542 | 44. | Project future training needs (relating to management succession, organization change etc.) |
| .465 | 38. | Counsel individuals on career development |
| .434 | 28. | Technique: Job Rotation |
| .434 | 27. | Analyze performance problems to determine any applicable training and development solutions |
| .395 | 16. | Develop program or courses in collaboration w/ colleges, universities, or other institutions |
| .365 | 41. | Assist managers in implementing on-the-job training |
| .331 | 37. | Determine managerial/employee awareness of the availability of programs |
| .331 | 20. | Develop criteria for selecting program participants |
| .309 | 77. | Keep abreast of OSHA regulations and related training and development practices |
| .307 | 76. | Keep abreast of EEO/Affirmative Action regulations and related training and development practices |
| .303 | 56. | Apply criteria for selecting program participants |

TABLE XXXV

FACTOR 8: GROUP AND ORGANIZATION
DEVELOPMENT

| <u>LOADING</u> | <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> |
|----------------|--------------------|--|
| .673 | 28. | Technique: Organization Development Techniques |
| .613 | 36. | Use organization development intervention techniques (e.g., team building, inter-group meetings) |
| .572 | 28. | Technique: Coaching/Counseling |
| .569 | 28. | Technique: Simulation/Advanced Gaming |
| .496 | 28. | Technique: Laboratory Education/Sensitivity Training |
| .423 | 28. | Technique: Job Rotation |
| .405 | 28. | Technique: Role Playing |
| .312 | 19. | Train managers and supervisors how to train |

TABLE XXXVI
 FACTOR 9: NEEDS ANALYSIS
 AND DIAGNOSIS

| <u>LOADING</u> | <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> |
|----------------|--------------------|--|
| .706 | 2. | Conduct needs analysis interviews |
| .529 | 1. | Construct questionnaires for analysis of training & development needs |
| .503 | 30. | Identify training and development needs through interviews or informal discussions |
| .394 | 27. | Analyze performance problems to determine any applicable training and development solutions |
| .375 | 29. | Identify training and development needs through questionnaire surveys (perceived needs, attitudes) |
| .358 | 25. | Design questionnaires for evaluating training and development programs (feedback) |
| .345 | 3. | Establish objectives for programs (e.g. behavioral or learning objectives) |
| .339 | 49. | Assess performance before and after training to measure training effects |
| .305 | 19. | Train managers and supervisors how to train |
| .301 | 33. | Evaluate training and development needs to set program priorities |

TABLE XXXVII
 FACTOR 10: JOB/PERFORMANCE
 RELATED TRAINING

| <u>LOADING</u> | <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> |
|----------------|--------------------|--|
| .616 | 28. | Technique: Programmed Instruction/ Self-Instruction |
| .588 | 28. | Technique: On-the -Job Training/ Job Instruction Training |
| .569 | 32. | Identify skills and knowledge requirements of jobs |
| .542 | 31. | Identify training and development needs through analysis of job requirements (job descriptions, task analysis, observation, etc. |
| .455 | 12. | Develop programmed learning or computer- managed instructional materials |
| .409 | 41. | Assist managers in implementing on-the-job training |
| .313 | 42. | Assist others in implementing training and development programs |

TABLE XXXVIII

FACTOR 11: DEVELOP MATERIAL
RESOURCES

| <u>LOADING</u> | <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> |
|----------------|--------------------|---|
| .625 | 10. | Prepare scripts (for films, videotapes, etc.) |
| .496 | 28. | Technique: Videotape/Closed Circuit TV |
| .462 | 28. | Technique: Films |
| .444 | 11. | Write cases based on personal experiences or observation (research) |
| .374 | 12. | Develop programmed learning or computer-managed instructional materials |
| .319 | 28. | Technique: Simulation/Advanced Gaming |
| .312 | 28. | Technique: Role Playing |
| .301 | 9. | Develop training materials (e.g. workbooks, exercises, cases) |

TABLE XXXIX
 FACTOR 12: CONDUCT AND PREPARE
 FOR CLASSROOM TRAINING

| <u>LOADING</u> | <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> |
|----------------|--------------------|--|
| .663 | 70. | Operate audio-visual equipment |
| .649 | 69. | Prepare artwork and copy for slides |
| .409 | 59. | Identify equipment and supplies required for training and development program |
| .384 | 67. | Supervise production of training and development materials (slides, films, cassettes, manuals, etc.) |
| .357 | 66. | Arrange program logistics (facilities, lodging, meals, communications, etc.) |
| .304 | 28. | Technique: Discussions (cases, issues, etc.) |

TABLE XL
FACTOR 13: DEVELOP EVALUA-
TION METHODS

| <u>LOADING</u> | <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> |
|----------------|--------------------|---|
| .701 | 22. | Develop self-assessment tools (checklists, manuals, exercises) |
| .638 | 21. | Develop exercises and tests for measurement of learning |
| .394 | 25. | Design questionnaires for evaluating training and development programs (feedback) |
| .350 | 26. | Revise materials/programs based on evaluation feedback |
| .326 | 85. | Write speeches relating to training and development |

TABLE XLI
FACTOR 14: DETERMINE COURSE
CRITERIA

| <u>LOADING</u> | <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> |
|----------------|--------------------|--|
| .451 | 17. | Determine appropriate sequences of courses or programs (e.g. prerequisites, curricula) |
| .402 | 18. | Train or coach trainers/program leaders |
| .341 | 12. | Develop programmed learning or computer-managed instructional materials |
| .319 | 45. | Organize and staff training and development function or department |
| .316 | 20. | Develop criteria for selecting program participants |
| .313 | 15. | Experiment with new training and development techniques (innovate or pilot test) |

APPENDIX J

COMPARISON OF FACTOR ANALYSIS BETWEEN
PRESENT STUDY AND PINTO
AND WALKER STUDY

TABLE XLII

COMPARISON OF FACTOR ANALYSIS BETWEEN PRESENT
STUDY AND PINTO AND WALKER STUDY FACTOR 1:
MANAGE INTERNAL AND EXTERNAL RESOURCES

| <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> | <u>PINTO & WALKER FACTOR TWO & TEN</u> | |
|--------------------|--|--|---|
| 61. | Obtain (contract with) outside consultants | X | |
| 60. | Evaluate proposals from outside consultants | X | |
| 65. | Evaluate external instructors/program resource persons | X | |
| 64. | Obtain/hire external instructors/program resource persons | X | |
| 68. | Contract with outside vendors (purchase materials, programs) | X | |
| 62. | Obtain internal instructors/program resource persons | X | X |
| 63. | Evaluate internal instructors/program resource persons | X | X |
| 47. | Prepare budgets (plans) for training and development programs and projects | | |
| 48. | Maintain information on training and development costs and/or benefits | | |
| 45. | Organize and staff training and development function or department | | |
| 57. | Maintain records of participation in training and development programs | | |
| 24. | Decide whether to use an existing program, purchase an external program or create a new one to satisfy needs | X | |
| 66. | Arrange program logistics (facilities, lodging, meals, communications, etc.) | X | |
| 73. | Supervise the work of others (plan, organize, schedule, etc.) | | |

TABLE XLII (Continued)

| <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> | <u>PINTO & WALKER FACTOR TWO & TEN</u> |
|--------------------|--|--|
| 52. | Prepare/disseminate internal and external training and development program announcements | X |
| 58. | Administer tuition reimbursement program | |
| 51. | Identify and evaluate external training and development programs | X |
| 59. | Identify equipment and supplies required for training and development program | |
| 67. | Supervise production of training and development materials (slides, films, cassettes, manuals, etc.) | |
| 54. | Design or use information system for data on programs, projects, participants, instructors, materials, etc. | |
| 17. | Determine appropriate sequences of courses or programs (e.g. prerequisites, curricula) | |
| 13. | Evaluate "ready-made" courses or materials as to their applicability | X |
| 53. | Arrange for participation in external training and development programs | X |
| 87. | Write memos or announcements | |
| 35. | Identify the impact of training and development on other personnel programs or policies | |
| 34. | Identify training implications prior to implementing other personnel programs (benefit programs, recruiter training, labor relations | |
| 46. | Make formal management presentation plans for training and development programs and projects etc.) | |
| 33. | Evaluate training and development needs to set program priorities | |
| 56. | Apply criteria for selecting program participants | |
| 76. | Keep abreast of EEO/Affirmative Action regulations and related training and development practices | |

TABLE XLIII

COMPARISON OF FACTOR ANALYSIS BETWEEN PRESENT
STUDY AND PINTO AND WALKER STUDY FACTOR 2:
PROGRAM DESIGN AND DEVELOPMENT

| <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> | <u>PINTO & WALKER FACTOR ONE & FOURTEEN</u> | |
|--------------------|---|---|---|
| 5. | Determine program content (topics) | X | |
| 4. | Design specific programs to satisfy needs (e.g. management development, supervisory training, | X | |
| 9. | Develop training materials (e.g. workbooks, exercises, cases) | X | |
| 7. | Apply adult learning theory/instructional principles in developing program content and materials | X | |
| 14. | Determine program structure (length, number of participants, choice of techniques, seating configurations, technical development) | X | |
| 6. | Apply concepts of human development & growth in designing training and development programs | X | |
| 23. | Conduct training programs/activities | X | |
| 8. | Evaluate alternative instructional methods (e.g., videotape, roleplay, demonstration) | X | X |
| 15. | Experiment with new training and development techniques (innovate or pilot test) | X | |
| 3. | Establish objectives for programs (e.g. behavioral or learning objectives) | X | |
| 28. | Technique: Lecture w/wo Media | | |
| 24. | Decide whether to use an existing program, purchase an external program or create a new one to satisfy needs | X | |
| 26. | Revise materials/programs based on evaluation feedback | X | |

TABLE XLIII (Continued)

| <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> | <u>PINTO & WALKER FACTOR ONE & FOURTEEN</u> |
|--------------------|--|---|
| 13. | Evaluate "ready-made" courses or materials as to their applicability | X |
| 28. | Technique: Discussions (cases, issues, etc.) | |
| 25. | Design questionnaires for evaluating training and development programs (feedback) | X |
| 28. | Technique: Role Playing | |
| 33. | Evaluate training and development needs to set program priorities | |
| 22. | Develop self-assessment tools (checklists, manuals, exercises) | X |
| 11. | Write cases based on personal experiences or observation (research) | X |
| 30. | Identify training and development needs through interviews or informal discussions | |
| 17. | Determine appropriate sequences of courses or programs (e.g. prerequisites, curricula) | X |
| 28. | Technique: Films | |
| 78. | Attend seminars/conferences on training and development (e.g., ASTD meetings) | |
| 80. | Attend seminars/conferences for your own professional development | |
| 10. | Prepare scripts (for films, videotapes, etc.) | |
| 28. | Technique: Videotape/Closed Circuit TV | X |
| 70. | Operate audio-visual equipment | |

TABLE XLIV

COMPARISON OF FACTOR ANALYSIS BETWEEN PRESENT
STUDY AND PINTO AND WALKER STUDY FACTOR 3:
TRAINING RESEARCH

| <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> | <u>PINTO & WALKER FACTOR FIVE</u> |
|--------------------|---|---|
| 81. | Interpret statistics and data (e.g., scatter plots, time series) | X |
| 82. | Present statistics and data (e.g., charts, tables) | X |
| 55. | Design data collection procedures to maintain privacy or confidentiality | X |
| 43. | Interpret data/statistics on training and development | X |
| 83. | Write reports on manuals relating to training and development | X |
| 88. | Administer achievement tests/aptitude tests/questionnaires | |
| 29. | Identify training and development needs through questionnaire surveys (perceived needs, attitudes) | |
| 86. | Write articles (for periodicals, internal publications) | X |
| 54. | Design or use information system for data on programs, projects, participants, instructors, materials, etc. | X |
| 56. | Apply criteria for selecting program participants | |
| 75. | Communicate with government personnel on training and development matters (e.g., meetings, conversations, correspondence) | X |
| 85. | Write speeches relating to training and development | X |
| 31. | Identify training and development needs through analysis of job requirements (job descriptions, task analysis, observation, etc.) | |

TABLE XLIV (Continued)

| <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> | <u>PINTO & WALKER FACTOR FIVE</u> |
|--------------------|---|---|
| 77. | Keep abreast of OSHA regulations and related training and development practices | X |
| 84. | Write proposals for programs or projects | X |
| 49. | Assess performance before and after training to measure training effects | |
| 48. | Maintain information on training and development costs and/or benefits | |

TABLE XLV

COMPARISON OF FACTOR ANALYSIS BETWEEN PRESENT
STUDY AND PINTO AND WALKER STUDY FACTOR 4:
PROFESSIONAL DEVELOPMENT

| <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> | <u>PINTO & WALKER FACTOR EIGHT & FIVE</u> |
|--------------------|---|---|
| 78. | Attend seminars/conferences on training and development (e.g., ASTD meetings) | X |
| 80. | Attend seminars/conferences for your own professional development | X |
| 79. | Keep abreast of training and development concepts, theory, techniques, and approaches | X |
| 74. | Keep abreast of training and development activities in other organizations (e.g., competitors, other local firms) | X |
| 75. | Communicate with government personnel on training and development matters (e.g., meetings, conversations, correspondence) | X |
| 19. | Train managers and supervisors how to train | |
| 85. | Write speeches relating to training and development | X |
| 18. | Train or coach trainers/program leaders | |
| 15. | Experiment with new training and development techniques (innovate or pilot test) | |
| 86. | Write articles (for periodicals, internal publications) | X |
| 16. | Develop program or courses in collaboration w/ colleges, universities, or other institutions. | |
| 77. | Keep abreast of OSHA regulations and related training and development practices | X |
| 76. | Keep abreast of EEO/Affirmative Action regulations and related training and development practices | X |
| 38. | Counsel individuals on career development | |

TABLE XLVI

COMPARISON OF FACTOR ANALYSIS BETWEEN PRESENT
STUDY AND PINTO AND WALKER STUDY FACTOR 5:
MANAGE WORKING RELATIONSHIPS
WITH MANAGEMENT

| <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> | <u>PINTO & WALKER FACTOR ELEVEN & NINE</u> | |
|--------------------|--|--|---|
| 39. | Establish and maintain good working relationships with managers as clients | X | |
| 40. | Explain recommendations to gain acceptance for them | X | X |
| 46. | Make formal management presentation plans for training and development programs and projects | | X |
| 84. | Write proposals for programs or projects | | |
| 72. | Counsel with managers and supervisors on training and development | X | X |
| 51. | Identify and evaluate external training and development programs | | |
| 42. | Assist others in implementing training and development programs | | |
| 85. | Write speeches relating to training and development | | |
| 41. | Assist managers in implementing on-the-job training | | |
| 13. | Evaluate "ready-made" courses or materials as to their applicability | | |
| 44. | Project future training needs (relating to management succession, organization change etc.) | | X |
| 48. | Maintain information on training and development costs and/or benefits | | X |

TABLE XLVII

COMPARISON OF FACTOR ANALYSIS BETWEEN PRESENT
STUDY AND PINTO AND WALKER STUDY FACTOR 6:
INDIVIDUAL DEVELOPMENT PLANNING
AND COUNSELING

| <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> | <u>PINTO & WALKER FACTOR FOUR</u> |
|--------------------|--|---|
| 52. | Prepare/disseminate internal and external training and development program announcements | X |
| 57. | Maintain records of participation in training and development programs | X |
| 53. | Arrange for participation in external training and development programs | X |
| 71. | Counsel with employees on training and development matters | X |
| 50. | Establish/maintain a library (training resources, career development information) | X |
| 56. | Apply criteria for selecting program participants | X |
| 58. | Administer tuition reimbursement program | X |
| 51. | Identify and evaluate external training and development programs | X |
| 28. | Technique: Discussions (cases, issues, etc.) | |
| 72. | Counsel with managers and supervisors on training and development | X |
| 59. | Identify equipment and supplies required for training and development program | |
| 20. | Develop criteria for selecting program participants | |
| 49. | Assess performance before and after training to measure training effects | |

TABLE XLVII (Continued)

| <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> | <u>PINTO & WALKER FACTOR FOUR</u> |
|--------------------|--|---|
| 14. | Determine program structure (length, number of participants, choice of techniques, seating configurations) | |
| 37. | Determine managerial/employee awareness of the availability of programs | X |
| 24. | Decide whether to use an existing program, purchase an external program or create a new one to satisfy needs | |

TABLE XLVIII

COMPARISON OF FACTOR ANALYSIS BETWEEN PRESENT
STUDY AND PINTO AND WALKER STUDY FACTOR 7:
PLANNING FOR TRAINING PERFORMANCE

| <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> | <u>PINTO & WALKER FACTOR THREE</u> |
|--------------------|--|--|
| 35. | Identify the impact of training and development on other personnel programs or policies | X |
| 34. | Identify training implications prior to implementing other personnel programs (benefit programs, recruiter training, labor relations etc.) | X |
| 44. | Project future training needs (relating to management succession, organization change etc.) | |
| 38. | Counsel individuals on career development | |
| 28. | Technique: Job Rotation | X |
| 27. | Analyze performance problems to determine any applicable training and development solutions | X |
| 16. | Develop program or courses in collaboration w/ colleges, universities, or other institutions | |
| 41. | Assist managers in implementing on-the-job training | X |
| 37. | Determine managerial/employee awareness of the availability of programs | |
| 20. | Develop criteria for selecting program participants | |
| 77. | Keep abreast of OSHA regulations and related training and development practices | |
| 76. | Keep abreast of EEO/Affirmative Action regulations and related training and development practices | |
| 56. | Apply criteria for selecting program participants | |

TABLE XLIX

COMPARISON OF FACTOR ANALYSIS BETWEEN PRESENT
STUDY AND PINTO AND WALKER STUDY FACTOR 8:
GROUP AND ORGANIZATION DEVELOPMENT

| <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> | <u>PINTO & WALKER FACTOR SIX</u> |
|--------------------|--|--|
| 28. | Technique: Organization Development Techniques | X |
| 36. | Use organization development intervention techniques (e.g., team building, inter-group meetings) | X |
| 28. | Technique: Coaching/Counseling | X |
| 28. | Technique: Simulation/Advanced Gaming | X |
| 28. | Technique: Laboratory Education/Sensitivity Training | X |
| 28. | Technique: Job Rotation | |
| 28. | Technique: Role Playing | X |
| 19. | Train managers and supervisors how to train | |

TABLE L
 COMPARISON OF FACTOR ANALYSIS BETWEEN PRESENT
 STUDY AND PINTO AND WALKER STUDY FACTOR 9:
 NEEDS ANALYSIS AND DIAGNOSIS

| <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> | <u>PINTO & WALKER FACTOR TWELVE</u> |
|--------------------|--|---|
| 2. | Conduct needs analysis interviews | X |
| 1. | Construct questionnaires for analysis of training & development needs | X |
| 30. | Identify training and development needs through interviews or informal discussions | X |
| 27. | Analyze performance problems to determine any applicable training and development solutions | |
| 29. | Identify training and development needs through questionnaire surveys (perceived needs, attitudes) | X |
| 25. | Design questionnaires for evaluating training and development programs (feedback) | X |
| 3. | Establish objectives for programs (e.g. behavioral or learning objectives) | |
| 49. | Assess performance before and after training to measure training effects | |
| 19. | Train managers and supervisors how to train | |
| 33. | Evaluate training and development needs to set program priorities | |

TABLE LI

COMPARISON OF FACTOR ANALYSIS BETWEEN PRESENT
STUDY AND PINTO AND WALKER STUDY FACTOR 10:
JOB PERFORMANCE RELATED TRAINING

| <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> | <u>PINTO & WALKER FACTOR THREE & FOURTEEN</u> | |
|--------------------|--|---|---|
| 28. | Technique: Programmed Instruction/ Self-Instruction | X | X |
| 28. | Technique: On-the -Job Training/ Job Instruction Training | X | |
| 32. | Identify skills and knowledge requirements of jobs | X | |
| 31. | Identify training and development needs through analysis of job requirements (job descriptions, task analysis, observation, etc. | X | |
| 12. | Develop programmed learning or computer- managed instructional materials | | X |
| 41. | Assist managers in implementing on-the-job training | X | |
| 42. | Assist others in implementing training and development programs | X | |

TABLE LII

COMPARISON OF FACTOR ANALYSIS BETWEEN PRESENT
STUDY AND PINTO AND WALKER STUDY FACTOR 11:
DEVELOP MATERIAL RESOURCES

| <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> | <u>PINTO & WALKER FACTOR SEVEN & SIX</u> |
|--------------------|---|--|
| 10. | Prepare scripts (for films, videotapes, etc.) | X |
| 28. | Technique: Videotape/Closed Circuit TV | |
| 28. | Technique: Films | |
| 11. | Write cases based on personal experiences or observation (research) | |
| 12. | Develop programmed learning or computer- managed instructional materials | X |
| 28. | Technique: Simulation/Advanced Gaming | X |
| 28. | Technique: Role Playing | X |
| 9. | Develop training materials (e.g. workbooks, ex- ercises, cases) | X |

TABLE LIII

COMPARISON OF FACTOR ANALYSIS BETWEEN PRESENT
STUDY AND PINTO AND WALKER STUDY FACTOR 12:
CONDUCT AND PREPARE FOR CLASSROOM
TRAINING

| <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> | <u>PINTO & WALKER FACTOR THIRTEEN & SEVEN</u> | |
|--------------------|--|---|---|
| 70. | Operate audio-visual equipment | X | X |
| 69. | Prepare artwork and copy for slides | | X |
| 59. | Identify equipment and supplies required for training and development program | | X |
| 67. | Supervise production of training and development materials (slides, films, cassettes, manuals, etc.) | | X |
| 66. | Arrange program logistics (facilities, lodging, meals, communications, etc.) | X | |
| 28. | Technique: Discussions (cases, issues, etc.) | X | |

TABLE LIV

COMPARISON OF FACTOR ANALYSIS BETWEEN PRESENT
STUDY AND PINTO AND WALKER STUDY FACTOR 13:
DEVELOP EVALUATION METHODS

| <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> | <u>PINTO & WALKER FACTOR ONE</u> |
|--------------------|---|--|
| 22. | Develop self-assessment tools (checklists, manuals, exercises) | X |
| 21. | Develop exercises and tests for measurement of learning | X |
| 25. | Design questionnaires for evaluating training and development programs (feedback) | X |
| 26. | Revise materials/programs based on evaluation feedback | X |
| 85. | Write speeches relating to training and development | |

TABLE LV

COMPARISON OF FACTOR ANALYSIS BETWEEN PRESENT
STUDY AND PINTO AND WALKER STUDY FACTOR 14:
DETERMINE COURSE CRITERIA

| <u>ITEM NUMBER</u> | <u>JOB ACTIVITY</u> | PINTO & WALKER No Factor Similar |
|--------------------|--|-------------------------------------|
| 17. | Determine appropriate sequences of courses or programs (e.g. prerequisites, curricula) | |
| 18. | Train or coach trainers/program leaders | |
| 12. | Develop programmed learning or computer-managed instructional materials | |
| 45. | Organize and staff training and development function or department | |
| 20. | Develop criteria for selecting program participants | |
| 15. | Experiment with new training and development techniques (innovate or pilot test) | |

APPENDIX K

IDENTIFICATION OF YEARS IN TRAINING AND
DEVELOPMENT, YEARS IN PRESENT ORGANI-
ZATION, LEVEL OF EDUCATION, AND
MAJOR FIELD OF STUDY

TABLE LVI
IDENTIFICATION OF NUMBER OF YEARS IN TRAINING
AND DEVELOPMENT

| <u>Number of Years</u> | <u>Frequency</u> | <u>Percentage</u> |
|------------------------|------------------|-------------------|
| 0 - 4 | 35 | 21% |
| 5 - 10 | 79 | 47 |
| 11 - 24 | 47 | 28 |
| 25 or more | 5 | 3 |
| No Response | <u>3</u> | <u>1</u> |
| | 169 | 100% |

TABLE LVII
IDENTIFICATION OF NUMBER OF YEARS IN
PRESENT ORGANIZATION

| <u>Number of Years</u> | <u>Frequency</u> | <u>Percentage</u> |
|------------------------|------------------|-------------------|
| 0 - 4 | 83 | 49% |
| 5 - 10 | 48 | 29 |
| 11 - 24 | 22 | 13 |
| 25 or more | 9 | 5 |
| No Response | <u>7</u> | <u>4</u> |
| | 169 | 100% |

TABLE LVIII
IDENTIFICATION OF LEVEL
OF EDUCATION

| <u>Level of Education</u> | <u>Frequency</u> | <u>Percentage</u> |
|---------------------------|------------------|-------------------|
| Some College | 9 | 5% |
| Associate Degree | 1 | 1 |
| Bachelor Degree | 17 | 10 |
| Some Graduate Study | 28 | 16 |
| Master's Degree | 64 | 38 |
| Doctorate | 45 | 27 |
| No Response | <u>5</u> | <u>3</u> |
| | 169 | 100% |

TABLE LVIX
 IDENTIFICATION OF MAJOR FIELD
 OF STUDY

| <u>Major</u> | Degree and Frequency | | |
|---------------------------|----------------------|-----------------|------------------|
| | <u>Bachelor's</u> | <u>Master's</u> | <u>Doctorate</u> |
| Business | 34 | 39 | 13 |
| Psychology | 21 | 14 | 6 |
| Secondary Education | 9 | | |
| Administration | | 24 | |
| Continuing Ed/Higher Ed | | | 23 |
| English | 7 | 4 | |
| Communications | 6 | | |
| Sociology | 5 | 5 | |
| Guidance Counseling | | 7 | |
| Math/Physics | 5 | | |
| Human Resource Management | | 5 | 2 |
| Engineering | 5 | | |

APPENDIX L
HYPOTHESES ONE -
LSD TESTS

Null Hypotheses One is rejected when considering the years in training and development with Factor One. The alternative hypotheses is that there is a significant difference in the years in training and development and Factor One, Manage Internal and External Resources.

TABLE LX
YEARS IN TRAINING AND DEVELOPMENT AND
FACTOR 1: MANAGE INTERNAL AND
EXTERNAL RESOURCES

| <u>Mean</u> | <u>N Years in T&D</u> | <u>Years</u> |
|-------------|---------------------------|--------------|
| 3.1623 | 79 | 5 - 10 ** |
| 2.9647 | 5 | 25 or more |
| 2.8627 | 48 | 11 - 24 |
| 2.7479 | 35 | 0 - 4 |

**LSD TEST: The difference can be identified between those in training and development from 5 - 10 years and those in training and development 0 - 4 years and 11 - 24 years.

Null Hypotheses One is rejected when considering the years in training and development with Factor Seven. The alternative hypotheses is that there is a significant difference in the years in training and development and Factor Seven, Planning for Training Performance. The following table illustrates where those differences can be identified.

TABLE LXI
YEARS IN TRAINING AND DEVELOPMENT
AND FACTOR 7: PLANNING FOR
TRAINING PERFORMANCE

| <u>Mean</u> | <u>N Years in T&D</u> | <u>Years</u> |
|-------------|---------------------------|--------------|
| 2.2269 | 78 | 5 - 10** |
| 2.1600 | 5 | 25 or more |
| 1.9064 | 47 | 11 - 24 |
| 1.7200 | 35 | 0 - 4 |

**LSD TEST: The difference can be identified between those in training and development from 5 - 10 years and those in training and development 11 - 24 years.

Null Hypotheses One is rejected when considering the years in training and development with Factor Nine. The alternative hypotheses is that there is a significant difference in the years in training and development and Factor Nine, Needs Analysis and Diagnosis. The following table illustrates where those differences can be identified.

TABLE LXII
YEARS IN TRAINING AND DEVELOPMENT
AND FACTOR 9: NEEDS ANALYSIS
AND DIAGNOSIS

| <u>Mean</u> | <u>N Years in T&D</u> | <u>Years</u> |
|-------------|---------------------------|--------------|
| 3.1880 | 78 | 5 - 10** |
| 2.9787 | 47 | 11 - 24 |
| 2.8000 | 5 | 25 or more |
| 2.5907 | 34 | 0 - 4 |

**LSD TEST: The difference can be identified between those in training and development from 5 - 10 years and those in training and development 0 - 4 years.

Null Hypotheses One is rejected when considering the years in training and development with Factor Twelve. The alternative hypotheses is that there is a significant difference in the years in training and development and Factor Twelve, Conduct and Prepare for Classroom Training. The following table illustrates where those differences can be identified.

TABLE LXIII
YEARS IN TRAINING AND DEVELOPMENT FACTOR
12: CONDUCT AND PREPARE FOR
CLASSROOM TRAINING

| <u>Mean</u> | <u>N Years in T&D</u> | <u>Years</u> |
|-------------|---------------------------|--------------|
| 3.0633 | 79 | 5 - 10** |
| 2.6471 | 34 | 0 - 4 |
| 2.5390 | 47 | 11 - 24 |
| 2.3333 | 5 | 25 or more |

**LSD TEST: The difference can be identified between those in training and development from 5 - 10 years and those in training and development 11 - 24 years.

Null Hypotheses One is rejected when considering the years in training and development with Factor Thirteen. The alternative hypotheses is that there is a significant difference in the years in training and development and Factor Thirteen, Develop Evaluation Methods. The following table illustrates where those differences can be identified.

TABLE LXIV
YEARS IN TRAINING AND DEVELOPMENT AND
FACTOR 13: DEVELOP EVALUATION
METHODS

| <u>Mean</u> | <u>N Years in T&D</u> | <u>Years</u> |
|-------------|---------------------------|--------------|
| 2.9160 | 78 | 5 - 10** |
| 2.8889 | 5 | 25 or more |
| 2.5143 | 35 | 0 - 4 |
| 2.5106 | 47 | 11 - 24 |

**LSD TEST: The difference can be identified between those in training and development from 5 - 10 years and those in training and development 0 - 4 years and 11 - 24 years.

Null Hypotheses One is rejected when considering the years in training and development with Factor Fourteen. The alternative hypothesis is that there is a significant difference in the years in training and development and Factor Fourteen, Determine Course Criteria. The following table illustrates where those differences can be identified.

TABLE LXV
YEARS IN TRAINING AND DEVELOPMENT AND
FACTOR 14: DETERMINE COURSE
CRITERIA

| <u>Mean</u> | <u>N Years in T&D</u> | <u>Years</u> |
|-------------|---------------------------|--------------|
| 2.6365 | 79 | 5 - 10** |
| 2.4571 | 5 | 25 or more |
| 2.4559 | 47 | 11 - 24 |
| 2.1839 | 35 | 0 - 4 |

**LSD TEST: The difference can be identified between those in training and development from 5 - 10 years and those in training and development 0 - 4 years.

2
VITA

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Candidate for the Degree of

Doctor of Education

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