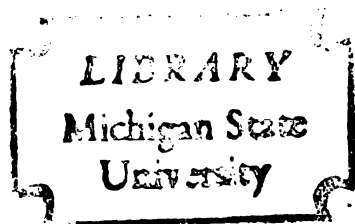
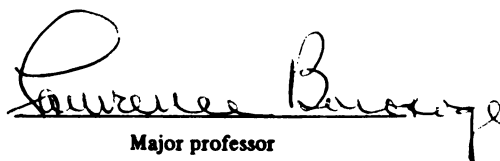


THESIS



This is to certify that the
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AN IDENTIFICATION OF OCCUPATIONAL THERAPIST COMPETENCIES
WITH IMPLICATIONS FOR LIFELONG EDUCATION
presented by
VIRGINIA KNOX WHITE

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AN IDENTIFICATION OF
OCCUPATIONAL THERAPIST COMPETENCIES
WITH IMPLICATIONS FOR LIFELONG EDUCATION

By

Virginia K. White

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Administration and Higher Education

1980

ABSTRACT

AN IDENTIFICATION OF OCCUPATIONAL THERAPIST COMPETENCIES WITH IMPLICATIONS FOR LIFELONG EDUCATION

By

Virginia K. White

Purpose of the Study

The purpose of this study was to determine the essential, supplementary and emerging competencies (skills and knowledge) needed by occupational therapists (OTs). The study focused on three major objectives: (1) to define the competencies needed by OTs; (2) to validate by obtaining consensus of members of the profession as to the essential, supplementary and emerging competencies needed by OTs; and (3) to derive an educational model for lifelong professional development from the implications of the data analysis.

Methodology for the Study

A three phase methodology was used to attain the stated objectives for the study. Phase One consisted of identifying a list of competencies from a literature review. In Phase Two an OCCUPATIONAL THERAPISTS' COMPETENCY INVENTORY was designed and pilot tested by five American Occupational Therapy Association Fellows living in Michigan. The INVENTORY contained two parts: a list of competency statements (124) and a personal data section (16 demographic variables). The Delphi procedure for obtaining opinions of a panel of experts was used in Phase Three to determine how essential panelists thought the competencies to be. Fellows of the American

Virginia K. White

Occupational Therapy Association, Curriculum Directors of programs for OTs and assistants, and a random sample of graduates within the last five years composed the panel. Opinions were obtained in two rounds, using two INVENTORIES: Round One response rate was 37% usable INVENTORIES (301), and Round Two, 76% (229). Feedback from Round One was given as means and frequency of responses in each of the five intervals of the Likert-type scale. Descriptive statistics included the semi-interquartile range, Leik Formula, Multivariate Analysis of Variance, Univariate F Test, Roy-Bargman Stepdown F Test and the mean, to report the findings.

Conclusions of the Study

The findings of the study supported the following conclusions:

The EMERGING Competencies which were considered ESSENTIAL at entry level were in Direct Client Service (3), Occupational Therapy Theory (2), Indirect Client Service (8) and OTs in the Schools (3). Specifically, these were the following: applying OT to clients with or without disabilities; developing functional living programs with team members; applying purpose of adaptive devices to client's needs; distortion of occupation lifelong; use of occupation in health problems; building trusting relationships; team working; identifying community resources; applying OT theory in schools; analyzing behavioral theories; maintaining professionalism; initiating and directing one's professional growth; and articulating uniqueness of OT. The EMERGING ESSENTIAL Competencies did not represent technical changes in skills but reflected a response to social and political pressures.

Virginia K. White

Across all panelists the proportions of competencies that reached consensus as ESSENTIAL were 60%; SUPPLEMENTARY, 0%; and EMERGING, 28%. The two panelist groups viewed the competencies in the INVENTORY as a whole differently. Fellows and Curriculum Directors considered Direct Client Services, Life Tasks and Activities, Basic Human Sciences, Health-Illness-Health, OT Theory, and Human Development more essential. Recent Graduates considered EMERGING Competencies in Indirect Client Services and OT in the Schools more essential.

Significant differences were found between competency scales and demographic variables of education, years in practice, work setting and work functions. This applied to the whole INVENTORY also.

The Delphi procedure was useful in obtaining consensus of panelists. Scales with lowest consensus were mostly EMERGING ones having low scale means indicating less agreement on competencies ranked less essential.

Implications of this study are for a dynamic lifelong professional development model in which people move in and out of formal and nonformal learning experiences as best meets their personal and professional needs without regard for age or other stereotypic conceptions.

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The completion of a doctoral study is the culmination of many years of formal and nonformal education. Although intrinsically the effort is a solitary one, it cannot be accomplished without "significant others" in one's home, work, and educational environments. To these special persons I offer a humble thanks and gratitude for each person's unique contribution.

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TABLE OF CONTENTS

	<u>Page</u>
LIST OF TABLES	1
LIST OF FIGURES	1
CHAPTER I. THE PROBLEM	1
Introduction	1
Background	1
Statement of the Problem	5
Research Questions	6
Significance of the Study	7
Purpose of the Study	8
Basic Assumptions for the Study	8
Delimitations of the Study	9
Definition of Terms	10
Footnotes	12
CHAPTER II. REVIEW OF LITERATURE	13
Competency-based Education	13
Occupational Therapy Literature	27
AOTA Essentials of an Accredited Educational Program for the Occupational Therapist	27
Occupational Therapy Literature Related to Philosophy, Principles and Theory	32
Summary of Occupational Therapy Literature Related to Philosophy, Principles and Theory	41
General Competencies Within the AOTA Essentials	43
Literature References to Educational Areas	44
Literature Related to Emerging Competencies	47
Opinions of Leaders in Occupational Therapy from the Representative Assembly Session in November, 1978	55
Implications of Social Policy Legislation	60
PL 93-112: The Rehabilitation Act of 1973, Amendments of 1978	61
PL 94-142: Education of All Handicapped Children Act of 1975	64
PL 93-222: Health Maintenance Organization Act of 1973	67
PL 93-641: National Health Planning and Resources Development Act of 1974	71
PL 92-603: Social Security Amendments of 1972	74

TABLE OF CONTENTS (Continued)

	<u>Page</u>
CHAPTER II. REVIEW OF LITERATURE (Continued)	
Research Methodology	76
The Delphi Procedure	79
Survey Methodology	82
Footnotes	85
CHAPTER III. METHODOLOGY AND DATA COLLECTION	
Type of Study	93
Objectives	93
Research Question #1	94
Research Question #2	95
Research Question #3	95
Research Question #4	96
Research Question #5	96
Research Question #6	97
Research Question #7	99
Design of the Study	100
Population and Sample	101
Data Collection	103
Data Analysis	107
Footnotes	110
CHAPTER IV. RESEARCH FINDINGS	
Background of Sample	112
Analysis of Round One or Round Two Data	112
Data Analysis	114
Scale Formation	114
Statistical Procedures	117
Research Question #1	118
Operational Definition	118
Research Findings	119
Hypotheses Summary	119
Research Question #2	124
Operational Definition	124
Research Findings	124
Research Question #3	128
Operational Definition	128
Research Findings	128
Research Question #4	130
Research Findings	130
Hypotheses Summary	132
Research Question #5	134
Operational Definition	134
Research Findings	135
Hypotheses Summary	142

TABLE OF CONTENTS (Continued)

	<u>Page</u>
CHAPTER IV. RESEARCH FINDINGS (Continued)	
Research Question #6	142
Operational Definition	142
Research Findings	144
Hypotheses Summary of Professional Degrees	146
Research Findings	147
Hypotheses Summary of Years of Practice	152
Research Findings	152
Hypotheses Summary of Work Setting	155
Research Findings	156
Hypotheses Summary of Work Function	159
Research Question #7	162
Research Findings	162
Convergence to Consensus Between Groups	162
Summary of Research Findings	170
Footnote	170
CHAPTER V. SUMMARY, CONCLUSIONS, IMPLICATIONS AND	
RECOMMENDATIONS	171
Summary of Findings	180
Discussion and Conclusions	193
Essential Competencies	193
Supplementary Competencies	193
Emerging Competencies	194
Degree of Consensus	196
Degree of Consensus Between Groups	196
Differences Between Subpopulations	197
Differences Between Subpopulations as Total Groups	198
Change to Nontraditional Settings	198
Present Employment	199
Participation in Continuing Education	199
Discussion	199
Implications	202
Model of Lifelong Professional Development	207
Recommendations	221
To the Profession of Occupational Therapy	221
To the Educators of Occupational Therapists	223
To Future Research in the Area of OTs' Competencies	223
Footnotes	226
APPENDICES	228
Appendix A. Sources of Competencies	228
Appendix B. Tables of Variables	233
Appendix C. Participant Correspondence	237
Appendix D. Sample of Round Two Inventory	244
BIBLIOGRAPHY	268

LIST OF TABLES

<u>Table</u>	<u>Page</u>
1 Responses to the INVENTORY for Rounds One and Two . . .	105
2 INVENTORY timetable for obtaining and analyzing data. .	106
3 Summary of characteristics of panelists	113
4 Homogeneity of competencies for existing and emerging competency scales	116
5 Competencies considered ESSENTIAL by panelists	120
6 Competencies considered SUPPLEMENTARY by panelists . .	125
7 Competencies considered USEFUL BUT NOT ESSENTIAL by panelists	127
8 EMERGING Competencies: Number within scales ranked as ESSENTIAL or SUPPLEMENTARY	129
9 Summary of variables reaching consensus in each range of convergence	131
10 Summary of frequency of variables reaching consensus within ranges of consensus	131
11 Summary of all competencies by number, proportion and consensus (.77)	133
12 Percentage of ESSENTIAL and SUPPLEMENTARY competencies in Existing and Emerging scales reaching consensus of .77	133
13 Summary of test differences for each round, subpopulation and scale	160
14 Convergence to consensus	166
15 Means of scales	168
16 Change of panelist groups on scale means between rounds	167

LIST OF TABLES (Continued)

<u>Table</u>	<u>Page</u>
17 Scales identified by variable number and essentiality	178
18 Rank order of essentiality of scales by demographic group	191

Appendix B

B-1 Variables, convergence to consensus, semi-inter-quartile range, and frequencies for Rounds One and Two	233
B-2 Listing of inventory competency statement with corresponding variable number	236

LIST OF FIGURES

<u>Figure</u>		<u>Page</u>
1	Curriculum development model for proficiency education	28
2	The basis of occupational therapy - the impact of occupation on the human being	34
3	The components of occupational therapy	36
4	Role and functions of occupational therapist and occupational therapy assistant at entry level competency	40
5	Summary of data analysis	109
6	Convergence to consensus on emerging and existing scales by all panelists	164
7	Comparison of responses to competency statements in Rounds One and Two using histograms	175
8	Statistical tests used to determine differences between groups on all scales	179
9	Content of educational experiences and goals of lifelong education	209
10	Supplementary Competencies: Indirect Client Service categories, first and second choices for learning	213
11	A dynamic model of lifelong professional development	215

Chapter 1

THE PROBLEM

Introduction

This study is concerned with the educational preparation of occupational therapists (OTs) for entry into the profession. As a member of the health professions, OTs have found it necessary to adapt to changes in social policy that affect health care delivery and the lives of consumers of professional services. To do this, therapists have discovered a need for new competencies not acquired in basic professional education. Educational programs which prepare OTs for entry into the profession of therapy need to be aware of these competencies and their relative importance. The findings from this study will help the profession of occupational therapy make decisions about changing entry-level essential standards. The next section on the background for this study will enlarge upon these issues and establish the need for investigation focusing on emerging competencies of OTs.

Background

The decade of the seventies was a period of great change in health care delivery, primarily as a result of social policy legislation both at the federal and state levels of government. "Nineteen hundred and eighty marks the time of new beginnings for our nation.

The nation is undergoing a major transition in health care policy - a shift from costly disease treatment to a prevention/promotion policy."¹ As social policy shifted from a disease-oriented medical model to one of prevention, the maintenance of health presented a new location for practice of health professionals - the community and the client's home. The increase in the life span with its accompanying chronic health problems among the elderly has contributed to the challenges faced by the health practitioners and society in general, to help maintain satisfactory quality of life for adults in later years of life. Additional emphasis on quality standards for health care delivery, on accountability for services rendered and cost-benefit analysis all have had implications for providers of health care.

Throughout the history of the profession, occupational therapy has been affected by social policy changes and significant happenings within the health sector of society. Careful consideration and weighing of issues followed sensitization to changing circumstances before actual adaptations or shifts in practice occurred. For example, the shell-shocked veterans of World War I who were without an occupation, led to the psychosocial beginnings of occupational therapy -- the need to be doing something purposeful. The amputees and spinal cord injuries of World War II prompted a stronger emphasis on physical disabilities in occupational therapy. Tuberculosis and polio led to the identification of new techniques and procedures to serve these chronic patients. During the 1960's and 1970's, society's emphasis on mental retardation and other developmental disabilities resulted in occupational therapists (OTs) working in the institutions for the

mentally retarded and the school systems in increasing numbers. The 1977 member survey by the American Occupational Therapy Association (AOTA) for Michigan OTs indicated that 29% of the OTs in the state were employed in schools, the single largest location of practice.

As OTs expand their employment to the community and beyond the hospitals and rehabilitation centers to working with new populations such as the severely multiply handicapped and retarded, a need for new knowledge and skill has arisen. These educational implications have been recognized by the occupational therapy profession.

The American Occupational Therapy Association's Long Range Plan (1978)² contains a goal which speaks to the relevance of this study. It is the following:

Goal #3: To facilitate and support an educational system for occupational therapy which responds to current needs, anticipates, plans for, and accommodates to change.

This Plan also includes critical problems relative to the educational preparation of OTs, one of which is that the current "Essentials" (upon which curricula are based) offer no clear criteria relative to the academic competence of occupational therapy educators, nor to the clinical competence of students' field work supervisors, which thus varies from program to program. Although not directly related to the competency of students, this does identify a problem within the occupational therapy educational programs which has an influence on therapist's education. The Plan states, in regard to education of OTs:

"It is evident, therefore, that a dichotomy exists between 'what is' and 'what should be', and thus, by definition, there is a problem."

The issue of assuring competency through recertification is presently being addressed by the Division of Certification of AOTA. During 1976-78 the Examination Development Project from that Division engaged in a study to delineate the role of entry-level occupational therapy personnel. This information was used as a basis for developing questions for competency examination. Because of the limited scope of the roles of OTs selected for this study, no attention was given to emerging settings and foci of practice.

The profession of occupational therapy, because of the shift to a prevention model of health care, legislative demands for accountability and precision of quality care, is studying and discussing nationally issues affecting current practice and future directions for the profession. Among these are entry into the profession at the graduate level only, the therapist as technician or professional, and the direct service role, consisting of one-to-one treatment, versus the indirect, in which the therapist consults with another professional or an assistant who delivers client services. This last issue was responded to in the report of the Ad hoc Committee on Educational Standards Review, submitted to the Representative Assembly of the AOTA in April, 1980. Addressing the philosophical issue of entry-level role functions, respondents to the committee's survey endorsed the clinical practice role function for the OTR but rejected the role function of consulting, administration and supervision, community health care planning and research. They stated that these four functions necessitate either graduate level education or job experience.

At the AOTA national conference, April, 1980, the issue of entry-level standards was referred to the Ad hoc Inter-Commission Committee of AOTA to be incorporated in their effort to coordinate the selection of the most appropriate role delineation for occupational therapy for presentation to the Representative Assembly for approval in 1981. The Accreditation Committee, presently concerned with the issue of post-baccalaureate entry into the profession, has indicated interest in the results of this study for their decision-making. Since the Representative Assembly committees will be studying the entire entry-level Essentials Review over the next few years, the data from this study can be useful information for their deliberations.

A related issue which has a direct bearing on the movement of practice to the community is the payment of occupational therapy services by third party payors such as Medicare, for services provided in the community. This is one example of the influence of social policy legislation on the professional practice of OTs.

Statement of the Problem

Because the medical model is changing from disease oriented to one of prevention, and social policy legislation has mandated new health services and accountability requirements, new competencies for occupational therapy practice have emerged. This study has addressed the first step in curricular change: identification of competencies needed by OTs for practice. The problem for study was to identify those emerging competencies essential to the practice of OTs at this time.

Research Questions

The following questions arise from the problem for study:

1. What are the essential competencies needed for entry into the profession of occupational therapy?
2. What supplementary competencies may be needed for entry into the profession of occupational therapy?
3. What are the emerging competencies which OTs need to practice within changing social policies and in settings other than the traditional hospitals and rehabilitation centers, such as schools, homes, residential care facilities, health agencies, and other community locations?
4. What degree of consensus is there across members of the profession regarding the essential, supplementary and emerging competencies?
5. To what degree do Group One (Fellows and Curriculum Directors) and Group Two (Recent Graduates) agree regarding how essential the various competencies are?
6. Do significant differences exist between the competency scales?

7. Would therapists take a job in a non-traditional setting? If so, for what reasons?

Significance of the Study

As health care changes from a disease-oriented medical model to one emphasizing prevention, work settings for OTs have shifted from the hospital to the community - to homes, schools, and health agencies. The need for professional accountability, cost-benefit analysis and quality assurance measures have added dimensions to work roles for which therapists are often not prepared. Issues have arisen for therapists such as how to decide where to obtain the necessary competencies demanded in their work: through graduate education, workshops or short courses, or inservice conducted by employers. University programs in occupational therapy, although aware that more skills and knowledge need to be taught, have difficulty setting priorities among content materials and finding time to teach present courses.

The fact is that occupational therapy educational programs are basing their curricula on the AOTA Essentials of an Accredited Educational Program for the OT which were derived from the roles of OTs in the traditional model of practice which was hospital located and illness-oriented. Emerging roles require additional competencies. Also, present OTs need a lifelong educational plan to assist them in maintaining professional competency.

The profession nationally (AOTA) recognizes the need for the Essentials, for preparing OTs to meet the new Quality Review Standards,

and for maintaining certification of competency of practicing therapists. Since this study has addressed the perceptions of occupational therapists regarding present day practice competencies, it will contribute to the information needed to resolve some of the issues facing the profession in the 1980's. The lifelong education model derived from the identification of competencies can also be applied as a process to other health professions.

Purpose of the Study

It is the intent of this study to determine the essential, supplementary and emerging competencies needed by OTs, as perceived by a panel of experts, and to propose an educational model that will describe a process for acquiring and maintaining lifelong professional competency.

The following objectives will be accomplished by this study:

1. To define the competencies needed by occupational therapists.
2. To validate by obtaining consensus of members of the profession as to the ESSENTIAL, SUPPLEMENTARY, and EMERGING competencies needed by occupational therapists.
3. To derive an educational model for lifelong professional development from the data analysis.

Basic Assumptions for the Study

The following assumptions were made in order to accomplish the

objectives of this study:

1. That change is inevitable, and that the profession of occupational therapy will gradually adapt to changes in social policy related to health, adjusting its practice and educational preparation accordingly.
2. That the members of the profession - both leaders and new practitioners - are sufficiently informed to respond to statements of competency of occupational therapists at the entry-level into the profession.
3. That the occupational therapists will engage in lifelong education, either formal or non-formal, as is true of most adult professionals.
4. That since the certification and recertification process within AOTA is using competencies as a basis for examination and skill assessments, and an AOTA study of Occupational Therapy in the Schools has defined competencies for that locus of practice, it was assumed that competency-based education needed to be reviewed for this study.

Delimitations of the Study

Selected occupational therapists served as respondents to the two INVENTORIES. The essentiality of each competency was

measured only by the perceptions of these occupational therapists. It remains for additional studies to determine the perceptions of others with whom therapists have significant interaction.

Survey methodology and the Delphi procedure have inherent limitations, one of which is obtaining responses from a long questionnaire. Although the INVENTORIES in this study were long, an effort was made to restrict length by stating competencies in general terms. It was recognized that the Delphi procedure was also limiting, but was considered to be the best research method for this study.

Definition of Terms

Occupational Therapy is the art and science of directing man's participation in selecting tasks to restore, reinforce and enhance performance, facilitate learning of those skills and functions essential for adaptation and productivity, diminish or correct pathology, and to promote and maintain health. Its fundamental concern is the capacity, throughout the life span, to perform with satisfaction to self and others those tasks and roles essential to productive living and to the mastery of self and the environment.³

Occupational Therapist, Registered, is a member of the occupational therapy profession who is listed on the roster of AOTA as certified to practice as a registered occupational therapist.

Competency-based Education is a system of education based on the specification of what constitutes competency in a given field.⁴

AOTA Essentials are the Essentials of an Accredited Educational Program for the Occupational Therapists, established and adopted by the American Occupational Therapy Association, Inc., Council on Education, October, 1972, in collaboration with the American Medical Association, Council on Medical Education; adopted by the AMA House of Delegates, June, 1973.

Operational Definitions

Competencies are defined as skills, knowledge, attitudes and their usefulness to the practice of occupational therapy. Competencies have been described as generic knowledge, skills, traits, self-schema or motives of a person that are causally related to effective behavior referenced to external performance criteria.⁵

Essential Competencies are those which the panel of experts says are essential or absolutely essential (on the INVENTORY rating scale).

Supplementary Competencies are those which the panel of experts says are minimally or probably essential (on the INVENTORY rating scale).

Emerging Competencies are those competencies derived from a review of occupational therapy and other relevant literature, social policy legislation, and which are not now a part of the AOTA Essentials. The operational definition provides the criteria for determining how essential the panelists consider the emerging competencies. It is all competencies ranked as useful but not essential at entry level to absolutely essential.

Delphi Procedure is an effort to produce convergence of group consensus through a series of questionnaires dealing with future-oriented questions.⁶

Scales are combined indices or variables (competencies, in this study) which are closely related to each other. There are two different scales in this study: ⁷the Existing Competencies and the Emerging Competencies.

Chapter I has introduced the problem of the study including the background information and statement of the problem. Research questions arising from the intent of study were given as were the significance, basic assumptions, delimitations and definitions of terms. Chapter II will contain the review of the literature relevant to this study.

Footnotes

¹Canton, James. "Health Policy at the Crossroads," from Health Forecast, Vol. 1, No. 1, 1980.

²American Occupational Therapy Association's Long Range Plan, February 22, 1978.

³Occupational Therapy: Its Definition and Function. American Journal of Occupational Therapy, XXVI, 1972.

⁴May, Bella J. "Evaluation in a CBE System," Physical Therapy, LVII, (January 1977), p. 28.

⁵Klemp, George O., in Defining and Measuring Competence, edited by Pottinger and Goldsmith. California: Jossey-Bass Publishing Company, 1979, p. 42.

⁶Young, Wanda. "Family Studies Program Development at the College Level: A Delphi Study," unpublished dissertation, Michigan State University, 1977.

⁷Warwick, Donald P., and Lininger, Charles. The Sample Survey: Theory and Practice. New York: McGraw-Hill, 1975.

Chapter II

REVIEW OF LITERATURE

In this chapter the review of literature will be divided into four parts:

1. Competency-based Education (CBE)
2. Occupational Therapy literature regarding
identification of competencies
3. Social Policy Legislation
4. Research Methodology
Delphi Procedure
Survey Methodology

Competency-based Education

Since this study dealt with competencies required for professional practice, as a first step in curricular change and development, the broad area of competency-based education needed to be considered. In medical and allied health education various approaches have been used to evaluate readiness for professional practice: accreditation of education programs and credentialing of health professionals. Recently CBE has emerged as another alternative for assuring that graduates possess predetermined competence required for entry-level professional performance. Pottinger and Goldsmith⁸ state that although there may not be total agreement about the meaning of

competency, some consensus emerges about the following important aspects of the concept:

1. That it is desirable.
2. That it can be taught.
3. That it can be measured.
4. That it can have a major impact on
improving both the quality of education
and professional service.

CBE is a systematic approach to curricular design that enables the learner to progress step-by-step toward the achievement of the competency.⁹ CBE can be perceived as a very broad concept that is used as the conceptual framework for a total curriculum, or more narrowly as a framework for an individual unit of instruction.¹⁰ The broad interpretation allows the learner to be self-directed in the selection of and obtaining of goals and objectives; the narrow framework identifies the competency or outcome of learning as well as the evaluation method prior to the learning experience so that the learning strategies can be based on the performance objective.

CBE is not defined in standard dictionaries. The word competency has been interpreted to mean the "ability to do" in contrast to the more traditional emphasis on the "ability to demonstrate knowledge."¹¹ CBE is an educational approach having two primary characteristics: first, precise learning objectives defined in behavioral, assessable terms, and known to the learner and teacher alike. Competencies are first identified as general goals, then stated as performance objectives which have a stated behavior to be changed, conditions for completing the learning effort and a standard by which the learners'

performance will be judged.¹² The second characteristic is accountability: the learner knows the learning expectation, accepts responsibility for doing the activity and expects to be held accountable for meeting the established conditions.

Elam (1971)¹³ developed a list of essential elements of CBE programs:

1. Competencies are derived from the role of the practitioner, are specified in behavioral terms and are made public in advance.
2. Assessment criteria are competency based and specify expected levels of mastery and are made public.
3. Assessment of learners is based primarily on performance.
4. Learners' progress through the program depends on demonstrated competency.
5. The instructional program facilitates development and evaluation of competencies.

It is through these elements that accountability in education is possible. The identification of responsibility which is accountability has been dealt with extensively by Browder.¹⁴ He states that political, social and economic change pressures demand responsiveness to perceived problems. Universities with diminishing student enrollments are receiving complaints from practitioners (former students) that they are not prepared for the real world. Through CBE universities can seek to achieve accountability to students by basing instruction on practice-based competencies. Browder states

further that the concept of accountability looks at task definition and how work to be done is stated. Traditionally the work has been implied or stated generally, sometimes in writing and sometimes not. The emerging pattern is the use of performance objectives within a CBE program.

In the evaluation stages of instruction the fact that outcome variables have been determined in the planning phase and stated in measurable terms permits accurate evaluations of the learning outcome. Performance evaluation in CBE is done by means of criterion-referenced tests and other evaluation measures which base test items on criteria that have been determined in the performance objectives at the beginning of the course. Attainment of the predetermined standard of performance is based on performance of an individual learner. There can be little doubt at this point as to whether the learner has reached the objective defined at the start.

Nyquist¹⁵ says that evaluation not only means finding out how successful an educational activity has been, but also means comparing the costs with the benefits obtained. Cost effectiveness analyses which measure the extent to which resources allocated to a specific objective actually contribute to accomplishing that objective can be done more precisely within a CBE program where specificity is stressed.

Lessinger¹⁶ discusses accountability for results and recalls the passage of the Elementary and Secondary Education Act of 1965 as a mandate for schools to develop a "zero reject system" which would ensure that education prepare every young person for a productive life. This new objective of basic competency for all can be

accomplished through a system of quality assurance. One of the suggested ways to contribute to such a system is through CBE.

Another advantage of CBE is its relevance for the adult learner whose needs are multiple and varied. Dorothy del Bueno¹⁷ refers to the ability of adults to engage in self-directed learning which can be a part of CBE. In addition she recognizes that placing emphasis on learning - rather than on teaching, which CBE does by having the teacher's role more of a facilitator than impartor of information, is much more compatible with adult learners. If the competencies to be learned are desired, relevant and offered with positive feedback and reinforcement, the adult learner can work independently, given the resources and materials.

A CBE process model has been developed by Roberts, Cordova and Saxe.¹⁸ It is based on learning theories of CBE and it is suggested that curricula so designed will, in conjunction with accreditation and credentialing, provide another mechanism for ensuring quality in professional practice. These authors compare the characteristics of the traditional approach with those of CBE on the basis of the use of objectives, entrance requirements, class schedules, course content, locus of emphasis and student evaluation. Of these comparisons, one needs to give particular attention because they have not been mentioned by others in the literature reviewed. It is the traditional focus on instruction - on texts, teaching, tests and grades; the CBE approach directs the focus on the student and the provision of the individualized opportunities to achieve mastery. Of additional importance is student evaluation which in CBE is continuous,

with success being measured primarily by the student's ability to do the job, while traditionally it is on grades alone.

A model from the University of Texas School of Allied Health Sciences proceeds from the merging of the institutional goals with the philosophy of the professional and the department. The third step in the developmental process is the specification of entry-level roles pertinent to the OT. These authors express the following concern:

"A concern at this point is that the delineated roles and functions give realistic expectations of entry-level performance and are representative of current practices, but flexible enough to accommodate future expectations."¹⁹

A case for competency-based preparation of OTs is made by Anderson, Greer and McFadden²⁰ for those who will be working with the severely handicapped persons in the schools of the nation. It is the instructional module which "has emerged as a viable modus operandi for the implementation of competency-based teacher education." These authors refer to Meyen and Altman²¹ who list the sequence of processes used to design a competency-based teacher training program: competency identification; competency organization; specifications process to reduce competencies into training components; module development activities; module management options alternative to traditional lecture model; evaluating trainee competence through performance assessment and providing feedback on performance to trainees.

The use of instructional modules allows students to proceed at their best rate, bypassing unnecessary instruction and focusing on the needs of the learner, not the instructor. Modules emphasize

the attainment of objectives which are set when learning begins. It is the authors' opinions that proper certification and accountability in service can best be guaranteed through competency-based training programs.

Anderson, Greer and McFadden state that the profession of occupational therapy initiated a movement toward competency-based preparation of OTs in 1972 when AOTA was awarded a grant to develop the knowledge and skills essential for performance in two levels of occupational therapy personnel. In 1974 the AOTA "Curriculum Guide for Occupational Therapy Educators" published the project's results. They state that there is a need for further "development and implementation of competency-based training programs in institutions of higher education that engage in the preparation of OTs. Therapeutic objectives must be specified more systematically, learning alternatives should be provided to facilitate better student progress, and faculty and students must be held accountable for achieving the specified objectives. The 'module of instruction' may emerge as a catalyst for the implementation of training programs in occupational therapy."²²

Barris²³ postulates that CBE, because of its emphasis on stated objectives, feedback, self-evaluation, and alternative learning experiences, is an approach to curriculum design that should lead students to become more creative thinkers. The process of creative thinking and of problem-solving have been defined by theoreticians in similar terms. "When one looks at creativity as a problem-solving process entailing an attitude promoted by certain conditions, then education and curriculum assume an important role in furthering this resource in people."²⁴ Barris quotes Carl Rogers who says that a curriculum

based on humanistic principles will encourage "concern for self-direction, responsibility for one's own learning, involvement in the present learning experience, and the development of qualities like curiosity, wonder, awe, imagination, commitment, openness and respect for self and others."²⁵ While CBE need not be associated with a particular philosophy of teaching and learning, it can be congruent with humanism.²⁶

The Barris study points out that although research on the effects of CBE is nonexistent (July, 1978) one can examine studies that look at methods which might be incorporated into a competency-based program. Davies²⁷ points out that although conclusions of studies say that methods make little difference in learning, these research studies used traditional measures such as the final performance on a test to study effects. The differences, says Davies, may lie in style, motivation, level or type of objective being reached rather than cognitive achievement. Strategies used in CBE such as role-playing, case-studies, independent tutorials, programmed learning and leaderless groups can be individualized to serve the particular objective for which they are best suited. In so doing the learner is provided methods which will not only meet personal needs but also will facilitate the achievement of the performance objective. As was noted previously, the needs of adult learners are sufficiently unique that they can profit from this kind of variety offered by CBE.

Two competency-based programs are discussed in the Barris article: Oregon State University and Northwest Regional Educational Laboratory; and Weber State College in Utah. The Oregon program is a counselor training "open entry/open exit system." Two types of competencies

are involved: outcome-referenced, related to a product, and activity-referenced, related to a process. Students were highly motivated and graduates of the program met the highest performance expectations of their employers. Weber State College, one of the first teacher-preparation institutions to be committed to CBE, organized the program around five components:

1. Structured field experiences,
2. Interaction laboratory to improve interpersonal skills,
3. Weber Individualized Learning Kits,
4. A student teaching experience,
5. A post-student teaching seminar.

Problems encountered have been establishing reliability and validity in measures used to assess student performance and a need for more variety in learning experiences. Major strengths are satisfied graduates; ability to apply this method to one's own teaching; judged by school personnel to be more self-confident, adaptable, student-centered and better able to fill leadership roles than graduates of other programs. Through the systematic design the program allows for identification of its own weaknesses and for assessment of its progress.²⁸

The implications of this approach for occupational therapy education are first that OTs as educators would find themselves using the same facilitatory skills for helping students plan their programs, analyzing strengths and weaknesses, setting goals and determining paths of action to reach them (courses, modules, field work) which they would use with clients. Since other university courses could

be resources for OTs, an interdisciplinary approach to medicine and public health could be fostered. Looking at curricula in terms of competencies needed by therapists forces the profession to identify and define what makes occupational therapy different from other professions, as Wilson says, "by helping it (the profession) attain congruency; namely, to possess a clear statement of what the profession is and then, in fact, to be what it says it is."²⁹

The Barris study's review of several studies provides a rationale for experimenting with an educational program based on a problem-solving model. Also CBE can provide a new perspective for examining process and outcome in occupational therapy educational programs. Moreover the graduates of the Oregon and Utah programs in other disciplines were thought to be flexible and self-confident which are characteristics of self-reliant, autonomous people, unafraid to assert themselves and to engage in problem-solving, which are needed attributes in occupational therapy.

The issue of the congruency of education and practice was responded to by the immediate past president of the AOTA, Jerry Johnson who said the "greatest challenge immediately confronting us in the future may be related to our educational programs and their relevance to the practice of occupational therapy."³⁰ Pottinger and Goldsmith³¹ summarize the view of several prominent spokespersons on CBE in a collection of individual writings with the same realization that the gap between those who teach and those who practice needs to be narrowed. It is their thought that professionals and educators need to bring clients and students into the process of

defining competencies and entry-level standards in given fields. Although they see CBE as a fashionable bandwagon of the moment, they do acknowledge that it could have a major impact on improving both quality of education and professional service. Despite the fact that initial costs of assessment and evaluation in CBE are high, in the long run better understanding of what constitutes competency and effective delivery of service or job performance - the real costs related to competently meeting social needs as the result of better education, new job definition and improved delivery system - might be low.

Wilson³² discusses the relationship of education, practice and credentialing which are the components of professional congruency contributing to quality assurance in service delivery. Congruency is achieved only when the education of individuals preparing for the profession, those already in the field, the credentialing of educational programs and individuals, and the actual practice of the profession relate positively to one another. Competencies, according to Wilson, "are defined as those performance knowledge and skill abilities requisite for fulfilling the responsibilities of the given practitioner generic position."³³ Generic position refers to all positions of a given type in the specific professional field, such as all entry-level generalist therapists in occupational therapy.

Competency education, the second component of the competency assurance program Wilson presents, prepare the practitioner for entry-level positions. By clearly defining program goals that include professional role responsibilities, the educational faculty provides

the practice-education linkage. The determination of the role responsibilities or role delineations is, therefore, step one of a competency assurance program. By definition a role is a configuration of specific responsibilities, and role delineation is the determination of the specific responsibilities essential to practitioner goal attainment.³⁴ According to Wilson, national health professional associations have yet to put the five components of a competency assurance program together congruently; the most important error is that the first step, role delineation, has never been developed. "The total process must be goal-directed toward identification of the performance responsibilities requisite to the given generic position."³⁵ This identification process should have input from the public, other health fields, accrediting bodies and other appropriate groups. This role delineation process becomes the foundation and the goal of initial competency education. The responsibility for assessing the congruency of the educational program with the profession's role delineation falls upon the accrediting body. By affirming the validity of the program the accreditors provide accountability to students and public alike.

The American Occupational Therapy Association was engaged in a role delineation study from July, 1976 to February, 1978, to delineate the role of persons in entry-level positions, providing direct client service only. Administration, maintenance of the clinic, ordering supplies, and all other indirect services were excluded. There had been a previous role delineation study or task inventory done in 1971-72, following the Ohio State University School of Allied Medical Professions project to develop occupational therapy job

descriptions and curricula through task analysis. From these identifications of competencies the Essentials of an Accredited Educational Program for the Occupational Therapist was implemented in 1974. It is these AOTA Essentials that are the basis for achieving educational accreditation through the AOTA.

In the 1976 Anderson, Greer and McFadden study which described a competency-based preparation program for OTs working with the severely handicapped persons,³⁶ the cluster of competencies covered the demonstration of skill in the selection, administration and interpretation of evaluation tools and application of therapeutic activities or remedial techniques for clients who are severely and profoundly retarded. These were determined as actual role responsibilities in that specific practice setting which serves as an illustration of congruency between practice and education.

Other professional education programs using CBE are the University of Texas Dental School, Antioch School of Law in Washington, D.C., the doctoral program in management at Case Western Reserve and Alverno College in Milwaukee in Liberal Arts. In occupational therapy the Department of OT in the School of Allied Health Professions at the Louisiana State University Medical Center has a program which is competency-based.

Although vocational teacher education was the first to offer a vocational teacher competency profile as a part of the Performance-based Teacher Education (PBTE),³⁷ competency-based professional education in Home Economics began with the development of competencies and criteria at a national working clinic at Kansas City, February 7-10, 1977.³⁸ Dieticians have developed a CBE educational program

also. In 1974-75 a set of entry-level competencies were selected from a Study Commission, American Dietetics Association's Plan IV and other documents.

Competency-based curricula have been implemented at the Medical College of Georgia to prepare students to meet entry-level competencies as physical therapists.³⁹ Criteria-referenced evaluations are used to determine if students have achieved the desired competencies. The impact of the program has been favorable. Learning experiences aimed at helping the student attain necessary competencies for practice are relevant and meaningful; the student is involved as an active partner in the learning process and motivation becomes internalized.

To summarize, CBE is an area that is complex, often misinterpreted, but has characteristics that are beneficial to the adult learner and to the certification process of professionals. CBE models have been developed in many professions in conjunction with the credentialing process, for working with client populations, and in entry-level into professional practice. The importance of basing competencies on entry-level roles has been stressed and the start of a movement toward CBE in the preparation of OTs has been noted. The issue of congruency of professional practice with education has been emphasized in the defining of competencies and entry-level standards. The relationship of education, practice and credentialing as components of quality assurance in service delivery are linked to competency education positively.

Occupational Therapy Literature

In this section the review of the literature will cover the AOTA Essentials, philosophy, principles and theory, unique and common curricular areas, and a general review within the professional literature of references pertinent to this study.

AOTA Essentials of an Accredited Educational Program for the Occupational Therapist

The basic essentials for educational programs for occupational therapists are contained in the AOTA Essentials of an Accredited Educational Program for the OT. The Essentials are based on two previous studies concerned with job performance. The first is one done at Ohio State University in 1968-71 in the School of Allied Medical Professions. This project used a task analysis approach to develop job descriptions and curriculum guidelines.⁴⁰ A 1972-73 study of the AOTA,⁴¹ using a task inventory approach rather than the task analysis approach, focused on those tasks critical to the performance of the entry-level therapist and assistant. Task inventory refers to a method of itemizing or counting the functions or tasks required in a particular job or position, while task analysis goes deeper into the study of the functions or tasks by looking at the qualities implied or expected. A model for curriculum development which incorporates these two methods as the basis for designing instructional units is presented in Figure 1.

The Essentials state that all occupational therapy curricula will include the following areas of content:

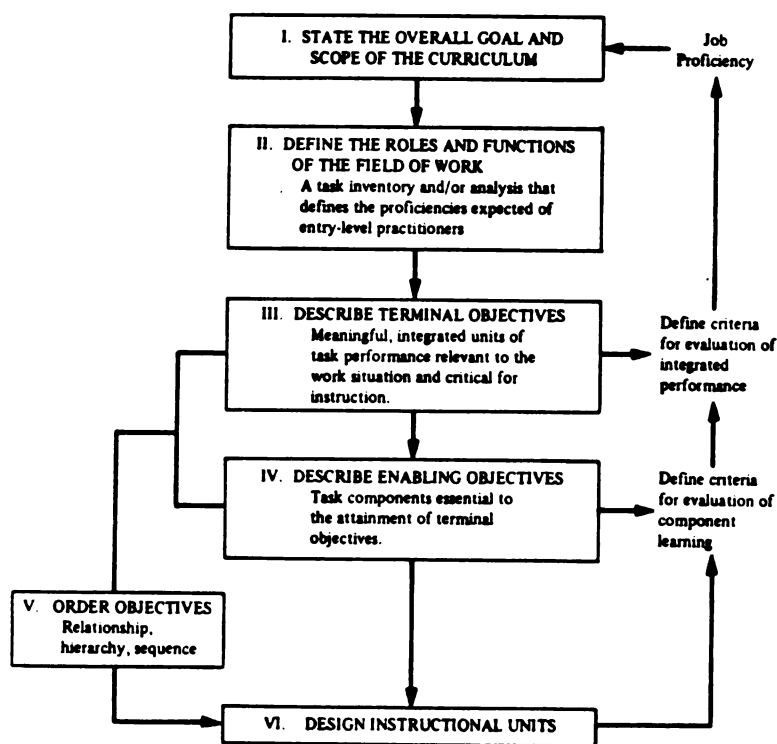
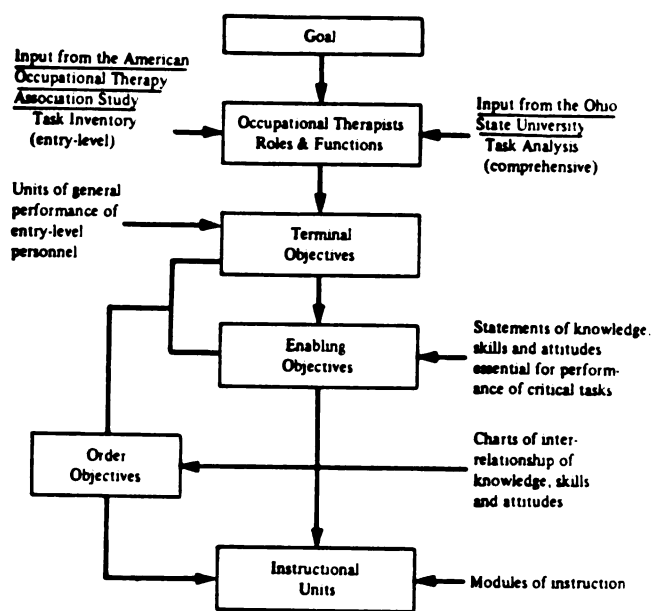


Figure 1

CURRICULUM DEVELOPMENT MODEL⁵
FOR PROFICIENCY EDUCATION

⁵ Adapted from Model of D. Merrill: *Instructional Design*, Loc. Cit. David M. Merrill (ed.)

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1. Basic Human Sciences

Purpose: To understand the structure and function of the human organism and its development from conception to death.

Objectives: The student shall demonstrate knowledge and understanding of:

- A. The structure and function of the human body and body systems.
- B. The structure and function of human personality and cognition.
- C. The human growth process.
- D. Social-cultural systems and the interrelationship with individual development and functioning.

2. The Human Development Process

Purpose: To understand the development, acquisition and integration of skills, life tasks and roles essential to productive living and mastery of self and the environment.

Objectives: The student shall demonstrate knowledge and understanding of:

- A. Developmental tasks and needs in each period from birth to death.
- B. Development of human relationships, roles and values.
- C. The impact of non-human environment on normal growth and development.

- D. The meaning of activity in development of human potential and competence.
- E. The meaning and impact of symbols and the symbolization process throughout the life cycle.
- F. The concepts and modes of adaptation and their relationship to performance.

3. Specific Life Tasks and Activities

Purpose: To understand and perform the processes involved in selected tasks and activities. To be able to identify and analyze the components which make up tasks and activities.

Objectives: The student shall be able to:

- A. Perform the processes involved in selected tasks and activities.
- B. Identify and analyze these tasks and activities in terms of the following components:
 - (1) Physical
 - (2) Perceptual-motor
 - (3) Cognitive
 - (4) Psychological
 - (5) Social
 - (6) Cultural
 - (7) Economic
- C. Observe, identify and analyze tasks and activities performed by others.
- D. Relate the elements of any task or activity to age-specific needs, capacities and roles.

4. Health-Illness-Health Continuum

Purpose: To understand the characteristics of the health-

illness-health continuum. To describe and discuss the effect upon the human being of interruptions in, aberrations of and trauma to the developing human organism throughout the life span.

Objectives: The student shall be able to:

- A. Discuss the concept of "Wellness".
- B. Define and discuss the etiology, progression, management and prognosis of the following:
 - (1) Congenital and developmental defects and deficits
 - (2) Disease processes and mechanisms
 - (3) Physical, emotional and environmental stresses and trauma
- C. Describe and discuss the effect of the above upon optimal human functioning.
- D. Recognize and identify manifestations and symptomatology of health and illness.

5. Occupational Therapy Theory and Practice

Purpose: To be able to apply and utilize the theories and principles of occupational therapy.

Objectives: The student shall be able to:

- A. Serve the individual client by:
 - (1) Evaluating his performance capacities and deficits.
 - (2) Selecting tasks or activity experiences appropriate to his defined needs and goals.
 - (3) Facilitating and influencing his participation and investment.
 - (4) Evaluating his response, assessing and measuring change and development.
 - (5) Validating assessments, sharing findings and making appropriate recommendations.
- B. Provide consultative services in relation to the profession and its function.

- C. Provide administrative and supervisory leadership for occupational therapy programs.
- D. Facilitate and participate in community health care planning and activities.
- E. Promote, plan, implement and conduct research for the benefit of the public and the growth of the profession.

From these Essentials and the AOTA Task Inventory, suggested content for each objective in the Essentials has been included in Chapter 7 of A Curriculum Guide for Occupational Therapy Educators.⁴² It is from this listing of content areas that the existing competencies will be drawn. In order to determine which part of the content is unique to occupational therapy, a review of the literature in occupational therapy was done. This review follows.

Occupational Therapy Literature Related to Philosophy, Principles and Theory

In November, 1978, the Representative Assembly of AOTA met in special session to address issues affecting the entire profession. Selected leaders of the profession over the past few decades were invited to address the meeting to provide direction and a broad perspective base. These presentations have been assembled in a monograph entitled Occupational Therapy: 2001 AD.⁴³ The following AOTA leaders have identified occupational therapy philosophy, principles and theory.

Wiemer says that the uniqueness of occupational therapy lies in the basic knowledge of occupation. "Our exclusive domain is occupation."⁴⁴ The "impact of occupation upon human beings" was spelled out as the sole claim to professionalism by the founders

in 1917.⁴⁵ In 1918 a government bulletin stated that occupational therapy "is the science of healing by occupation."⁴⁶ Wiemer outlines the basis of occupational therapy or the impact of occupation on the human being, under the following headings (Figure 2, page 34):

- I. Dynamics of occupation in routine human living.
 - A. The concept of occupation as a force in normal human development
 - B. The concept of occupation as a force in the equilibrium of health
- II. Dynamics of occupation in the presence of illness, injury, dysfunction, deficits.
 - A. The concept of the distortion of the normal dynamics of occupation in the presence of imposed or acquired illness, injury, health deficit
 - B. The concept of the distortion of the normal dynamics of occupation in human beings in the presence of illness, injury, or deficits at or before birth
- III. Dynamics of occupation in the management of illness, injury, dysfunction, deficits.
 - A. The concept of selected use of occupation as a force in identifying and assessing health problems
 - B. The concept of occupation prescribed for goal achievement in human development
 - C. The concept of occupation prescribed for specific goal achievement in the presence of pathology

Wiemer further says that the components of occupational therapy are its science, art and practice, as explained in Figure 3.

I. Dynamics of occupation in routine human living: (including entry to and departure from life)

A. The concept of occupation, in its many definitions, as a source in normal development and behavior.

The positive and negative outcomes to be anticipated from participation or non-participation by normal human beings:

1. By type of occupation and its unique demands:

work, including child's play and readiness to learn; self care, including protection; and management of leisure, including play and retirement.

e.g., typesetting, typewriting, ten pin bowling, top spinning

2. By human differences, such as those of:

age - economy - culture - climate and environment - mores

e.g., relationship of life-long responsibility for doing heavy housekeeping, to management of leisure enforced by old age.

3. By the nature of the occupational task:

creative - non creative	self initiated - imposed	self selected - non chosen
purposeful - purposeless	monotonous - variable	participant - observer
independent - interpersonal	stimulating - soporific	competitive - noncompetitive
voluntary - involuntary	random - planned	work (and child's play) - leisure
mental - manual	continuous - sporadic	

e.g., relationship of creative play experiences to adult problem-solving skills, or absence of anxiety and teenage aggression.

B. The concept of occupation as a force in the equilibrium of health:

The positive and negative outcomes to be anticipated from human participation or non-participation in occupation as it relates to body functioning in the spectrum of health, - optimum, acceptable, marginal, deficit, destructive, intolerable:

- Size of body and body parts	- Quality of body functions
- Skill of body functions	- Quality of human worth
- Capacities of body functions	- Value and meaning of human existence.
- Longevity of body functions	

Figure 2. The basis of occupational therapy - the impact of occupation on the human being.

II. Dynamics of occupation in the presence of illness, injury, dysfunction, deficits:

- A. The concept of the distortion of the normal dynamics of occupation in the presence of imposed or acquired, illness, injury, health deficit:

The positive and negative outcomes to be anticipated from participation or non-participation in occupation when the individual has a health problem as compared to the normal individual. (I,A&B) e.g., if a child does not experience play until age 6, what can be anticipated at age 16, 26, 36, 46, 56 ...? How does this differ from what could be anticipated if he had experienced play before age 6?

- B. The concept of the distortion of the normal dynamics of occupation in human beings in the presence of illness, injury, or deficits at or before birth:

The positive and negative outcomes to be anticipated from participation or non-participation in occupation when the individual has never known normal occupation.

e.g., if a child has never experienced play with natural and living objects, what can be anticipated in terms of his dealing with confrontation in adulthood? How does this compare with the child who did?

III. Dynamics of occupation in the management of illness, injury, dysfunction, deficits:

- A. The concept of selected use of occupation as a force in identifying and assessing health problems

The positive and negative outcomes to be anticipated from human participation in certain occupational tests or criteria in case finding, screening, evaluation. The exploration for such tests.

- B. The concept of occupation prescribed for goal achievement in human development:

The positive and negative forces and outcomes to be anticipated from participation in selected, graded, and supervised occupation as related to specific developmental and learning problems.

- C. The concept of occupation prescribed for specific goal achievement in the presence of pathology:

The positive and negative forces and outcomes to be anticipated from participation in selected, graded, and supervised occupation as related to the spectrum of illness, i.e., latent, sub-clinical, clinical, transient.

Figure 2. (Continued) The basis of occupation therapy - the impact of occupation on the human being.

THE SCIENCE OF OCCUPATIONAL THERAPY

Systematized knowledge and classified facts about the impact of occupation on human beings, i.e., the dynamics of occupation.

- It's force in determining the course of individual and societal life;
- It's force as a health determinant;
- It's force as a therapeutic measure;

THE ART OF OCCUPATIONAL THERAPY

Skillful dextrous action implementing the dynamics of occupation.

- Analysis and prescription of goal-directed occupation to facilitate change in health and behavior;
- Advice on use of occupation to improve the quality of life and human worth;

THE PRACTICE OF OCCUPATIONAL THERAPY

Skillful management of the art and science of occupational therapy.

- Application of art and science for various target populations, in various sites of service, by various professional, technical and aide-level manpower.

Figure 3. The components of occupational therapy.

West says that "the core of our profession's being is activity or occupation that is purposeful, meaningful, and structured to accomplish specific therapeutic objectives."⁴⁷ The philosophical base of occupational therapy was identified by Hopkins (says West) as "the pioneers who fashioned the profession believed that the health of individuals was influenced by 'the use of muscles and mind together in games, exercises and handicraft' as well as in work."

Gillette and Kielhofner state that occupation and related concepts reflect the "inherently powerful philosophy upon which occupational therapy rests."⁴⁸ Hopkins,⁴⁹ in an historical perspective recalls that in the Army Manual on Occupational Therapy, Bird T. Baldwin says that occupational therapy is based on the principle that the best type of remedial exercise is that which requires a series of specific voluntary movements involved in the ordinary trades and occupations, physical training, play or the daily routine activities of life. In 1915, Dunton, according to Hopkins, said that treatment was based on these principles:

- directed to individual needs; should arouse interest, courage and confidence; should exercise mind and body in healthy activity; should overcome disability and reestablish capacity for industrial and social usefulness; should be regulated and graded as a patient's strength and capabilities increased; employment in groups is advisable to provide opportunity for social adaptation; only reliable measure of the treatment is the effect on the patient.⁵⁰

Spackman, says Hopkins, emphasized that constructive activity is the keynote of occupational therapy. Hopkins summarizes occupational therapy principles in four propositions:

1. The use of occupation or purposeful activity can influence the state of health of an individual; people

have a need to self-actualize through work or leisure activities; occupational therapy's goal has remained to correct or ameliorate whatever prevents self-actualization.

2. Individuals and their total functioning must be viewed in respect to their environment and remediation must take into consideration all the physical, psychological and social factors.
3. Interpersonal relationships are an important factor in the occupational therapy process.
4. Occupational therapy is an adjunct to and has its roots in medicine and must work in cooperation with medical professionals and other persons involved as health care providers to assure maximum benefits to clients.

Although Hopkins says that theoretical propositions by Ayres, Reilly and Mosey form the beginning of occupational therapy's unique body of knowledge, she states that the profession as a whole has not identified the characteristics of occupational therapy which make it unique - no single perspective has been identified and accepted by the total profession.⁵¹ However, since these propositions are being researched to provide regulation and validation, they need to be considered among the core principles of the profession. Ayres' sensory integrative approach, Reilly's occupational behavior approach, and Mosey's developmental approach, as well as Rood's neurophysiological approach, must be included in the unique core of the profession.

From the Curriculum Guide for Occupational Therapy Educators another perspective on uniqueness is found. Tasks that provide direct

service to clients and program support are initial screening, evaluation, planning, implementation, re-evaluation, unit managing, supply and equipment managing, communicating with groups and staff development (Figure 4). These represent the processes in occupational therapy practice. To make a curriculum unique and specific for students of occupational therapy, a second dimension is needed: the identification of situations in occupational therapy for which the processes are performed. Through the integration of process with situation, the process becomes meaningful for occupational therapy practice.⁵² Reference to situations is used in the context of a person's ability to perform life roles and human functions within a particular life space. From the AOTA Project to Delineate the Roles and Functions of Occupational Therapy Personnel these terms are defined:

"Occupational Performance: the individual's ability to accomplish the tasks required by his or her role and related to his or her developmental stage. Roles include those of a preschooler, student, homemaker, employee, and retired worker. Occupational performance includes self-care, work and play/leisure time performance.

"Occupational performance requires learning and practice experiences with the role and developmental state-specific tasks, and the utilization of all performance components. Deficits in task learning experiences components, and/or life space, may result in limitations in occupational performance.

"Performance Components: the learned and developmental patterns of behavior which are the substructure and foundation of the individual's occupational performance. The performance components include:

- a. motor functioning
- b. sensory-integrative functioning
- c. cognitive functioning
- d. psychological functioning
- e. social functioning.

"Life Space: includes the individual's cultural background and human and non-human environment.⁵³

**ROLES AND FUNCTIONS OF
OCCUPATIONAL THERAPIST AND OCCUPATIONAL THERAPY ASSISTANT
AT ENTRY LEVEL OF COMPETENCY**

TASKS THAT PROVIDE DIRECT SERVICE TO CLIENTS

	Therapist	Assistant
INITIAL SCREENING	Identifying sources of info. Plan/supv. data collection Integrate/interpret Formulate recommendations	Explaining services Obtaining info. re needs Recording/reporting
EVALUATION	Select/plan methodology Evaluate/test Integrate/interpret Discuss findings Record/report	Interviewing/reporting Observing/reporting Discussing with client Testing (self-care) Assisting with testing
PLANNING	Goal setting Plan/select methods/ activities Record/report	Goal setting (self-care) Selecting/planning (self-care) Discuss plans with client
IMPLEMEN- TATION	Preparing/orienting Instruct/supv. others Supv. design/construct. Analyze/summarize perfor. Change/adapt Discuss/coord. with others Record/report	Preparing Orienting client Instructing Design/construct adapt. equipment Structure/adapt activity/ envir. Observing Reporting
RE- EVALUATION	Initiate re-evaluation Evaluate/test Analyze Recommend Terminate/follow-up Record/report	Review data Test (self-care) Assisting with evaluation Terminate/follow-up Record/report

PROGRAM SUPPORT TASKS

	Therapist	Assistant
UNIT MANAGING	Scheduling Budgeting/free setting Planning/projecting	Scheduling/recording Budgeting/recording Escorting
SUPPLY AND EQUIPMENT MANAGING	Ordering	Inventory Ordering Storing Preparing Maintaining
COMMUNI- CATING WITH GROUPS	Prepare professional written material Speaking to public groups Speaking to professional groups	Prepare general written material Speaking to public groups
STAFF DEVELOPMENT	Orienting Supervising volunteers Supervising COTA's Participating in In-Service Providing In-Service	Orienting volunteers Supervising volunteers Participating in In- Service Training volunteers

Figure 4 Frame of Reference, Dimension One: Processes in Occupational Therapy Practice

The content of the occupational therapy process is, therefore, the knowledge of occupational performance skills necessary for a person's life role in a particular life space. It is this knowledge of the impact of occupation on the human being to which Wiemer referred to as the science of occupational therapy; implementing the dynamics of occupation as the art of occupational therapy; and the skillful management of the art and science of occupational therapy as the practice of occupational therapy. The philosophical base of occupational therapy is contained in a resolution passed by the Representative Assembly of AOTA in April, 1979:

Man is an active being whose development is influenced by the use of purposeful activity. Using their capacity for intrinsic motivation, human beings are able to influence their physical and mental health and their social and physical environment through purposeful activity. Human life includes a process of continuous adaptation. Adaptation is a change in function that promotes survival and self-actualization. Biological, psychological, and environmental factors may interrupt the adaptation process at any time throughout the life cycle. Dysfunction may occur when adaptation is impaired. Purposeful activity facilitates the adaptive process.

Occupational therapy is based on the belief that purposeful activity (occupation), including its interpersonal and environmental components, may be used to prevent and mediate dysfunction, and to elicit maximum adaptation. Activity as used by the Occupational Therapist includes both an intrinsic and therapeutic purpose.

Summary of Occupational Therapy Literature Related to Philosophy, Principles and Theory

The philosophy of the profession expresses its beliefs. From the basic knowledge of occupation comes the content of occupational therapy process, which, as science and art are "managed" in the practice of occupational therapy. To identify the competencies which are unique to the profession, the AOTA Essentials were reviewed to

ascertain the content from which the competencies could be taken.

The following sections will, therefore, comprise the content specific areas:

1. The Human Development Process: the meaning of activity in development of human potential and competence; the meaning and impact of symbols and the symbolization process throughout the life cycle; the concepts and modes of adaptation and their relationship to performance.
2. Specific Life Tasks and Activities.
3. Occupational Therapy Theory and Practice.

General Competencies within the AOTA Essentials

The AOTA Essentials cover all curricula content that is required in the professional preparation of OTs - both content unique to the profession and common to other health professions. The areas of the curricula which are the source of the competencies common to all health professions are the following:

1. Basic Human Sciences
 - A. The structure and function of the human body and body systems.
 - B. The structure and function of human personality and cognition.

- C. Social-cultural systems and the interrelationship with individual development and functioning.
- 2. The Human Development Process
 - A. Developmental tasks and needs in each period from birth to death.
 - B. Development of human relationships, roles and values.
 - C. The impact of non-human environment on normal growth and development.
- 3. Health-Illness-Health Continuum
- 4. Program management and supervision; consultation.
- 5. Promotion, planning, implementing and conducting research (not considered entry-level functions in the AOTA Task Inventory).

A Re-Entry Project at Western Michigan University has done a needs assessment study of job descriptions of OTs in the field

work centers of the Occupational Therapy Department at Western.⁵⁴ The centers are located nation-wide and cover experiences in physical disabilities and psychiatry in hospitals, clinics and schools. The results show that in all of these settings the overwhelming emphasis is on administrative and supervisory functions for both chiefs and staff therapists. Employers of OTs, according to this study, expect therapists to have administrative and supervisory skills when they are first hired.

Literature References to Educational Areas

Most of the articles reviewed dealt with curriculum design or learning strategies. Llorens and Adams examined the learning style preference of OT students. Their results indicate a preference for learning conditions which permit knowing and liking the instructor personally, setting one's own objectives and working alone and independently - the last two criteria being ones which are a part of CBE. Direct experience was preferred; listening and iconics was next, and reading was lowest.⁵⁵

Silva⁵⁶ describes the components of program development and curricula design. Following the statement of purpose there are: "deliberations about separate domain or reintroduction must be determined; followed by identification and explanation of the core arguments

that characterize the field; content competencies are the output of the student. In another reference Silva discusses the difference between a discipline and subject matter: a discipline has a regulated set of premises that serves as a basis for explaining the core arguments identified as the unique body of knowledge; disciplines remain constant, subject matter changes to meet crises of living and to accommodate contemporary points of view.⁵⁷

Jantzen says that "our grounding educationally is too weak to ensure competency in the entry-level member, and we persist in the notion that on-the-job training will make up for the lack."⁵⁸ This writer suggests a move to professional level being post baccalaureate with concentration on four areas of specialization determined by age: pediatrics, geriatrics, adult psychiatry and adult physical disabilities.

Ford surveyed occupational therapy schools to assess clinical exposure to the field of mental retardation.⁵⁹ In summary, most curricula covered mental retardation as a part of several courses; 11 universities did not offer any course but compensated by offering preclinical observation and experiences.

Nord suggested an interdisciplinary educational program using a core curriculum approach: "learning together in order to work together."⁶⁰ From a survey to determine courses which were or could be shared with other professionals, the Basic Sciences were dominant. Christiansen points to a need for earlier client contact and increased attention to the development of administrative and managerial skills and courses designed to facilitate skills necessary for effective interpersonal relationships.⁶¹ Eliason and Gohl-Giese raise the

issue of professional boundaries.⁶² Since the AOTA Essentials do not describe specific curriculum content, the faculty has responsibility to determine the kind and extent of coverage needed to prepare entry-level therapists. There are many modalities to choose from and without standards in curricular areas, guidelines must be given students as to treatment methods that are occupational therapy and those not.

Fidler looks at the implications for education of specialization.⁶³ Without the coherence of an occupational therapy discipline, without a substantive base in occupational therapy per se, specialization risks focusing on developing expertise more relevant to other professions than to OT. Without a generic frame of reference for occupational therapy, specialization is more phantom than real. The writer goes on to state that the profession must confront the issues of a solid, rigorous basic education and must delineate and describe the generic occupational therapy focus and content of entry-level education.

The search of the literature to find specific examples of curriculum content related to specific competencies reveals few citations. Barris investigated the implications of CBE for developing creativity in OTs as an approach to problem-solving, a skill much needed by OTs.⁶⁴ Roberts, Cordova and Saxe describe a process model for design and development of curricula based on learning theories of CBE.⁶⁵ Allen and Cruickshank studied problems of beginning therapists as a first step in reproducing the problems in simulations for classroom use - a teaching strategy.⁶⁶ Anderson, Greer and McFadden identified

two clusters of competencies that could be applied to the severely, profoundly retarded client:⁶⁷

1. The OT will be able to demonstrate skill in the selection, administration, and interpretation of evaluation tools for clients who are severely and profoundly retarded.
2. The OT shall demonstrate skill in applying therapeutic activities or remedial techniques for severely and profoundly retarded clients.

Cromwell and Kielhofner developed and implemented a model of training that prepares students for community practice, as a part of the occupational therapy curriculum at the University of Southern California.⁶⁸

From this review of the literature related to competencies in occupational therapy curricula it is evident that most references are to curriculum design, teaching strategies, educational issues relevant to the profession, and the potential use of CBE in occupational therapy programs. If other competencies are being taught, some other method of retrieving this information would have to be used.

Literature Related to Emerging Competencies

The literature in occupational therapy is replete with references to changing roles, models of practice, and emerging implications for education. The following writers were selected because of their significant contribution to this study.

Ethridge⁶⁹ spoke from the management view of the future of occupational therapy in mental health. Changes in the field over

the past ten years have prompted a necessary change in the role of the OT. Decline of state hospitals, court decisions and new laws have resulted in a new atmosphere in psychiatric practice. The Community Mental Health Movement, started with legislation in 1963, had a budget in 1975 of \$75 million for 5,000 employees treating 200,000 clients. The state hospital has decreased the number of patients and has in essence become an acute care center since the chronic problems have moved to the community. Long term clients are scattered throughout the community and are in need of innovative programs to address their needs. Professionals must pool thoughts with administration and legislature on ways to deal with these people or the legislature will dictate.

For OTs Ethridge says that it means redefining the role of psychiatric practice. Therapists must be trained for non-hospital locations, and become an organizer, developer, and implementer of approaches to serve the re-located clients. First, however, OTs must accept this mission; next, curriculum change is necessary. The basic introductory course in occupational therapy education "is probably one of the few valid subject areas remaining in the professional curricula today."⁷⁰ Some suggested changes are the following:

1. Clinical experience should move to the community (out of the hospital).
2. Course work in individual counseling, community development, budgeting and finance, adult education, administration and management are all necessary.
3. Train through graduate education persons for key administrative management positions.

4. Specialization comes through experiences; graduate education broadens one's perspectives.
5. It is now necessary to train community organizers, program facilitators and therapists for administration.

Will occupational therapy lead or follow?

Johnson⁷¹ wrote on changing from helping the individual patient to providing service to the whole of society by working to prevent disability and dependence. In a presentation before the Canadian Association of Occupational Therapists in 1977⁷² Johnson said that the profession's belief in humanism or humanitarianism is in conflict with the imposition of accountability procedures. This is only one example of a conflict in values, attitudes and conditions which prevailed at the founding of the profession and which are in need of change today. The fact that the profession is primarily one of women imposes beliefs that, although changing with the pro-feminist movement, continue to offer resistance. An example of this is, according to Johnson, the lack of knowledge about dealing with political or financial matters - a much needed involvement now and in the future. Also, therapists cherish the one-to-one relationship which focuses on the "use of self" as a therapeutic tool without relating this to defined goals that the consumer values and can experience as having contributed to improvement. Since the content of our educational programs reflects the profession's beliefs and attitudes, change must first be made in these before the course content can be revitalized.

Lewis⁷³ wrote in 1975 about assuming a leadership position in geriatrics. Statistics show that by the year 2000, 32.3% of the

total population will be over 65 years. OTs have a responsibility to serve this population by the following:

1. Commitment of the therapist to keeping informed about current legislation, benefits, services available to this population (The Older Americans Act).
2. Sharing this information with clients.
3. Keeping current in treatment methods.

This may suggest a role in the nursing homes, but can also indicate home health services with an emphasis on independent living as long as possible. Shore⁷⁴ stresses the need for public policy in long term care: if the acute medical disease model falls, new models must look at nursing home hearings, scandals, reasonable cost related reimbursement, alternatives to institutionalization and the mental impairment as a catastrophic illness - all of which have direct implications for OTs.

Katz, Ford, Downs, Adams and Rusby did a study of the effects of continued care⁷⁵ in 1972. They studied the effects of continued care of chronic disease patients discharged from rehabilitation hospitals as measured by outcome criteria: restoration or maintenance of function and survival. Outcomes of the study were that beneficial nursing effects were among the youngest (50-64 years); more patients were hospitalized among the oldest; more non-nurse and non-physician professional services among the relatively economically independent. Implications for OTs point to an increased practice with 50-64 year-old persons and with geriatric chronically ill persons through medicare and medicaid funds on an out-patient or at home basis. This suggests the need once again for political expertise to influence

the obtaining of coverage for the services of the OT by third party payors and for developing skill in team functioning. An unpublished paper of Katz spoke this need for a multidisciplinary team of medical specialists to serve the chronically disabled patient. Ford and Katz⁷⁶ studied the prognosis of patients after stroke with results showing that the majority of recoveries occurred within six months after the stroke and with little likelihood of recovery after two years. At the end of two years, six out of the ten required no personal assistance with walking, and minimal help with activities of daily living. These data suggest that OTs continue to be involved immediately after the stroke and put all emphasis on the six months post stroke period - a time when the client will be in the hospital but for a greater time will be at home. Again this suggests outpatient or home services for which third party payment for services is needed and if in the home, also implied that the OT could be providing home health services on a fee for service basis or as a part of a Visiting Nurses Association or some such home provider. The implications here are for private practice skills which fall within the business - management sphere of influence.

Cromwell and Kielhofer⁷⁷ described an educational strategy for the educational preparation of OTs to be a community health specialist: someone who can move into non-traditional settings, be skillful in program development and more mature in assuming responsibility for the demands of lay persons and professionals. OTs must learn first that disability and health are not mutually exclusive. The process is Jim Kent's Discovery Process which gets a description of a community - its culture, the people physically, socially, psychologically

and economically, in order to obtain the key environmental factors that directly influence health. Only by so doing can the therapist design a health system that fits that culture. The writers say that as the profession moves toward community practice, the educational program must balance preparation of students for both the traditional hospital practice and community health roles.

Marnio⁷⁸ used this process for discovering the lifestyle of the physically disabled. This therapist taught OT students the Discovery Process in order to put emphasis on the person, instead of the diagnosis. Describing, documenting, focusing, reflecting, planning and implementing were the parts of the process in which the student participated. The ecological frame of reference which looks at life style as a basis for understanding a person in a particular setting, is useful when helping clients set goals and work toward attaining them.

Issues in occupational therapy education are similar in Canada and the United States. Woodside⁷⁹ wrote in 1975 about eight different educational issues of importance to Canadian OTs, one of which dealt with the new focus on "health" rather than "ill health". There had been concern as to whether some health workers were continuing to emphasize acute curative work to the exclusion, in some cases, of preventive health care. From this Woodside suggests that the credibility of the educational programs might be strengthened by examining and documenting the amount of content pertaining to "health". Additionally, clinical internships might include areas such as health maintenance, leisure and retirement planning, and environmental alterations to improve health. Trends in health care discussed by this

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writer included reference to a paper given by Dr. Muriel Uprichard at the World Federation of Occupational Therapists Congress in 1974, in which she noted that the medical model was defined by a division of subject matter into body systems and disease states. As a nursing educator, Dr. Uprichard described a curriculum focused on the biological system of the medical sciences; the personality system of the psychological sciences, and the social system of the social sciences.

A Queen's University study in Kingston, Ontario, surveyed OTs to find out what they were thinking about the profession.⁸⁰ Several conclusions were drawn:

1. Since physicians had fought the battles for OTs for so long, this medical leadership deprived OTs of a tradition of leadership experience to draw upon. OTs in the study did not know how to get into the arenas of power, nor did they know what strategies to use once in that arena. And even if someone were to push an OT into the leadership positions, they would not want to go. Only ten of the 835 respondents to the questionnaire ranked the chance to exercise leadership as first in importance among their life satisfactions in a career.
2. There was much dissatisfaction with the political effort required to keep the profession going. Unfortunately, the writer said, this political activity is a necessary evil in professional life. When considering occupational therapy as an economic alternative, it is going to require political skill and effort to implement the goals of the profession in this regard.

3. Regarding education, the OTs who had graduated since 1975 (between 1975 and 1977), expressed the most dissatisfaction in areas of research, administration (including departmental management, public relations supervision and program design), and professional involvement (knowledge to formulate professional and health care policy, and knowledge of trends in health care).
4. When looking to education in the future, the respondents stressed the need for training in research, treatment and evaluation; of lesser importance were professional involvement and administration.

The implications of these educational problems, stated the writer, are for there to be a change in attitudes and skills of the present practitioners first, since time cannot wait for educational change. The practical aspects of occupational therapy need to be transferred to the political arena - OTs must play the role of the practical politician.

The biopsychosocial model of Mosey,⁸¹ was mentioned in the discussion of the profession's theories and concepts. According to Mosey, this model directs attention to the body, mind and the environment of the client, without any consideration for wellness or illness. The biological aspect focuses on the anatomy and physiology basic to occupational therapy practice; the psychological portion, to concern about normal human growth and development, and deficits in the maturation process; the sociological to concern for a person as a group member. All of these interpretations lend themselves well to

theory development and operational principles. The assessment and delineation of the individual's learning needs relative to the objectives of the model refer to the initial evaluation, which suggests a knowledge of basic principles of measurement and testing; planning refers to the considerations of the teaching-learning process which is a part of the client's personal program; and evaluation of the effectiveness of the learning experience is continued evaluation - requiring the same skills and knowledge as for the initial evaluation. This model is oriented to the client-in-community, and more of the connotation of working together to solve problems in living. Since this non-medical model is more teaching centered than treatment centered, the therapist must draw upon many different theories of teaching and learning, which points to specific competencies that must be acquired.

Dunning emphasized the importance of environmental occupational therapy, a way of looking at people, space and tasks.⁸² From environmental psychology comes this theoretical foundation, which overlaps with an ecological-systems approach. Each stresses the effect of the environments on persons in terms of role performance, learning, and other tasks which take place in different life spaces. Familiarity with research in environmental studies should add to the OTs skill as managers of space, people and tasks.

Opinions of Leaders in Occupational Therapy from the
Representative Assembly Session in November, 1978

Since there were many issues of importance to the profession nationally, the Representative Assembly met in special session to

deliberate over proposed resolutions and to hear from leaders in the profession. Their comments provided a firm foundation for proposed changes.

Wiemer⁸³ illustrated traditional and nontraditional practice arenas in occupational therapy. She has identified, namely, the OTs' function, role, objective of treatment, focus of treatment, the site and access to clients over a time period from the traditional, to the transitional and the contemporary. It is noteworthy that the sites have shifted from the one-to-one therapist-client relationship in hospitals to the HMO, home health, day care, school, housing, industry, workshops, prisons, community, health administration. Wiemer believes that the profession must move to the master's level in order to develop the science of occupational therapy. A product must be built that is useful in the traditional arenas and saleable in non-traditional ones, ultimately reaching to the fundamental management of human living.

As the president of the AOTA looked into the future, Mae Hightower-Vandamm suggested that there would be no institutions⁸⁴ - all living would be community-based; activities would be the strongest forte of the OT and a performance evaluation would accompany an activity history; the role of preventive care would be important for all; early intervention in treatment programs for children would begin at birth; and planning for activity throughout the lifespan would be commonplace. Each of these ideas suggests an emphasis in educational preparation.

Johnson⁸⁵ suggests that if OTs want to be an independent health profession consideration must be given to the implications for

education, for legislation, for reimbursement potential and for licensure as well as for the type of individual who will be attracted to the profession. This kind of independence requires competencies quite different from the clinician of today.

Cromwell⁸⁶ believes that the profession's future model will be similar to that of Somers, which is a health promotion/health protection model using health education as a basic ingredient. For this kind of model OTs will practice in the community, "as generalists, acting in the role of the catalyst for helping patients/people solve increasingly complex problems of functioning in a highly technical society."⁸⁷ Such roles as one in home health with OTs coordinating and supervising health homemakers and aides, a Community Care Workshop with OTs directing and operating this multi-service center where learning about normal human needs could take place; long term care with OTs assisting with normal life roles. To do these things means that the profession must reassert the fundamental philosophy of occupational therapy - the use of therapeutic activity as the catalyst for acquiring or maintaining basic living skills. Additionally consider a coalition or consortium plan in which OTs join other activity technologies and home health personnel.

Yerxa⁸⁸ reviewed the implications of conflicting values held by OTs and by the profession's leaders toward the profession. Decisions about education must be made after these conflicts have been resolved, so that there will be a concerted effort to attract persons to the field who possess the same values as the profession espouses. However, the point that Yerxa makes about these conflicting values emanating from what the OT schools teach and what leaders not in

education profess, is worthy of consideration. First it will be necessary that the professional socialization process be explored to discover the subtle system of rewards and punishments employed, so that these can be reconciled with goals which the changing health scene is imposing upon the profession.

Gillette⁸⁹ explored the relationship of practice - research - education, and proposed several "musts" for educators and the profession. First, educators must assume the responsibility for the development of knowledge, rather than being protectors and transmitters of already existing information. The profession must commit itself to innovative research and reflect this commitment when attracting new students. Clinical education, as an integral part of the socialization process, must transmit a professional identity including skepticism, initiative, scientific inquiry, and the development of professional and ethical ideals. Research must become a part of the problem solving effort which confirms theory, and be integrated as a regular part of each course of study. As Gillette said, the students will model the thinking patterns of their mentors, so it is the educators' task to link practice and research to education. As education establishes cause and effect relationships between purposeful activity and the components of occupational performance, therapeutic modalities will take on their appropriate meaning.

The AOTA Task Force on Target Populations of the Representative Assembly was given the charge to identify client populations needing the expertise that is uniquely that of occupational therapy and to rank order their priority.⁹⁰ This report, submitted in 1974, viewed the profession in transition - from services which are client-centered,

based in medical institutions and directed primarily toward dysfunction resulting from diseases, to identifying problems which can be met by OTs in the home, community or social institution, using systems intervention or indirect service - moving toward a primary care role, assuming responsibility for supervising and coordinating programs in occupational performance. The recommendations of this report included the following:

1. Undertake activities to enable the profession to become uniquely definable, independent health one.
2. Examine, refine and validate theories related to practice and strengthen the educational programs by ensuring that curricula and field placement centers utilize such frames of reference as the foundation for educational planning.
3. Continue to identify human health needs..... as these impinge upon occupational performance.
4. Efforts to help occupational therapy become a unique definable independent health profession should start with developing models of practice.

The AOTA published a book titled Consultation in the Community: Occupational Therapy in Child Health in 1973. Several leaders in the profession documented the transition from a medical to a health care model of practice in which OTs function in community health: furnishing indirect treatment, having supervisory and consultant roles as health agents and advocates. Emerging competencies will be drawn from a review of this compilation of writings of leaders in the field of occupational therapy.

Implications of Social Policy Legislation

This review of the literature will encompass social policy legislation which has a direct affect on occupational therapy practice. Social policy legislation is chosen as a relevant source for identifying the constraints of social systems in which OTs are or could be working, and for drawing from the public law the specific educational and research implications suggested. The following laws will comprise the review:

1. PL 93-112: The Rehabilitation Act of 1973, Amendments of 1978.⁹¹ This legislation offers a broad area of practice for OTs.
2. PL 94-142: Education of All Handicapped Children Act of 1975.⁹² As mentioned in Chapter I, this law has already provided many new opportunities for OTs as reflected in the increased numbers of therapists working in the school systems.
3. PL 93-222: Health Maintenance Organization Act of 1973.⁹³ Since much of the literature in occupational therapy has for some time described a role for therapists in preventative medicine, the Health Maintenance Act, which legitimizes the Health Maintenance Organizations (HMOs), creates a setting for this kind of practice.
4. PL 93-641: National Health Planning and Resources Development Act of 1974.⁹⁴ In addition to the regular practice arenas, OTs can and should be involved at the health planning phase of health

care. This Act has made it easier for this to happen.

5. PL 92-603: Social Security Amendments of 1972.⁹⁵

Quality of health care has long been a goal for evaluators. To make this possible it was thought that by creating Professional Standards Review Organizations (PSROs) there would result quality health care services. PSROs now exist in hospitals and nursing homes and require the participation of health practitioners in these settings. The implications for OTs are many.

These five public laws will be discussed using an outline that includes the intent of the law when first conceived, a brief summary of particular provisions, the scope of service with particular reference to occupational therapy, and the educational and research implications that suggest competencies which are among the emerging ones needed for nontraditional practice, as well as the traditional settings. A list of the competencies suggested by these laws and other literature review is in Appendix A.

PL 93-112: The Rehabilitation Act of 1973, Amendments of 1978⁹⁶

Intent: Starting in 1917 with the Vocational Education Act of that year, Congress has intended to provide services to handicapped people so they can contribute to the work force within the society.

Provisions: Although Section 504 of this act, which opened doors for employing handicapped persons on a non-discriminatory basis,

is understandably important, of greatest relevance to OTs is the provision for Comprehensive Services for Independent Living. Based on this part of the law, service would be delivered to severely disabled young and old in their homes.

Scope of Service: Federal regulations include occupational therapy as a "physical and mental restoration service" which may be provided in a rehabilitation facility to render a handicapped person employable. Occupational therapy service can be to do the following:

1. Provide input to the State Plan regarding current and future needs for programs and services as perceived by OTs.
2. Assist with evaluation of the client for individualized rehabilitation programs; assess the ability of the client to perform activities necessary to live and function in various life spaces. OTs are particularly trained to do this with the severely handicapped person.
3. The "independent living rehabilitation" (ILR) program with authorization of Comprehensive Services for Independent Living funds professional services to assess and train skills required vocationally, and in self-care. One purpose of this part of the law is to establish people in the community through a supportive service network, in which OTs could be a part of the rehabilitation team.

OTs will need to learn about the vocational rehabilitation system, how to access it and how to define their role. Although vocational rehabilitation has its own vocational evaluators, OTs are also trained to provide this service, particularly with the handicapped population. An educative role will be necessary so that OTs can acquaint others with their particular competencies.

Educational and Research Implications: For OTs in an unfamiliar system, in clients' homes and work settings, communicating to others the uniqueness of occupational therapy.

1. Learning how to access the system; do a comprehensive needs assessment, write a proposal, be effective in public relations and communication skills; know where to gather information about public laws - for families and for the professional.
2. Know how to define a new role in a new system which is not a part of the medical model. The president of AOTA said in 1979:

"When I first graduated from Columbia, the glamour program for young OT graduates was vocational evaluation. Whatever happened to that? Now, we have vocational specialists ...vocational evaluators, work evaluators. The OT is the only professional I know who has the training to look at a total person. We were perfect for the job, yet, while we were solving the problem of how to deal with this, another group of professionals emerged and took that role away from us."⁹⁷

3. Know how to work in the community; in the client's home living space - problem solving and creatively adapting solutions to help clients live productively and meaningfully; giving service without the backdrop of an

occupational therapy department with standard equipment.

4. Work as a team member with rehabilitation engineers to assist clients through the construction of adaptive equipment; doing task analysis of client's jobs and recommending refinements to meet individual needs.
5. In the homebound setting, learn more about family ecosystems, management of resources and interrelationships.
6. Know how to document precisely the client's problem and the client's goals.
7. Engage in studies of the evaluation of service outcomes in order to assess the quality of service performed.
8. Acquire administrative and consultative skills; know how to educate clients, develop and use community resources and natural caretakers.
9. Become familiar with the ecological model which emphasizes the interaction and interdependence of systems and persons within, as well as linkages.

PL 94-142: Education of All Handicapped Children Act of 1975⁹⁸

Intent: To provide equal educational opportunities for all children. In essence this says that education is a continuous process by which individuals learn to cope and function within their environment, regardless of their environment.⁹⁹

Provisions: The law provides for a free, appropriate public education for all children and for protection of children's and parent's

rights. OTs are identified as related services "required to assist a handicapped child to benefit from special education."¹⁰⁰

Scope of Service: The locations of practice for occupational therapy in school systems are in intermediate school districts, local elementary and secondary schools and school programs in the institutions for the retarded and mentally ill; nursing homes where students live and sheltered workshops where students are enrolled, as well as the homes of students (usually those under 3-5 years). OTs work in settings which are non-medical, teaching oriented and in a system having policies, rules and philosophy quite different from the medical system.

OTs function in direct service and non-direct service roles - as providers of one-to-one treatment, and consultant to teachers and parents regarding the handicapped child's abilities to perform skills of daily living. Administrators within the system are unfamiliar with OTs and what they are trained to do; teachers are in need of problem-solving help with handicapped children so that they will be able to develop cognitively, and parents want to know how they can help their children grow and develop. The role of team member has become the most needed one for OTs.

Educational and Research Implications: The new non-medical settings present the following implications since therapists have not been trained for this role.

1. Ability to live with ambiguity and to structure a new role in an unfamiliar setting and system.
2. Acquiring public relations skills to get along as strangers on another's turf.

3. Understanding the core of occupational therapy to the extent that they can communicate it clearly and simply. "The core" refers, in this instance, primarily to the application of the uniqueness of occupational therapy to the role of the OT in schools.
4. Becoming familiar with community resources, services and contact persons; knowing how to move through the system effectively.
5. Acquiring skills needed to function as a team member and consultant; being able to share one's knowledge with other professionals.
6. Having a knowledge base about the family: ecosystems, managerial theory, decision-making, home as a learning environment and factors which influence home learning, human resource development, family developmental tasks and stages, and how to assess coping ability.
7. Having a good understanding of the characteristics of the school handicapped population: the severely multiply impaired and others; knowing how to assess students in all areas and having a variety of disabling conditions; knowing how to write performance objectives for individualized educational plans and how to set priorities for treatment when several goals are presented.
8. Familiarity with union politics and professional liability; knowing how to influence the legislative process regarding the writing of rules, regulations and guidelines.

9. Having skills in administration, program development and implementation.
10. Taking responsibility for one's practice without the reliance on a doctor's prescription; becoming an independent practitioner.

One of the reasons school personnel question the scientific basis of occupational therapy is a lack of documented evidence that what therapists do makes a difference. Although in some instances there are facts which can show that therapy did influence change, often it is difficult or impossible to show research to back up certain treatment modalities. The present emphasis on sensory-integrative treatment which has reached the certification stage, needs more research to give validity to treatment techniques. Though OTs claim to help the learning disabled improve cognitively, a sound research base is needed to provide data to confirm this claim.

PL 93-222: Health Maintenance Organization Act of 1973¹⁰¹

Intent: As costs of medical care rose and consumers of health services found it difficult to pay for unexpected medical expenses, the federal government decided to change the emphasis on acute care to prevention of illness through pre-paid health plans. The intent of this legislation was to keep people out of hospitals by keeping them well.

Provisions: This law established the requirements and restrictions for Health Maintenance Organizations (HMOs) which could provide prepaid health services to the well consumer, as well as intermediate and long term care if such is desired by the enrollee.

Scope of Service: The role of the OT in an HMO is a preventive care one. Preventive medicine deals with the quality of life and the interdependence of people, and acts to limit health problems and the stress arising from them.¹⁰² Emphasis areas in a prevention to adaptation continuum are promotion or health education; protection or the interception of illness and injury agents and conditions; identification through recognizing health deviations; correction by treating or rehabilitation; and accommodation through the adaptation of a person with the illness or health limitations.¹⁰³ Since OTs believe in a health-illness-health concept, an emphasis on wellness or prevention is compatible with practice.

Although there is no provision in this legislation for funding of the OTs services, there are other sources for payment of services such as the HMO, or private payment for the therapist's independent services (less likely since the consumer has already paid for all services through the HMO). The importance of this Act is that it implies a shift in total health care emphasis from the hospital disease-oriented model to one of prevention, which intrinsically involves all people, health practitioners and community agencies. Responsibility for maintaining one's health becomes each individual's, with health professionals taking on an educative, supportive role.

As preventive health care extends beyond the hospital and clinic to the home and community environment, the OT's one-to-one treatment role shifts to teaching, consulting, program development and/or research. As health agent the OT has "progressed from technician receiving a prescription from the physician to our present position as principle agent in the treatment of patients who require an

intervention process employing the therapeutic use of activities."¹⁰⁴

What is required of the therapist who assumes or defines this new role? According to Finn, there are several needs:

1. An understanding of the meaning of health that is more encompassing than the absence of disease.
2. Knowledge about the community systems, the health center (the HMO), or the industrial setting.
3. Interpretation of the OT body of knowledge, particularly the relationship of activities in an environment to the maintaining of a sense of health.
4. Thinking creatively, so that our knowledge of occupational performance becomes functional material for developing prevention programs in the service of maintaining health. This premisses on our knowledge of people's needs.
5. Coping need of an unfamiliar situation to develop new skills in interpersonal relationships, increased sensitivity to the behavioral cues of others. These are necessary given non-medical and institutional environment.
6. Developing a new communication process which allows the OT to talk understandably to clients and others who are not medically oriented, and put into simple language concepts that have been learned and subsumed under the mantle of the professional term.
7. Having the patience to spend a lot of time planning the service to be offered; then be able to explain and defend and revise.
8. Creating a climate of acceptance for an individual's or client's program.

OTs individually and collectively, according to Finn, tend to wait for cues to act. In preventive health maintenance, as in other settings where the role is new, the therapist must assume an active dynamic role. Stein discusses several areas of primary prevention in which an OT can practice:¹⁰⁵

1. Private industry - to prevent industrial accidents, occupational diseases and recognition of hazardous conditions.
2. Relating activities to normal development and consequences for parents and health workers.
3. Architectural design.

4. Research on relationship between activity and lessening of hypertension to prevent heart disease.
5. Study the effects of activity programs for aged people to prevent senility.
6. Maternal health care; interdisciplinary research on birth defects.
7. Early intervention in developmental disabilities.

Educational and Research Implications: There are many. The study of activity and the application of this knowledge to the provision of a better way of life is basic to occupational therapy. To shift focus from the value of a specific activity to achieve a desired result, to the total life situation requires a more comprehensive understanding of activities and human action. Other implications are the following:

1. Acquiring leadership skills for community involvement, including communication abilities.
2. Learning more about social effects of technology on the quality of life; the economic, political and social forces that control individual goal attainment and influence family decisions about the use of resources and management of family life.
3. Applying knowledge of developmental life stages and tasks to the prevention of crises.
4. Learning enough about human behavior and how and why change occurs to be able to motivate people to "do something to prevent what does not exist", as in prevention.
5. Educational programs in occupational therapy will need to find field work settings in community placements where practice in this new role can be done.

The greatest need for the profession is to stress doing research on the dynamics of occupation, establish norms for different ages, cultures, sexes; consider the relationship of lack of activity to quality of life; the relationship of the tolerance of stress jobs as a health intrusion to the nature of that stress. OTs should study behavior in terms of the use of occupation and its influence on health. In no other arena of practice is there such a strong need for doing research in order to validate the ensuing practice.

PL 93-641: National Health Planning and Resources Development Act of 1974¹⁰⁶

Intent: This law sets equal access to quality health care at a reasonable cost as a national priority, according to the preamble to PL 93-641. The intent of this law is to establish guidelines for health planning and resource allocation within states so that ultimately everyone will be able to receive quality health care at a reasonable cost.

Provisions: Growing out of a need to coordinate several earlier health planning and public health acts, this Act of 1974 proposed to affect health care through providing uniformity in health delivery methods and mal-distribution of health resources (both manpower and facilities), and to alleviate the increasing costs of health care.¹⁰⁷ Health Systems Agencies (HSAs) were established in states, functioning under a statewide Health Coordinating Council. Health Systems Plans (HSPs) were mandated; their goal being to assure quality health services which would be available at a reasonable cost for all residents. Representatives on the Agency and Council boards were required to come from consumer and service health groups, of which OTs were

included as Allied Health Professionals. Issues related to prevention of disease, preventive health care services, public health education and primary care to underserved populations were among those for which policy and standards would be developed. In essence this law modified and enhanced the role of technology in regional planning. Characteristics of plan development are national health planning policy, national priorities, a common health system framework, concern for cost containment, detailed data analyses and cost-benefit analysis.

Scope of Service: For OTs this law offers an opportunity to participate in the health planning process through membership on the HSA or the statewide council, or indirectly by maintaining a liaison with the allied health representative who sits on the Board of the HSA so that a channel of communication for exchange of concerns of mutual interest will exist. If the intention of this law is realized, the presence of OTs who can articulate the profession's needs and contributions is of great importance. OTs can inform the council about the scope and variety of services available by OTs; contribute to planning recommendations for the allocation of resources such as funds to be spent on the construction of an outpatient clinic versus supporting increased provision of home health service.¹⁰⁸

When discussions center around the annual implementation plan which includes giving priority to objectives, OTs can provide factual information about the benefits of early intervention services for children with developmental disabilities as opposed to the costs of intervening at a much later date; the benefits of providing rehabilitation of persons to an independent living status versus the cost of maintaining persons at home on supplemental security income and medicare;

the benefits of providing home health services of an OT for chronic disabilities instead of providing financial support to such conditions in nursing homes.

Sitting on a Council or Agency Board is obviously not a working function which offers compensation financially. It does, however, suggest a way for OTs to influence the system through involvement in planning.

Educational and Research Implications: To provide support for the role of occupational therapy in various settings, studies are needed that document the fact that OTs do, in fact, contribute meaningfully to the outcome of the treatment. In the absence of such evidence, the need for research and involvement in quality care studies becomes evident. Only through this kind of "proof" can OTs state unequivocally that costs of their services are justified.

Implications for education are the following:

1. Acquisition of professionalism over and above the technical skills obtained in the educational program.
2. Knowledge of evaluation methodology, quality care review, administrative cost-benefit analysis.
3. Knowledge of the planning process, including gathering appropriate data, relating goals to objectives, setting priorities and implementing action.
4. Acquiring familiarity with this Law and other legislation pertinent to OTs, and learning how to assume a proactive role: "responsible participation, not a silent partnership, is the key to improving public relations and furthering professional objectives."¹⁰⁹

5. Developing communication skills that are effective and precise; having the ability to convey the uniqueness of occupational therapy concisely and simply; knowing generally how OTs serve the whole community.
6. Possessing evaluation skills for doing valid research using patient care studies.
7. Developing the ability to analyze skillfully, maintain a broad perspective of the total situation, and involvement in research critiquing and participation.

PL 92-603: Social Security Amendments of 1972¹⁰⁹

Intent: The intent of medicare legislation has been to regulate the distribution of health services within the program and to protect the quality of health care.

Provisions: This Law called for the creation of Professional Standards Review Organizations (PSROs) which are intended to "promote the effective, efficient and economical delivery of health care services of proper quality."¹¹⁰ Although previous legislation had established peer review, chart auditing, utilization review and other measures to assure quality health care, the Congress felt that there had been little impact on the quality or economy of health care. The profession of occupational therapy has expressed concern for quality care through accreditation of schools, certification of therapists through examination, standards of practice, continuing education programs and a recertification program.

The PSRO system operates through national, state and local systems and includes on the councils both physicians and other health care

practitioners. Review studies are required: concurrent, retrospective, and analysis of hospital, practitioner and patient profiles. The law obligates OTs to participate in chart audit and to be involved in the PSRO process because it is a reimbursable service under Medicare and Medicaid.

Scope of Service: OTs working in hospitals, clinics and nursing homes are required by the Law to become involved in PSRO. Among the various kinds of participation is the profiling or profile analysis which focuses on patterns of service that require modifications, provides a means for self-evaluation and comparative evaluation of facilities and practitioners. The information from profiling is used by PSROs to monitor the impact of the review process and to compare the overall effectiveness of the program.

Other kinds of participation are in Medical Care Evaluation studies which require a knowledge of evaluation techniques and methodology; patient care audit and the development of process and outcome standards. Peer review is also useful among OTs as a method for identifying educational needs of therapists.

Educational and Research Implications: OTs are challenged in all practice settings to be accountable for services rendered in order to be able to contribute to cost-benefit analysis and cost containment. Educationally this demands a knowledge of business practices which contribute to accountability. The implications of involvement in quality care review processes are the following:

1. Knowing how to perform cost-benefit analysis; how to evaluate the outcomes of client services in relation to the treatment performed.

2. Being skillful in all forms of evaluation methodology, documentation, written and oral communication.
3. Being actively involved in the entire PSRO process as leaders.
4. Having an awareness of the total health care picture in one's own institution, as a part of a community system of interacting and interdependent persons and places (ecological approach).
5. Knowing how to do research studies - case studies and action research.

Social policy legislation which affects the practice of occupational therapy has been reviewed in two community systems: schools and vocational rehabilitation; in an emerging practice dimension: prevention; in health care planning, and quality care review. Numerous implications for skills, knowledge and attitudes have been suggested, some of which are being taught in occupational therapy educational programs, and some which are not included. A summary of these competencies are included in the Appendix.

Research Methodology

The review of research methodology covered competency studies done in other professions with primary emphasis on the methods and procedures used to identify and validate competencies. A study was done by Howard¹¹¹ to identify and validate change agent competencies. A three-phase methodology was used to accomplish the objectives of the study. Phase one consisted of a survey of the literature relative to change agent roles and duties in education. Second, a pilot study

to identify the most important competencies that would have relevance to the final investigation, was done. The third phase focused on empirically validating those competencies which were identified from the pilot study.

Change agent roles were selected from the literature review. The data collection instrument had 105 competency statements which were validated by a group of 53 reviewers. From this pilot study a 37-item list was presented to 272 reviewers. Validation was computed statistically among the demographic variables and the change agent competencies.

Mokma¹¹² completed a study of the assessment of the leadership role in emerging career education programs in Michigan. The literature review covered, among several topics, the analysis of roles for determining curriculum content. This approach was called the "function-activities" approach by Clark and Meaders in 1968. Once identified, these activities or tasks then serve as a basis for identifying specific competencies - skills, knowledges, and attitudes needed by personnel occupying the particular occupation. Others used this approach in vocational education while Heilman used functions as a method for organizing and grouping tasks and activities after they were identified.

McCleary¹¹³ outlined six steps for developing a program of competency-based administration:

1. Assess competency needs.
2. Specify competencies.

3. Determine competency components and performance levels.
4. Identify competency attainment.
5. Establish assessment of competency attainment.
6. Validate competencies, attainment procedures and assessment system.

The procedures used in this study consisted of role analysis methodology. An instrument was developed after the review of the literature for functions in leadership roles. Next, critical incidents were created to reflect each function. Eight leaders were selected to be representative of the study population; interviews were conducted; 46 activities were identified. A panel of judges reviewed the list which was then incorporated into an instrument which was pilot-tested with a group of 10 career education persons. The instrument was revised and sent to 60 superintendents. From their responses the data was analyzed and the results tabulated.

Competency-based professional education in Home Economics began with the development of competencies and criteria at a national working clinic at Kansas City, February 7-10, 1977.¹¹⁴ After the subject matter competency lists were assembled, they were validated by circulating them to three or four specialists in each of the five areas of the United States. After review by the specialists, committee members incorporated their suggestions into the present materials.

The Dieticians have also developed a CBE educational program. In 1974-75 a set of entry-level competencies were selected from a

Study Commission, American Dietetics Association's Plan IV and other documents. Competencies (85) covering Foodservice, Clinical Nutrition and General were selected. They were validated by questionnaire, critical incident technique and interview and observation. Questionnaires were sent to MSU faculty (25), dietetics practitioners (77), MSU Foodservice practitioners-educators (18), dietetic educators in the U.S. (45), and significant others (non-dietetic, 28). The second questionnaire had 108 items and was sent to the same people. The third questionnaire had 445 competencies stated at four different levels of difficulty based on Bloom's Taxonomy. These were sent to 233 with the addition of 62 recent graduates. Critical incidents in work were reported; interviews followed which revealed gaps in identified competencies. The following roles were identified: communicator, facilitator, educator, manager, advocate and professional.

The Delphi Procedure

The Delphi procedure has been used extensively to seek opinions about important issues. A study of the knowledge and skills for the adult educator, a Delphi study, was done by Rossman and Bunning.¹¹⁵ This study utilized a series of four questionnaires. The first solicited open-ended responses to the basic question. The second asked respondents to prioritize the statements generated by the first questionnaire on a 5-point rating scale. The third fed back the modal consensus of the previous respondents and asked them to either join the consensus or defend their dissent with individual statements. The final questionnaire asked respondents to choose learning experiences which would be most appropriate for

the adult educator to acquire the knowledge and skills rated as "highest priority" on questionnaire three.

The Delphi procedure was also used in a study done by Young at Michigan State University, on the development of a family studies program at the college level.¹¹⁶ One of the purposes of the study was to contribute to the theory of the Delphi method by comparing panels that have hierarchical, heterogeneous, and homogeneous sections, within specialist and generalist groups. A 15 member advisory committee evaluated the objective and pilot tested the questionnaire completed by 104 persons in six Delphi panels. Round One contained 123 items derived from the review of the literature. Panelists' suggestions were added in round two and information and evaluation items in round three. A four-point Likert-type scale was used as a metric. Statistics reported to panelists were median and inter-quartile range. Round three data were submitted to principal factor analysis with varimax rotation, two-way analysis of variance and Newman-Keul one-way analysis of variance. The Uhl formula was used to test convergence to consensus.

Results of the study showed that the Delphi method was suitable for the development of a program in family studies at the college level. Convergence to consensus on objectives and formal content topics was complete by round two, and informal content topics by round three. There were sufficient differences in the panels to warrant continued research on specialist and generalist groups with all three sections. Although the Delphi method was originally used to forecast, it is increasingly used to resolve conflicting opinion and to determine policy in complex situations. Young reviewed the

research on the Delphi method, considering its history, purposes, philosophy, process, modifications, advantages and disadvantages.

Helmer¹¹⁷ noted that historically the Delphi method was developed from forecasting operations research in World War II. It was designed to obtain group opinions without face-to-face confrontation. Young says that it is an effort to produce convergence of group consensus through a series of three or four questionnaires dealing with future-oriented questions.¹¹⁸

Modifications to the method have been classified as selection of the panel of experts, format, number of and interval between rounds. Young found that in 49 dissertations reviewed, 34 used three rounds.

Criteria for selection of experts was listed by Helmer and Rescher:¹¹⁹ level of knowledge of the person about the topic; degree of reliability, determined by the relative frequency of accurate predictions already made by the person. In essence, the characteristics of the panel of experts should be matched to the nature and purposes of the study.

Advantages of this method over assembling experts were the following:

1. Less costly (if experts were to be gathered from some distance).
2. Avoids persuasion, leadership influences, hidden agendas, personality conflicts and other problems of group decision-making.

3. Several studies showed the Delphi to have remarkable accuracy.
4. Provides documentation of a precise nature, including minority opinions.

Disadvantages are the critical problems of predicting the future; bias can be present in the selection of the panels; and much time can be spent in completing the series of questionnaires. In summary, the Delphi method with modifications appears to be a suitable way to obtain opinions of persons on the competencies identified in this study.

Survey Methodology

Since a survey instrument was used in this study, a review of survey methodology as a research tool was completed. The sample survey is an appropriate and useful means of gathering information under three conditions: when the goals of the research call for quantitative data, when the information sought is reasonably specific and familiar to the respondents, and when the researcher has considerable prior knowledge of particular problems and the range of responses likely to emerge.¹²⁰ Survey research is probably the best method available to the social scientist interested in collecting data for purposes of describing a population too large to observe directly.¹²¹ Babbie goes on to say that careful probability sampling provides a group of respondents whose characteristics may be taken as representative of those of the larger population. There are both strengths

and weaknesses incumbent in survey research. Strengths are the following:

1. Makes very large samples feasible which is important for descriptive and explanatory analysis.
2. Useful in getting opinions of large populations scattered geographically.
3. Flexible because much information can be obtained.
4. Because the same questions are asked each person, there is strength to measurement generally. Since there are no real meanings to a concept, asking each person the same questions allows the researcher to impute the same intent to all respondents giving a particular response.
5. Economy and standardization are possible as compared to interviews.
6. There is a lack of interviewer bias in the self-administered questionnaire.

Weaknesses of survey research can be summarized as follows:

1. Generally a researcher seldom taps what is most appropriate to many respondents by designing questions that will be at least minimally appropriate to all respondents.
2. Trends to be superficial by comparison with interviewing since the research can seldom deal with the content of social life or develop the feel for the total situation.

3. Although flexible in one sense (amount of information that can be obtained), surveys require that an initial study design remain unchanged throughout the entire research.
4. There is an artificiality inherent in experiments or surveys. Since surveys cannot measure social action, they can only collect self-reports of opinions at a given time. The act of studying a given topic may affect the respondents' opinions.

Based on the sampling techniques used, survey research can have generalizability to dispersed populations and larger populations within known limits of error. Replicability is possible because the measuring instruments and conditions of research are arranged so that they can be repeated. It must be remembered that every method of data collection, including the survey, is only an approximation to knowledge.¹²²

In this chapter competency-based education has been discussed with advantages and disadvantages stated. The review of occupational therapy literature included the AOTA Essentials, philosophy principles and theory of occupational therapy, educational areas, emerging competencies and opinions of leaders of the profession. Social policy legislation review covered five public laws related to health care. Research methodology related to identification of competencies, the Delphi Procedure and survey methodology completed Chapter II. Chapter III will contain the methodology and data collection procedures.

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Chapter III

METHODOLOGY AND DATA COLLECTION

The purpose of this study was to identify the competencies needed by occupational therapists to practice in the 1980's. This chapter introduces the methodology and data collection procedures used to fulfill the purpose by including the type of study conducted, the objectives, related research questions and hypotheses, and the three phases of the methodology.

Type of Study

This study used the Delphi procedure for empirically validating the competencies identified through the literature review. Although not "pure descriptive research which provides information and data to assist decision-makers in solving a particular problem,"¹²³ this study went one step further by obtaining opinions of a panel of experts through two surveys. The Delphi procedure will be described under Phase 3 in this chapter.

Objectives

The following objectives were germane to this study:

1. To define the competencies needed by occupational therapists.

2. To validate by obtaining consensus of members of the profession as to the ESSENTIAL, SUPPLEMENTARY and EMERGING competencies needed by occupational therapists.
3. To derive an educational model for lifelong professional development from the data analysis.

From these objectives the following research questions and hypotheses were generated:

Research Question #1

What are the ESSENTIAL Competencies needed for entry into the profession of occupational therapy as perceived by a Delphi panel of professionals in the field?

Operational Definition: The ESSENTIAL Competencies will be those competencies which the panelists rank as essential or absolutely essential (3.5 - 5.0). The numbers indicate a ranking on the response scale in the INVENTORY.

<u>Panelists</u>	<u>Competencies</u>
Fellows and Curriculum Directors Group #1	ESSENTIAL
Recent Graduates (1975 and 1978) Group #2	

HYPOTHESES

- H_0 : There will be no meaningful divergence from the EXISTING ESSENTIAL Competencies.
- H_1 : There will be meaningful divergence from the EXISTING ESSENTIAL Competencies needed for providing indirect client services in occupational therapy.

Research Question #2

What SUPPLEMENTARY Competencies may be needed for entry into the profession of occupational therapy in addition to the ESSENTIAL Competencies, as perceived by a Delphi panel of professionals in the field?

Operational Definition: The SUPPLEMENTARY Competencies will be those which the panelists say are minimally or probably essential (1.5 - 3.4). The numbers indicate a ranking on the response scale in the INVENTORY.

<u>Panelists</u>	<u>Competencies</u>
Fellows and Curriculum Directors Group #1	SUPPLEMENTARY
Recent Graduates (1975 and 1978) Group #2	

Research Question #3

What are the EMERGING Competencies which OTs need to practice in settings other than the traditional general and mental hospitals and rehabilitation centers, such as in schools, homes, residential care facilities, health agencies and other community locations, as perceived by a Delphi panel of professionals in the field of occupational therapy?

Operational Definition: The EMERGING Competencies are those derived from a review of occupational therapy and other relevant literature, and social policy legislation, and which are not now a part of the AOTA Essentials. These will be all competencies ranked as minimally to absolutely essential (1.5 - 5.0), excluding the AOTA Essentials.

<u>Panelists</u>	<u>Competencies</u>
Fellows and Curriculum Directors Group #1 Recent Graduates (1975 and 1978) Group #2	EMERGING

Research Question #4

What degree of consensus is there across members of the profession regarding the ESSENTIAL, SUPPLEMENTARY, and EMERGING Competencies?

<u>Panelists</u>	<u>Competencies</u>
Fellows and Curriculum Directors AND Recent Graduates (1975 and 1978)	ESSENTIAL SUPPLEMENTARY EMERGING

HYPOTHESES

- $H_0(1)$: There will not be convergence to consensus on over 50% of the ESSENTIAL and SUPPLEMENTARY Competencies.
- $H_1(1)$: There will be convergence to consensus on over 50% of the ESSENTIAL and SUPPLEMENTARY Competencies.
- $H_0(2)$: There will not be convergence to consensus on over 50% of the EMERGING Competencies.
- $H_1(2)$: There will be convergence to consensus on over 50% of the EMERGING Competencies.

Research Question #5

To what degree do Group One (Fellows and Curriculum Directors) and Group Two (Recent Graduates) agree regarding how essential the various competencies are?

Operational Definition: The competencies will be analyzed as to whether they are ESSENTIAL, SUPPLEMENTARY, or EMERGING.

<u>Panelists</u>	<u>Competencies</u>
Group #1	ESSENTIAL
Group #2	
Group #1	SUPPLEMENTARY
Group #2	
Group #1	EMERGING
Group #2	

HYPOTHESES

H_0 : There will be no significant differences between Group One and Group Two regarding how essential the various competencies are.

H_1 : There will be significant differences between these two groups regarding how essential the various competencies are.

Research Question #6

Do significant differences exist between the competency scales?

Operational Definition: The demographic variables which describe the panelists are identified in the following breakdown for each of the four categories:

Education: 1 = Bachelor of Arts/Science, Bachelor of Science in OT, and Certificate in OT.

2 = Master of OT (MOT)

3 = Graduate Education (not including the MOT)

Years in Practice: 1 = less than 5 years

2 = 5 - 10 years

3 = 11 or more years

Work Setting: 1 = hospital or rehabilitation center

2 = school system, private practice, home health agency, residential care facility, university education program or other.

Primary Work Function: 1 = direct client service

2 = administration/supervision, consultation, teaching in classroom or field, and other (indirect client service)

<u>Professional Degree(s)</u>	<u>Competencies</u>
1	
2	
3	Scales 1 - 13
<u>Years in Practice</u>	<u>Competencies</u>
1	
2	
3	Scales 1 - 13
<u>Work Setting</u>	<u>Competencies</u>
1	
2	Scales 1 - 13
<u>Primary Work Function</u>	<u>Competencies</u>
1	
2	Scales 1 - 13

HYPOTHESES

Professional Degree

H_0 : There will be no significant difference between educational groups on the competency scales.

H_1 : There will be a significant difference between these groups.

Years in Practice

H_0 : There will be no significant difference between years of practice groups on the competency scales.

H_1 : There will be a significant difference between years of practice groups on the competency scales.

Work Setting

H_0 : There will be no significant difference between traditional and nontraditional work setting groups on the competency scales.

H_1 : There will be significant differences between these groups.

Primary Work Function

H_0 : There will be no significant difference between direct client service groups and indirect client service groups on the competency scales.

H_1 : There will be a significant difference between these groups.

Research Question #7

Would OTs take a job in a nontraditional setting, and if so, for what reasons, according to a Delphi panel of professionals?

Operational Definition: This question will be analyzed by obtaining the frequency of responses for each reason for change and

by rank ordering the reasons for change.

<u>Panelists</u>	<u>Reasons for Change</u>
Fellows and Curriculum Directors	Rank order: 1 - 5
Recent Graduates	Rank order: 1 - 5
Reasons for Change:	1 - to develop own job 2 - interest in nontraditional setting 3 - desirable client population 4 - job available 5 - other ...

Design of the Study

A three-phase methodology was used to accomplish the objectives of this study and to answer the research questions.

Phase I

The first phase of the methodology identified the competencies needed by OTs to practice. This was accomplished by reviewing the following:

1. The AOTA Essentials, the Ohio University Task Analysis Study¹²⁴ to obtain a list of competencies considered by AOTA to be essential for entry into the profession.
2. Social policy legislation having an impact on the profession of occupational therapy.
3. Literature related to competency-based education; suggestions and recommendations of leaders in the profession regarding competencies needed for practice.

This review of competencies has been described in Chapter II. The list of competencies generated from the review is included in Appendix A.

Phase 2 - Instrument Development and Pilot Testing:

This phase of the study consisted of designing and pilot testing the OCCUPATIONAL THERAPISTS COMPETENCY INVENTORY (INVENTORY), using the five Fellows of AOTA who reside in Michigan as pilot testers. Revision of the INVENTORY followed before beginning Phase 3.

Phase 3 - Data Collection and Analysis:

This phase focused on empirically validating those competencies identified in Phase 1 and 2. For this part of the study, the Delphi procedure for obtaining opinions of a panel of experts was used. The decision to use this procedure was based in part on the review of the literature. Since the INVENTORY would be a long one, it was decided to use only two rounds for surveying panelists. This modification of the Delphi procedure in which three rounds is the most common number, was deemed advisable for the following reasons:

1. Round one contained a long list of competencies for panelists to make judgments about.
2. Since the INVENTORY was long, two rounds were considered to be the greatest number from which responses could be obtained.

Population and Sample

The sample for this study was drawn from a population of approximately 25,000 OTs. Both stratified and systematic random sampling

were used to obtain the strata of the population desired, and to ensure randomization. To obtain opinions of leaders in the profession, all Fellows of AOTA were part of the sample. Fellows are selected by the profession of AOTA for having made a significant contribution to the continuing education and professional development of members of the association. Curriculum directors were chosen because of their involvement in the educational process of OTs. Practitioners who graduated in 1975 were selected because they would have practiced as long as possible and still have gone through school under the AOTA Essentials of 1972. Graduates who took the registration examination in January and June, 1978, were chosen because they would have practiced at least one year in present practice settings and would have also gone through school after the educational programs had had at least two years to revise curricula to conform to the 1973 AOTA Essentials.

The size of the sample was decided in consultation with Dr. Lawrence Lezotte, head of the Institute for Research on Teaching at Michigan State University. A sample of 300 was thought to be adequate for establishing a valid opinion consensus. This number would be apportioned approximately equally among Fellows and Curriculum Directors (100) and recent graduates from 1975 (100) and 1978 (100). To obtain this number, with consideration given to non-responses, it was decided upon consultation with AOTA's Operations Research Director, Francis Acquaviva, to sample 300 from each of the two groups of recent graduates, all Fellows and all Curriculum Directors, including the Occupational Therapy Assistant's program (a grand total of 842).

A systematic sampling procedure was used to obtain randomization from among the recent graduates. This consisted of starting at a random point in the list and selecting every Kth element (every 7th). This "systematic sample with a random start" according to Babbie¹²⁵ is virtually identical to simple random sampling if the list of elements is "randomized" in advance of sampling. Empirically the results of simple random sampling and systematic sampling are virtually identical. In systematic sampling care must be given to periodicity of the elements in the list. This means that if a cyclical list pattern exists, a grossly biased sample may be drawn. In this study the lists of registered therapists which exist on the AOTA computer are in the order of registration only, thus eliminating any periodicity or cyclical pattern.

Data Collection

The INVENTORY for Round One consisted of 140 variables of which 124 were competency statements and 16 were demographic variables. There were 28 pages of which two were informational. A rating scale of 5 to 1 with 5 being absolutely essential, 4 - essential, 3 - probably essential, 2 - minimally essential, and 1 - useful, but not essential, followed each competency statement. Panelists answered the question, "How essential is each of the following competencies for entry into the profession?" Demographic data consisted of educational degrees, professional development in past year, employment status, number of years worked as an OT, work setting, primary work function and change of employment setting.

This INVENTORY was sent to all panelists, together with a cover letter requesting each person to be a panelist and complete the INVENTORY. From this number, 302 usable responses were returned. Letters with returned INVENTORIES excused 15 from participating for reasons such as "being out of the profession too long," not practicing directly in an area of occupational therapy, or living out of the country. There were 19 not deliverable INVENTORIES. Table 1 summarizes the responses to the INVENTORY for Rounds One and Two.

The INVENTORY for Round Two consisted of two parts. Part 1 repeated the competency statements from Round One with the addition of clarifying parts to a few (7). Feedback was given to panelists concerning the mean of responses for each statement and a histogram showing the response rate in each of the five rating columns. Those competencies which had obtained consensus of .77 were indicated, and no response was required to these. A total of 11 obtained consensus on the first round. The method for determining consensus is described under data analysis.

Part 2 of the second INVENTORY contained all the competencies which had been submitted by panelists in Round One. They were listed in each category in the same manner as were the competency statements in Part 1. Panelists were asked to make a judgment about the essentiality of these as well. However, if necessary because of the length of the INVENTORY (46 pages) to make a choice between the two parts, it was stressed that Part 1 was critical to the outcome of the research and should, therefore, be completed first.

Table 1. Responses to the INVENTORY for Rounds One and Two.

Panelists	Round One					Percent of Each Panelist Group	Percent Total Deliverable Sample Usable
	Responses Mailed	Responses* Not Deliverable	Returned Not Completed	Returned Usable			
Fellow and Curriculum Directors	251	19	34	109	43%	13%	
Graduates 1975 and 1978	591	5	26	192	33%	24%	
TOTAL	842	24	60	301	--	37%	
Round Two							
Fellow and Curriculum Directors	109	None	2	92	84%	31%	
Graduates 1975 and 1978	192	None	2	137	71%	46%	
TOTAL	301	--	4	229	--	77%	

105

	Round Two					
Fellow and Curriculum Directors	109	None	2	92	84%	31%
Graduates 1975 and 1978	192	None	2	137	71%	46%
TOTAL	301	--	4	229	--	77%

*Death, incorrect address, out of country, etc.

NON-USABLE RESPONSES BY REASON

Too long out of profession	14	Out of Country	4	Questions confusing	2
Too busy	9	Returned to late	3	INVENTORY too long	1
		Death	2	Miscellaneous reasons	11

A cover letter was included with both rounds, a sample of which is included in Appendix C. Follow-up postcards were mailed to panelists in both rounds to remind them to return their INVENTORY. This was done approximately three weeks after mailing the INVENTORY. A return postage-paid envelope was included in both rounds to encourage completion of the INVENTORIES. In Round One a five-page reference list was included as a motivator to stimulate a desire to respond, reasoning that if the panelist receives something as a gift, there might be a stronger inclination to do something in return. Round One was mailed on January 23, 1980; Round Two on March 21, 1980. About six weeks was required to obtain all responses in each round (see Table 2).

Table 2. INVENTORY timetable for obtaining and analyzing data.

	Number	Date
Pilot testing returned	5	12/17/79
Round One mailed	843	1/23/80
Follow-up cards mailed		2/05/80
Round One data analyzed		3/08/80
Round Two mailed	301	3/21/80
Follow-up cards mailed (AOTA National Conference intervened)		4/21/80
Round Two data analyzed (starting)		5/21/80

Data Analysis

Since Objective #2 was to validate by getting opinions from members of the profession as to the essential and supplementary competencies needed by occupational therapists, the data analysis focused on the convergence to consensus. Consensus is defined as the degree to which everyone is in total agreement, as opposed to dispersion, which is the degree to which people are polarized. A measure of ordinal consensus was used, based on the work of Leik.¹²⁶ The typical Likert-type question produces an endorsement of only one option, with no statement by the respondent regarding other possible options. For this reason no assumptions about the intervals between choices can be made. Therefore, a formula which is a measure of ordinal consensus has to be used. Leik's formula is the following:

$$D = \frac{2 \sum d_j}{m - 1} - 1$$

D is a percentage, a measure of ordinal dispersion; when subtracted from 1 (total consensus) it becomes a percentage of consensus. $\sum d_j$ equals the cumulative frequency of responses; m equals the number of options in the scale.

Other Delphi studies had used the semi-interquartile range as an indicator of consensus, the median and the mean.¹²⁷ The semi-interquartile range was obtained in this study as a check against the ordinal dispersion formula of Leik, and the results indicated agreement. An adequate degree of consensus was considered to be .77 or better, using the Leik formula for ordinal consensus. On the semi-interquartile range scale, this was equal to .49. A Fortran

program was written to obtain the statistical analyses needed to obtain consensus and semi-interquartile range.

For both Round One and Round Two the INVENTORIES were coded on optical scan sheets by two coders: the researcher and one assistant who read the responses to the other who then checked the circle on the optical scan sheet. Frequent checking for errors was done to maintain accuracy. These sheets were taken to the computer for card punching. The cards were verified as to accuracy and any error was corrected. The mean was given as feedback to the panelists in Round Two since it is a statistical average of responses, easily understood by those reading the competency statements. Multivariate analysis of variance (MANOVA) was done to determine differences between group means on the competency variables. Reliability tests were done to determine variables that did not belong in identified categories. Cross tabulation tables and cross breakdowns of demographic data and the sample groups were also completed. Figure 5 shows the statistical analysis procedures used for the data analysis.

Chapter III has included the type of research study, objectives, research questions, and hypotheses. From these the study was designed, and the three phase methodology determined. The population and sample is described, data collection techniques noted and the data analysis procedures necessary for completion of the third phase listed and explained. Chapter IV will contain the findings of the study.

Figure 5. Summary of data analysis.

Purpose	Data Used	Statistic
Feedback to panelist to encourage consensus	Round One INVENTORY responses	Mean, Frequency, Standard Deviation and Variance
To determine convergence to consensus	Rounds One and Two INVENTORIES responses	Semi-interquartile Range and Leik Formula
To determine internal consistency of competencies	Round One INVENTORY responses	Coefficient of Reliability
To determine differences between groups	Rounds One and Two INVENTORIES responses	MANOVA, Univariate F Tests, Roy-Bargman Stepdown F Tests
To decide whether to add 17 late responses	Round One INVENTORY responses	Mean

Footnotes

¹²³Deabold, Van Dalen. Understanding Education and Research. New York: McGraw-Hill Book Company, 1966, p. 203.

¹²⁴Ohio State University, School of Allied Medical Professions. Development of Occupational Therapy Job Descriptions and Curricula through Task Analysis. Reports No. 1-6. Columbus, Ohio: The Ohio State University, 1971.

¹²⁵Babbie, Earl R. The Practice of Social Research. California: Wadsworth Publishing Company, 1975, p. 259.

¹²⁶Leik, Robert K. "A Measure of Ordinal Consensus." Pacific Sociological Review, Fall 1966, p. 85-90.

¹²⁷Young, Wanda. "Family Studies Program Development at the College Level: "A Delphi Study," unpublished dissertation, Michigan State University, 1977.

Chapter IV

RESEARCH FINDINGS

This chapter contains the results of the analysis of the responses from the panelists who participated in this study. The objectives of this study were accomplished in three phases. Phase I consisted of the identification of competencies through the literature review. A list of these competencies and their source is given in Appendix A. Phase 2 involved the development and pretesting of the OCCUPATIONAL THERAPY COMPETENCY INVENTORY. Phase 3 included the data analysis. In this chapter the research findings will be given for each research question. A summary of the responses to the INVENTORY has been given in Chapter III, and in Table 1. There were 17 respondents who returned their INVENTORIES after the initial analysis of second round data had taken place. To decide whether these 17 could be included with the responses of the larger sample of 284, the small group responses were analyzed to determine differences in means of each competency variable, the standard deviations and variances. Upon comparing the means of the competencies of these two groups, none varied more than a hundredth of a point. With this small variation it was deemed permissible to include the 17 with the 284, making a total sample for Round One of 301.

Background of Sample

The demographic data which describes the characteristics of the sample which responded to Round One is given in Table 3. This data is taken from the 284 responses which were analyzed prior to receiving the group of 17 that arrived later. The open-ended responses to employment setting, primary work function and change of employment setting are not given because they were so individualized that grouping was impossible.

Analysis of Round One or Round Two Data

Since this was a Delphi study which differs from a single survey in that the second round or survey serves as a cross-validation of panelists' opinions, the issue arose of whether to use Round One or Round Two data to test the hypotheses. In consultation with the statistical and research consultants, the question of inferring results to the general population was considered in relation to both rounds. It was thought that Round One data was the more independent, less clouded by interaction with others through the communication process of the Delphi procedure, and therefore more statistically appropriate to use for hypothesis testing.

The second round tells the researcher whether panelists are truly committed to their original position after receiving feedback in terms of clarifying information about statements, and the histogram showing the frequency of the judgments of others in Round One. To look more deeply into the Delphi process in this study it was decided to use data from both rounds for testing hypotheses

Table 3. Summary of characteristics of panelists.

<u>EDUCATION</u>		<u>EMPLOYMENT SETTING</u>	
Bachelor of Science in Occupational Therapy	202	Hospital or rehabilitation center	108
Bachelor of Arts/Science	60	School system	28
Master of Occupational Therapy	31	Private practice	12
Certificate in Occupational Therapy	39	Home health agency	5
Master's in Graduate Education	76	Residential care facility	16
Ph.D.	16	University education program	63
Certificate of Candidacy for Ph.D.	5	Other	45
<u>PROFESSIONAL DEVELOPMENT</u>		<u>WORK FUNCTION</u>	
Have you participated in any continuing education workshops, courses or conferences in the past year?		Direct client service	130
YES <u>258</u> NO <u>26</u>		Administration/supervision	79
		Consultation	19
		Teaching in classroom or field	45
		Other	17
<u>EMPLOYMENT</u>		<u>SUMMARY</u>	
Are you presently employed?		<u>Employment Setting</u>	
YES <u>252</u> NO <u>3</u>		Hospital/rehabilitation center	108
Number of years worked as an OT:		Other than hospital/rehabilitation center	169
Less than 5 years	133	<u>Work Function</u>	
5 - 10 years	53	Direct client service	130
11 or more years	92	Indirect client service	160

and report the differences in findings of each round. In the sub-population testing of group differences, the generalizability will be done based on Round One. Since one of the main purposes of a study of this kind is to have change occur between rounds, a close look was taken at the kinds of change which took place, and possible reasons postulated.

Data Analysis

Scale Formation

Before data analysis could begin, the 124 competency statements from the INVENTORY were reviewed for obvious conceptual groupings. Since there were nine sections to the INVENTORY, it was decided to use each section as a category of similar variables. These were the following:

1. Life Tasks and Activities
2. Basic Sciences
3. Direct Client Services
4. Health-Illness-Health
5. Human Development Process
6. OT Theory
7. Indirect Client Services
8. Personal Performance Skills and Attitudes
9. OT in the Schools

Next, the responses to Round One were reviewed to identify the means of panelists' responses to competencies within categories which did not seem to be congruent with that category. Additionally, it was found that several competencies referred to a separate category

related to the family specifically; these were placed in a 10th category and called Family Studies.

Since the study sought to identify emerging competencies, for analysis purposes it was necessary to separate those competencies from the AOTA Essentials. These competencies would then be called the EMERGING Competencies. Mainly these were taken from the categories of Indirect Client Services, OT Theory and Direct Client Services. For analysis purposes these categories would be called scales (subscales of the largest overall scale).¹²⁸ Warwick and Lininger describe scales as a process of combining variables that relate to each other into a single scale. They resemble sub-test items which are groupings of similar test items for analytical purposes. To determine the homogeneity of the items (whether the single items "hang together" or have internal consistency), statistical analysis to find the coefficient of reliability was done. Warwick and Lininger state that if reasonably high correlations are found (.60 - .90), one would be justified in combining the variables into a single scale. The coefficients of reliability for all scales were found to range from .60 - .95. This reliability tells us to what extent scales represent the true measure of the competency area in question (i.e., how error-free measures are). These are listed in Table 4. Further inspection of single item reliability revealed that eliminating no single variable improved the scale reliability, so the items were left intact.

There were now basically two groups of scales: the EMERGING Competencies and the EXISTING ESSENTIAL (EE) Competencies. The EMERGING Competencies were the ones taken from the literature review

Table 4. Homogeneity of competencies for existing and emerging competency scales.

Scale Number	Name	Coefficient Alpha (Reliability Measure)
<u>EXISTING ESSENTIAL Competency Scales</u>		
1	Specific Life Task and Activities	.77
2	Basic Human Science	.60
3	Direct Client Services	.84
4	Health-Illness-Health	.75
5	Human Development Process	.87
6	Occupational Therapy Theory	.85
7	Indirect Client Services	.94
8	Personal Performance Skills and Attitudes	.90
9	Occupational Therapy in the Schools	.89
10	Family Studies	.87
<u>EMERGING Competency Scales</u>		
1	Direct Client Services	.66
2	Occupational Therapy Theory	.86
3	Indirect Client Services	.95
4	Occupational Therapy in the Schools (same as #9 regular scale)	.89
5	Family Studies (same as #10 regular scale)	.87
Range of Coefficient Alpha:		
	.60 - .70	(2 scales)
	.70 - .80	(2 scales)
	.80 - .90	(8 scales)
	.90 +	(3 scales)

and personal experience; the EXISTING ESSENTIAL Competencies were those contained in the AOTA Essentials which provide the OT Curricula with standards upon which to base entry-level competencies. The EMERGING Scales (EScales) were numbered and named as follows:

EScale 1: Direct Client Services

EScale 2: OT Theory

EScale 3: Indirect Client Services

EScale 4: OT in the Schools, same as #9 in
the list of sections in the INVENTORY

EScale 5: Family Studies

EScales contained EMERGING Competencies only. Scales 1 - 10 consisted of both EMERGING and EXISTING ESSENTIAL Competencies: Scales 1 - 5 and 8 were only EXISTING ESSENTIAL Competencies; Scales 6 and 7 were mixed, and Scales 9 and 10 were only EMERGING Competencies.

Statistical Procedures

The means of panelists' responses from Round Two were used in the Multivariate Analysis of Variance (MANOVA) computations which provided the findings needed to answer the following research questions: number 1, 2, 3 and 4. In question 4 both Round One and Round Two data were used to compute consensus across all panelists. Convergence to consensus was produced by the Fortran computer program. Round One and Round Two data formed the basis for the multivariate analysis of variance (MANOVA) tests of significance of within scale scores as criterion measures and the demographic variables as independent measures. In discussion with consultants it was concluded

that the composition and experimental conditions of Rounds One and Two differed; therefore, consensus figures and MANOVA's were done on each round separately. Results between rounds were compared and reported in the summary of each research question. The statistical procedures used for analyzing data to answer the research questions are described in each question.

Research Question #1

What are the ESSENTIAL Competencies needed for entry into the profession of occupational therapy as perceived by a Delphi panel of professionals in the field?

Operational Definition: The ESSENTIAL Competencies will be those competencies which the panelists rank as essential or absolutely essential (3.5 - 5.0). The numbers indicate a ranking on the response scale in the INVENTORY. The ranking columns on the INVENTORY were 5 - 1; in order to divide the range from 5 - 1 into relatively equal intervals, 3.5 - 5 was selected as being ESSENTIAL since 3.5, if rounded off would become 4.0 (essential on the INVENTORY); 1.5 - 3.49, supplementary, and 1.0 - 1.49, useful but not essential.

The question to be dealt with in this research question is whether there is perceived change, in the opinions of the Delphi panelists in the EXISTING ESSENTIAL Competencies which were based on the AOTA Role Delineation Study of 1972.

The hypotheses postulated for this question are the following:

H_0 : There will be no meaningful divergence from the EXISTING ESSENTIAL Competencies.

- H₁: There will be meaningful divergence from the EXISTING ESSENTIAL Competencies needed for providing indirect client services in occupational therapy.

Meaningful divergence will be operationally defined as being 25% or more of the indirect client service competencies becoming essential.

Research Findings: The responses by panelists to all competency variables on the INVENTORY were analyzed to determine the mean of the ranking on the scale of 5 (Absolutely Essential), 4 (Essential), 3 (Probably Essential), 2 (Minimally Essential) and 1 (Useful but not Essential) for each competency statement, using the MANOVA procedures of the Statistical Package for the Social Sciences (SPSS). Table 5 lists these competency variables within each scale, means for Rounds One and Two, the ranking within scales, and degree of consensus. The findings indicate that there were 78 competencies considered by these panelists to be essential at entry level using Round Two means. Within the Indirect Client Service scale, 13 of the 47 competencies or 28% were considered essential. Essentiality at a lesser level is indicated by means of 1.5 - 3.49, and are considered SUPPLEMENTARY in this study.

Table 5 does not include Scale 7, Indirect Client Services, since only the provision of administrative and supervisory leadership of OT programs is considered essential at entry-level by AOTA Essentials; the remainder of the scale consists of emerging competencies. Emerging Scale 3, Indirect Client Services, contains those competencies considered essential by the panelists.

Hypotheses Summary: The null hypothesis which states that there will be no meaningful divergence from EXISTING ESSENTIAL

Table 5. Competencies considered ESSENTIAL by panelists.

Number in Scale	Competency	Rank in Scale (Round Two)	Mean	
			Round One	Round Two
<u>EXISTING ESSENTIAL Scales</u>				
<u>1. Life Tasks</u>				
1	Analysis of tasks in terms of performance	3	4.69	4.69
2	Relation life tasks to client's abilities, limitations, goals	1	4.42	4.75
3	Relation elements of tasks to age needs and life roles	5	4.18	4.43
4	Integration developmental tasks and skill development to performance	4	4.34	4.65
6	Analysis tasks in terms of occupational performance components	2	4.53	4.73
8	Social role behavior and skills related to competence and potential	7	3.90	3.90
9	Learner's performance of life tasks	6	3.89	4.02
<u>2. Basic Human Sciences</u>				
11	Human growth process all areas	2	4.73	4.73
13	Relationship individual development to social-cultural system	4	3.69	3.77
14	Human personality and cognition	3	4.22	4.39
15	Structure/function human body	1	4.75	4.75
<u>3. Direct Client Services</u>				
16	Teaching a client	10	4.61	4.61
18	Evaluating a client to get occupational history	11	4.55	4.55
20	Supporting therapeutic activity program	7	4.31	4.67
21	Evaluating Client's response to treatment	4	4.73	4.73
22	Team working	8	4.61	4.61
23	Verbal and written communication	6	4.37	4.67
24	Recording and reporting - written/oral	9	4.60	4.60
25	Adapting environment to client's needs	1	4.53	4.87
26	Communicating recommendations for referral, termination, follow-up	2	4.48	4.81
27	Fabricate adaptive devices	13	4.05	4.19
<u>4. Health-Illness-Health</u>				
30	Applying measures of well-being to recognize symptoms of health or lack of health	3	4.05	4.15
31	Concept of "wellness"	5	3.91	4.07
32	Relation occupational performance to health	4	3.98	4.13

Table 5. (Continued)

Number in Scale	Competency	Rank in Scale (Round Two)	Mean	
			Round One	Round Two
<u>4. Health-Illness-Health (Continued)</u>				
33	Knowing congenital and developmental defects, disease process and mechanisms	2	4.21	4.24
34	Effect of conditions of "33" to optimal human functioning	1	4.21	4.35
<u>5. Human Development Process</u>				
35	Meaning of activity in development of human potential and competence	1	3.94	4.19
36	Influence of non-human environment of skill development	7	3.54	3.67
37	Socialization process	6	3.75	3.83
38	Acquisition of developmental tasks lifelong	2	3.98	4.12
39	Relation of occupational performance and skills to acquisition of developmental tasks	3	3.66	3.99
41	Relation adaptation concepts to client performance	8	3.63	3.40
46	Learning of adaptive skills	4	3.78	4.00
47	Adaptive process	14	3.79	3.73
<u>6. Occupational Therapy Theory</u>				
54	Application of OT theroetical frames of reference	1	3.91	4.25
<u>8. Personal Performance Skills and Attitudes</u>				
101.	Problem solving skills	3	4.47	4.84
102	Communication skills	2	4.47	4.88
103	Leadership	13	4.06	4.43
105	Observational and listening skills	10	4.08	4.53
106	Responsibility	6	4.62	4.62
107	Flexibility and adaptability	11	4.18	4.49
108	Organizational skills	12	4.17	4.47
109	Motivation and commitment	5	4.33	4.72
110	Resourcefulness and creativity	15	3.92	4.12
111	Self-awareness	8	4.26	4.54
112	Relatedness to others	4	4.42	4.74
113	Objectivity and judgment	14	4.11	4.32

Table 5. (Continued)

Number in Scale	Competency	Rank in Scale (Round Two)	Mean	
			Round One	Round Two
<u>EMERGING ESSENTIAL Scales</u>				
<u>9. OT in the Schools</u>				
116	Assess a student's functional capacities and limitations	8	4.23	4.46
117	Implement an effective OT program	2	4.28	4.51
118	Engage in consensual decision-making	5	3.98	4.04
119	Document performance objectives	1	4.40	4.66
120	Apply OT concepts to educational management programs	6	3.79	3.72
122	Engage in consulting/training relationship within educational system	7	3.51	3.55
123	Communicate value of OT in improving school performance	4	4.19	4.43
<u>1. Direct Client Services</u>				
17	Clients with and without disabilities	1	4.39	4.78
19	Functional living program	1	4.37	4.71
28	Quality care review studies	4	3.90	3.87
29	Adaptive devices and equipment	3	4.14	4.34
<u>2. OT Theory</u>				
50	Dynamics of occupational as force in normal development and behavior	4	3.51	3.58
51	Dynamics of occupation as force in equilibrium of health	3	3.51	3.72
52	Distortion of occupational in presence of illness on living	2	3.84	3.96
53	Use of occupation as a force in identifying health problems	1	3.88	4.00
<u>3. Indirect Client Services</u>				
58	Establishing public relations	11	3.78	3.91
62	Establishing relationships with team members	3	4.48	4.88
63	Intervention in systems: needs assessments	9	3.96	3.73
65	Problem-solving with other professionals and non-professionals	10	3.81	4.04
67	Promoting health practices in OT services	13	3.72	3.80
70	Identifying community resources and knowing information seeking process	12	3.78	3.94
75	AOTA standards of practice; using quality assurance measures	15	3.59	3.75
76	Transmitting value of occupation in promoting health to clients	7	4.02	4.26

Table 5. (Continued)

Number in Scale	Competency	Rank in Scale (Round Two)	Mean	
			Round One	Round Two
<u>3. Indirect Client Services (Continued)</u>				
88	Initiating and directing one's professional growth on continuing basis	2	4.55	4.55
90	Wholistic approach to the client	16	3.35	3.97
96	Professional judgment	4	4.45	4.94
97	Team participation	1	4.61	4.61
98	Professional ethics, necessary business practices	8	3.99	4.24
99	Articulating uniqueness of OT as needed	6	4.17	4.60
104	Professional identity	5	4.21	4.53
48	Relating behavioral theories to motivation of clients	14	3.62	3.89

TOTAL: 78

63% of all competencies in the INVENTORY.

Competencies, is rejected since 28% of indirect client service competencies were considered essential - 3% above the 25% meaningful divergence from the EXISTING ESSENTIAL Competencies.

Research Question #2

What supplementary competencies may be needed for entry into the profession of occupational therapy in addition to the essential competencies, as perceived by a Delphi panel of professionals in the field?

Operational Definition: The supplementary competencies will be those which the panelists identified as minimally or probably essential (1.5 - 3.4).

Research Findings: The frequency of responses by panelists to the competency variables within the minimal or probably essential range were determined from inspection of the Round Two means. Table 6 lists these competency variables within each scale, means for Rounds One and Two, and the competency ranking within scales. The findings indicate that there were 41 competencies considered by these panelists to be minimally or probably essential SUPPLEMENTARY Competencies.

ESSENTIAL and SUPPLEMENTARY Competencies comprised a total of 119 competencies out of a total of 124 competency variables in the INVENTORY. The remaining five were considered to be useful but not essential, which is category one on the response columns for competencies in the INVENTORY.

Table 7 shows the competencies which were considered useful but not essential at entry level.

Table 6. Competencies considered SUPPLEMENTARY by panelists.

Number in Scale	Competency	Rank in Scale	Mean	
			Round One	Round Two
<u>EXISTING Scales</u>				
<u>1. Life Tasks and Activities</u>				
5	Use of simulation strategies with clients	9	3.09	2.61
7	Symbolic meaning of activities	8	3.21	3.15
<u>2. Basic Human Sciences</u>				
None				
<u>3. Direct Client Services</u>				
None				
<u>4. Health-Illness-Health</u>				
None				
<u>5. Human Development Process</u>				
40	Symbolization process	9	2.65	2.42
41	Adaptational concepts	8	3.63	3.40
<u>6. OT Theory</u>				
None				
<u>8. Personal Performance</u>				
114	Manual dexterity	16	3.42	3.32
<u>EMERGING Scales</u>				
<u>9. OT in the Schools</u>				
115	Initiate and manage OT programs	8	3.47	3.39
124	Engage in supervising/training relationship with others to implement OT theories	10	3.36	3.20
121	Develop OT services	6	3.29	3.23
<u>10. Family Studies</u>				
10	Family managerial theory	8	2.56	1.86
12	Ecological approach to family and community	2	3.21	3.13
42	Family developmental theories	3	3.09	3.02
43	Family crisis coping potential	1	3.44	3.35
44	Measures of life satisfaction	4	2.99	2.89

Table 6. (Continued)

Number in Scale	Competency	Rank in Scale	Mean	
			Round One	Round Two
<u>10. Family Studies (Continued)</u>				
49	Ecological approach applied to development, adaptive process and quality of life	5	2.89	2.89
74	Gaining access to families	6	2.85	2.62
79	Elements in family decision-making	7	2.73	2.24
<u>1. Direct Client Services</u>				
	None			
<u>2. OT Theory</u>				
	None			
<u>3. Indirect Client Services</u>				
55	Supervisor of others	25	2.85	2.65
56	Administrative and supervisory leadership of OT programs	33	2.57	1.73
57	Administrative responsibilities	20	3.02	2.41
60	Consultation as staff member	17	3.30	3.49
66	Community health planning	35	2.55	1.82
68	Practice in homes, schools and health agencies	19	3.09	3.11
69	Role of health agent in other cultures	32	2.67	2.18
71	Health promotion activities	34	2.57	1.82
72	Community health promotion	26	2.82	2.35
73	Working in non-OT department settings	24	2.95	2.62
78	Influencing the legislative process	39	2.33	1.93
80	Handicapped person advocate	21	2.99	2.82
81	Negotiating systems	36	2.55	2.27
82	Research in OT theory and practice	30	2.75	2.03
83	Doing research	31	2.69	1.92
84	Research link between practice and education	40	2.29	1.62
85	Promoting research	41	2.18	1.50
86	Engaging in research as part of one's role	38	2.48	1.73
87	Apply OT concepts to all areas of specialization	22	2.97	2.85
89	Leader in development of profession	29	2.80	2.17
91	Change agent role	28	2.81	3.10
92	Change agent as catalyst and innovator	23	2.96	2.97
93	Assist clients to re-define roles	31	2.69	3.15
95	Marketing self and professional services	37	2.53	2.01

Table 6. (Continued)

Number in Scale	Competency	Rank in Scale	Mean	
			Round One	Round Two
<u>3. Indirect Client Services (Continued)</u>				
100	Contribute to comprehensive health care	27	2.82	2.61
45	Applying interrelationship of a person's life space and tasks to occupational performance	18	3.20	3.19

TOTAL: 41

33% of all competencies in INVENTORY.

Table 7. Competencies considered USEFUL BUT NOT ESSENTIAL by panelists.

Number in Scale	Competency	Rank in Scale	Mean	
			Round One	Round Two
<u>EMERGING Scales</u>				
<u>3. Indirect Client Services</u>				
59	Writing proposals	44	2.00	1.36
61	Functioning as a consultant to systems	43	2.20	1.46
64	Consultant to systems	45	2.20	1.28
77	Social policy formation and law enactment	42	2.09	1.47
94	Role of independent practitioner	46	1.77	1.20

TOTAL: 5

4% of all competencies in INVENTORY.

Research Question #3

What are the EMERGING Competencies which OTs need to practice in settings other than the traditional general and mental hospitals and rehabilitation centers, such as schools, homes, residential care facilities, health agencies and other community locations, as perceived by a Delphi panel of professionals?

Operational Definition: The EMERGING Competencies are those derived from a review of occupational therapy, relevant literature, social policy legislation and which are not now a part of the AOTA Essentials. The criteria for determining how essential the panelists considered the EMERGING Competencies is all competencies ranked as minimally to absolutely essential (1.5 - 5.0), excluding the AOTA Essentials.

Research Findings: The research findings answer the question, how essential are the EMERGING Competencies, according to the Delphi panel of experts. The means of the competencies were used to rank them according to essentiality. Table 8 summarizes the number of EMERGING Competencies considered ESSENTIAL or SUPPLEMENTARY within Emerging Scales. The content of these competencies can be found in Tables 5 and 6; Table 7 lists the EMERGING Competencies thought to be Useful but not Essential.

To summarize Table 8, most of the ESSENTIAL EMERGING Competencies were in OT in the Schools and Indirect Client Services. Next in order was OT Theory, which was included among the EMERGING Competencies

because four of the five in that scale were taken from a conceptual model of Wiemer described in the collection of presentations to the Representative Assembly of AOTA in November, 1978. Although the basic theory of occupation behind the dynamics of occupation described by Wiemer is not new, her model does state the theory in a new conceptual format. SUPPLEMENTARY EMERGING Competencies were primarily within Family Studies and Indirect Client Services.

Table 8. EMERGING Competencies: Number within scales ranked as ESSENTIAL or SUPPLEMENTARY.

<u>Emerging Scales - ESSENTIAL Competencies</u>		<u>Number</u>
9	OT in the Schools	7
1	Direct Client Services	3
2	OT Theory	4
3	Indirect Client Services	<u>16</u>
Total		30
 <u>Emerging Scales - SUPPLEMENTARY Competencies</u>		
9	OT in the Schools	3
10	Family Studies	8
3	Indirect Client Services	<u>26</u>
Total		37

The highest priorities of essentiality in Indirect Client Services in EMERGING Competencies were given to team participation, personal growth and judgment, professional identity, ethics and business practices and articulating the uniqueness of OT. Roles of administrator, supervisor, change agent, consultant, researcher, health promotor were of secondary importance at entry-level. The lowest

in priority among all competencies were the roles of independent practitioner and consultant to systems; writing proposals and the legislative process.

Research Question #4

What degree of consensus is there across members of the profession regarding ESSENTIAL, SUPPLEMENTARY and EMERGING Competencies?

HYPOTHESES

$H_0(1)$: There will not be convergence to consensus on over 50% of the ESSENTIAL and SUPPLEMENTARY Competencies.

$H_1(1)$: There will be convergence to consensus on over 50% of the ESSENTIAL and SUPPLEMENTARY Competencies.

$H_0(2)$: There will not be convergence to consensus on over 50% of the EMERGING Competencies.

$H_1(2)$: There will be convergence to consensus on over 50% of the EMERGING Competencies.

Research Findings: Analysis of convergence to consensus was done by two statistical procedures: the Leik formula for measuring ordinal consensus (see Data Analysis, Chapter III), and the semi-interquartile range. Using the Leik formula which indicates how little dispersion of responses to each competency variable occurred, the degree of convergence to consensus was calculated on the computer for each variable, and all scales. A summary of the frequency of variables reaching consensus within a range of .3 to .9 (1.0 being perfect consensus) for Rounds One and Two, both with the 11 variables reaching consensus of .77 in Round One and without those variables is given in Table 9. The percent of variables reaching consensus within this range is given in Table 10.

Table 9. Summary of variables reaching consensus in each range of convergence.

Rounds	Range of Consensus					
	.4 - .49	.5 - .59	.6 - .69	.7 - .79	.8 - .89	.9+
Round One N = 124	23%	77%	55%	19%	7%	0%
Round Two N = 113	5%	95%	83%	64%	27%	6%
Round Two (with 11 variables reaching consensus in Round One) N = 124	5%	95%	85%	67%	32%	6%

Table 10. Summary of frequency of variables reaching consensus within ranges of consensus.

	.3-.39	.4-.49	.5-.59	.6-.69	.7-.79	.8-.89	.9+
Round One N = 124	4	25	27	45	14	9	0
Mean = .56 consensus (average consensus)							
Round Two N = 113	0	6	13	22	41	24	7
Mean = .68 consensus (average consensus)							
Round Two N = 124	0	6	13	22	43	33	7
Mean = .69 consensus (average consensus)							

Since the research question and hypotheses required determining the consensus for ESSENTIAL, SUPPLEMENTARY and EMERGING Competencies, the degree of convergence to consensus at .77 or higher for all ESSENTIAL Competencies, SUPPLEMENTARY and EMERGING Competencies was obtained from the Leik formula calculations for each variable. A summary of the number, percentage and consensus for each category of competencies is contained in Table 11. The percentage of variables in each Existing and Emerging Scale reaching consensus of .77 is listed in Table 12 for ESSENTIAL Competencies. There were no SUPPLEMENTARY Competencies that obtained .77 consensus.

A Fortran computer program was written to compute the semi-interquartile range. This analysis of data is given in the Appendix. It should be noted that .49 or lower indicates consensus equal to that given by the Leik computations of .77 or higher. As is indicated, the semi-interquartile range gives the distribution of responses around the median or midpoint in the distribution of responses. The degree of convergence indicates to what degree people agree to the same response: for example, if everyone made the same response, the index = 1; if everyone was equally split at opposite extremes, 50% at one end and 50% at the other, the index would equal 0.

Hypotheses Summary

$H_0(1)$: The null hypothesis states that there will not be convergence to consensus of over 50% of the ESSENTIAL and SUPPLEMENTARY Competencies. The findings in Table 11 show ESSENTIAL Competencies reaching 60% consensus; no SUPPLEMENTARY Competencies obtaining consensus. The null hypothesis is rejected in respect to the

Table 11. Summary of all competencies by number, proportion and consensus (.77).

Number and Percent	Total	Essential	Competencies Supplementary	Useful, Not Essential	Emerging
Number in Study	124	78	41	5	72
Number Reaching Consensus	51	47	0	4	16 (E)* 0 (S)* 4 (U)* <u>20</u>
Percent in Study	100%	63%	33%	4%	58%
Percent of Total Reach- ing Consensus	41%	60%	0%	80%	28%

*(E) = Essential, (S) = Supplementary, (U) = Useful, not Essential.

Table 12. Percentage of ESSENTIAL and SUPPLEMENTARY competencies in Existing and Emerging scales reaching consensus of .77.

Scale	Essential Competencies	Supplementary Competencies
EXISTING SCALES		
1	56%	None
2	75	
3	80	
4	80	
5	43	
6	40	
7	39	
8	67	
EScale		
Emerging Competencies		
1	75%	None
2	50	
3	47	
4	43	
5	0	

ESSENTIAL Competencies but accepted for the SUPPLEMENTARY Competencies.

$H_0(2)$: There will not be convergence to consensus on over 50% of the EMERGING Competencies. Since only 28% of the EMERGING Competencies reached .77 consensus, the null hypothesis is accepted.

Research Question #5

To what degree do Group One (Fellows and Curriculum Directors) and Group Two (Recent Graduates) agree regarding how essential the various competencies are?

Hypotheses

H_0 : There will be no significant differences between Group One and Group Two regarding how essential the various competencies are.

H_1 : There will be significant differences between the means of these two groups regarding how essential the various competencies are.

This research question asks to what degree the two panelist groups agree about the essentiality of the competencies. The hypotheses reflect differences between group means of competency scales.

Research Findings: The research findings answer the question, do recent graduates as a group perceive competencies differently from Fellows and Curriculum Directors as a group? In order to statistically analyze these differences, it was decided, with consultation from the statistical consultant, to do multivariate analysis of variance (MANOVA) on the scales as a compilation of homogeneous variables, rather than analyze each individual variable (competency) separately. Based on that decision, means of 13 scales (8 EXISTING ESSENTIAL and 5 EMERGING Scales) containing a total of 124 variables for the two groups were input into the analysis. In this research question the scales will be divided into two groups: Scales 1 - 10 which include the 8 Existing Scales plus Scale 9, OT in the Schools and Scale 10, Family Studies, which are Emerging Scales.

EScales 1, 2 and 3 are the second group. The Wilks multivariate test of significance, the Univariate F-Test and the Roy-Bargman Stepdown F Test were all used to test for differences between the groups. The .05 alpha was selected as the level of significance necessary for each test to achieve. This says that if the null hypothesis were true, the results obtained in this study would occur less than 5% of the time. On the Roy Bargman Stepdown Tests, after a scale at the end of the list is significant, the remaining scales are not assessed. Because of the nature of the test, the effect of these variables is masked by any significant variables occurring after them in the analysis. The results of these statistical procedures are as follows:

Round One: Analysis of Group 1 (Fellows and Curriculum Directors - FCD) and Group 2 (Recent Graduates - RG) by responses to Scales 1 - 10

and EScales (Emerging Scales) 1 - 3.

Multivariate Test of Significance = .05247

Univariate F-Tests: Significance on Scales of F: the F Statistic

Scale 1 = .007 Scale 4 = .048 Scale 5 = .019

Scales 2, 3, 6, 7, 8, 9, and 10 were not significant.

Roy-Bargman Stepdown F Tests:

Scales 10, 9, 8 were not significant.

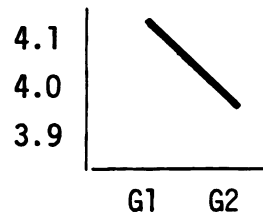
Scale 7 = .006, which is significant.

The remaining scales, 6 - 1 were not considered because they are dismissed when Scale 7 was significant.

The differences between Groups 1 (FCD) and 2 (RG) on these scales can be seen graphically in the following illustrations:

Scale 1: Life Tasks

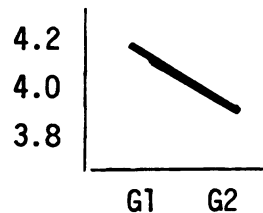
Fellows/Curriculum Dir. (G1) = 4.196
Recent Graduates (G2) = 3.954
Entire Group Mean = 4.029



In Scale 1, Group 1 (FCD) perceived the scale as a totality to be more essential than Group 2 (RG).

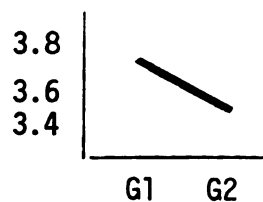
Scale 4: Health-Illness-Health

Fellows/Curriculum Dir. (G1) = 4.178
Recent Graduates (G2) = 3.956
Entire Group Mean = 4.025



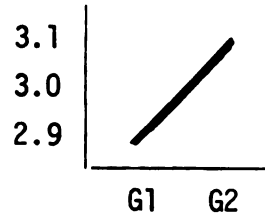
Scale 5: Human Development

Fellows/Curriculum Dir. (G1) = 3.784
Recent Graduates (G2) = 3.491
Entire Group Mean = 3.581



Scale 7: Indirect Client Services

Fellows/Curriculum Dir. (G1) = 2.940
 Recent Graduates (G2) = 3.107
 Entire Group Mean = 3.055



To summarize the results of this analysis, it can be inferred from the significance test that there is a difference between how Fellows and Curriculum Directors viewed the competencies included in the entire INVENTORY (124), and how the Recent Graduates viewed them. More specifically, on three scales, Specific Life Tasks and Activities, Health-Illness-Health, and Human Development Process, the two groups viewed them differently: Group 1 (FCD) considered them more essential at entry level. The Roy-Bargman Stepdown F Test takes into account the correlation of Scale 7 with all other scales. Scale 7, Indirect Client Services, evidenced a significant difference between the groups. This means that Scale 7 gives information about the differences between groups that is unique to it and not redundant with the other scales. In summary, the differences between groups is due to Scales 4, 5, and 7. In this case, Group 2 (RG) viewed these competencies as more essential than Group 1 (FCD).

The same analyses of group differences was completed on the Emerging Scales. The results of these are as follows:

Multivariate Test of Significance = .0008

Univariate F-Tests: Significance on Scales of F: The F Statistic

EScale 1 = .0007

EScale 2 = .005

Roy-Bargman Stepdown F Test:

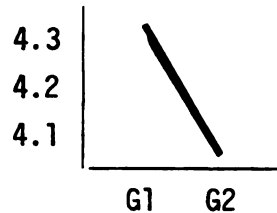
EScale 3 = .033

The remaining scales, EScales 2, 1, 9, 10 were not considered since their effect was masked when EScale 3 was significant.

The differences between panelist groups on these scales can be seen graphically in the following illustrations:

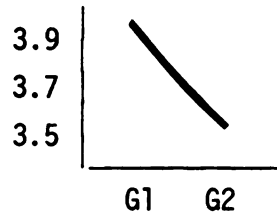
EScale 1: Direct Client Service

Fellows/Curriculum Dir. (G1) = 4.339
Recent Graduates (G2) = 4.054
Entire Group Mean = 4.143



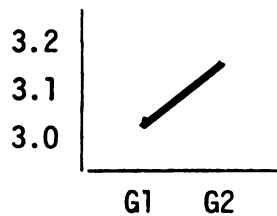
EScale 2: OT Theory

Fellows/Curriculum Dir. (G1) = 3.919
Recent Graduates (G2) = 3.554
Entire Group Mean = 3.668



EScale 3: Indirect Client Service

Fellows/Curriculum Dir. (G1) = 3.083
Recent Graduates (G2) = 3.171
Entire Group Mean = 3.144



To summarize the results of this analysis, it can be inferred from the significance test that there is a difference between how the Fellows and Curriculum Directors viewed the Emerging Scales and how the Recent Graduates viewed them. On EScale 1, Direct Client Services, Group 1 considered them more essential than Group 2; EScale 2, OT Theory, Group 1 perceived this scale more essential; EScale 3, Indirect Client Service, Group 2 viewed as more essential. In the remaining EScales, 9 and 10, OT in the Schools and Family Studies, there were no differences between the two groups.

The scales which were significant for panelist group differences can be described in terms of essential, supplementary and emerging competencies. The breakdown by scale is shown in Table 17, Scales identified by variable number and essentiality. Scale 4 and EScales 1 and 2 contain all ESSENTIAL Competencies. Scale 7 and EScale 3, both similar with overlapping variables, contained mostly supplementary and all of the Useful but not Essential Competencies. The statistical analysis of these scales indicated that the scales that contained mainly essential competencies were considered more essential by Group 1 (FCD) than by Group 2 (RG), and those with supplementary competencies more essential by Group 2 than Group 1.

Round Two: Analysis of Group 1 and Group 2 by responses to Scales 1-10 and EScales 1-3.

Multivariate Test of Significance = .002

Univariate F Tests: Significance on Scales of F: the F Statistic

Scale 2 = .016 Scale 5 = .002 Scale 3 = .03 Scale 6 = .01

Scales 1, 4, 7, 8, 9, and 10 did not reach significance.

Roy-Bargman Stepdown F Tests:

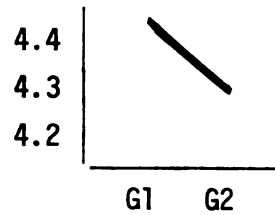
Scale 9 = .015, which is significant.

All remaining scales were not considered because they are dismissed when Scale 9 was significant.

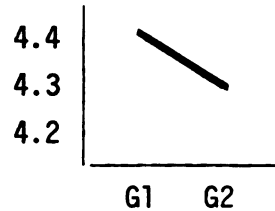
The differences between Group 1 (FCD) and Group 2 (RG) on these scales can be seen graphically in the following illustrations:

Scale 2: Basic Human Sciences

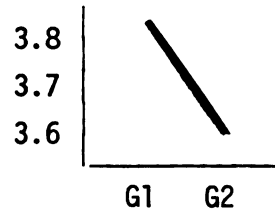
Fellows/Curriculum Dir. (G1) = 4.469
 Recent Graduates (G2) = 4.355
 Entire Group Mean = 4.393

Scale 3: Direct Client Services

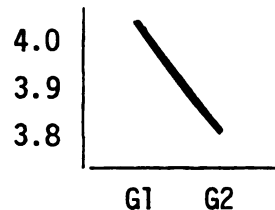
Fellows/Curriculum Dir. (G1) = 4.416
 Recent Graduates (G2) = 4.322
 Entire Group Mean = 4.354

Scale 5: Human Development

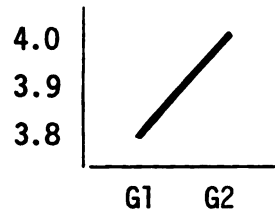
Fellows/Curriculum Dir. (G1) = 3.872
 Recent Graduates (G2) = 3.608
 Entire Group Mean = 3.697

Scale 6: OT Theory

Fellows/Curriculum Dir. (G1) = 4.086
 Recent Graduates (G2) = 3.834
 Entire Group Mean = 3.919

Scale 9: OT in the Schools

Fellows/Curriculum Dir. (G1) = 3.822
 Recent Graduates (G2) = 4.003
 Entire Group Mean = 3.942



One can conclude from the significance tests that there was a difference between how Fellows and Curriculum Directors (Group 1) viewed the scales taken as a group (124), and how the Recent Graduates (Group 2) viewed them. This is the same result obtained in Round One. On

five scales the panelist groups viewed competencies differently: Basic Human Sciences, Direct Client Services, Human Development Process, OT Theory, and OT in the Schools. The last scale obtained significance on the Roy-Bargman Test. In Scales 2, 3, 5 and 6, Group 1 viewed them as more essential than Group 2; however, in Scale 9, Group 2 considered OT in the Schools to be more essential.

The same analysis of differences was completed on the Emerging Scales. The results of these are as follows:

Multivariate Test of Significance = .003

Univariate F Tests: Significance on Scales of F: The F Statistic

EScale 2 = .01

Roy-Bargman Stepdown F Tests:

EScale 2 = .051

EScale 3 was not significantly different, since all remaining scales were not considered because they are dismissed when EScale 2 was significant.

The differences between these groups on EScale 2 can be seen in the following graph:

EScale 2: OT Theory

Fellows/Curriculum Dir. (G1) = 3.971
Recent Graduates (G2) = 3.732
Entire Group Mean = 3.816



It can be inferred from the significance tests that there was a difference in both rounds between how the Fellows and Curriculum Directors viewed the Emerging Scales as a whole, and how Recent Graduates did. There were differences on two scales: EScales 1

and 2: Direct Client Service and OT Theory. Group 1 (FCD) considered these scales more essential than Group 2 (RG).

Summary of Round One and Round Two: In Rounds One and Two it can be inferred that both groups viewed the entire INVENTORY differently. On specific scales, differences were found in the following:

Group 1 (Fellows and Curriculum Directors) - more essential

Life Tasks
Health-Illness-Health
Human Development
Basic Human Sciences
Direct Client Service
OT Theory

Group 2 (Recent Graduates) - more essential

Indirect Client Service (Existing and Emerging)
OT in the Schools

Hypotheses Summary

H_0 : Since there was a significant difference between the Fellows and Curriculum Directors and the Recent Graduates on the competency scales, the null hypothesis is rejected, and the alternate one accepted.

H_1 : The alternate is that Group 1 (FCD) is different from Group 2 (RG).

Research Question #6

Do significant differences exist between the competency scales and the following demographic variables of the panelists: professional educational degree; number of years in practice; work setting and primary work function?

Operational Definition: The demographic variables which describe the panelists are identified in the following breakdown for each of the four categories:

Education: 1 = Bachelor of Arts/Science; Certificate in Occupational Therapy, and Bachelor of Science in Occupational Therapy

2 = Master of Occupational Therapy (MOT)

3 = Graduate Education (not including the MOT)

Years in Practice: 1 = less than 5 years

2 = 5 - 10 years

3 = 11 or more years

Work Setting: 1 = Hospital or rehabilitation center

2 = School system, private practice, home health agency, residential care facility, university education program or other

Primary Work Function: 1 = Direct client service

2 = administration/supervision, consultation, teaching in classroom or field, and other

There are 13 scales, identified as follows:

Scale 1 = Specific Life Tasks and Activities

Scale 2 = Basic Human Sciences

Scale 3 = Direct Client Services

Scale 4 = Health-Illness-Health

Scale 5 = Human Development Process

Scale 6 = Occupational Therapy Theory

Scale 7 = Indirect Client Service

Scale 8 = Personal Performance Skills and Attitudes

Scale 9 = Occupational Therapy in the Schools

Scale 10 = Family Studies

EScale 1 = Emerging Scale on Direct Client Service

EScale 2 = Emerging Scale on Occupational Therapy Theory

EScale 3 = Emerging Scale on Indirect Client Service

Hypotheses

Professional Degree

H_0 : There will be no significant difference between educational groups 1, 2 and 3 on the competency scales.

H_1 : There will be a significant difference between these groups.

Research Findings: The research findings answer the question, does the professional education of OTs influence how they perceive the importance of emerging competencies? To do this the Wilks Multivariate Test of significance, the Univariate F-Test and the Roy-Bargman Stepdown F Test were all used to test for differences between groups. The results of these procedures are as follows:

ROUND ONE

Multivariate Test of Significance = .622 This is not significant at the .05 level.

Univariate F-Tests: Significance on Scales of F: The F Statistic
None of the scales were significant at .05 alpha.

Roy-Bargman Stepdown F Test: Since the Multivariate Test did not show significance, it is inappropriate to use this test.

The same analyses were done on the Emerging Scales. The results are as follows:

Multivariate Test of Significance: = .477. This is not significant at the .05 level.

Univariate F-Test: Significance on Scales of F: The F Statistic
None of the Emerging Scales were significant at .05.

Roy-Bargman Stepdown F Tests: Since the Multivariate Test did not show significance, this test is not used.

No significant differences were found on regular or emerging scales on the tests for differences between groups.

ROUND TWO

Multivariate Test of Significance = .006

Univariate F-Tests: Significance on Scales of F: The F Statistic
Scale 5 = .023 Scale 9 = .028

Scales 1, 2, 3, 4, 6, 7, 8, and 10 did not reach significance.

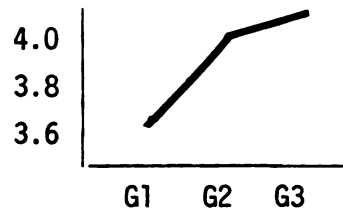
Roy-Bargman Stepdown F Tests:

Scale 9 = .037, which is significant. All remaining scales were not considered because they are dismissed when Scale 9 is significant.

The differences between these groups on these scales can be seen on the following graphs: (ED = Education Group)

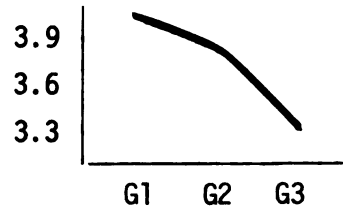
Scale 5: Human Development

ED (B.A./B.S. OT, Cert.) G1 = 3.659
ED (MOT) G2 = 4.012
ED (Graduate) G3 = 4.063
Entire Group Mean = 3.697



Scale 9: OT in the Schools

ED (B.A./B.S. OT, Cert.) G1 = 3.980
ED (MOT) G2 = 3.822
ED (Graduate) G3 = 3.328
Entire Group Mean = 3.942



The same analyses were done on Emerging Scales. The results are as follows:

Multivariate Test of Significance: = .029

Univariate F-Tests: Significance on Scales of F: The F Statistic

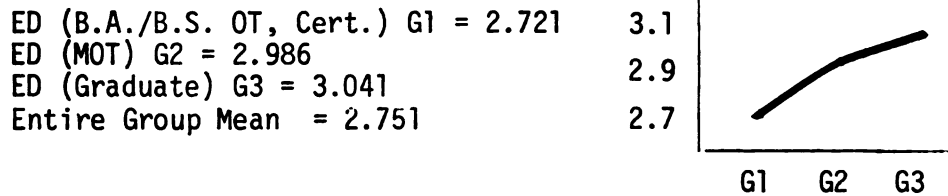
Scale 9 = .03 None of the remaining scales, 1-8, 10 reached .05

Roy-Bargman Stepdown F Tests:

EScale 10 = .004, which is significant. All remaining scales were not considered because they are dismissed when EScale 10 is significant.

The differences between these groups on this scale can be seen on the following graph:

EScale 10: Family Studies



Summary of Rounds One and Two

No significant differences were found in Round One. In Round Two the Multivariate Test was significant, indicating that education groups as a subpopulation differ in their perception of all scales taken as a group. Differences on individual scales were found as follows: (See Table 13.)

Group One - (B.A./B.S. OT, Certificate) - more essential
OT in the Schools

Group Three - (Graduate)

Human Development
Family Studies

Group Two - (MOT) was between Group 1 and Group 3 in
all three scales.

Hypotheses Summary

H₁: The null hypothesis states that there will be no significant difference between education groups 1, 2, and 3. Since differences were found, the null hypothesis is rejected and the alternate accepted.

Hypotheses

Years as an OT

H₀: There will be no significant difference between years of practice groups on the Competency scales.

H_1 : There will be a significant difference between years of practice groups on Competency scales.

Research Findings: The research findings answer the question, does the number of years practiced influence how one perceives competency scales? The Wilks multivariate test of significance, the univariate F-Test and the Roy-Bargman Stepdown F Test were all used to test for differences between groups. The results of these statistical procedures are as follows:

ROUND ONE

Multivariate Test of Significance = .500, which is not significant at the .05 level.

Univariate F Tests: Significance on Scales of F: The F Statistic Scale 1 = .011

Scales 2, 3, 4, 5, 6, 7, 8, 9, and 10 did not reach significance.

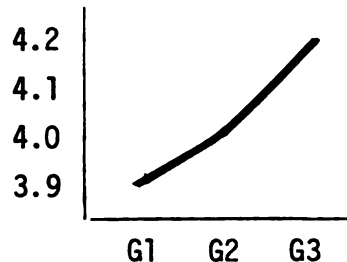
Roy-Bargman Stepdown F Test:

Since the multivariate test was of no significance, this test cannot be used.

The differences between Group 1 (- 5 years), Group 2 (5-10 years) and Group 3 (11 years +) on this scale can be seen on the following graph:

Scale 1: Life Tasks

- 5 years (G1) = 3.955
 5 - 10 years (G2) = 4.017
 11 + years (G3) = 4.253
 Entire Group Mean = 4.034



The same analyses were done on the Emerging Scales. The results are as follows:

Multivariate Test of Significance = .023

Univariate F-Tests: Significance on Scales of F: The F Statistic

EScale 1 = .008

EScale 2 = .018

EScales 9, 10 and 3 were not significant.

Roy-Bargman Stepdown F Tests:

EScales 2 and 3 were not significant.

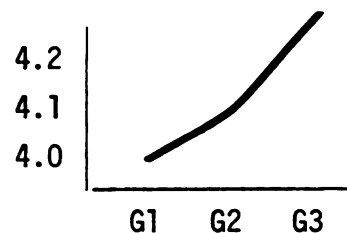
EScale 1 = .009, which was significant.

EScales 9 and 10 were not considered because they are dismissed when EScale 1 was significant.

The differences between Group 1 (- 5 years), Group 2 (5-10 years) and Group 3 (11 years +) on this scale can be seen on the following graphs:

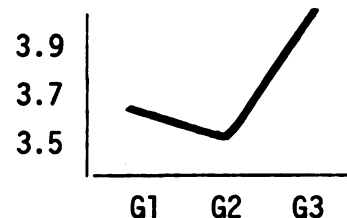
EScale 1: Direct Client Service

- 5 years (G1) = 4.028
5 - 10 years (G2) = 4.190
11+ years (G3) = 4.392
Entire Group Mean = 4.153



EScale 2: OT Theory

- 5 years (G1) = 3.602
5 - 10 years (G2) = 3.526
11 + years (G3) = 3.977
Entire Group Mean = 3.679



To summarize the results of the analysis of Round One on both Existing and Emerging scales as a subpopulation, it can be inferred that years of work experience made a difference on how EMERGING Competencies as a group were perceived. The increasing years of experience

as an OT group considered Life Tasks, Direct Client Service and OT Theory more essential than fewer years. OTs with less than five years' experience (most of the Recent Graduates in the sample) viewed Direct Client Services, Life Tasks and OT Theory as less essential than do more experienced OTs such as the Fellow and Curriculum Directors.

ROUND TWO

Multivariate Test of Significance = .001

Univariate F-Tests: Significance on Scales of F: the F Statistic

Scale 2 = .015 Scale 5 = .028 Scale 6 = .003

Scales 1, 4, 7, 8, 9 and 10 did not reach significance.

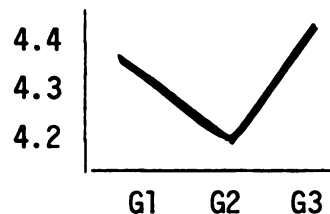
Roy-Bergman Stepdown F Tests:

No unique contribution was made by Scale 10 to the total group of scales. Scale 9 = .007, with was significant. The remaining scales were not considered because they are dismissed when Scale 9 was significant.

The difference between Group 1 (- 5 years), Group 2 (5-10 years) and Group 3 (11+ years) on this scale can be seen on the following graphs:

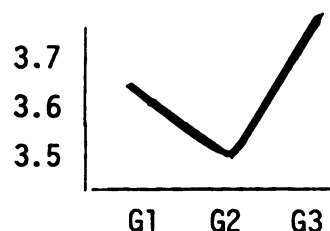
Scale 2: Basic Human Science

- 5 years (G1) = 4.376
5 - 10 years (G2) = 4.297
11 + years (G3) = 4.484
Entire Group Mean = 4.397



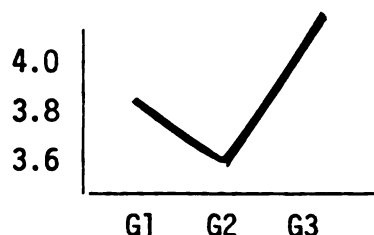
Scale 5: Human Development

- 5 years (G1) = 3.631
5 - 10 years (G2) = 3.527
11 + years (G3) = 3.858
Entire Group Mean = 3.696

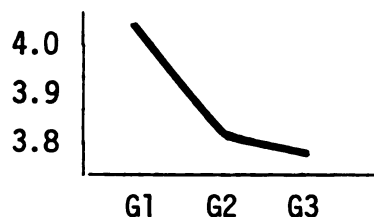


Scale 6: OT Theory

- 5 years (G1) = 3.880
 5 - 10 years (G2) = 3.666
 11+ years (G3) = 4.125
 Entire Group Mean = 3.923

Scale 9: OT in the Schools

- 5 years (G1) = 4.068
 5 - 10 years (G2) = 3.854
 11+ years (G3) = 3.839
 Entire Group Mean = 3.963



The same analyses were done on Emerging Scales. The results are as follows:

Multivariate Test of Significance = .00013

Univariate F-Tests: Significance on Scales of F: the F Statistic

EScale 1 = .017

EScale 2 = .001

Roy-Bargman Stepdown F Tests:

EScale 3 = .022, which is significant. The remaining Emerging scales were not considered because they are dismissed when EScale 3 was significant. EScales 9 and 10 were not significant.

The differences between Group 1 (- 5 years), Group 2 (5-10 years) and Group 3 (11 years +) on this scale can be seen on the following graphs:

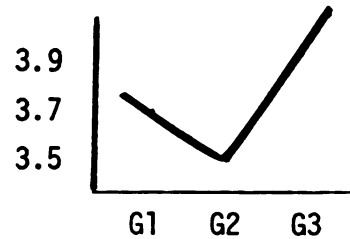
EScale 1: Direct Client Service

- 5 years (G1) = 4.434
 5 - 10 years (G2) = 4.283
 11+ years (G3) = 4.549
 Entire Group Mean = 4.445

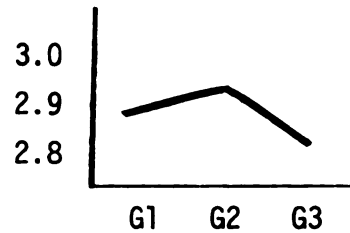


EScale 2: OT Theory

- 5 years (G1) = 3.792
 5 - 10 years (G2) = 3.533
 11+ years (G3) = 4.013
 Entire Group Mean = 3.818

EScale 3: Indirect Client Service

- 5 years (G1) = 2.913
 5 - 10 years (G2) = 2.949
 11+ years (G3) = 2.873
 Entire Group Mean = 2.906



One can conclude from the significance tests of Round Two on both Existing and Emerging scales that as a subpopulation, years of work experience as an OT make a difference in how OTs view the entire group of competencies in this INVENTORY. On specific scales, both Existing and Emerging, the differences are noteworthy. Three patterns were prevalent: (See Table 17.)

1. Group 3 considered the scales more essential, Group 1 next essential, and Group 2, the lowest or least essential (in 5 scales).
2. Group 1 the most essential, Group 2 next, and Group 3 the least (1 scale).
3. Group 2 first, Group 1 second, Group 3, third or lowest (1 scale).

In five of the seven scales, the 11 or more years of experience group considered competencies to be the most essential, the under 5 years group the next, and the 5-10 year group the least essential.

The content of these scales warrants consideration since the scales in which the less experienced OTs viewed the competencies more

essential were in OT in the Schools and Indirect Client Services. More experienced OTs considered the Basic Sciences, Human Development Process, OT Theory, Emerging Direct Client Services and OT Theory more essential.

Hypothesis Summary

H_0 : The null hypothesis stated that there would not be significant differences between years of experience groups; the alternate is accepted - there was a difference between years of practice groups on Competency scales.

Hypotheses

Work Setting

H_0 : There will be no significant difference between traditional and nontraditional work setting groups.

H_1 : There will be significant differences between these groups.

Research Findings: The research findings answer the question, does where an OT works influence perceptions of competencies? The Wilks multivariate test of significance, the Univariate F-Test and the Roy-Bargman Stepdown F Test were all used to test for differences between groups. The results of these procedures are as follows:

ROUND ONE

Multivariate Test of Significance: .214 This is not significant at the .05 level.

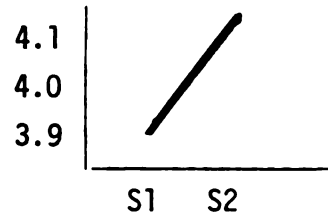
Univariate F-Tests: Significance on Scales of F: The F Statistic Scale 4 = .05

Roy-Bargman Stepdown F Tests: Since the multivariate test did not show significance, it is inappropriate to use this test.

The differences between the Setting 1 Group (traditional) and Setting 2 Group (nontraditional) on this scale is shown on the following graph:

Scale 4: Health-Illness-Health

Setting 1 = 3.936
 Setting 2 = 4.150
 Entire Sample Mean = 4.059



The same analyses were done on Emerging Scales. The results are as follows:

Multivariate Test of Significance = .845 This is not significant at the .05 level.

Univariate F-Tests: Significance on Scales of F: the F Statistic
 None of the emerging scales were significant at the .05 level.

Roy-Bargman Stepdown F Tests:

Since the multivariate test did not show significance, the results of this test are not to be considered.

To summarize the results of Round One regarding the influence of where one works on how one perceives the essentiality of competencies, as a subpopulation, setting does not make a difference. Scale 4 was significant: OTs in nontraditional settings viewed Health-Illness-Health competencies as more essential than those in traditional settings. This scale emphasizes the prevention model of practice. Those who work in hospitals view prevention less essentially than those not in hospital settings.

ROUND TWO

Multivariate Test of Significance = .09 This is not significant at the .05 level.

Univariate F-Tests: Significance on Scales of F: the F Statistic
Scale 6 = .008

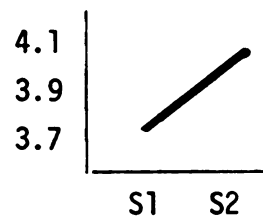
Roy-Bargman Stepdown F Tests:

Since the multivariate test did not show significance, this test is not considered.

The differences between the traditional and nontraditional setting groups on this scale can be seen in the following graph:

Scale 6: OT Theory

Setting 1 = 3.765
Setting 2 = 4.031
Entire Sample Mean = 3.921



The same analyses were done on Emerging Scales. The results are as follows:

Multivariate Test of Significance = .023

Univariate F-Tests: Significance on Scales of F: the F Statistic
EScale 2 = .01

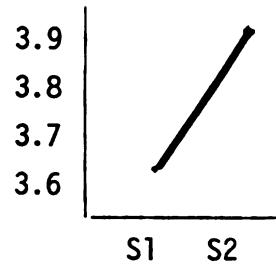
Roy-Bargman Stepdown F Tests:

EScale 2 = .001, which was significant. EScale 3 was not significant. The remaining scales were not considered because they are dismissed when EScale 2 was significant.

The differences between these groups on this scale can be seen on the following graph:

EScale 2: OT Theory

Setting 1 = 3.673
 Setting 2 = 3.923
 Entire Sample Mean = 3.818



The results of Round Two show that as a subpopulation, setting makes a difference in how OTs view EMERGING Competencies as a group. Scale 6 and EScale 2 indicate that those who work in nontraditional settings view OT Theory as more essential than those in traditional settings.

Summary of Round One and Round Two

Significance on the Multivariate Test was shown on Round Two in Emerging scales only. To summarize the differences between traditional and nontraditional settings:

Setting 2 (nontraditional) - more essential on two scales:

Health-Illness-Health
 OT Theory

Hypothesis Summary

H_0 : The null hypothesis stated that there would not be a significant difference between work setting groups. Since there was a difference, the null hypothesis is rejected and the alternate one accepted.

HypothesesWork Function

H_0 : There will be no significant difference between direct client service groups and indirect client service groups on the Competency scales.

H_1 : There will be a significant difference between these groups.

Research Findings: The research findings answer the question, does work function influence one's perceptions of competencies? The Wilks Multivariate Test of Significance, the Univariate F-Test and the Roy-Bargman Stepdown F Test were all used to test for differences between groups. The results of these procedures are as follows:

ROUND ONE

Multivariate Test of Significance = .109 This is not significant at the .05 level.

Univariate F-Tests: Significance on Scales of F: the F Statistic Scale 1 = .01 All other tests were not significant.

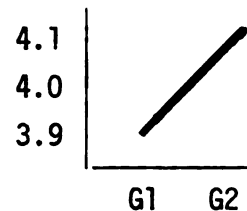
Roy-Bargman Stepdown F Tests

Since the Multivariate Test was not significant, this test is not to be considered.

The differences between these groups on this scale can be seen on the following graph:

Scale 1: Life Tasks

Direct Client Service = 3.923
Indirect Client Service = 4.157
Entire Sample Mean = 4.044



The same analyses were done on Emerging Scales. The results are as follows:

Multivariate Test of Significance = .01

Univariate F-Tests: Significance on Scales of F: the F Statistic

EScale 1 = .0009

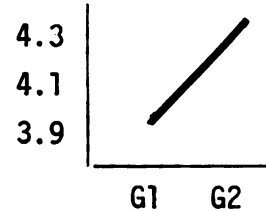
Roy-Bargman Stepdown F Tests

EScale 1 = .001, which is significant. The remaining scales were not considered because they are dismissed when EScale 1 was significant.

The difference between these groups on this scale can be seen on the following graph:

EScale 1: Direct Client Service

Direct Client Service = 3.980
Indirect Client Service = 4.314
Entire Sample Mean = 4.044



To summarize, Scale 1, Life Tasks, and EScale 1, Emerging Direct Client Services, were significant. Work function groups view Emerging Scales differently. Scale 1 and EScale 1 did show significance: Scale 1, Specific Life Tasks and Activities; EScale 1, Emerging, Direct Client Services. On both of these, those OTs working in indirect client services viewed the competencies as more essential than those in direct client services.

ROUND TWO

Multivariate Test of Significance = .03

Univariate F-Tests: Significance on Scales of F: the F Statistic

Scale 5 = .01 Scale 6 = .019

All other scales were not significant at .05.

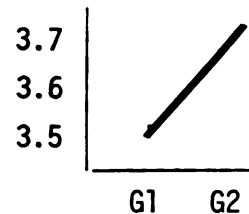
Roy-Bargman Stepdown F Tests:

Scale 5 = .01 The remaining scales were not considered because they are dismissed when Scale 5 was significant.

The differences between these groups on these scales can be seen on the following graphs:

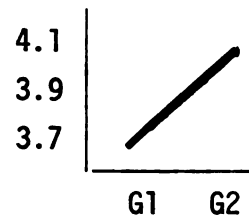
Scale 5: Human Development

Direct Client Services = 3.572
Indirect Client Services = 3.793
Entire Sample Mean = 3.688



Scale 6: OT Theory

Direct Client Services = 3.796
Indirect Client Services = 4.027
Entire Sample Mean = 3.917



The same analyses were done on Emerging Scales. The results are as follows:

Multivariate Test of Significance = .06 This is not significant at the .05 level.

Univariate F-Tests: Significance on Scales of F: the F Statistic

EScale 2 = .009 E Scales 9, 10, 1 and 3 were not significant.

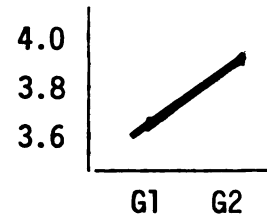
Roy-Bargman Stepdown F Tests

Since the Multivariate Test was not significant, this test is not applicable.

The differences between these groups on this scale can be seen on the following graph:

EScale 2: OT Theory

Direct Client Services = 3.678
 Indirect Client Services = 3.933
 Entire Sample Mean = 3.814



Round Two contained three scales that independently obtained significance: two Existing scales and one Emerging. Scale 5, Human Development Process; Scale 6, OT Theory; and EScale 2, OT Theory, all showed that OTs in Indirect Client Services viewed them as more essential than did those in Direct Client Services. Multivariate analysis was significant in Round Two on Existing scales.

Summary of Rounds One and Two

In Round Two the subpopulation Work Function groups viewed the entire INVENTORY Emerging competencies differently. This was not true in Round One. Independently, Scale 1, Life Tasks, was significant in Round One; in Round Two, Scale 5, Human Development, and Scale 6, OT Theory, were significant. Among the Emerging Scales, EScale 1, Emerging Direct Client Services was significant in Round One but not in Round Two; however, EScale 2 was significant in Round Two. Direct Client Service OTs viewed all significant scales less essential than Indirect Client Service OTs.

Hypotheses Summary

H₁: Since the subpopulation Work Function group viewed competencies differently, the null hypothesis is rejected and the alternate one accepted.

A summary of statistical test differences for each round, subpopulation and scale is given in Table 13.

Table 13. Summary of test differences for each round, subpopulation and scale.

Sub- population	1	2	3	Existing Scales		6	7	8
				4	5			
<u>ROUND ONE</u>								
Education	--	--	--	--	--	--	--	--
Years of Practice	.011 .008 .009	.018	--	--	--	--	--	--
Work Setting	--	--	--	.05	--	--	--	--
Work Function	.010	--	--	--	--	--	--	--
<u>ROUND TWO</u>								
Education	--	--	--	--	.023	--	--	--
Years of Practice	--	.015	--	--	.028	--	--	--
Work Setting	--	--	--	--	--	.008	--	--
Work Function	--	--	--	--	.010 .010	.019	--	--
<u>Emerging Scales</u>								
	9	10		1	2	3		
<u>ROUND ONE</u>								
Education	--	--		--	--	--		
Years of Practice	--	--		.008 .009	.018	--		
Work Setting	--	--		--	.010 .001	--		
Work Function	--	--		.001	--	--		
<u>ROUND TWO</u>								
Education	.028 .037	.004		--	--	--		
Years of Practice	.007	--		.017	.001	.022		
Work Setting	--	--		--	.010	--		
Work Function	--	--		--	--	--		

Table 13. (Continued)

<u>MANOVA</u>				
Subpopulation	<u>Existing Scales</u>		<u>Emerging Scales</u>	
	Round One	Round Two	Round One	Round Two
Group One (Fellows and Curriculum Directors)	.05	.002	.0008	.003
Group Two (Recent Graduates)				
Professional Education	--	.006	--	.029
Years of Practice	--	.001	.023	.0001
Work Setting	--	--	--	.023
Work Function	--	.03	.01	--

Significance at .05 alpha.

Research Question #7

Would OTs take a job in a nontraditional setting, and if so, for what reasons, according to a Delphi panel of experts?

Research Findings: The research findings answer the question, would OTs take a job in a nontraditional setting? If so, for what reasons? Of the 293 who responded, 243 said they would change, 50 would not. The reasons for change are given in the following table:

Reasons for Change	Frequency of Response					Total	Rank Order
	1	2	3	4	5		
1. Want to develop own job	72	3	2	1		78	3
2. Interest in nontraditional job	67	30				97	1
3. Desirable client population	46	27	22	1	1	97	1
4. Because job is available	3	5	4	9	1	22	4
5. Other reason(s)	46	14	8	7	4	79	2
Number Missing	59	214	258	276	288		

In this table the five response columns correspond to the five variables read by the computer from the panelists' responses. Since a respondent could check from one to five reasons, the computer read the reasons five times. From the frequencies listed, most gave only two reasons. The rank order indicates that wanting to develop own job was considered by panelists to be fourth in importance as a reason for change while other miscellaneous reasons took second place after the tie for first. The "other" responses are summarized in the Appendix.

Convergence to Consensus Between Groups

In Research Question #5 the differences between group means on the competency scales were addressed. The question of differences

in group consensus and the competency scales was referred to this section of Research Findings. Convergence to consensus indicates the degree to which the group reached unanimity: a total lack of dispersion of responses. According to Leik, complete consensus would be 1.0; zero consensus would be complete dispersion of responses. A degree of consensus was selected as being adequate agreement among panelists. Using .77 as indicating that $\frac{1}{2}$ a point over 50% of the panelists agreed on a variable, that degree of convergence was selected. In the following figure, the scales in both rounds which reached consensus are listed.

	<u>Round One</u>	<u>Round Two</u>	
Scale	1	1	Emerging Scale 2
	3	2	
		3	
		4	
		5	
		6	
		9	

The degrees of convergence are shown in Figure 6. It can be seen that six additional scales reached consensus in Round Two. None of the Emerging Scales achieved consensus except for Scale 9, OT in the Schools and OT Theory. Scale 7, Indirect Client Services, Scale 8, Personal Performance Skills and Attitudes, and EScale 10, Family Studies, 1, Direct Client Services, and 3, Indirect Client Services, did NOT achieve .77 consensus.

Obtaining opinions and getting agreement about those opinions is the central goal of a Delphi study. The purpose is not to coerce panelists in any way. Instead, it is to have panelists re-think their judgments about each competency in view of how others have responded but also in light of increased understanding of each

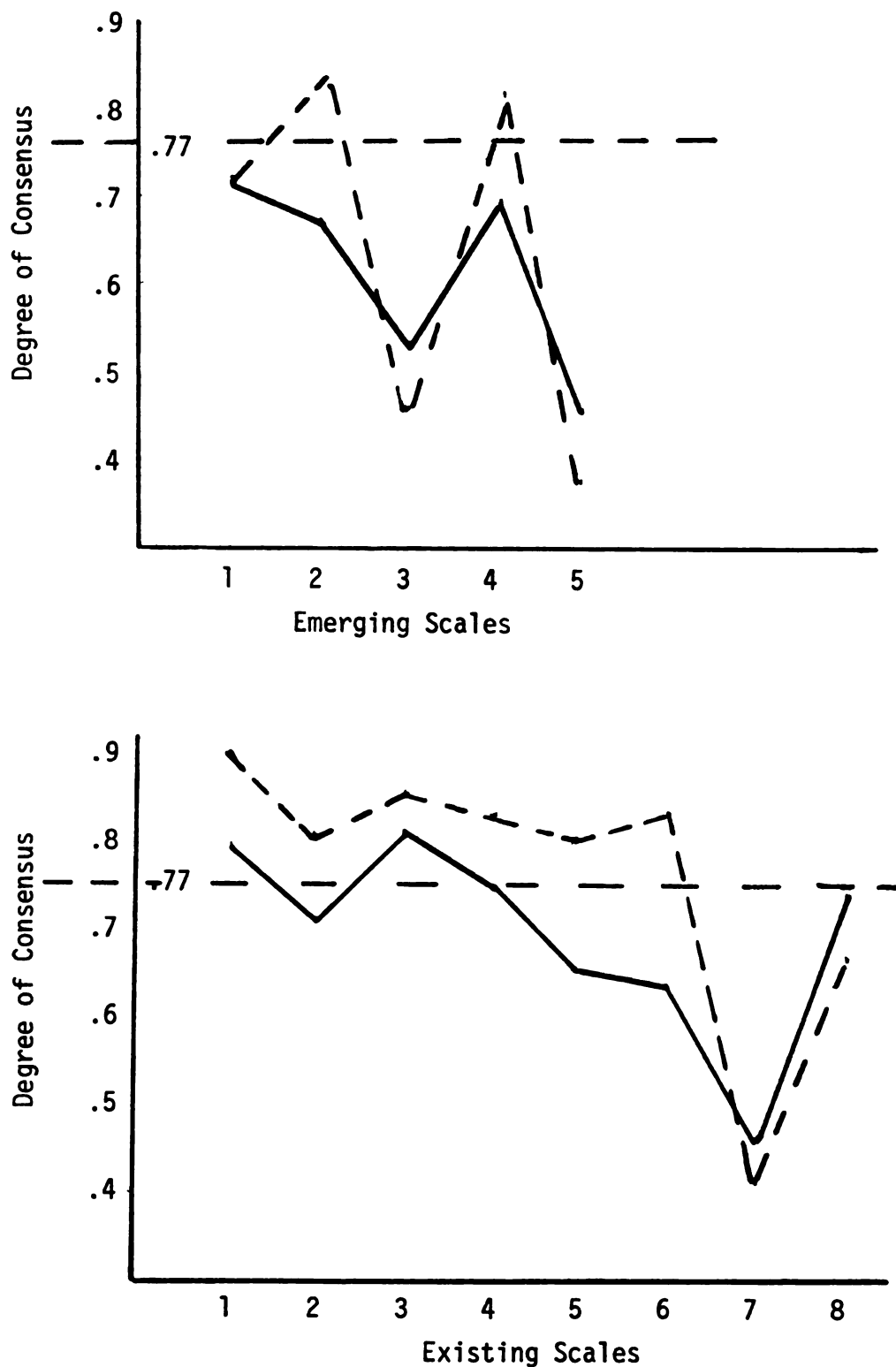


Figure 6. Convergence to Consensus on Emerging and Existing Scales by all Panelists.

Statistic used was the Leik formula for convergence to consensus.
Round One = — , Round Two = - - -.

competency statement.

The findings from the progression to consensus between Rounds One and Two indicate that six additional scales reached consensus in Round Two (6/13 - total number of scales). Panelist groups maintained separate consensus in nearly half of the scales by either one increasing or decreasing consensus independently of the other. These were Human Development, Indirect Client Services, Family Studies, OT Theory and Emerging Indirect Client Services. Six scales went down in total group consensus: Indirect Client Service, Personal Performance, Family Studies, Emerging Scales Direct Client Service, OT Theory and Indirect Client Service.

In both panelist groups two scales went down: Personal Performance and Emerging Direct Client Service. In eight cases both groups went up: Life Tasks, Basic Human Sciences, Direct Client Service, Health-Illness-Health, OT Theory, OT in the Schools, and Human Development. In three scales, the movement was mixed: Indirect Client Service - Existing and Emerging, and Family Studies. This means that there was not movement toward overall consensus. Each group maintained consensus within its own group. If the Delphi procedure had homogenized group differences, it would have wiped out group differences. On the contrary, it heightened group differences on some of the scales.

On 11 scales at least one group increased consensus; in only two scales did both go down toward a lower consensus. In these it reflects an overall drop for all panelists.

The convergence to consensus summary of groups is given in Table 14.

Table 14. Convergence to Consensus.

Scales	Round One*			Round Two**		
	Total	Group 1	Group 2	Total	Group 1	Group 2
1	.809	.753	.837	.912	.890	.927
2	.717	.668	.748	.808	.747	.849
3	.808	.789	.820	.876	.833	.904
4	.766	.740	.784	.864	.839	.881
5	.685	.747	.649	.813	.832	.801
6	.682	.688	.678	.828	.794	.850
7	.484	.473	.748	.409	.770	.398
8	.768	.740	.785	.705	.703	.707
9	.730	.691	.752	.842	.762	.892
10	.494	.555	.458	.386	.412	.809
E Scales						
1	.702	.684	.714	.668	.647	.686
2	.683	.698	.674	.824	.808	.834
3	.540	.543	.539	.476	.791	.480

* N = 183

** N = 136

The question of whether one group influences the other on judgments about the rating of the competencies can be summarized from scale means. In Table 15, the means of scales by separate and total groups is given. Group 1 changed very little on the means of four scales between rounds. The scales are the following: [plus (+) indicates an increase, minus (-) indicates a decrease between rounds]

Scale 3	- .004
4	- .006
5	- .003
EScale 2	+ .002

These are the scales, except for EScale 2, on which consensus was high also.

Movement by groups is indicated by changes in the means of each group on the 13 scales. The direction of this change in respect to Group 1 and Group 2 on the scale means between rounds is shown in Table 16.

Table 16. Change of panelist groups on scale means between rounds.
Group 1 = Fellows and Curriculum Directors; Group 2 = Recent Graduates; Direction of Movement = →

Group Movement	SCALES =													TOTAL
	Existing									Emerging				
	Life Tasks	Basic Sciences	Direct Client Services	Health-Illness Health	Human Development	OT Theory	Indirect Client Services	Personal Performance	OT in Schools	Family Studies	Direct Client Services	OT Theory	Indirect Client Services	
	1	2	3	4	5	6	7	8	9	10	1	2	3	
Group 1 → Group 2	X	X	X	X	X					X			X	7
Group 2 → Group 1	X		X	X	X	X	X	X	X		X	X		10
← Group 1 - Group 2						X	X	X	X		X	X		6
Group 1 - Group 2 →		X								X			X	3

Table 15. Means of scales.

Scales	Round One			Round Two		
	Total	Group 1	Group 2	Total	Group 1	Group 2
1	4.075	4.321	3.950	4.070	4.110	4.044
2	4.498	4.647	4.403	4.374	4.506	4.286
3	4.201	4.337	4.124	4.238	4.333	4.177
4	4.077	4.259	3.966	4.153	4.253	4.089
5	3.621	3.958	3.422	3.791	3.955	3.679
6	3.742	4.010	3.586	3.924	4.033	3.851
7	2.977	2.974	2.979	2.829	2.855	2.813
8	4.283	4.327	4.256	4.580	4.570	4.586
9	3.938	3.876	3.971	3.904	3.857	3.933
10	3.061	3.242	2.955	2.782	2.849	2.739
E Scales						
1	4.333	4.544	4.198	4.626	4.659	4.605
2	3.799	4.097	3.623	3.956	4.099	3.860
3	3.100	3.116	3.092	2.964	2.944	2.975

The total number of group movements suggests that Group 1 acted more independently than Group 2 since Group 1 moved away from Group 2 50% more times and moved toward only 70% of the time.

To summarize the Delphi process in two rounds of interaction, the following conclusions can be inferred:

1. An increase in consensus of .77 in Round Two was achieved on the following scales:

Scale 1 - Life Tasks

2 - Basic Sciences

3 - Direct Client Service

4 - Health-Illness-Health

5 - Human Development

6 - OT Theory

9 - OT in the Schools

2. The Emerging Scales reached .77 consensus on EScale 2, OT Theory and EScale 9, OT in the Schools.
3. Considering the scale means in relation to Group 1 (FCD) and Group 2 (RG), Group 2 was influenced more times to move toward Group 1 than was Group 2 to move toward Group 1.
4. Considering the factor of independence of inter-active influence on scale means, Group 1 acted more independently than Group 2.
5. The lowest consensus of all scales, from .386 - .540, was on Scale 7 (EScale 3), Indirect Client Services, and Scale 10, Family Studies. The lowest scale means, from 2.78 - 2.98, were also on these scales. This seems to indicate that there is less agreement among

all panelists and lower ranking of essentiality on Emerging Scales. This conclusion is supported at the opposite end of the ranking - essential or absolutely essential - in which there was higher consensus on all ESSENTIAL Competencies.

Summary of Research Findings

This chapter has included the research findings related to each research question and the Delphi process in general. Results of the hypotheses tested were given as were summaries of each question for Rounds One and Two. The next chapter contains the overall summary of the study, discussion and conclusions, followed by implications and recommendations.

Footnote

¹²⁸Warwick, Donald P., and Lininger, Charles. The Sample Survey: Theory and Practice. New York: McGraw-Hill Book Co., 1975.

Chapter V

SUMMARY, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

The purpose of this study was to determine the ESSENTIAL, SUPPLEMENTARY and EMERGING Competencies needed by OTs and to propose a lifelong educational model for maintaining professional competency, derived from the implications of the findings of this study. The following objectives were identified as a result of the intent of the study:

1. To define the competencies needed by occupational therapists.
2. To validate by obtaining consensus of members of the profession as to the ESSENTIAL, SUPPLEMENTARY and EMERGING Competencies needed by occupational therapists.
3. To derive an educational model for lifelong professional development from the data analysis.

The three-phase methodology was used to accomplish the objectives and to answer the research questions. Phase 1 consisted of identifying occupational therapy competencies from the Essentials of an Accredited Educational Program for the Occupational Therapist, the Ohio University Task Analysis Study,¹²⁹ and Fidler's "A Guide to Planning and Measuring Growth Experiences in the Clinical Affiliation."¹³⁰ To discover competencies needed by health professionals

based on social policy legislation, pertinent laws were reviewed and implications for occupational therapy practice and education were delineated.

Since maintaining professional competency through the recertification process is a necessary obligation of practicing therapists, literature regarding this process and other related areas were reviewed to obtain EMERGING Competencies. With the study's emphasis on competencies it was deemed advisable to review competency-based education as a background for the study.

Phase 2 consisted of designing the OCCUPATIONAL THERAPISTS COMPETENCY INVENTORY which would be used to obtain the data necessary for validating those competencies identified in Phase 1. After the INVENTORY was designed, it was pilot tested by five Fellows of AOTA who resided in Michigan. Revision of the INVENTORY followed to prepare it for dissemination in Phase 3.

Phase 3 was initiated to accomplish Objective #2. For this part of the study the Delphi procedure for obtaining opinions of a panel of experts was used. Because of the extreme length of the INVENTORY (28 pages), only two rounds of collecting data from panelists were planned. This was one round short of the average number of rounds used in most Delphi studies. Having a nearly complete list of competencies included in the first round compensated in part for shortening the number of rounds.

The stratified and systematic random sampling procedures drew from a population of nearly 25,000 OTs nationwide. Fellows of the AOTA were selected because of their recognized contributions to continuing education. Curricula directors of both occupational

therapists and competencies assistants educational programs were chosen because of their knowledge of the AOTA Essentials and the educational process. To balance the sample with practicing therapists in the field, recent graduates from 1975 and 1978 were selected because they would have gone through school under the present AOTA Essentials and would have had a chance to practice after graduation for from two to five years. Hoping to have a sample of at least 300 to use for data analysis, 842 persons were sent INVENTORIES: 251 Fellows and Curriculum Directors and 591 Recent Graduates. Responses from 301 OTs were returned usable in Round One. Round Two panelists returned 229 or 76% of those mailed out.

The INVENTORY contained 124 content variables and 16 demographic variables. The Round Two INVENTORY consisted of two parts: part 1 was the same as the first INVENTORY except for clarifying wording and definitions; part 2 contained all of the competencies submitted by panelists in Round One. Panelists were asked to respond to both parts, but if time did not permit, it was critical for them to complete part one. Additional feedback in Round Two was in the form of histograms for each competency statement showing the frequency of responses in each of the five response columns, indicating how essential or important the panelists judged the statement to be. Means of each variable were also given.

The time for completing both rounds was about 3-1/2 months from the date of the first mailing to the return of the last INVENTORIES. About two months passed from the first to the second mailing. Returns were mailed back slowly and follow-up cards had to be mailed about 3-4 weeks after the initial mailing. The responses were

coded by hand and computer to prepare the data for analysis.

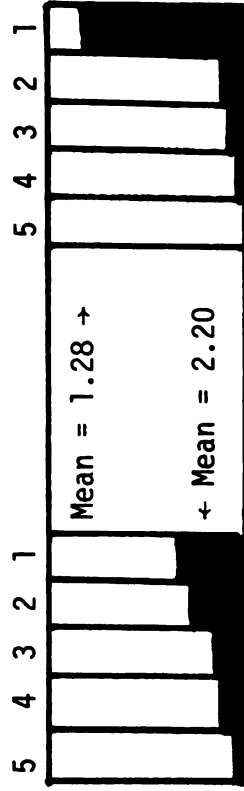
Data analysis focused on the research questions which were designed to give answers to resolve the problem under study and fulfill the intent of the research. Seven questions were asked and eight hypotheses generated. From the review of the literature the Delphi procedure was selected because of its applicability to a study of this kind. Substituting for committee meetings or brainstorming sessions, the mailed questionnaires helped to obtain consensus of opinions of panelists regarding the variables under study.

Consensus came about as a result of the group process. Although 11 competency statements reached a consensus of .77 (out of a possible 1.00) or better in the first round, 47 of the 78 competencies declared essential by panelists reached consensus; none of the 41 supplementary competencies, 20 of the 72 emerging competencies (16 were essential, none supplementary); and four of the five competencies judged to be useful but not essential, reached consensus. The summary of consensus is shown in Table 11.

The process of change in consensus between the two rounds is shown graphically in Figure 7. Three different illustrations of how most of the consensus changed depict the change in the means for each: if the first round mean and concentration of responses was in column 1, in which the mean would be low, the mean of the second round decreased; if the concentration was to the left at 4 or 5, the second round mean increased; if the concentration was in the middle, the mean stayed nearly the same. Figure 6 shows

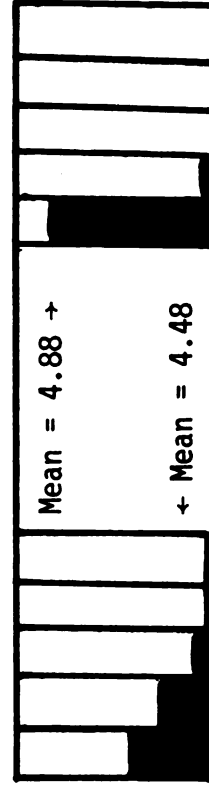
These histograms show the change in ratings of competency statements between rounds. Following the competency statement the Round One histogram indicates the responses by columns 5 - 1 (left to right) and the mean for that round. On the right is the histogram for the second round, indicating the movement of opinions of panelists.

The first illustration shows a lowering of the mean on Round Two when the concentration of responses in Round One was predominately on the right side (column 1).



This one shows an increase in the mean when the concentration was on the left side (column 5.)

7g. Build trusting, helping relationships with other professionals and nonprofessionals, clients and family members.



This one illustrates the mean remaining the same when the concentration of opinions was centered at 3.

50. Apply the ecological approach (interaction and interdependence of persons within family systems) to individual/family development; the adaptive process and quality of life.

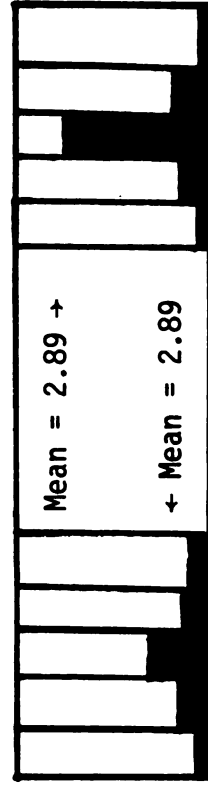


Figure 7. Comparison of responses to competency statements in Rounds One and Two using histograms.

The last one shows a decrease in mean toward the concentration when this polarization was in column 4.

7h. Conduct needs assessment, identify and clarify problems.
(This applies to intervention in systems.)

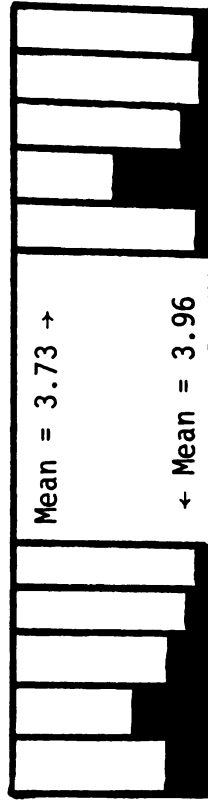


Figure 7. (Continued). Comparison of responses to competency statements in Rounds One and Two using histograms.

graphically the convergence to consensus on all scales between Rounds One and Two.

Since it is important to achieve as much consensus as possible in order to be able to say with some degree of confidence that a high percentage of the total group agreed on the essentiality of the competencies, two choices were possible after Round Two. One was to consider doing a third round, as the Young study did. However, both the numbers in the sample and the size of the instrument were substantially smaller than in this study. The other choice was to identify the variables reaching consensus at a selected figure and describe the results in terms of these considerations. It is the second choice which was the better alternative.

A complete description of the competencies selected by the panelists as being essential at entry level, those supplementary to the more important competencies, and the emerging ones which fitted into the essential, supplementary or useful but not essential categories is summarized in Table 17, Scales identified by variable number and essentiality. Research Questions 1 - 3 dealt with the identification of these competencies. From the results of the analysis of consensus completed for Research Question 4, it is evident that greater consensus was obtained overall for competencies viewed as ESSENTIAL. SUPPLEMENTARY Competencies, ranked by panelists as minimally to probably essential, reflected a wider range of opinions. Since three of the five useful but not essential competencies reached consensus, less polarization of opinions is evident.

Differences between groups or subpopulations comprised the remainder of the data analysis. Research Question 5 tested the

Table 17. Scales identified by variable number and essentiality.
 Essential - Es; Supplementary - S; Useful, but not
 Essential - U.

<u>SCALE 1</u>	<u>SCALE 5</u>	<u>SCALE 7</u>	<u>SCALE 10</u>	<u>ESCALE 3</u>
V 1 Es	V 35 Es	(Cont.)	V 10 S	(Cont.)
2 Es	36 Es	V 84 S	12 S	V 71 S
3 Es	37 Es	85 S	42 S	72 S
4 Es	38 Es	86 S	43 S	73 S
5 S	39 Es	89 S	44 S	75 Es
6 Es	40 S	90 Es	49 S	76 Es
7 S	41 S	91 S	74 S	77 U
8 Es	46 Es	92 S	79 S	78 S
9 Es	48 Es	93 S		80 S
		94 U	<u>EMERGING</u>	81 S
		95 S	<u>SCALES</u>	82 S
<u>SCALE 2</u>	<u>SCALE 6</u>	96 Es	Scales 9	83 S
V11 Es	V 50 Es	97 Es	and 10 are	84 S
13 Es	51 Es	98 Es	EScales 4	85 S
14 Es	52 Es	99 Es	and 5	86 S
15 Es	53 Es	100 S		87 S
	54 Es		<u>ESCALE 1</u>	88 Es
<u>SCALE 3</u>	<u>SCALE 7</u>	<u>SCALE 8</u>	V 17 Es	89 S
V16 Es	V 55 S	V 88 Es	19 Es	90 Es
17 Es	56 S	96 Es	28 Es	91 S
18 Es	57 S	101 Es	29 Es	92 S
19 Es	58 Es	102 Es		93 S
20 Es	59 U	103 Es	<u>ESCALE 2</u>	94 U
21 Es	60 S	104 Es	V 50 Es	95 S
22 Es	61 U	105 Es	51 Es	96 Es
23 Es	62 Es	106 Es	52 Es	97 Es
24 Es	63 Es	107 Es	53 Es	98 Es
25 Es	64 U	108 Es		99 Es
26 Es	65 Es	109 Es	<u>ESCALE 3</u>	100 S
27 Es	66 S	110 Es	V 55 S	45 S
28 Es	67 Es	111 Es	56 S	48 Es
29 Es	68 S	112 Es	57 S	104 Es
45 S	69 S	113 Es	58 Es	
47 Es	70 Es	114 S	59 U	
87 S	71 S		60 S	
	72 S	<u>SCALE 9</u>	61 U	
<u>SCALE 4</u>	73 S	V115 S	62 Es	
V30 Es	75 Es	116 Es	63 Es	
31 Es	76 Es	117 Es	64 U	
32 Es	77 U	118 Es	65 Es	
33 Es	78 S	119 Es	66 S	
34 Es	80 S	120 Es	67 Es	
	81 S	121 S	68 S	
	82 S	122 Es	69 S	
	83 S	123 Es	70 Es	
		124 S		

hypothesis that there would be no significant difference between panelist subgroups, the Fellows of AOTA and the Curriculum Directors in one group, and the Research Graduates in a second. The null hypothesis was rejected because in both rounds there was a difference between groups.

Research Question 6 contained hypotheses about other subpopulations, namely panelists' education, years in practice, work setting and work function. Multivariate Tests of Significance, Univariate F-Tests and Roy-Bargman Stepdown F Test were all used in the computer SPSS program. All scales in the study, the eight Existing and five emerging, were tested for significance between groups in a research design described in the following figure:

Panelists Group 1 Panelists Group 2		Roy-Bargman Stepdown F Tests Multivariate Test of Significance Univariate F Tests
<u>Years in Practice</u>	Under 5 years 5 - 10 years 11 or more years	Scales 1 - 13
<u>Education</u>	B.S., B.A., OT Certificate MOT Graduate Education	Scales 1 - 13
<u>Work Setting</u>	Hospital, rehabilitation center Other	Scales 1 - 13
<u>Work Function</u>	Direct Client Service Indirect Client Service	Scales 1 - 13

Figure 8. Statistical tests used to determine differences between groups on all scales.

The last research question identified the frequencies of responses to two questions: Would OTs take a job in a nontraditional setting, and if so, for what reasons?

Conclusions: Of the 293 who responded, 243 would change jobs, 50 would not change jobs. Reasons for change ranked by frequency of responses:

1. Interest in the nontraditional setting.
2. Desirable client population (a tie with the first reason).
3. Miscellaneous personal reasons.
4. Want to develop own job.
5. Because job is available.

Summary of Findings

1. What are the ESSENTIAL Competencies needed for entry into the profession of occupational therapy, as perceived by a Delphi panel of experts in the field?

The following competencies were judged to be essential at .77 or higher degree of consensus:

SCALE 1: Specific Life Tasks and Activities

V1: Analyze the processes involved in selected tasks and activities in terms of skills and performance.

V2: Relate specific life tasks and activities to client's abilities, limitations, goals, life satisfaction and lifestyle activities.

V4: Analyze and integrate developmental tasks, daily activities, and skill development in the performance of activities.

V6: Identify and analyze tasks and activities in terms of the following components: physical, sensorimotor, cognitive, psychological, social, cultural and economic.

V8: Relate social role behavior and skills in self-care, work and play to the development of a person's competence and potential.

SCALE 2: Basic Human Sciences

V11: Know the human growth process: biological, reflex, perceptual, sensorimotor, cognitive, emotion, intellectual, social and cultural.

V13: Relate social-cultural system of client to individual development and functioning.

V15: Know the structure and function of the human body and body systems.

SCALE 3: Direct Client Services

V16: Instruct a client in carrying out a program of purposeful activities.

V18: Evaluate client's abilities and deficits to present functional living skills profile and to obtain occupational history.

V20: Facilitate and support client's active participation and investment in therapeutic activity program.

V21: Evaluate the client's response to treatment.

V22: Verify assessments, share findings with client and team members and make recommendations.

V23: Explain theories and principles of occupational therapy clearly, understandably to others, verbally and written.

V24: Record and report client data orally and written.

V25: Adapt environment/activities to meet client's goals and needs.

V26: Communicate recommendations for follow-up, referral or termination.

SCALE 4: Health-Illness-Health

V30: Evaluate biological, social and psychological well-being.

V31: Relate concept of "wellness" to biological, social and psychological well-being and influences on health and quality of life.

V32: Relate occupational performance to health, developmental tasks of life periods, performance skills, and life satisfaction.

V33: Know the etiology, progress, management and prognosis of congenital and developmental defects and deficits, disease process and mechanisms.

SCALE 5: Human Development Process

V38: Acquisition of developmental tasks throughout life cycle.

V39: Relate occupational performance activities and skill components to the acquisition of developmental tasks throughout life.

V46: Analyze the learning of adaptive skills necessary for accomplishing developmental tasks essential to productive living.

SCALE 6: Occupational Therapy Theory

V52: Analyze the distortion of occupation in the presence of illness, injury, dysfunction and deficits on living throughout life.

V53: Analyze the use of occupation as a force in identifying and assessing health problems, prescribed for goal achievement, in human development and in the presence of pathology.

SCALE 7: Indirect Client Services

V62: Build trusting, helping relationships with other professionals, nonprofessionals, clients and family members.

V65: Engage in problem-solving by listening and clarifying to obtain the real problem.

V70: Identify community resources and know information seeking process.

V97: Team working.

SCALE 8: Personal Performance Skills and Attitudes

V88: Initiate and direct one's own professional growth on a continuing basis.

V96: Maintaining professionalism.

V101: Problem-solving skills.

V102: Communication skills.

V106: Perceive and accept responsibility.

V109: Motivation and commitment.

V110: Resourcefulness and creativity.

V111: Self-awareness.

V112: Relatedness to others.

V113: Objectivity and judgment.

SCALE 9: Occupational Therapy in the Schools

V118: Engage in consensual decision-making.

V119: Document performance objectives.

V120: Apply OT theory to educational programs.

SCALE 10: Family Studies

None

EMERGING SCALE 1: Direct Client Services

V17: Apply OT theory to clients of all ages with or without disabilities.

V19: Develop functional living program in cooperation with client, family and other members of the health-care team.

V29: Apply purpose of adaptive devices and equipment to clients' needs; know where to purchase and how to adjust or adapt.

EMERGING SCALE 2: Occupational Therapy Theory

V52: Analyze the distortion of occupation in the presence of illness, injury, dysfunction and deficits on living throughout life.

V53: Analyze the use of occupation as a force in identifying and assessing health problems, prescribed for goal achievement, in human development and in the presence of pathology.

EMERGING SCALE 3: Indirect Client Services

V48: Analyze behavioral theories - how behavior is influenced and how people are motivated.

V62: Build trusting, helping relationships.

V65: Engage in problem-solving.

V70: Identify community resources and know information seeking process.

V88: Initiate and direct one's professional growth.

V96: Maintaining a level of professionalism.

V97: Team working with professionals.

V98: Knowledge of personal liability, professional ethics, etc.

V99: Articulating uniqueness of OT.

This is a total of 47 different variables which reflect consensus of .77 or higher. Table 11 gives a total number of essential, supplementary and emerging, useful but not essential competencies judged so by the panelists.

2. What are the SUPPLEMENTARY Competencies needed for entry into the profession of occupational therapy, as perceived by a Delphi panel of professionals in the field?

The following competencies were judged to be minimally or probably essential, the operational definition of SUPPLEMENTARY Competencies, at .700 - .751 degree of consensus (none reached .77).

SCALE 1: Specific Life Tasks and Activities

None

SCALE 2: Basic Human Sciences

None

SCALE 3: Direct Client Services

V87: Identify such concepts as the dynamics of occupation and apply to all areas of OT specialization.

SCALE 4: Health-Illness-Health

None

SCALE 5: Human Development Process

None

SCALE 6: Occupational Therapy Theory

None

SCALE 7: Indirect Client Services

V85: Function as a researcher by promoting research.

V93: Assist clients to redefine their roles in order to participate in a desired change.

SCALE 8: Personal Performance Skills and Attitudes

None

SCALE 9: Occupational Therapy in the Schools

None

SCALE 10: Family Studies

V44: Identify influences of measures of life satisfaction on individual and/or family goal setting.

V49: Apply the ecological approach to individual/family development, the adaptive process and quality of life.

EMERGING SCALE 1: Direct Client Services

None

EMERGING SCALE 2: Occupational Therapy Theory

None

EMERGING SCALE 3: Indirect Client Services

V85: Function as a researcher by promoting research.

V87: Identify such concepts as the dynamics of occupation and apply to all areas of OT specialization.

V93: Assist clients to redefine their roles in order to participate in a desired change.

Only five SUPPLEMENTARY Competencies reached .70 - .75 degree of consensus out of a total possible number of 41.

3. What are the EMERGING Competencies which OTs need to practice in nontraditional settings, as perceived by a Delphi panel of professionals in the field?

The EMERGING Competencies which reached consensus of .77 are the following:

ESSENTIAL

EMERGING SCALE 1: Direct Client Services

V17: Apply OT theory to clients of all ages with or without disabilities.

V19: Develop functional living program in cooperation with client, family and other members of the health-care team.

V29: Apply purpose of adaptive devices and equipment to clients' needs; know where to purchase and how to adjust or adapt.

EMERGING SCALE 2: Occupational Therapy Theory

V52: Analyze the distortion of occupation in the presence of illness, injury, dysfunction and deficits on living throughout life.

V53: Analyze the use of occupation as a force in identifying and assessing health problems, prescribed for goal achievement, in human development and in the presence of pathology.

EMERGING SCALE 3: Indirect Client Services

V48: Analyze behavioral theories - how behavior is influenced and how people are motivated.

V62: Build trusting, helping relationships.

V65: Engage in problem-solving.

V70: Identify community resources and know information seeking process.

V88: Initiate and direct one's professional growth.

V96: Maintaining a level of professionalism.

V97: Team working with professionals.

V98: Knowledge of personal libability, professional ethics, etc.

V99: Articulating uniqueness of OT.

EMERGING SCALE 4 (Scale 9): OT in the Schools

V118: Engage in consensual decision-making.

V119: Document performance objectives.

V120: Apply OT theory to educational programs.

SUPPLEMENTARY:

None

USEFUL BUT NOT ESSENTIAL:

EMERGING SCALE 3: Indirect Client Services

V59: Writing proposals for funding and knowing where to obtain funding.

V61: Function as a consultant to a system.

V64: Consult to a system.

V94: Be an independent practitioner.

This is a total of only 20 EMERGING Competencies; 19 additional ones reached consensus of .70 - .77, however. This represents a total of 39 out of 72, or 54% of emerging competencies.

4. What degree of consensus is there across members of the profession regarding the ESSENTIAL, SUPPLEMENTARY and EMERGING Competencies?

The percentage of ESSENTIAL, SUPPLEMENTARY and EMERGING Competencies reaching consensus out of a total possible number for each of these groups are the following:

ESSENTIAL Competencies:	60% (47 of 78)
SUPPLEMENTARY Competencies:	0%
EMERGING Competencies:	28% (20 of 72)

5. What degree of consensus is there among the Fellows and Curriculum Directors (Group 1) and Recent Graduates (Group 2) regarding the ESSENTIAL, SUPPLEMENTARY and EMERGING Competencies?

In both rounds a difference was found in how both groups viewed the entire INVENTORY.

Group 1, Fellows and Curriculum Directors considered Specific Life Tasks and Activities, Basic Human Sciences, Direct Client Services, Health-Illness-Health, Human Development Process, and OT Theory more essential.

Group 2, Recent Graduates, considered Indirect Client Services and EMERGING Competencies in Indirect Client Services and OT in the Schools more essential. Nearly all of these are EMERGING Competencies.

6. Do significant differences exist between the variable scales and the following demographic variables of the panelists: professional educational degree, number of years in practice, work setting and work function?

Educational Degree (ED)

In Round Two, education subpopulation groups differed in perception of the total INVENTORY; this was not true in Round One. There were no significant differences found in Round One. In Round Two the differences found are listed in Table 18.

Years in Practice as an OT

As subpopulation groups, years of work experience made a difference on how the total competencies in the INVENTORY were judged, according to Round Two; in Round One this perception applied to Emerging Scales only. Differences between subpopulations are summarized in Table 18.

Work Setting

As subpopulation groups, work setting made a difference in how OTs viewed the entire INVENTORY on Emerging Scales in Round Two only. Differences between groups are summarized in Table 18.

Work Function

In Round One, the work function subpopulation groups viewed the EMERGING Competencies as a whole in the INVENTORY significantly different, but not the Existing Scales.

Table 18. Rank order of essentiality of scales by demographic group.
 * = Round Two, ** = Round One, *** = 1 is most essential

EDUCATION	Human Development*	OT in the Schools*	Family Studies*
ED 1 (B.A./B.S. OT or Certificate in OT)	3	1***	3
ED 2 (MOT)	2	2	2
ED 3 (Graduate Study)	1	3	1

YEARS IN PRACTICE	Life Tasks **	Direct Client ** Services (Emerging)	Basic Human * Sciences	Human Development *	OT Theory *	Direct Client * Services (Emerging)	OT Theory *	OT in the * Schools	Indirect Client * Services (Emerging)
Less than 5 years	3	3	2	2	2	2	2	1	2
5 - 10 years	2	2	3	3	3	3	3	2	1
11 years or more	1	1	1	1	1	1	1	3	3

WORK SETTING	Health-Illness Health**	OT Theory*	OT Theory (Emerging)*
Hospital, rehabilitation center	2	2	2
Other (nontraditional)	1	1	1

WORK FUNCTION	Life Tasks**	Human Development*	OT Theory*	Direct Client Service (E)**
Direct Client Services	2	2	2	2
Indirect Client Services	1	1	1	1

In Round Two, the work function subpopulation groups viewed the EXISTING but not the EMERGING Competencies as a whole in the INVENTORY significantly different. Differences between groups are summarized in Table 18.

7. Would OTs take a job in a nontraditional setting, and if so, for what reasons?

Yes, 243 panelists would take a job in a nontraditional setting; 50 would not.

The reasons given for making such a change ranked in the following order:

1. Interest in nontraditional setting

or

Desirable client population

2. Miscellaneous personal reasons

3. Want to develop own job

4. Because job is available.

8. Two additional questions were asked panelists. One asked whether they had participated in any continuing education workshops, courses or conferences in the past year. Of 284 responses, 258 said yes, and 26 said no. The other question was concerning present employment: are you presently employed? Of 284 responses, 252 said yes, 32 said no.

Discussion and Conclusions

Essential Competencies

Consensus at .77 was reached on 47 competencies, falling mainly within Direct Client Services, Specific Life Tasks and Activities, Basic Human Sciences, Health-Illness-Health, and Personal Performance Skills. The remaining scales, Human Development Process, OT Theory and OT in the Schools, showed only scattered high consensus. Lack of consensus exists generally on Indirect Client Services and Emerging Scales.

To summarize, the following conclusions can be drawn:

1. The panelists as a majority agreed with small dispersion of responses that nearly all competencies in all scales were essential except Family Studies, Indirect Client Services and the remaining EScales.
2. Of the 124 variables in the study, 78 or 63% were declared essential.
3. The percent of all ESSENTIAL Competencies of .77 consensus was 60%
4. High consensus existed in Existing Scales; low in Emerging Scales.

Supplementary Competencies

No SUPPLEMENTARY Competencies had .77 agreement. Within the consensus range of .70 or higher, SUPPLEMENTARY Competencies were within Scale 7, Indirect Client Services; Scale 3, Direct Client Services; and EScale 3, Indirect Client Services. Since SUPPLEMENTARY

Competencies were dispersed among all scales except Scales 2, 4, 6 and EScales 1 and 2, panelist group comparison of differences on separate competency items was not computed.

To summarize, the following conclusions can be drawn:

1. SUPPLEMENTARY Competencies fell primarily within Emerging Scales.
2. None reached .77 consensus or higher.
3. At .70 consensus, five SUPPLEMENTARY Competencies reached consensus.
4. Of the 124 variables in the study, 41 or 33% were SUPPLEMENTARY Competencies. Only five reached .70 consensus which was 15% of all the SUPPLEMENTARY Competencies in the study.
5. Panelists converged to consensus on SUPPLEMENTARY Competencies at a much smaller rate than on the ESSENTIAL Competencies. In other words, panelists' opinions of SUPPLEMENTARY Competencies were dispersed much more widely than were ESSENTIAL Competencies.
6. Panelists reached .70 consensus on competencies judged SUPPLEMENTARY in Emerging Scales only.

Emerging Competencies

Within the consensus range of .77 or higher, 16 EMERGING Competencies were considered essential, none supplementary and four useful but not essential. In the study, 72 of the 124 variables were EMERGING, which was 58% of the variables. Of the 72 variables,

37 or 51% were judged to be Essential; 31 or 42% Supplementary, and five or 7% Useful but not Essential.

Of all competencies in the Emerging Scale of Indirect Client Services (47), 34% or 16 were considered Essential. Of the 16, 50% reached consensus of .77 or higher.

The following conclusions can be drawn:

1. EMERGING Competencies in agreement by over 50% of the panelists are primarily in Indirect Client Services.
2. Although 58% of the variables in the study were Emerging, only 20 or 28% reached consensus of .77 or higher, indicating lack of agreement by panelists on EMERGING Competencies.
3. The content area of the EMERGING Competencies declared Essential and reaching .77 consensus were the following:
 - a. Applying OT to clients with and without disabilities.
 - b. Developing functional living programs with team members.
 - c. Applying purpose of adaptive devices to client's needs.
 - d. OT Theory: distortion of occupation lifelong.
 - e. OT Theory: use of occupation as a force in identifying and assessing health problems.
 - f. Building trusting relationships.
 - g. Engaging in problem solving with team workers.
 - h. Identifying community resources.

- i. Team work.
- j. Apply OT theory to educational programs.
- k. Analyze behavioral theories.
- l. Maintain professionalism.
- m. Initiate and direct one's professional growth.
- n. Articulate uniqueness of OT.

Degree of Consensus

In decreasing order, panelists agree at .77 about ESSENTIAL Competencies (60%), EMERGING Competencies (28%), and SUPPLEMENTARY Competencies (0%). Consensus of four of the five Useful but not Essential Competencies was also obtained. The Delphi process was effective in getting increased consensus in the second round (250% on number of scales increased over the first round). The interactive element was present in both Groups, somewhat more in Group 2 than 1. Group 2 increased in consensus on Scale 10 from .412 to .809 in Round Two, while Group 1 dropped to .412. The Recent Graduates as a group (Group 2) agreed much more strongly than did Fellows and Curriculum Directors that these competencies are supplementary ($\bar{X} = 2.78$).

Degree of Consensus Between Groups

Independently, Groups 1 and 2 reached .77 consensus in Rounds One and Two according to these frequencies:

Scale	Round One		Round Two	
	Group 1	Group 2	Group 1	Group 2
	3	1	1	1
		3	3	2
		4	4	3
		8	5	4
			6	5
			7	6
			EScale 2	9
			3	10
				EScale 2

As a group, Recent Graduates were in stronger agreement than Fellows and Curriculum Directors. Although not as centrally polarized in their opinions, Group 1 was different from Group 2 in judgments of essentiality of Scales 1 - 6, And EScales 1 and 2. The Recent Graduates viewed Scales 7, 9, and EScale 3 as more essential. These were in the content areas of Indirect Client Services and OT in the Schools.

Differences Between Subpopulations

Educational Degree

In Round Two differences in educational level were significant on Scale 5, Human Development Process: more education varied directly with the essentiality of this scale. Conversely, less education (B.A., B.S./OT, or Certificate) perceived OT in Schools (Scale 9) to be more essential than those with graduate education. Scale 10, Family Studies, varied in essentiality directly with more education.

Years in Practice

In Round One, increasing years of experience varied directly with the essentiality of Scale 1 and EScale 1 (Specific Life Tasks and Activities, and Direct Client Services).

In Round Two, on Scales 2, 5, 6 and EScales 1 and 2, Group 3, over 11 years of work, viewed them as more essential, followed by Group 1 (less than 5 years) and Group 2 (5 - 10 years). On Scale 9, Group 1 was first in essentiality, followed by Groups 2 and 3. On EScale 3, Group 2 was followed by Groups 1 and 3.

Work Setting

In Round One, Scale 4 was viewed by the nontraditional setting as more essential than the traditional setting. In Round Two, the nontraditional setting viewed Scale 6 and EScale 2 as more essential.

Work Function

In Round One only Scale 1 was significant. This scale was viewed as more essential by OTs in Indirect Client Services than OTs in Direct Client Services. In Round Two, Scales 5 and 6 were seen as more essential by Indirect Client Service OTs. In the Emerging Scales in Round One, EScale 1 was judged more essential by Indirect Client Services. In Round Two, EScale 2 was viewed as more essential by Indirect Client Services.

Differences Between Subpopulations as Total Groups

The subpopulations viewed the INVENTORY as a whole differently according to the following chart:

<u>Subpopulation</u>	<u>Round One</u>	<u>Round Two</u>
Educational Degree		YES
Years in Practice	EMERGING SCALES	YES
Work Setting		EMERGING SCALES
Work Function	EMERGING SCALES	YES

Change did occur between rounds as individuals interacted through the INVENTORY.

Change to Nontraditional Settings

Panelists would change to nontraditional settings: 243 yes, 50 no. The reasons given in rank order were interest in setting

and desirable client population, miscellaneous personal reasons, wanting to develop own job and last, because job is available. This question was important because if therapists would not change to a nontraditional setting, there would be little reason to consider EMERGING Competencies which were needed for nontraditional areas of practice such as OT in the Schools. Of the reasons given for making such a change, "wanting to develop own job" requires special competencies which the other reasons do not. Ranking next to last, this reason is important when considering the competencies which will be needed for transition into emerging practice areas where jobs are not already available. OTs will need the skill necessary to develop jobs where none presently exist.

Present Employment

Panelists were asked if they were presently employed. Of the 284 responding, 252 were employed, 32 were not. This gives a high ratio of employed to not employed in the sample.

Participation in Continuing Education

Of 284 responses, 258 panelists had participated in workshops, courses, conferences in the past year. This large proportion of continuing education activity has implications for the educational model which is presented in this study.

Discussion

The purpose of this study was to determine the essential, supplementary, and emerging competencies needed by OTs and to propose a lifelong educational model for maintaining professional competency,

derived from the implications of the findings of this study. Three objectives were derived from the intent of the study. The first objective, to define the competencies needed by OTs, was accomplished through the literature review and Round One of the INVENTORY. The second objective, to validate or get consensus of members of the profession as to the essential, supplementary and emerging competencies needed by OTs, was accomplished in the Delphi procedure which used two rounds of seeking opinions of panelists on variables in the INVENTORY. The determination of the significance of the data collected was accomplished in the statistical analysis procedures. Objective 3, deriving an educational model for lifelong professional development, follows the implication section.

The problem for study was to identify the competencies needed to practice in the 1980s. These competencies were identified in the literature review which included analysis of social policy legislation for implications applicable to education of OTs. The determination of the importance of these emerging competencies in relation to the AOTA Essentials consumed the data collection and analysis. Had rank ordering competencies been the final objective, a survey of panelists would have sufficed. Since the goal was to obtain consensus regarding these competencies, a Delphi procedure was selected. Two rounds of data were analyzed and change of opinions of panelists in a movement toward consensus was calculated. The findings included the ratings of essentiality given by panelists on 124 competency variables. Consensus convergences of groups of panelists and the entire sample population were

determined. The degrees of consensus were considered in relation to the essentiality of competencies and competency scales.

The dimension of convergence to consensus which is the purpose of the Delphi procedure, is important as an indicator of group agreement. The results of this study with respect to consensus by scale shows that 8 of the 13 scales obtained consensus of .813 or higher - an increase of 6 after Round One. Comparing these to means, only one scale, Family Studies, had a mean lower than 3.6, indicating that eight of the nine scales were considered essential at entry level.

The scales which did not reach consensus at .77 were: Indirect Client Services and EScale 3 (also Indirect Client Services), EScale 1, Direct Client Services, and Scale 8, Personal Performance Skills and Attitudes and Family Studies. Of these five scales, three had means lower than 3.5, meaning that they are considered supplementary at entry level: they are Indirect Client Services, both existing and emerging, and Family Studies. The other two, Personal Performance and Direct Client Services, had means that placed them in the essential range. Analysis by scales supports individual variable results which indicated lower consensus in the supplementary competency area.

In essence the findings regarding consensus and essentiality of variables indicate that panelists as a group agree on the competencies which are in the AOTA Essentials as still being essential; the EMERGING Competencies, except for OT Theory, lack agreement; all EMERGING Competencies were considered essential at entry level except Family Studies and Indirect Client Services. If the total panelist group is divided into the separate groups - Group 1,

Fellows and Curriculum Directors, and Group 2, Recent Graduates - to identify how essential were the scales in which the two groups were significantly different in their perceptions of the variables, the findings were that only Indirect Client Services were viewed as supplementary at entry level by both groups. The other scales were considered essential by both groups.

Subpopulations were different with respect to essentiality:

1. OTs with graduate degrees (ED 3) considered OT in the Schools to be supplementary, while both ED 1 and ED 2 said it was essential at entry level. ED 1 and 2 includes all of the Recent Graduates (Group 1).
2. All other subpopulations, although significantly different in how they viewed the scales, stayed within the essential at entry level range.

Implications

What are the implications of the research findings? It is necessary to review the need for this study and the report of the Ad Hoc Committee on Educational Standards Review, submitted to the Representative Assembly of AOTA in April, 1980. The movement away from the medical model to one of prevention and the shift to the community and the client's home has begun. OTs are now working in the schools of the nation in increasing numbers. The profession has supported a study which identified the competencies necessary for practice in schools with populations from birth to 21 or 25 years. Workshops to teach present practicing OTs the

skills and knowledge necessary for this non-medical setting have begun. In the fall of 1980 the workshops will be conducted in all states in the nation. The findings of this study indicate that Recent Graduates as a group consider the competencies needed for working in schools to be essential at entry level. OTs with more years of work experience consider these competencies NOT to be essential at entry level. If those who are already in the non-traditional practice area of schools realize the need for being prepared before graduation to work in schools, the profession must listen to what these practitioners are saying and observe what they are doing. Educational decisions can then be based on the reality of OTs' practice.

The findings of the total panelist group also supported the competencies in the OT in the Schools scale as being essential at .842 consensus. Having this additional support for including the competencies needed for working in the schools in the entry level curriculum, the implication is that these should be added when the new AOTA Essentials are written.

Another Emerging Scale, Family Studies, was thought by both panelist groups to be supplementary at entry level - not essential. Total group consensus was low. However, Group 2, Recent Graduates, had strong agreement while Group 1 had very low agreement. Again, the practitioners who have graduated under the 1973 AOTA Essentials - Group 2 - as a group realize the importance of an emerging area of competency.

The findings that emerging competencies in Indirect Client services are not essential at entry level - that they are

supplementary - and that they had low consensus by the total panelist group suggests implications for the profession. Graduates leave school prepared to be clinicians. The direct service role is familiar and desirable, not the indirect. Additionally, curriculum directors, in agreement with the AOTA Essentials, construct courses around the role of clinician - not the administrator, consultant, private practitioner or health planner. The report of the Ad Hoc Committee on Educational Standards Review endorsed the clinical practice role function for the OTR but rejected the role functions of consulting, administration and supervision, community health care planning and research. In this study the panelists also viewed the direct service role as essential, with strong agreement as a group. The competency related to community health care which was considered essential was V67 - provide OT services which promote health practices for prevention of illness and disability.

The implications of the direct client service role versus the indirect - of the clinical practice role versus the nonclinical, are important and far reaching. Although the nonclinical role has been rejected as being essential at entry level, the role of the OT in the Schools was considered essential by the panelists in this study. This role is not a clinical one. According to the report of the Advanced Training for Occupational Therapists in the School Systems first year report,¹³¹ the consultation relationship of school staff, families, and occupational therapists is emerging as a paramount role in implementing occupational therapy school-based programs. This trend in indirect client services,

the nonclinical role, cannot be denied. The profession must consider the alternatives which are possible at this time.

One direction that is possible is for OTs to continue to follow the nonclinical role in settings other than schools. This direction is the one indicated by the changing health care scene, by the social policy legislation reviewed for this study, and the one chosen, although without strong agreement, by the panelists. The panelists favored indirect client services as being supplementary - not essential at entry level. It would seem that this is a step toward being essential, at the minimally or probably essential level.

If these competencies are to be learned by OTs in order to practice in the nonclinical, nontraditional settings, where are they to be acquired? If at entry level, which the panelists suggested, there will need to be changes in the present AOTA Essentials. Since the panelists supported strongly all other non-emerging competency scales as being essential, can more competencies be added to the present OT curriculum? If not, specialization channels could be added to the entry level programs. Instead, as has been urged by leaders in the profession, the entry level program could remain preparatory for the generalist, but require more pre-entry to the curriculum competencies so that there would be time for adding new competencies to the professional courses. Since that could be difficult at the baccalaureate level, movement to graduate entry is also an option.

If the profession were to move to graduate entry to the profession, more of the indirect client services such as research,

consultation, community health planning, and other independent practitioner skills could be learned. To ensure that these competencies are learned, the competency-based model of education might want to be evaluated as one way for the profession to follow. The basic professional education which encompasses the uniqueness of occupational therapy and the application to practice could be learned together with the indirect service content and practice competencies. Such a drastic change in professional education would innately be resisted initially by curricula directors. The alternatives are for the profession to remain clinically, direct client service oriented, and prepare clinicians as is presently being done.

Wilson has written extensively about curriculum development. She says that faculty must identify the role the practitioner will fill and then the competencies necessary to fill that futuristic role. "Until we know what a practitioner will be doing, we cannot educate realistically or accountably."¹³² Education is viewed by Wilson as a preparation for the future which is often perceived as very little different from the past or present. Education must have the courage to change for the future, otherwise current emphases will be irrelevant and unacceptable.

Wilson goes on to say that some health practitioner positions are in danger of extinction unless these professions can perceive a marked change in role for their practitioners and "carefully define the new role as a basis for changing education." The implications of not moving in the direction of health care change and opportunities for expansion of the profession are serious and require careful consideration of the consequences of such action. The

profession has identified its uniqueness. Now it must decide whether it will continue to grow and respond to change, making the educational adjustments necessary, or remain static and traditional.

It is important to note that the EMERGING competencies considered ESSENTIAL by respondents focus on inter-relating with professionals, family members, community agencies; building relationships; health maintenance, which is broader than the technical aspects of professional services. This reflects a response to social and political changes: in community extension, practice of school systems, to disease prevention, all which were areas of the social policy legislation reviewed for this study. These competencies suggest an ecological approach to practice which is commensurate with an independent profession growing and expanding to best serve consumers of its service.

Model of Lifelong Professional Development

The areas of skills and knowledge which the professional OT learns at every level are the unique content of occupational therapy - the core theory, principles, concepts. Cognate areas of interest embellish and enrich the core emphasis. Processes in occupational therapy practice (at present these are tasks that provide direct service to clients) and program support tasks include managing client service, supervising others, maintaining supplies and equipment, communication with team members and pertinent other persons.

This basic professional education prepares the OT for entry into the profession at the baccalaureate level. If this were a Masters in Occupational Therapy (MOT), graduate emphasis on research, critical thinking and scholarly writing would be acquired. In both professional programs field work practicums give the OT an opportunity to apply theory and principles to practice, under the supervision of a more knowledgeable person in a particular speciality area of practice (physical disabilities, psychiatry, pediatrics).

A model of lifelong professional development begins with the education which prepares a person for entry into the field of practice. In Figure 9, current professional education is conceptualized in these components: unique occupational therapy core content, program support and field work; research, critical thinking and scholarly writing; masters and/or doctorate in occupational therapy with concentration in administration, education, pediatrics, psychosocial dysfunction, sensory integration, motor dysfunction, genetic or physical disabilities. The routes of professional degree entry

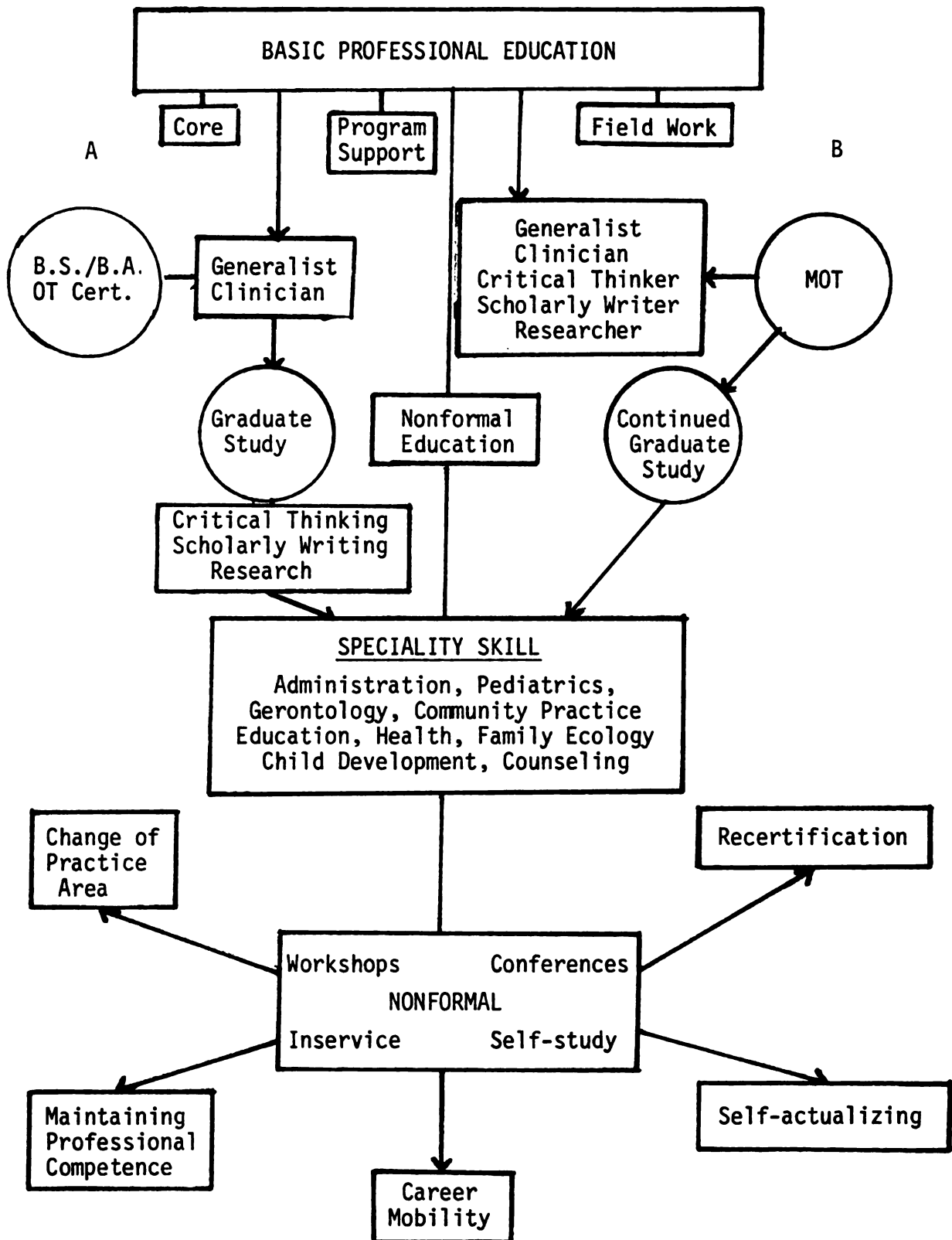


Figure 9. Content of educational experiences and goals of lifelong education.

are indicated as Bachelor of Arts or Science in Occupational Therapy (B.A./B.S. OT, Certified OT) or Master of Occupational Therapy. The B.A./B.S. OT or Certified OT has several options for graduate education in occupational therapy at the master's or doctoral level. Graduate programs are available in related areas of study in education, health, family ecology, child development, counseling, to name but a few. It must be stressed that graduate degree study focuses on research, critical thinking, scholarly writing with occasionally interpersonal practice applied experiences.

Undergraduate or graduate degree programs are considered formal education since they lead to a degree, give credits to the learner, are planned and scheduled. Non-formal education is not a program leading to a degree (although occasionally university credits can be earned for a 3-5 day workshop); it is usually a one-time, short term learning experience. Workshops, conference, refresher courses, inservice programs or self-study modules are some examples of non-formal education. These are also planned and scheduled, as is formal education, in contrast to informal learning which is incidental, of varying lengths of time and occurring in a variety of settings. Examples are crafts, sports, or hobbies.

Are OTs engaged in formal and nonformal learning after their basic professional education? This study has indicated that OTs who are practicing do continue to educate themselves through workshops, conferences, courses and inservices. Of the panelists in the study 91% had participated in continuing education in the past year. In formal education, 32% had graduate degrees, not including the MOT. OTs now practicing must acquire skills to remain certified

and up-to-date in practice competency. The law mandates quality care, and individual practitioners set high standards for professional preparation and work. Based on the need to acquire entry level competency, maintain professional competency in practice skills, and often re-enter the profession after years of inactivity, lifelong education is an accepted way of life. The results of the data analysis have also indicated a need for the acquisition of EMERGING Competencies in areas such as OT in the Schools, Family Studies, and Indirect Client Services; some at entry level, some not.

The Re-Entry Project's Needs Study¹³³ of job descriptions of supervisors, administrators and staff OTs found that the most frequently mentioned functions of OTs are supervising and managing - skills that were not considered ESSENTIAL by the panelists. A 1979 AOTA survey of OT members to find out choices for continuing education listed the four high areas to be sensory integration, administration, consultation and research methods. These areas of competency can be obtained through graduate study or nonformal learning experiences. Other areas of personal or professional knowledge or skill can be acquired in nonformal education.

Workshops or courses can fill a personal need such as Assertiveness Training, Time Management, the Woman Manager, or increase specialized professional skills in Home Health, Consultation, Private Practice, Hand Rehabilitation or Sensory Integration. When the need for competency is of a limited nature, specific and short term, nonformal learning is preferable. When the learning is less focused, longer term and more encompassing, the choice would be formal graduate study.

Should all OTs acquire graduate degrees at some time after entering practice through Route A? if so, what option should be selected? It depends on one's professional goals, personal interests and resources. For consideration also is whether there are other elements of graduate study which are critical to OTs' professional roles as they change from the clinician to the non-clinical OT. If such exist, graduate education should be required and starting in 1982 new entry OT programs should be master's level; all baccalaureate OTs would need to obtain graduate education.

Is there a need for continuing nonformal education? Figure 10 contains a list of indirect client service categories of SUPPLEMENTARY Competencies from Scale 7 or EScale 3 in the INVENTORY. None of these were thought to be ESSENTIAL at entry level; they were SUPPLEMENTARY. Since these are EMERGING Competencies incumbent in non-traditional practice and occurring in traditional as well, they will either have to be added to curricula as options or offered through graduate study or nonformal education. Suggested alternatives are given in Figure 10.

Two other groups of competencies were considered SUPPLEMENTARY by the panelists: OT in the Schools and Family Studies. Where to acquire these practice and theoretical skills is partly determined by the immediacy of the need. OTs working in schools need these competencies immediately and will be able to attend workshops starting in the fall of 1980. Should they be incorporated in the entry level curricula? If so, analysis of the individual competencies would show an overlap with some of the other indirect client service competencies. Field work placements in schools as an option is

<u>Competencies</u>	<u>Formal</u>	<u>Nonformal</u>
Supervision	1 (entry)	2
Administration	1 (entry)	2
Consulting within a system	--	1
Change agent role	Introduction	1
Community Health Health Promotion Prevention Planning Health Agent Home Health	Entry 1	2
Independent practitioner		1
Social Policy and Legislative	Introduction	1
Negotiating Systems		1
Research	1	2
Written Proposals	2	1
Professional Leadership	1	2

Figure 10. Supplementary Competencies: Indirect Client Service Categories, first and second choices for learning.

presently available in a few OT schools. This suggests that the process of inclusion of school practice competencies has started.

Family Studies as a cognate area could be offered at the graduate level. However, OTs in practice in settings such as schools realize the need to understand and work closely with families. As a minimum, a course could be offered at the pre-professional level or later if it were designed to include the necessary components of family theory.

All that has been said suggests a model of professional development that is continuous throughout one's professional life. It is also based on the reality that most of professional lifelong education is acquired as an adult learner. This requires that the needs of the adult learner be addressed in considering any human resource development model. They include relevant content that is useful at the given time; facilitation of learning, not autocratic presentation of material; offered at a pace and quantity that is comfortable; and presented with the understanding that learning is just one of the many tasks of persons throughout the life cycle.

Learning will be formal and nonformal, intermittent, beginning at any time in a total life span, and located in a variety of settings. Figure 11 illustrates lifelong professional education. Adult developmental stages begin with Young Adulthood and continue through Adulthood to retirement. Learning experiences, both formal and nonformal, take place over time following the basic professional education and are intermingled with other life activities.

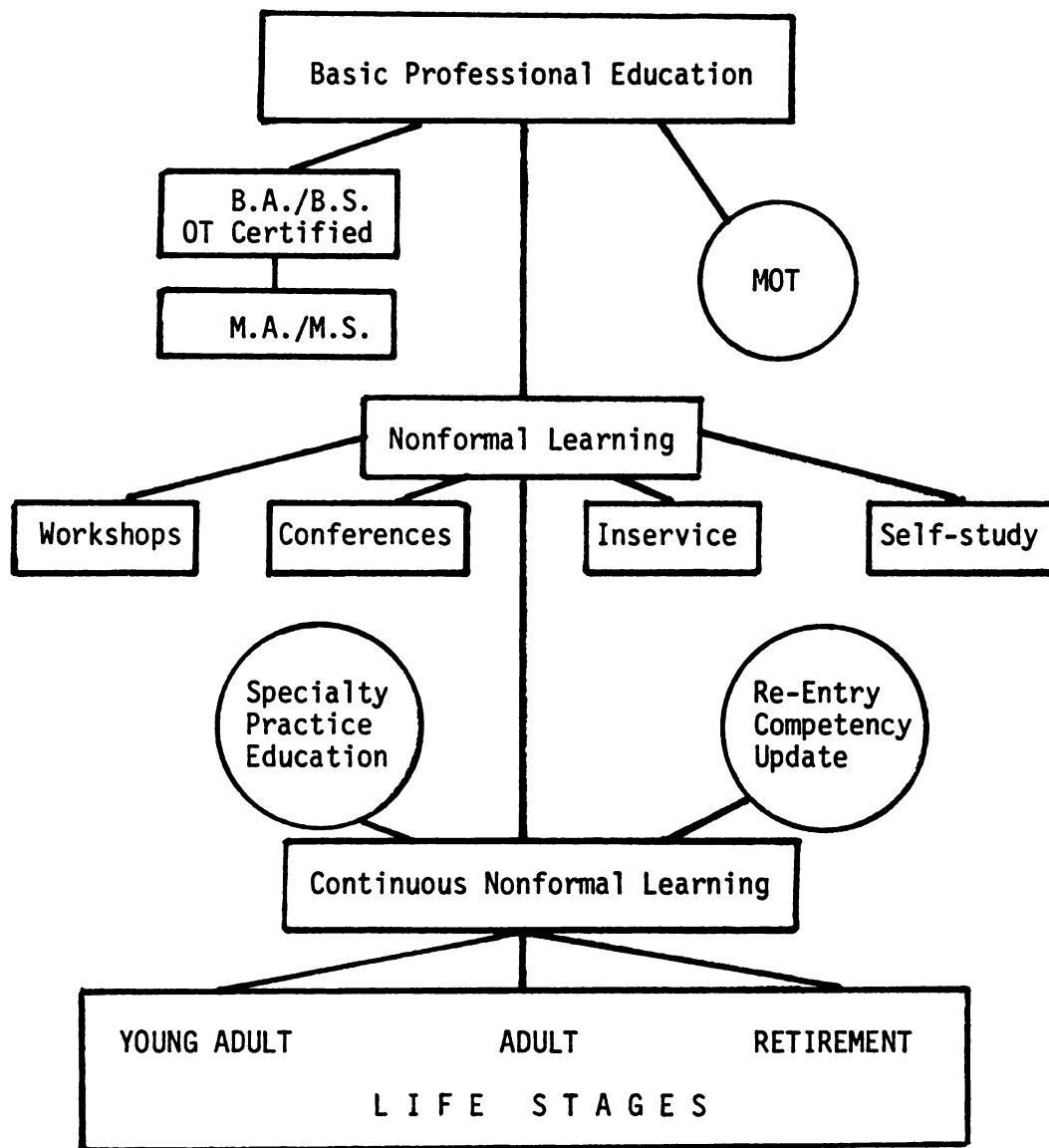


Figure 11. A dynamic model of lifelong professional development.

Where will the educational experiences take place? During the formal professional education the settings will be either at the university or through the university extension. Graduate degrees could be obtained entirely off campus. Nonformal learning may occur either in the home through self-learning modules, in the work place or at conferences or workshops. The annual professional conference frequently is focused on continuing education.

Responsibility for professional development rests ultimately with the learner. A competency in this study which had strong agreement and was rated highly essential was "to initiate and direct one's own professional growth on a continuing basis." Others have responsibility in the ongoing education of the professional - the employee - the graduate student.

The profession has a responsibility to its members to offer specialization courses or workshops which are required as changes in professional direction occur. Basic professional education is also the responsibility of the profession through the accreditation process which maintains the essential standards for this education. Since the professional organization is the recertifying body in most instances, recertification as an educational process is also the responsibility of the professional association. Re-entering education, although an individually engaged learning experience in part, should also be coordinated by the professional association.

The employer of OTs has a responsibility to offer educational experiences through on-the-job training to help orient the OT to the work setting, adjust to job functions or increase competency

in nonprofessional areas. This is particularly essential if the system in which the employee is entering is an unfamiliar one, such as OTs working in school systems. This should be ongoing yet intermittent, on an individual need basis. The need should be recognized for release time by the employer to allow the employee to attend professional workshops and conferences when the content is relevant to the work function and personal growth.

The formal educational institutions also share the responsibilities for the educational process: initially for basic professional education, for graduate education, and for continuing education. Because the professional is usually an adult learner, the college or university has an obligation to meet the needs of that person by offering the learning experience in a flexible, accommodating manner which allows the learner to integrate classes and studying time into family and work schedules. The competency-based educational model which permits the educational institution and the learner to determine course objectives together, and plan and arrange the learning experiences so they will be useful, relevant and convenient, and permit individual pacing, has merit for professional education.

The university must also be a link between the practicing professional and the academician through research activity. Professions must build a strong research base to support theory and undergird practice. In addition to being the interface between practice and education, faculty of the university curricula need to maintain contact with professional practice so that a gap does not develop between practice roles and what is being taught at

entry level. If university programs were constantly aware of practitioners needs, forming the basis for curricula change, the professional educational programs would not need 8 - 10 year updating of program Essentials. It would become future oriented.

Channels of communication must be kept open between those who desire learning experience on a continuing basis and those who are the providers. In this way practitioners can suggest content of workshops and conferences that has relevance to them. Questions such as "how do I know which kind of education I need - formal or nonformal" must be addressed through a counseling process if necessary. Information useful in the decision-making process can be furnished by the university to potential learners requiring guidance and understanding.

What responsibility rests with the professional practitioner in the lifelong education model? To be cognizant of the fact that the educational process is lifelong if professional competence is to be maintained; to plan for learning experiences when recognized as necessary or in one's best interest; to seek assistance in the decision-making process as needed and to maintain high quality practice standards. Most importantly the professional must believe that change can be personally effected. If nothing is done to plan for the future, there will be a probable future; if a little something is done, there will be a possible future; only when one deals with change and plans for the future in strong measure can there be a preferable future.¹³⁴

When offering nonformal education, will the content of workshops be the same for both practicing professionals and non-practicing

re-entering persons? Surveys of continuing education needs of these two OTs have identified entirely different content requirements. Therapists not working for several years require a review of current practices, while those active in the field need work related skills and knowledge. Additionally, the re-entering therapist or other professional lacks self-confidence and courage to enter the workplace, and seeks encouragement and emotional support from friends and other professional associates.

What are the motivational forces behind continuing education? To maintain professional certification which requires continuing competency, the nonformal learning experiences will occur "as needed." When change of practice area is desired, graduate courses leading to a degree, or combination workshop/practice experiences may be preferred, along with self-study. For new specialization preparation, similar courses with related practice work may be desired. If a break in working of a few to several years interrupts practice, the re-entry process will require self-learning mixed with workshops and field work. Job mobility, social policy requirements, new professional standards may also prompt ongoing learning.

A model of lifelong professional education has to be fluid in order to adjust to the schedules and needs of the adult learner. Change of careers at midlife is not unusual, and often involves formal education at this life stage or later. There are no limits to age for any learning incident. Only motivation and desire to acquire skills and knowledge are basic to when and how a person will move in and out of educational experiences.

The process of lifelong professional education is characterized by its fluidness, multiple entry times within the life stages of adults, alternating formal and nonformal, in the university, through university extension, week-end college, on-the-job training, conference, workshop or home setting. The educational experiences will be integrated with family living schedules and family goals. Responsibility for learning rests ultimately with the individual, with professional commitment and high competency standards directing and motivating the knowledge quest. Assistance in the learning process can be expected from both the professional organization and the employer, depending on the informational content and skill acquisition desired. The university as the center of formal education can be expected to consider the needs of the adult learner by furnishing innovative programs of study; it can also function as the link between practice and research.

Practice of professionals is molded to fit the constraints of social policy and altered in response to consumer demands and needs, and changes in health care systems. Practitioners who are active in the field soon become aware of changes through mandate or edict, and communicate their problems to the professional organization. Leaders in the field, being innovators frequently, recognize the changing pressures effecting practice and direct the professional organization as it responds to practitioner needs. To assist the practitioners in continuing education pursuits the professional organization through its member representatives studies problems and issues, and ultimately directs the professional entry curricula

to alter its basic essentials so it can become congruent with practice role competencies.

The period of time in which the change of basic entry skills and knowledge is in transition is one of great concentration on nonformal education so that the practitioner can maintain competency in the shifting health care systems. It is within this period that the profession of occupational therapy is moving in 1980. As new directions for entry-level education are considered, a caution would be that all possible alternatives be weighed carefully, and the final choice made without being hampered by the traditional. Too many OT leaders have spoken for too many years without being heard. The profession must take action that will make occupational therapy a leader in health care and a provider of the highest quality service possible.

Recommendations

To the Profession of Occupational Therapy

1. The profession needs to consider seriously the fact that new practitioners in the field recognize the need to learn at entry-level competencies that prepare them to practice in the emerging areas of practice, such as OT in the Schools. Recent graduates as a group are united in their opinions about this, as opposed to the Fellows and Curriculum Directors who do not as a group recognize the same urgency.

2. The issue of clinical practice role function as opposed to functioning as a consultant or other indirect client service roles needs to be looked at in terms of all of its implications

for the profession's growth and for education. This study agreed with the Ad Hoc Committee on Educational Standards Review that the indirect service roles are not essential at entry level, only minimally or probably essential. However, practice in the schools was deemed essential, and that area is not a clinical one consisting of only direct service. The profession should support the indirect client service role, both in the schools (OT practice in the schools) and elsewhere.

3. The only research competency which gained consensus as being essential was "promoting research". Numerous references in the literature review identified doing research as necessary. The AOTA member survey identified research as a high continuing education area. If moving entry into the profession to the graduate level would allow this to happen, then the Representative Assembly should take that action, giving due thought to other considerations.

4. Recent graduates as a group indicated strong agreement on Family Studies being minimally or probably essential. Since they are practicing in emerging areas such as the schools and recognize the importance of this area, consideration needs to be given to suggesting Family Studies as an area of related studies in graduate education of OTs.

5. Since the AOTA Essentials are structured in competency form in the area of content, and the recertification process is a competency assurance one which uses competencies as outcomes of learning as a basis for planning the self-assessment case studies which have been developed by AOTA, it would seem for these reasons to gradually change to a competency-based model for basic

professional education. The model has merits which have been discussed in the literature review, relevant to occupational therapy education.

6. OTs need to become comfortable with technology and their interface with other professionals such as the rehabilitation engineer as they develop a mutually beneficial team relationship.

To the Educators of Occupational Therapists

1. Based on the trends suggested by this study toward moving from the clinical role to the indirect service role, and the recommendations of numerous leaders in the field of occupational therapy, educational preparation of OTs for entry into the profession should consider moving to the graduate level.

2. The lifelong education model presented in this study should be adopted for the continuous education of OTs by the profession, the universities, employers of OTs and therapists themselves.

3. To accommodate the OTs who want graduate education but cannot arrange full-time on-campus classes, universities need to consider innovative nontraditional approaches to obtaining graduate degrees.

To Future Research in the Area of OTs' Competencies

1. The Delphi procedure was effective in obtaining agreement among panelists in this study, keeping in mind the lengthy INVENTORY and the small number of rounds. If used in a similar study, the following suggestions would improve the study:

- a. Use competency statements which are as free from "jargon" as possible.
- b. Include in Round One definitions to clarify all but the simplest terms.

- c. In Part 2 of Round Two which contained additional competencies from Round One, reduce the number to the smallest possible by condensing and eliminating. In this study Part 2 contained too many enabling objectives which represented personal interest areas; others were repetitious of Part 1.
- d. Obtain agreement from panelists prior to mailing Round One in order to reduce part of the cost of the two-thirds which were not returned completed.
- e. If possible, use a response category which would not be controversial; in this study the issue of "being more essential than essential (absolutely essential)" was confusing to many. Since the final goal was to rank the competencies by importance at entry-level, a five-point scale of importance could have been used. This was explained as an alternative in Round Two.
- f. Sending a copy of the reference list from the study as an incentive to obtaining cooperation of panelists in completing the study did not seem to be effective judging by the large number of returned reference lists.

2. There are data which remain from the comments and letters received with the returned INVENTORIES. Part 2 was not coded nor summarized because it was considered by many to be repetitious. Comments about competencies have been retrieved but are not summarized

in the study. Further information is potentially obtainable from the data collected in this study.

3. The study proved to be a much larger one than was initially conceived. A pilot study only to test the "model" would have been advisable financially and in terms of energy expenditure.

4. The pilot group of Fellows from Michigan were extremely helpful in many ways: through personal conversations, reviewing of the first INVENTORY, and in numerous written comments. A group of this kind with the expertise of the Fellows is necessary.

5. Research into other nontraditional areas of practice similar to OT in the Schools would be wise, such as the role of OTs in geriatrics, in community health, in independent living, and in industrial settings. The format used for the OT in the Schools study would yield information valuable in identifying the necessary competencies.

6. Study more thoroughly OT educational programs using CBE or variations thereof, as a possible alternative to traditional education.

7. The competencies identified in this study are the basis of an OT curriculum; they can be used for setting priorities in OT education.

8. Since consensus was high only on the EXISTING ESSENTIAL Competencies, research should be done to determine which group of OTs contains those who resist change and why. Is it the cautious, more experienced professional, the curriculum director, or the recent graduate?

Chapter V has included a summary of the study with results and conclusions. Discussion of the results and conclusions was

followed by implications of the results, and recommendations. The final objective, to derive an educational model for lifelong professional development from the data accumulated in the study, was accomplished with the presentation of a lifelong educational model.

Recommendations were offered to the profession of occupational therapy, to the educators of OTs, and for further research. Based on the selection of the sample for the study, and the data analysis methodology, the results have the potential generalizability to the profession. The findings can be used in studies related to the area of competencies necessary for entry into the profession of occupational therapy. The educational model is applicable to other health professions in the area of lifelong professional development.

Footnotes

¹²⁹Ohio State University, School of Allied Medical Professions: Development of Occupational Therapy Job Descriptions and Curricula through Task Analysis, Reports No. 1-6, Columbus, Ohio, The State University, 1971.

¹³⁰Fidler, Gail S., "A Guide to Planning and Measuring Growth Experiences in the Clinical Affiliation." American Journal of Occupational Therapy, 28, 6 (1964).

¹³¹Advanced Training for Occupational Therapists in the School Systems, First Year Report, American Occupational Therapy Association, May 1979.

¹³²Wilson, Margaret. Equivalency Evaluation in Development of Health Practitioners. (New Jersey: Charles B. Slack, Inc., 1976).

¹³³Re-Entry Project Needs Study, Western Michigan University, 1979, unpublished report.

¹³⁴Ibid.

APPENDICES

APPENDIX A

Sources of Competencies

APPENDIX A

Sources of Competencies

Occupational Therapy Theory and Practice

(From social policy legislation.)

1. How to access unfamiliar systems.
2. Do a comprehensive needs assessment of individuals.
3. Regarding public laws: know where to obtain the information; how laws affect families and professional practice.
4. How to define a new role in an unfamiliar system. Know how to write proposals.
5. Know how to work in client's home: have awareness of ecological approach to viewing families; family managerial theory and practice; family developmental theory; affect of crisis on families' ability to adapt and cope.
6. Have creative/practical problem-solving skills.
7. Ability to assess and treat in a non-OT department setting - the home: comfort in lack of structure; ambiguousness; confidence in one's self and professional skills.
8. Work as an interdisciplinary team member: share professional knowledge and skills; possess good interpersonal relationship skills; have holistic approach to client and be able to set priorities based on client's needs.
9. Be able to communicate clearly, precisely and in terms lay person can understand, OT theory, philosophy, and practice.
10. Know how to document client information according to quality assurance standards.
11. Engage in studies of the evaluation of service outcomes to assess quality of service performed.

12. Have administrative skills (as defined by Johnson, Jerry, "Report on Analysis of Examples of Performance Containing Administrative and Educational Implications," unpublished Master's report, Harvard Graduate School of Administration).
 - a. Training and experience in analytical processes; human relations and personnel administration: organization and standardization of office procedures; analysis of jobs for delegation purposes.
 Understanding needs of persons employed on staff; limitations to the imposed; explanation of roles and role expectations; supervision of staff and staff evaluation.
 Training methods.
 Communication systems - written and spoken - that is effective within and outside department.
 Understanding of group processes and methods to change behavior of persons.
 Methods for motivating persons to higher achievement levels.
 - b. Training in specific office procedures.
 - c. Training and experience in verbal communication.
 - d. Training in educational techniques.
 - e. Training in evaluating action.
13. Know how to consult; possess good consultation skills and those of change agents.
14. Ability to teach or instruct others: determining learning objectives, appropriate learning strategies and evaluations for measuring learning.
15. Awareness of community resources and information seeking process.
16. Ability to live with ambiguity.
17. Know how to negotiate an unfamiliar system.
18. Have effective public relations skills.
19. Understand uniqueness of OT and be able to communicate it clearly and simply; be able to relate the uniqueness of OT to specific community systems.
20. Have knowledge of specific handicapped populations such as those within the school system; know how to assess and treat and conform to needs and requirements of the system.
21. Be familiar with union politics and professional liability.

22. Know how to influence the legislative process in all phases of law making and implementation.
23. Be able to accept the responsibilities of an independent practitioner.
24. Engage in research to substantiate that what OT does results in benefits over costs to client.
25. Have leadership skills.
26. Have knowledge of social effects of technology on quality of life; forces (economic, political and social) that control individual goal attainment and influence family decisions.
27. Know why persons behave as they do; how behavior is determined; how to motivate persons to do something to prevent what does not exist (in preventative care).
28. Acquisition of professionalism over and above technical skills.
29. Knowledge of evaluation methodology, quality care review, cost-benefit analysis.
30. Know how to engage in program development: planning, gathering data, setting goals and priorities, making decisions, and implementing action.
31. Have awareness of total health care arena and place of OT within.

Competencies from the Review of the Literature

32. Skill in individual counseling, budgeting and finance; adult education; community organization and development; administration and management. (Ethridge, 1976)
33. Keeping informed about current legislation, benefits, services available to clients such as the geriatrics population. (Lewis, 1975)
34. Ability to be a client advocate in various systems; represent client in hearings, educational planning and placement committees.
35. Ability to apply OT theory and practice to a variety of populations: young, chronically ill, severely handicapped and "normal."
36. Knowledge and skill to develop and implement private practice through home health services in the community. (Ford, 1971)
37. Be a community health specialist who can move into nontraditional settings and develop programs - know the Discovery Process for assessing communities. (Cromwell & Kielhofner, 1976)

38. Skill in research, administration, and professional involvement in health care policy making. (Maxwell, 1977)
39. Be cognizant of environmental psychology which looks at people, space and tasks, and their interrelationships. (Dunning, 1972)
40. Knowledge and skill in political and financial matters. (Johnson, 1976)
41. Serving community to prevent disability and dependence. (Johnson, 1976)
42. Knowledge of basic principles of measurement and testing; teaching-learning. (Mosey, 1974)

Competencies from OT 2001

43. Ability to contribute to the fundamental management of human living. (Wiemer, 1979)
44. Ability to develop and obtain an activity history and a performance evaluation. (Hightower - Vandamm, 1979)
45. Knowing the importance and use of activities throughout the life-span of persons. (Hightower - Vandamm, 1979)
46. Possessing characteristics that allow an OT to practice independently as a health professional. (Johnson, 1979)
47. Being a catalyst for helping people solve complex problems of functioning in a highly technical society. (Cromwell, 1979)
48. Being professionally socialized to the values the profession espouses. (Yerxa, 1979)
49. Possessing a professional identity which includes skepticism, initiative, scientific inquiry and professional and ethical ideals. (Gillette, 1979)

Competencies from Consultation in the Community: OT in Child Health

50. Skills of the consultant, supervisor, researcher. (West, 1967; p. 3)
51. Being a health agent: helping normal growth and development with emphasis on prevention; serving health needs of persons outside hospitals. (West, 1968; p. 10)

52. Ability to plan for health services that concentrate on prevention, both primary and secondary (prevent illness and disability, pursue activities aimed at early detection and dysfunction). (West, 1969; p. 19)
53. Doing research on affects of lack of activity on health; relationship of impact of environmental stress on individuals' health; development of data and tests unique to the profession. (Weimer, 1972; p. 26)
54. Ability to think creatively - use one's imagination. (Finn, 1972; p. 38)
55. Possessing a comprehensive knowledge and understanding of meaning and significance of activities in the development of man's fullest potential; application of activities to provision of improved quality of life. (Finn, 1972; p. 38)
56. Ability to be leaders; move in confidence into the community, contribute knowledge of activities and human action. (Finn, 1972; p. 38)
57. Ability to problem solve: identify service, develop program objectives, implement programs, review programs, develop new objectives, implement needed changes. (Llorens, 1972; p. 71)
58. Skills and knowledge needed to facilitate optimal growth and development; within other cultures and in settings outside the hospital, in role of health agent. (Llorens, 1971, p. 84)

Competencies from Additional Review of the Literature

59. Knowledge and skills in growth and development of the total life span, working with families, teaching families and members of other disciplines, systems that impinge upon developmentally disabled persons, legal and human rights, community resources, mechanisms for coping with the political arena, program planning and evaluation and advocacy. (Moersch, 1978; p. 93)
60. Knowledge of the adaptive process as a theoretical framework applied to all specialty areas of OT practice. (King, 1978; p. 429)

APPENDIX B

TABLES OF VARIABLES

Table B-1. Variables, convergence to consensus, semi-interquartile range, and frequencies for Rounds One and Two.

Variable Number	Semi-Interquartile Range		Convergence to Consensus		Means	
	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
1	.348	.348	.845	.845	4.68	4.68
2	.554	.332	.713	.875	4.42	4.75
3	.662	.534	.650	.714	4.18	4.43
4	.588	.414	.673	.825	4.34	4.65
5	.992	.880	.487	.594	3.09	2.61
6	.513	.331	.765	.862	4.53	4.73
7	.778	.605	.556	.677	3.21	3.14
8	.688	.398	.665	.799	3.90	3.91
9	.713	.442	.634	.751	3.89	4.02
10	.887	.829	.547	.572	2.56	1.86
11	.330	.330	.865	.865	4.73	4.73
12	.886	.671	.159	.633	3.21	3.13
13	.666	.443	.648	.779	3.69	3.77
14	.570	.503	.709	.762	4.22	4.39
15	.327	.327	.875	.875	4.75	4.75
16	.454	.454	.804	.804	4.61	4.61
17	.562	.301	.697	.890	4.39	4.78
18	.491	.491	.774	.774	4.55	4.55
19	.573	.332	.686	.855	4.37	4.71
20	.580	.412	.680	.833	4.31	4.67
21	.335	.335	.864	.864	4.73	4.73
22	.457	.457	.806	.806	4.61	4.61
23	.574	.383	.683	.835	4.37	4.67
24	.466	.466	.801	.801	4.60	4.60
25	.510	.288	.766	.934	4.53	4.87
26	.530	.297	.739	.905	4.48	4.81
27	.659	.611	.623	.655	4.05	4.19
28	.749	.448	.601	.741	3.90	3.87
29	.618	.490	.680	.790	4.14	4.34
30	.612	.422	.683	.805	4.05	4.15
31	.702	.380	.649	.820	3.91	4.07
32	.696	.408	.646	.808	3.98	4.13
33	.581	.427	.694	.825	4.21	4.24
34	.630	.550	.664	.717	4.21	4.35
35	.718	.546	.641	.737	3.94	4.19
36	.712	.570	.581	.704	3.54	3.67
37	.729	.512	.621	.751	3.75	3.83
38	.661	.393	.648	.807	3.98	4.12
39	.833	.425	.563	.772	3.66	3.99
40	.875	.690	.547	.619	2.65	2.42
41	.691	.597	.624	.658	3.63	3.40
42	.792	.419	.559	.759	3.09	3.02
43	.758	.579	.555	.681	3.44	3.35
44	.819	.424	.568	.740	2.99	2.89
45	.929	.571	.507	.697	3.20	3.19

Table B-1. (Continued)

Variable Number	Semi-Interquartile Range		Convergence to Consensus		Means	
	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
46	.710	.341	.623	.846	3.78	4.00
47	.838	.679	.578	.642	3.79	3.73
48	.716	.473	.609	.740	3.62	3.89
49	.825	.424	.575	.747	2.89	2.89
50	.744	.623	.572	.656	3.51	3.58
51	.722	.534	.586	.736	3.51	3.72
52	.618	.370	.665	.809	3.84	3.96
53	.718	.383	.63 ²	.805	3.88	4.00
54	.754	.580	.617	.693	3.91	4.25
55	1.263	1.174	.380	.417	2.85	2.65
56	1.245	.707	.398	.636	2.57	1.73
57	1.175	.991	.417	.515	3.02	2.41
58	.823	.432	.580	.726	3.78	3.91
59	.932	.317	.500	.822	2.00	1.36
60	1.071	.589	.449	.690	3.30	3.49
61	1.053	.426	.469	.770	2.20	1.46
62	.535	.279	.741	.939	4.48	4.88
63	.613	.443	.653	.727	3.96	3.73
64	.967	.305	.526	.858	2.20	1.28
65	.717	.379	.617	.803	3.81	4.04
66	1.117	.891	.445	.592	2.55	1.82
67	.739	.406	.592	.749	3.72	3.80
68	1.054	.769	.468	.548	3.09	3.11
69	1.279	1.105	.402	.458	2.67	2.18
70	.706	.372	.630	.808	3.78	3.94
71	1.196	.914	.436	.592	2.57	1.82
72	1.065	1.103	.485	.465	2.82	2.35
73	1.115	1.115	.448	.465	2.95	2.93
74	.999	.753	.513	.648	2.85	2.62
65	.837	.461	.547	.745	3.59	3.75
76	.665	.506	.647	.763	4.02	4.26
77	1.032	.399	.486	.764	2.09	1.47
78	1.047	.868	.473	.547	2.33	1.93
79	1.109	.938	.482	.536	2.73	2.24
80	1.151	1.024	.441	.518	2.99	2.82
81	1.073	.966	.463	.507	2.55	2.27
82	1.298	.975	.393	.493	2.75	2.03
83	1.180	.911	.430	.542	2.69	1.92
84	1.178	.554	.426	.689	2.29	1.62
85	1.093	.368	.464	.751	2.18	1.50
86	1.200	.752	.397	.636	2.48	1.73
87	.952	.464	.521	.702	2.97	2.85
88	.484	.484	.776	.776	4.55	4.55
89	1.192	1.019	.440	.489	2.80	2.17
90	.976	.407	.434	.768	3.35	3.97

Table B-1. (Continued)

Variable Number	Semi-Interquartile Range		Convergence to Consensus		Means	
	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
91	1.159	.569	.471	.666	2.81	3.10
92	1.054	.556	.486	.645	2.96	2.87
93	1.075	.474	.491	.735	2.69	3.15
94	.730	.287	.616	.901	1.77	1.20
95	1.194	.982	.408	.504	2.53	2.01
96	.538	.264	.724	.971	4.45	4.94
97	.445	.445	.805	.805	4.61	4.61
98	.654	.505	.633	.770	3.99	4.24
99	.626	.467	.644	.798	4.17	4.60
100	1.010	.718	.516	.646	2.82	2.61
101	.551	.284	.731	.921	4.47	4.84
102	.540	.282	.731	.921	4.47	4.88
103	.653	.535	.640	.714	4.06	4.43
104	.610	.507	.676	.765	4.21	4.53
105	.634	.504	.651	.763	4.08	4.53
106	.460	.460	.810	.810	4.62	4.62
107	.570	.509	.706	.742	4.18	4.49
108	.588	.516	.741	.697	4.17	4.46
109	.594	.326	.665	.860	4.33	4.72
110	.677	.349	.643	.845	3.92	4.12
111	.605	.495	.682	.770	4.26	4.54
112	.566	.327	.710	.869	4.42	4.74
113	.595	.489	.697	.784	4.11	4.32
114	.849	.687	.528	.608	3.42	3.32
115	.928	.621	.494	.644	3.47	3.39
116	.604	.530	.647	.728	4.23	4.46
117	.604	.481	.637	.753	4.28	4.51
118	.598	.352	.657	.821	3.98	4.04
119	.548	.367	.701	.827	4.40	4.65
120	.737	.360	.595	.783	3.79	3.72
121	.811	.623	.504	.621	3.29	3.23
122	.767	.540	.573	.709	3.51	3.55
123	.609	.560	.660	.716	4.19	4.43
124	.860	.709	.508	.544	3.36	3.20

Table B-2. Listing of inventory competency statement with corresponding variable number.

Number	Variable Number	Number	Variable Number	Number	Variable Number
1a	1	5i	43	7ee	86
1b	2	5j	44	7ff	87
1c	3	5k	45	7gg	88
1d	4	5l	46	7hh	89
1e	5	5m	47	7ii	90
1f	6	5n	48	7jj	91
1g	7	5o	49	7kk	92
1h	8			7ll	93
1i	9	6a	50	7mm	94
		6b	51	7nn	95
2a	10	6c	52	7oo	96
2b	11	6d	53	7pp	97
2c	12	6e	54	7qq	98
2d	13			7rr	99
2e	14	7a	55	7ss	100
2f	15	7b	56		
		7c	57	8a	101
3a	16	7d	58	8b	102
3b	17	7e	59	8c	103
3c	18	7f ₁	60	8d	104
3d	19	7f ₂	61	8e	105
3e	20	7g	62	8f	106
3f	21	7h	63	8g	107
3g	22	7i	64	8h	108
3h	23	7j	65	8i	109
3i	24	7k	66	8j	110
3j	25	7l	67	8k	111
3k	26	7m	68	8l	112
3l	27	7n	69	8m	113
3m	28	7o	70	8n	114
3n	29	7p	71		
		7q	72	9a	115
4a	30	7r	73	9b	116
4b	31	7s	74	9c	117
4c	32	7t	75	9d	118
4d	33	7u	76	9e	119
4e	34	7v	77	9f	120
		7w	78	9g	121
5a	35	7x	79	9h	122
5b	36	7y	80	9i	123
5c	37	7z	81	9j	124
5d	38				
5e	39	7aa	82		
5f	40	7bb	83		
5g	41	7cc	84		
5h	42	7dd	85		

APPENDIX C

PARTICIPANT CORRESPONDENCE

MICHIGAN STATE UNIVERSITY

College of Education

East Lansing, MI 48824

Department of Administration and Higher Education

Erickson Hall

January 16, 1980

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Dear Colleagues:

For the last few years I have been a doctoral student and am now at the dissertation stage. With a strong commitment to the field of occupational therapy, I have chosen a dissertation topic which will contribute to the field; it is The Identification and Validation of Occupational Therapy Competencies. I shall also design a model of lifelong professional development which will describe the process of competency acquisition.

The relevance of this study is supported by two recognized leaders in our profession. Jerry Johnson, past president of A.O.T.A. has stated that OT's are often *reactive* when they need to be *pro-active*, and that we must do something now to direct the course of the profession. Ruth Wiemer wrote in Occupational Therapy: 2001 A.D., that the profession is moving from *traditional* to *transitional* to *contemporary* practice. She reports that contemporary practice requires skills, knowledge and attitudes (competencies) different from former practice.

In order to realize the contribution to occupational therapy which this study will make, I need your assistance. Since this is a Delphi study which uses a panel of experts to provide opinions about specific items, I would like to have you accept the role of panelist. You will receive *two rounds* of an Occupational Therapy Competency Inventory. The inventory which is included with this letter contains competencies taken from the Essentials of an Accredited Educational Program for the Occupational Therapist, a review of the literature and implications from social policy legislation. In Round I, panelists will give their opinions about the essentiality of each competency and add competencies to the original list. In Round II, feedback will be given regarding the responses from the first round and you will be asked to review your opinions about each competency or state your reasons against doing so. The goal is to obtain consensus on the essentiality of competencies for entry into the profession.

To summarize, you can assist me in the following ways:

1. Completing the Occupational Therapists Competency Inventory by giving your opinion about competency essentiality, and adding to the list of competencies.
2. Completing the one page of personal data information.
3. Returning the completed Inventory to me by February 8, 1980.
4. Repeating this process in Round II which will be sent to you in February.

Page 2
January 16, 1980

Please be assured that complete confidentiality will be maintained regarding your responses at all times. Only your names as panelists will appear in the final study summary. If you are unable to be a panelist in this study, please return the Inventory in the enclosed self-addressed stamped envelope. I am sending you the reference list which covers my review of the literature. Thank you in advance for your support of this study and the advancement of the profession.

Sincerely,

Virginia K. White, M.A., OTR
133 Kenberry Drive
East Lansing, MI 48823

BLUE SHEET

MICHIGAN STATE UNIVERSITY
College of Education East Lansing, MI 48824
Department of Administration and Higher Education
Erickson Hall

March 20, 1980

Dear Colleague:

Thank you for completing the OCCUPATIONAL THERAPISTS COMPETENCY INVENTORY in Round #1. I really appreciate your help very much, knowing how busy you are. There was a good return which will supply valuable data for committees of AOTA studying the Essentials for Accreditation and Recertification and for university curricula. Your final contribution will assist me to complete my doctoral program, but more importantly should yield lasting benefits for our profession.

As mentioned in my first letter, a second round is required by the research technique I am using - the Delphi procedure. Opinions and competencies are given by panelists in the first round. The overall goal is to obtain as large a degree of consensus or agreement about the competencies as is possible.

In order to work within time constraints, please try to return the INVENTORY completed within two weeks after receiving it (or later if absolutely necessary). If time is limited, be sure to complete Part #1 because it is necessary for identifying the priorities in the field. Your comments are greatly appreciated and will appear in the summary without identification. I will send you a summary of the study upon completion if you indicate you want it (see last page of INVENTORY).

Again, if you have questions, please call collect at (517) 351-6806. Thank you for your support of this study.

Sincerely,

Virginia K. White, M.A., OTR

February 5, 1980

Dear Colleague,

Your assistance is needed desperately in answering the OCCUPATIONAL THERAPY COMPETENCY INVENTORY sent to you in January!! If you have already returned the INVENTORY, please ignore this reminder. If not, please complete and return as soon as possible.

The more replies received, the more valid will be the results of this research and greater the benefits to the profession.

Thank you again for taking time from busy schedules to participate in this study.

Virginia K. White
133 Kenberry Drive
East Lansing, MI 48823
517/351-6806

April 21, 1980

Dear Colleague,

Your assistance is urgently needed in responding to Round #2 of the OCCUPATIONAL THERAPY COMPETENCY INVENTORY (blue paper) mailed to most of you on March 21st. If you have already returned the INVENTORY, please ignore this reminder. If not, please complete AT LEAST PART I and return immediately.

To ensure the validity of this research which will contribute to the discussion of current professional issues, I need responses from all who participated in Round #1.

Thank you again for giving valuable time to this study.

Virginia K. White
133 Kenberry Drive
East Lansing, MI 48823
517/351-6806

OCCUPATIONAL THERAPISTS COMPETENCY INVENTORY

1. Name _____

SECTION II: PERSONAL DATA

EDUCATION Check () degree(s) that apply

2. _____ Bachelor of Science in Occupational Therapy (1)
3. _____ Bachelor of Arts/Science (2)
4. _____ Master of Occupational Therapy (3)
5. _____ Certificate in Occupational Therapy (4)
6. _____ Master's in _____ (5)
 please specify
7. _____ Ph.D. in _____ (6)
 please specify

8. Certificate of Candidacy for Ph.D. (7)

PROFESSIONAL DEVELOPMENT (8)

Have you participated in any continuing education workshops, courses or conferences in the past year?

Yes (1) No (0)

EMPLOYMENT (9)

Are you presently employed? _____ Yes (1) _____ No (0)

Number of years worked as an OT in total (1)

1. _____ less than 5 years
2. _____ 5 - 10 years
3. _____ 11 or more years

ARE YOU CURRENTLY EMPLOYED IN AN OT POSITION IN ANY OF THE FOLLOWING SETTINGS? (11) Check principle one only.

1. _____ Hospital (general or mental) or Rehabilitation Center.
2. _____ Other:
3. _____ School System
4. _____ Private Practice
5. _____ Home Health Agency
6. _____ Residential Care Facility
7. _____ University Education Program
8. _____ Other _____
 please specify

1. _____ Administration/Supervision
2. _____ Consultation
3. _____ Direct Client Service
4. _____ Teaching in Classroom or Field
5. _____ Other _____
 please specify

1. _____ Want to develop your own job (1)
2. _____ Interest in non-traditional setting (2)
3. _____ Desirable client population (3)
4. _____ Because job is available (4)
5. _____ Other reason(s) _____

Please specify

Virginia K. White, M.A., OTR
133 Kenberry Drive
East Lansing, MI 48823

THANK YOU!!

APPENDIX D

SAMPLE OF ROUND TWO INVENTORY

APPENDIX D

SAMPLE OF ROUND TWO INVENTORY

8. PERSONAL PERFORMANCE SKILLS AND ATTITUDES

- u. Demonstrate ability to accept constructive criticism and use it for self and/or professional growth.

Comments				
Absolutely Essential	Essential	Probably Essential	Minimally Essential	Useful, But Not Essential
5	4	3	2	1

THANK YOU FOR TAKING TIME TO CONTRIBUTE YOUR OPINIONS TO THIS STUDY. I APPRECIATE YOUR HELP VERY MUCH.

IF YOU DESIRE I WILL SEND YOU A SUMMARY OF THE STUDY UPON COMPLETION. CHECK HERE _____ YES

Please return the OCCUPATIONAL THERAPISTS COMPETENCY INVENTORY to:

Virginia K. White, M.A., O.T.R.
Room #7
Human Ecology Building
Michigan State University
East Lansing, MI 48824

Additional Comments?

46

1

OCCUPATIONAL THERAPISTS COMPETENCY INVENTORY Round II

Name _____
Last First
Address _____
City _____ State _____ Zip _____
Telephone _____
Area Code Number

Date _____

This is Round #2. The Purpose of this round is twofold: first, to give you feedback on the judgments of panelists on competencies from Round #1; second, to obtain opinions about the essentiality of additional competencies submitted by panelists in Round #1.

- NEW FEATURES:
- Each of the competencies included in Round #1 has printed in the rating column a bar graph showing frequency of responses in each of the five columns and the mean of the ratings for that competency.
 - Competencies which have reached 66% consensus of better are so marked. These DO NOT have to be rated a second time.
 - There are two parts to the INVENTORY:
-Part #1 contains competencies from Round #1. There have been changes to clarify wording; explanatory statements have been added to some competencies; a few competencies have been separated into two or more parts; however, the original competency's rating is given in each column.
-Part #2 contains the competencies which were sent by panelists in Round #1.

- WHAT TO DO NEXT:
- Refer to the bar graph to see how the panelists rated the essentiality of competencies that have not reached consensus.
 - Considering the frequency of the clarifying information and explanations, decide how you now want to rate these competencies. Mark the appropriate column. If you choose to differ significantly from the majority (if such exists), state why you have made that decision.
 - Read through each competency statement in Part #2 and make a judgment about the degree of essentiality you give that competency.

REMEMBER: These competencies apply to entry into the profession, irregardless of whether this is from a baccalaureate or master's program. By assigning a rank of 5, 4, 3, 2, or 1, you are indicating how important you think each competency is for entry into the profession. If you indicate "5," you are saying that you think that competency rates first priority; if you indicate a "1," you are saying that you think that competency is useful, but has the lowest priority and is not necessary for entry level.

TURN THE PAGE FOR DEFINITIONS AND EXPLANATIONS.

PLEASE BE SURE TO DO AT LEAST PART #1.

IT IS CRITICAL TO THE RESEARCH.

EXPLANATIONS AND DEFINITIONS

- How the competencies are stated: the statements of knowledge, skill and attitudes which comprise the competencies are general goals or outcomes of learning and NOT performance or learning objectives (which have a stated behavior to be changed, conditions for completing the learning effort and a standard by which the learner's performance will be judged).
- Each statement should be preceded by the following: "the student shall be able to....."
- Whether a competency is measurable or not is a problem to be dealt with in writing the learning objective.
- Why include the competencies for Occupational Therapy within the School System? Because few competencies have been identified through research study of emerging areas of practice in occupational therapy, this research study that emanated from AOTA in 1979 was chosen to obtain your opinions about the importance of the competencies for entry level into the profession.
- Use of the concept of "Wellness": from the World Health Organization's definition of health--"Health is a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity." "Complete" may be defined differently and isn't a universal, static, unattainable, absolute measure since it is often affected by some unalterable environmental, genetic, other factors. "Wellness" focuses positively upon how and what we eat, breathe, how we use our bodies, our ability to relax, to express ourselves, to be creative, to stand up for ourselves; how we manage our emotions, our tensions, our thinking, our relationships. Wellness emphasizes being responsible for who we are, our behavior, and our feelings. It is a dynamic state of assessing and self-correcting, surveying opinions, and making decisions. From a wellness perspective, illness (when it occurs) can be viewed as a positive life force--a communicative opportunity to examine and readjust the balance among emotional, mental, physical and spiritual needs. Wellness is maintaining and being responsible for a balanced energy system." (Mayer, 1980).
- Quality of life and life satisfaction: from Campbell, Converse, and Rodgers, University of Michigan: "quality of life is a function, not only of the objective characteristics of a person's situation but also of one's expectations and aspirations": the relationship of happiness or satisfaction with life concerns to the subjective importance of these concerns. Life satisfaction measures refer to individual perceptions of emotional, psychosocial, physical, educational & work well-being and the ability to cope or adapt as needed.
- Dynamics of Occupation: see Wiemer, Ruth. Basis of OT--the Impact of Occupation on the Human Being in OT: 2001, pages 45, 46.
- Therapeutic Activities: see Resolution 1, the OT Newspaper, February 1980.
- Theories of Family Development and Management: Family development theories consider life periods, stages and the developmental tasks unique to those stages in the lives of families; this differs from individual development by considering the interactional nature of the family members. Managerial theory refers to systems theory applied to families and considers the input of resources, processing of goods and services, and the ongoing management of family goal-related activity. Ecological approach views families as systems of interacting and interdependent members within the environment of the family and the other pertinent environments of work, play, education, etc.
- Specific activities and life tasks refer to their use in occupational therapy treatment.
- Life space includes the individual's cultural background, value orientation and physical and social environment.
- Client care studies or patient care studies are those studies conducted to evaluate the outcomes of OT service as a part of quality review/maintenance of quality to apply and document normative standards of OT service.
- Self-care: According to the Uniform Terminology System for reporting OT Services (AOTA, 1-17-79), self care is a part of physical daily living skills (grooming, and hygiene, feeding/eating and dressing). Functional mobility and object manipulation are also listed under the physical daily living skills.

THIS IS PART #1.
IF YOU HAVE TO MAKE A CHOICE, PLEASE DO PART #1.

3

OCCUPATIONAL THERAPISTS COMPETENCY INVENTORY
(Round #2)

Check (✓) the column to the right which best identifies how essential or important is each competency for ENTRY LEVEL.

Please at least do Part #1, which is necessary for identifying priorities in the field.

	Absolutely Essential Essential Probably Essential Minimally Essential Useful, But Not Essential					Comments
	5	4	3	2	1	
1. <u>SPECIFIC LIFE TASKS AND ACTIVITIES</u>						
a. Analyze the processes involved in selected tasks and activities (self-care, work, play/leisure) and other lifestyle activities in terms of the following skills and performance: physical, sensorimotor, cognitive, psychological, social, cultural, and economic.	☒	☒	☒	☒	☒	Sufficient consensus achieved. DO NOT RATE. Mean = 4.69
b. Relate specific life tasks and activities to client's abilities, limitations, goals, life satisfaction and lifestyle activities. (Specific life tasks and activities are those considered for treatment program.)	☒	☒	☒	☒	☒	Mean = 4.42
c. Relate the elements of any task or activity to age-specific needs, capacities and life roles.	☒	☒	☒	☒	☒	Mean = 4.18
d. Analyze and integrate developmental tasks, daily activities, and skill development in the performance of activities.	☒	☒	☒	☒	☒	Mean = 4.34

1. SPECIFIC LIFE TASKS AND ACTIVITIES

- e. Observe, identify and analyze tasks and activities performed by clients through use of a variety of simulation strategies such as audio-visual aids, role playing, teaching and self-evaluation, as opposed to direct observation in the real situation.

Mean = 3.09

- f. Identify and analyze tasks and activities in terms of the following components: physical, sensorimotor, cognitive, psychological, social, cultural, and economic.

Mean = 4.53

- g. Analyze real or symbolic meaning of activities (as perceived by clients).

Mean = 3.21

- h. Relate social role behavior (necessary for life roles) and skills in self-care, work and play to the development of a person's competence and potential.

Mean = 3.90

- i. Perform basic life tasks and activities in areas of self-care, work and play/leisure.
(This applies to the OT performing as a basis for being able to teach others.)

Mean = 3.89

4

2. BASIC HUMAN SCIENCES

- a. Explain family managerial theory (systems theory applied to families), its application to resource allocation, goal setting and family decision-making.

Mean = 2.56

- b. Know the human growth process: biological development and reflex reaction maturation; perceptual, sensorimotor, cognitive systems; emotional and intellectual development; social and cultural systems.

Sufficient consensus achieved.
DO NOT RATE.

Mean = 4.73

- c. Describe a person's interaction and interdependence with family and community members.

(The ecological approach views people interacting and being inter-dependent within systems.)

Mean = 3.21

- d. Demonstrate knowledge and understanding of the client's social-cultural system and the interrelationship with individual development and functioning.

Mean = 3.69

- e. Demonstrate knowledge of development of human personality and cognition.

Mean = 4.22

e. 1. Knowledge of development of personality.

e. 2. Knowledge of development of cognition.

5

2. BASIC HUMAN SCIENCES

- f. Demonstrate knowledge of the structure and function of the human body and body systems.

f. 1. Nervous system (central, peripheral, special senses)

f. 2. Musculoskeletal system

f. 3. Endocrine system

f. 4. Integumentary system

f. 5. Gastro-intestinal system

f. 6. Genito-urinary system

f. 7. Cardiopulmonary system

f. 8. Respiratory system

Absolutely Essential
Essential
Probably Essential
Minimally Essential
Useful, But Not Essential

Comments

Sufficient consensus achieved.
DO NOT RATE.

Mean = 4.75

3. OCCUPATIONAL THERAPY THEORY & PRACTICE: DIRECT CLIENT SERVICES

- a. Instruct a client in how to carry out a program of purposeful activities.
-
- (graded to function)

Sufficient consensus achieved.
DO NOT RATE.

Mean = 4.61

6

3. OCCUPATIONAL THERAPY THEORY & PRACTICE: DIRECT CLIENT SERVICES

- b. Apply OT theory, principles and concepts serving clients of all ages, with or without disabilities (including the elderly, the chronically ill, and the severely mentally and physically handicapped), following client evaluation.
-
- (These specific clients' needs are sometimes not addressed; OTs should know how to apply OT practices to these persons.)

Mean = 4.39

b. 1. Apply OT theory, concepts and principles to serving clients with disabilities.b. 2. Apply OT theory, concepts and principles to serving clients without disabilities.

- c. Evaluate client's abilities and deficits to present a profile of functional living skills and to obtain an activity or occupational history.

Sufficient consensus achieved.
DO NOT RATE.

Mean = 4.55

- d. Develop a functional living program based on determined goals and objectives, needs and performance skills, in cooperation with client and/or family or guardian and other members of the treatment or health-care team.

Mean = 4.37

- e. Facilitate and support the client's active participation and investment in the therapeutic activity program.

Mean = 4.31

Absolutely Essential
Essential
Probably Essential
Minimally Essential
Useful, But Not Essential

Comments

7

3. OT THEORY AND PRACTICE: DIRECT CLIENT SERVICES

- f. Evaluate the client's response to treatment, assessing to measure change and/or development.
(From effect of client's performance on functional skills: use standardized measurements when possible.)

Sufficient consensus achieved.
DO NOT RATE.

Mean = 4.73

- g. Verify assessments, share findings with client and team members, and make appropriate recommendations.

Sufficient consensus achieved.
DO NOT RATE.
Mean = 4.61

- h. Demonstrate knowledge of theories and principles of occupational therapy by communicating (explaining) them clearly, and understandably to others, verbally or written.
(To lay people or professionals)

Mean = 4.37

- i. Record and report client data orally and in writing, clearly and precisely.

Sufficient consensus achieved.
DO NOT RATE.
Mean = 4.60

- j. Adapt environment/activities to meet client's goals and needs.
(When appropriate)

Mean = 4.53

- k. Communicate recommendations for follow-up, referral, or termination, when appropriate.
(Also receive referrals)

Mean = 4.48

8

3. OCCUPATIONAL THERAPY THEORY AND PRACTICE: DIRECT CLIENT SERVICES

1. Fabricate equipment/adaptive devices to meet clients' needs.

Mean = 4.05

1. 1. Fabricate equipment/devices.

1. 2. Know how to design equipment/adaptive devices to meet clients' needs.

- m. Evaluate effectiveness of client's program through client care studies and other means of accurately measuring treatment outcomes such as quality care review, and PSRO.

Mean = 3.90

- n. Apply purpose of adaptive devices and equipment to clients' needs; know where to purchase and how to adjust or adapt.

Mean = 4.14

- n. 1. Demonstrate ability to select/provide devices appropriate to client's needs and willingness to use.

4. HEALTH-ILLNESS-HEALTH CONTINUUM

- a. Apply measures (evaluations) of biological, social, and psychological well-being and recognize common signs and symptoms of health and lack of health.
(Measures are factors or criteria that indicate biological, social or psychological well-being.)

Mean = 4.05

- b. Demonstrated knowledge and understanding of the concept of "wellness" in terms of measures of biological, social, and psychological well-being; influences on state of and maintenance of health and quality of life.
(See definition of "wellness" and "quality of life.")

Mean = 3.91

- c. Relate occupational (activity) performance to health, developmental tasks of life periods (or stages), performance skills and life satisfaction.
(Relate what a person "does" to his/her health, developmental tasks of each life period, personal skills and general satisfaction.)

Mean = 3.98

- d. Demonstrate knowledge of the etiology, profession, management and prognosis of congenital and developmental defects and deficits; disease process and mechanisms.
(And life traumas)

Mean = 4.21

- e. Explain the effect of the conditions in "d" upon the developmental process, life tasks, goals, skills, roles, and optimal human functioning.
(To lay persons and professionals)

Mean = 4.21

10

11

5. HUMAN DEVELOPMENT PROCESS

- a. Analyze the meaning of activity in the development of human potential and competence in occupational performance.

Mean = 3.94

- b. Analyze the influence of non-human environment on normal skill development both in meeting or interfering with need satisfaction (to know what changes can be brought about in the client).
(For example, very small house with a large family that allows very little personal space.)

Mean = 3.54

- c. Identify the basic concepts in the socialization process (development of human relationships, roles and values); explain the influence of family members and significant others in this process.

Mean = 3.75

- d. Explain the acquisition of developmental tasks throughout the life cycle.
(As a factor to be considered in planning treatment programs.)

Mean = 3.98

- e. Relate occupational performance activities and skill components to the acquisition of developmental tasks throughout life.
(Demonstrate by listing developmental task components, performance skills necessary and relating appropriate occupational performance needed for accomplishing developmental tasks.)

Mean = 3.66

5. HUMAN DEVELOPMENT PROCESS

f. Relate the meaning and impact of symbols pertaining to the culture, to people in general and unique to a person, to the symbolization process throughout the life cycle.

Mean = 2.65

g. Relate adaptational concepts and modes to individual performance and life style.

Mean = 3.63

h. Demonstrate knowledge of family developmental theories regarding life tasks and needs throughout the family life stages.

Mean = 3.09

i. Assess individual/family adaptive and coping potential at times of family crisis.

Mean = 3.44

j. Identify influences of measures of life satisfaction on individual/family goal setting.

(Measures: criteria of life satisfaction; relation to motivation and reinforcement)

Mean = 2.99

12

5. HUMAN DEVELOPMENT PROCESS

k. Apply environmental psychology's concept of the inter-relationship of a person, life space and task activity to a client's occupational performance in various settings.
(What a person does in various settings, e.g. home, school, work)

Mean = 3.20

l. Analyze the learning of adaptive skills necessary for accomplishing developmental tasks essential to productive living.
(Productive living: maintaining desirable quality of life.)

Mean = 3.78

m. Apply the adaptive process as a theoretical framework (King's) to all areas of OT practice.

Mean = 3.79

n. Analyze human behavioral theories including how behavior is influenced and how persons are motivated.
(Know the basic theories and be able to apply in client treatment.)

Mean = 3.62

o. Apply the ecological approach (interaction and interdependence of persons within family systems) to individual/family development, the adaptive process and quality of life.

Mean = 2.89

13

6. OCCUPATIONAL THERAPY THEORY

- a. Analyze the dynamics of occupation (all activities in which one engages) in routine human living as a force in normal human development & behavior; by the type and unique demands, nature of the occupational task and by human differences such as age, economy, culture, climate, environment, and mores.
(Force used as a "factor.")

Mean = 3.51

- b. Analyze the dynamics of occupation as a force in the equilibrium of health as it relates to individual functioning.

Mean = 3.51

- c. Analyze the distortion of occupation in the presence of illness, injury, dysfunction & deficits on living at or before birth & continuously throughout life.

Mean = 3.84

- d. Analyze (in the management of illness, injury, dysfunction, deficits) the use of occupation as a force in identifying and assessing health problems, prescribed for goal achievement in human development and in the presence of pathology.

Mean = 3.88

- e. Apply a variety of OT theoretical frames of reference.
(Facilitating change in persons and groups in OT practice.)

Mean = 3.91

14

7. OCCUPATIONAL THERAPY PRACTICE: INDIRECT CLIENT SERVICES

- a. Function as a supervisor of staff (COTA's), volunteers, or students by teaching, scheduling work, maintaining records, interviewing and counseling, directing goal attainment, evaluating performance.
(Supervisory skills are basic here.)

Mean = 2.85

- b. Function as an administrator by providing administrative and supervisory leadership for OT programs, developing, implementing, coordinating and evaluating programs, offering and participating in staff development, setting priorities and scheduling work.
(Administrative skills are basic here.)

Mean = 2.57

- c. Analyze problems, situations, and jobs; organize work and delegate responsibility; determine program costs and prepare budgets.

Mean = 3.02

- d. Establish effective public relations which reflect interpersonal skill sensitivity, appropriate assertiveness based on a feeling of self-confidence resulting from competence in OT skills and knowledge.

Mean = 3.78

- e. Write proposals for funding of programs in OT, and know where to obtain such funding.

Mean = 2.00

15

7. OCCUPATIONAL THERAPY PRACTICE: INDIRECT CLIENT SERVICES

f. 1. Function as a consultant regarding client treatment within an organization as a staff member.

Absolutely Essential
Essential
Probably Essential
Minimally Essential
Useful, But Not Essential

Comments

5 4 3 2 1

Mean = 3.30

f. 2. Function as a consultant to a system--retained for a contracted period of time.

Mean = 2.20

g. Build trusting, helping relationships with other professionals and non-professionals, clients and family members.

Mean = 4.48

h. Conduct needs assessment, identify & clarify problems.
(This applies to intervention in systems.)

Mean = 3.96

i. Sustain a consulting relationship (as a consultant to a system) which gives no supervisory authority nor guarantees acceptance of one's ideas, plans or developed program.
(A consultant to a system works without guarantees.)

Mean = 2.20

16

17

7. OCCUPATIONAL THERAPY PRACTICE: INDIRECT CLIENT SERVICES

j. Engage in problem solving at the request of other professionals or non-professionals with whom one works by listening and clarifying to obtain the real problem.

Absolutely Essential
Essential
Probably Essential
Minimally Essential
Useful, But Not Essential

Comments

5 4 3 2 1

Mean = 3.81

k. Facilitate and participate in community health planning and other community health activities.

Mean = 2.55

l. Provide OT services which promote health practices for prevention of illness and disability.

Mean = 3.72

m. Pursue activities aimed at detection of client dysfunction in locations such as home, schools and health agencies.

Mean = 3.09

n. Facilitate optimal growth and development within all cultures in the role of health agent.
(Know culturally unique factors which delay growth and development.)

Mean = 2.67

	Absolutely Essential Essential Probably Essential Minimally Essential Useful, But Not Essential					Comments
	5	4	3	2	1	
7. <u>OT PRACTICE: INDIRECT CLIENT SERVICES</u>						
o. Identify community resources and know the information seeking process in order to serve the client maximally. (Information seeking process: how and where to gather information about community resources.)						Mean = 3.78
p. Assess (get a description of) communities and help others develop programs that promote health.						Mean = 2.57
q. Apply knowledge of activity analysis in relation to persons' needs to the area of community health promotion.						Mean = 2.82
r. Adjust to working in non-OT department settings such as homes; live with ambiguity and lack of structure, if necessary. (Also be a self-starter).						Mean = 2.95
s. Apply knowledge of open and closed families to gaining access to a family and develop a trusting relationship. (Open family is easily accessible and open to intervention; closed families do not readily admit outsiders.)						Mean = 2.85

16

19

	Absolutely Essential Essential Probably Essential Minimally Essential Useful, But Not Essential					Comments
	5	4	3	2	1	
7. <u>OT PRACTICE: INDIRECT CLIENT SERVICES</u>						
t. Know AOTA standards of practice which apply to all areas including home health; know how to use quality assurance evaluation methods.						Mean = 3.59
u. Transmit the value of occupation in promoting health to clients and other professionals.						Mean = 4.02
v. Analyze social policy formation and the process of law enactment within the legislative system.						Mean = 2.09
v. 1. Know the process of social policy formation and law enactment.						
w. Demonstrate knowledge of how to influence the legislative process, mechanisms for coping within the political arena, and where to obtain information about current legislation.						Mean = 2.33
w. 1. How to influence the legislative process.						
w. 2. Know mechanisms for coping within the political arena.						
w. 3. Know where to obtain information about current legislation.						

7. OT PRACTICE: INDIRECT CLIENT SERVICES

- x. Analyze how economic, political and social forces affect individual goal attainment and family decision making and bear on the quality of life.

Mean = 2.73

- y. Function as an advocate for the handicapped person's human and legal rights; benefits and services needed.

Mean = 2.99

- z. Demonstrate knowledge of the process of negotiating systems, applying this knowledge to school systems, vocational rehabilitation and others.
(Negotiating systems refers to learning how to get things done in unfamiliar systems.)

Mean = 2.55

- aa. Apply scientific inquiry, methodology and scholarly writing to the development of OT theory and practice.

Mean = 2.75

- bb. Plan, conduct or assist with research such as substantiating that what OT's do results in benefits over costs to the client, or to establish relationships between the components of occupational performance, etc.

Mean = 2.69

20

21

7. OT PRACTICE: INDIRECT CLIENT SERVICES

- cc. As a researcher, be a link between practice and education, connecting these two areas of the profession.
(Research based on input from practitioners can lead to changes in basic professional education.)

Mean = 2.29

- dd. Function as a researcher by promoting research such as the effects of lack of activity on health; relationship of impact of environmental stress on one's health; the development of data and tests unique to the profession, etc.

Mean = 2.18

- ee. Engage by oneself or by cooperating with others in research for the benefit of the public and the growth of the profession, whether as a clinician, educator, administrator, or consultant.

Mean = 2.48

- ff. Identify such concepts as the dynamics of occupation and apply to all areas of OT specialization.
(Know how to apply to all areas. Dynamics of occupations are concepts of activity which serve as forces or influential factors.)

Mean = 2.97

- gg. Initiate and direct one's own professional growth on a continuing basis.

Sufficient consensus achieved.
DO NOT RATE.

Mean = 4.55

7. OT PRACTICE: INDIRECT CLIENT SERVICES

hh. Provide leadership in the development of the profession.

Mean = 2.80

ii. See the client's entire situation--the overall picture; grasp the essential elements and assist others to formulate plans and take action to reach goals.

Mean = 3.35

jj. Function as a change agent: persuade or motivate pertinent persons to move in a desired direction--recognize the innovators, risk-takers, and early adopters.
(Pertinent persons: those with whom therapist is working.)

Mean = 2.81

kk. Function as a change agent by being a catalyst for behavioral change, and an innovator, assisting others to promote and initiate an innovation or change in a particular setting.

Mean = 2.96

ll. Assist clients to re-define their roles in order to participate in a desired change.

Mean = 2.69

mm. Establish and maintain oneself as an independent practitioner (self-employed): seek, obtain, and write contracts.

Mean = 1.77

22

7. OCCUPATIONAL THERAPY PRACTICE: INDIRECT CLIENT SERVICES

nn. Market oneself and professional services to organizations, families, agencies and others to obtain clients and promote recognition of the profession.

Mean = 2.53

nn. 1. Market oneself and professional services.

nn. 2. Promote recognition of the profession.

oo. Maintain a level of professionalism which uses one's best judgment in making decisions.
(Professionalism: that which constitutes being a professional person.)

Mean = 4.45

pp. Engage in sharing and linking with other professionals when in the best interest of a client.
(To accomplish OT program objectives.)Sufficient consensus achieved.
DO NOT RATE.

Mean = 4.61

qq. Demonstrate knowledge of personal liability, professional ethics, reimbursement for services and other necessary business practices.

Mean = 3.99

rr. Articulate the uniqueness of occupational therapy broadly and/or specifically as needed.

Mean = 4.17

23

7. OT PRACTICE: INDIRECT CLIENT SERVICES

- ss. Contribute to comprehensive health care services through knowledge of public health principles and procedures.
(Including Crippled Children's Benefits, Welfare, Medicare and Medicaid.)

Mean = 2.82

8. PERSONAL PERFORMANCE SKILLS AND ATTITUDES

- a. Demonstrate evidence of problem solving skills: how to perceive, analyze and identify problems; evaluate and assess alternatives; abstract and generalize ideas; draw inferences, make deductions; interrelate and coordinate information; identify similarities and differences; perceive parts in relation to the whole; establish priorities and proceed in a logical sequence, using common sense and logic.

Mean = 4.47

- b. Demonstrate written and oral communication skills by writing and speaking clearly, in an organized manner, focusing on appropriate and essential points; select and relate useful data. (So that all who read or hear can understand.)

Mean = 4.47

- c. Act in an appropriately assertive, proactive and leadership manner among health professionals and others with whom one is in contact.

Mean = 4.06

24

25

8. PERSONAL PERFORMANCE SKILLS AND ATTITUDES

- d. Possess a professional identity which includes skepticism, (questioning), initiative, professional and ethical ideals.

Mean = 4.21

- e. Focus on essentials, know what to look for, perceive inter-relationships from observation.
(Observational and listening skills.)

Mean = 4.08

- f. Perceive responsibility; accept responsibility for own actions and decisions; accept and follow through on appropriate responsibilities.
(In relationship with others for good of population served.)

Sufficient consensus achieved.
DO NOT RATE.

Mean = 4.62

- g. Adjust to change; deal effectively with a simultaneous variety of experiences; modify own behavior thereby demonstrating flexibility and adaptability.

Mean = 4.18

- h. Perform concurrent tasks or assignments effectively; follow through in logical sequence and order; appropriately use structure and flexibility; interrelate and correlate tasks and functions; appropriately organize time and set priorities.

Mean = 4.17

- i. Exhibit curiosity and drive to learn; commitment to the welfare of others.

(Demonstrating motivation and commitment.)

Mean = 4.33

B. PERSONAL PERFORMANCE SKILLS AND ATTITUDES	Absolutely Essential Essential Probably Essential Minimally Essential Useful, But Not Essential					Comments
	5	4	3	2	1	
j. Demonstrate <u>resourcefulness and creativity</u> by being a self-starter, self-reliant, and enterprising; formulate and develop independent ideas; be inventive and think creatively; act upon and implement creative thought.						Mean = 3.92
k. Demonstrate <u>self-awareness</u> by working toward increased self-understanding; distinguishing own needs from those of others; be sensitive to own needs and feelings and how these affect others.						Mean = 4.26
l. Demonstrate <u>relatedness to others</u> by being sensitive to needs and feelings of others; demonstrating warmth and concern for others and having appropriate expectations of others; help others to be independent; earn respect from others; give & take.						Mean = 4.42
m. Demonstrate <u>objectivity and judgment</u> by appraising situations realistically and objectively; see things in proper proportion; tolerate error and/or failure in self; exhibit appropriate self expectations; self-assurance, belief and respect for self; withstand frustration, anxiety, disagreement and pressures.						Mean = 4.11
n. Demonstrate manual dexterity in the use and manipulation of tools, equipment and materials used in activities.						Mean = 3.42

26

9. OCCUPATIONAL THERAPY WITHIN THE SCHOOL SYSTEM	Absolutely Essential Essential Probably Essential Minimally Essential Useful, But Not Essential					Comments
	5	4	3	2	1	
a. Demonstrate the ability to initiate and manage occupational therapy programs as defined by the service delivery patterns and ethical practices of the occupational therapy profession and the laws, rules, and regulations of the school district served by the therapist.						Mean = 3.47
b. Assess an individual's (student's) functional capacities and limitations according to the student's educational level and needs.						Mean = 4.23
c. Implement an effective occupational therapy program based upon results of assessments and educational needs of students.						Mean = 4.28
d. Demonstrate ability to engage in consensual decision making as a part of the educational management program for planning and implementing programs to meet identified functional needs and educational goals of the student.						Mean = 3.98
e. Document specific performance objectives as related to the individual's needs, progress, and program.						Mean = 4.40

9. OCCUPATIONAL THERAPY WITHIN THE SCHOOL SYSTEM

	Absolutely Essential	Essential	Probably Essential	Minimally Essential	Useful, But Not Essential	Comments
	5	4	3	2	1	
f. Apply occupational therapy concepts to educational management programs as a basis for integrating occupational therapy service programs into the educational system.						Mean = 3.79
g. Relate educational/health/social trends to occupational therapy concepts to develop/enhance/enlarge occupational therapy services within the educational system.						Mean = 3.29
h. Engage, as a health professional, in a consulting/training relationship with individuals within the educational system.						Mean = 3.51
i. Communicate the value of occupational therapy in improving school performance of students to school personnel, parents and health professionals.						Mean = 4.19
j. Engage in a supervising/training relationship with other individuals in implementing occupational therapy principles and theories.						Mean = 3.36

PLEASE CONTINUE WITH PART #2

2A

PART #2

1. SPECIFIC LIFE TASKS AND ACTIVITIES

The following competencies were submitted in Round #1. Please express your opinion as to the essentiality of each.

- | | Absolutely Essential | Essential | Probably Essential | Minimally Essential | Useful, But Not Essential | Comments |
|--|----------------------|-----------|--------------------|---------------------|---------------------------|----------|
| | 5 | 4 | 3 | 2 | 1 | |
| j. Determine client's priorities in specific life tasks and activities. | | | | | | |
| k. Analyze and teach stress management. | | | | | | |
| l. Relate theoretical base for activities to assessments and treatment for the specific theory, e.g. biological illness → sensory dysfunction → sensory assessment → physical intervention → gross motor activity; psycho-dynamic illness → developmental assessment → stage appropriate activity → treatment. | | | | | | |
| m. Teach specific life tasks and activities to clients. | | | | | | |
| n. Take an occupational history. | | | | | | |
| o. Interpret occupational history and incorporate in treatment plan. | | | | | | |
| p. Identify the priorities associated with selecting life tasks and activities for treatment of dysfunctions in physical, sensorimotor, cognitive, or psychological development. | | | | | | |

Comments

- [illegible]

30
31

Absolutely Essential
Essential
Probably Essential
Minimally Essential
Useful, But Not Essential

- ### Comments

[illegible]

2. BASIC HUMAN SCIENCES

- | | Absolutely Essential | Essential | Probably Essential | Minimally Essential | Useful, But Not Essential | Comments |
|---|----------------------|-----------|--------------------|---------------------|---------------------------|----------|
| | 5 | 4 | 3 | 2 | 1 | |
| t. Know how nutrition affects body systems in prevention and control of dysfunction of the body (i.e. diabetes, hypertension, etc.). | | | | | | |
| u. Demonstrate knowledge of abnormal types of psychological conditions and rehabilitation. | | | | | | |
| v. Demonstrate knowledge of systems functioning and analysis, from the individual to the community (both within and between systems). | | | | | | |
| w. Analyze client's life space and relate to tasks and activities (life space refers to one's various environments--at home, work, play). | | | | | | |
| x. Demonstrate knowledge of development of perceptual-motor function. | | | | | | |
| y. Demonstrate ability to effectively deal with client's psychological needs and/or problems in all types of settings (in and out of institutions). | | | | | | |
| z. Demonstrate knowledge and understanding of basic learning theories. | | | | | | |
| aa. Demonstrate knowledge of neurodevelopmental stages and cognitive development. | | | | | | |

32

33

2. BASIC HUMAN SCIENCES

- | | Absolutely Essential | Essential | Probably Essential | Minimally Essential | Useful, But Not Essential | Comments |
|--|----------------------|-----------|--------------------|---------------------|---------------------------|----------|
| | 5 | 4 | 3 | 2 | 1 | |
| bb. Analyze the interrelatedness of the different body systems--dysfunction in one is a strain in others, especially stress and the cardiovascular system. | | | | | | |
| cc. Demonstrate knowledge of anatomy, neurology, physiology, kinesiology, and how they affect dysfunction. | | | | | | |
| dd. Demonstrate knowledge and understanding of the psychological, psychosocial, and physical impacts of disability upon client and family. | | | | | | |
| ee. Demonstrate knowledge of the human aging process and its many implications. | | | | | | |
| ff. Explain the physiological functions as they relate to behavior and/or abnormal psychological dysfunction. | | | | | | |
| gg. Explain the psychological affects of disability. | | | | | | |

3. OT THEORY AND PRACTICE: DIRECT CLIENT SERVICES

- | | Absolutely Essential | Essential | Probably Essential | Minimally Essential | Useful, But Not Essential | Comments |
|---|----------------------|-----------|--------------------|---------------------|---------------------------|----------|
| | 5 | 4 | 3 | 2 | 1 | |
| o. Initiate and/or participate in client follow-up programs after treatment terminates, when indicated. | | | | | | |
| p. Generate referrals on clients who may benefit from OT services. | | | | | | |
| q. Demonstrate ability to transfer safely, and position clients to facilitate activity. | | | | | | |
| r. Record goals/objectives of OT program in measurable terms. | | | | | | |
| s. Relate to clients in service delivery in a manner depicting creative salesmanship--using positive body language, appearing interested, warm and vital. | | | | | | |
| t. Demonstrate that all evaluation methods and treatment interventions are derived from a theoretical base, showing relationship between theory, principles of practice, and methods selected for goals to be attained. | | | | | | |
| u. Possess a psychological understanding of oneself in conducting activities of therapy. | | | | | | |
| v. Communicate clearly an appropriate home program to the client's family, or significant others in terms they can understand and by procedures they can implement. | | | | | | |

34

3. OT THEORY AND PRACTICE: DIRECT CLIENT SERVICES

- | | Absolutely Essential | Essential | Probably Essential | Minimally Essential | Useful, But Not Essential | Comments |
|---|----------------------|-----------|--------------------|---------------------|---------------------------|----------|
| | 5 | 4 | 3 | 2 | 1 | |
| w. Translate results of evaluation into measurable objectives (to demonstrate accountability). | | | | | | |
| x. Demonstrate ability to carry out objectives in a variety of settings, i.e. OT clinic, client's home, community agencies, etc., taking into consideration the differences in equipment, space available and time constraints. | | | | | | |
| y. Demonstrate ability to provide activities (for the treatment program objectives) that can be carried out by the client, a family member, aide or some other non-professional person, and determine an appropriate plan for monitoring the program. | | | | | | |
| z. Terminate client's program and write discharge summary. | | | | | | |
| aa. Apply the concept of occupational behavior to evaluation and treatment of clients. | | | | | | |
| bb. Analyze treatment or intervention results, establish relationships between problems identified and treatment approach, and predict outcomes of treatment to be utilized; then critically analyze results and modify, as necessary, theories or principles about OT treatment or intervention. | | | | | | |
| cc. Recognize and accept client's right to a particular life-style, cultural pattern and personal dignity. | | | | | | |

35

3. OT THEORY AND PRACTICE: DIRECT CLIENT SERVICES

- dd. Demonstrate ability to work with families of clients.
- ee. Demonstrate knowledge of writing problem-oriented, S.O.A.P. notes, long term goals and objectives, as related to individual education plans (IEP's - school setting), clearly and precisely.
- ff. Explain how to base treatment programs on scientific inquiry.
- gg. Observe, record and evaluate non-verbal cues from client.
- hh. Demonstrate knowledge/awareness of community services/agencies and make clients aware of availability.
- ii. Demonstrate ability to measure wheelchair and select appropriate accessories.
- jj. Demonstrate ability to adapt to patient's emotional state and adjust program to obtain optimal goals.
- kk. Demonstrate ability to assess patient's emotions--exhibit sensitivity to patient's adjustment to disability.
- ll. Engage in development of standardized tests for evaluation and assessment.

Absolutely Essential
Essential
Probably Essential
Minimally Essential
Useful, But Not Essential

Comments

36

3. OT THEORY AND PRACTICE: DIRECT CLIENT SERVICES

- mm. Maintain open communication with all treatment team members to avoid overlapping and to verify those activities which are most beneficial.
- nn. Know a broad base of psychiatric and physical disabilities and what behaviors can be expected.
- oo. Know basic pharmacology--drug effects on performance and expectations.
- pp. Demonstrate knowledge of thorough application of exercise routines appropriate to the diagnosis.
- qq. Demonstrate knowledge and understanding of basic equipment and its application in patient treatment in OT departments.
- rr. Evaluate effectively the client's home situation, geographical layout, routines, as well as family interactions and means of support, and plan for client's discharge and long term development.
- ss. Communicate clearly and personally to patients and their families--with professional honesty.
- tt. Demonstrate ability to adapt goals, based on OT theory and practice, to patient's goals and level of function.

Absolutely Essential
Essential
Probably Essential
Minimally Essential
Useful, But Not Essential

Comments

37

3. OT THEORY AND PRACTICE: DIRECT CLIENT SERVICES

	Absolutely Essential	Essential	Probably Essential	Minimally Essential	Useful, But Not Essential	Comments
uu. Demonstrate ability to gather data/history information that is pertinent for assessment/evaluation.	5	4	3	2	1	
vv. Relate scientific background of OT education to providing neurodevelopmental treatment.						
ww. Relate the following factors to developing adaptive equipment: psychological, social, cultural and economic.						
xx. Apply OT principles to fabrication of equipment/adaptive devices.						
yy. Demonstrate ability to recognize one's inability to deal with a problem--personality or physically.						
zz. Coordinate goals and objectives with other disciplines.						
aaa. Relate the psychological value of treating more than one patient at a time to OT practice: groups enable patients to observe others worse off and gives them an opportunity to learn they can do things.						
bbb. Apply theories such as Brunnstrom, Bobath, Rood, Ayers, King to clients in a "hands-on" situation.						

38

3. OT THEORY AND PRACTICE: DIRECT CLIENT SERVICES

	Absolutely Essential	Essential	Probably Essential	Minimally Essential	Useful, But Not Essential	Comments
ccc. Demonstrate general knowledge of theories and methods of treatment used by other professional groups, e.g. physical therapists, speech pathologists, social workers.	5	4	3	2	1	
ddd. Evaluate client's home environment in terms of physical accessibility; client's ability to perform self-care and family-oriented skills in that environment.						
4. HEALTH-ILLNESS-HEALTH CONTINUUM						
The following competencies were submitted in Round #1. Please express your opinion as to the essentiality of each.						
f. Know different viewpoints, beliefs and values of health and the practices that accompany those viewpoints.						
g. Relate the role of stress in health-illness relationships.						
h. Analyze and apply adaptation processes upon the health-illness-health continuum.						
i. Demonstrate a base knowledge of the pharmacology involved in the treatment of mental health disorders.						
j. Demonstrate a good working knowledge of behavioral medicine.						

39

4. <u>HEALTH-ILLNESS-HEALTH CONTINUUM</u>	Absolutely Essential Essential Probably Essential Minimally Essential Useful, But Not Essential					Comments
	5	4	3	2	1	
k. Analyze the "concept of wellness" and relate to OT practice in preventive health.						
l. Know how emotions, sensory processing, and community interactions affect the wellness, health-illness continuum and how illness effects emotions, sensory processing, community interactions, etc. (the interactive effect).						
m. Possess an awareness of community special interest groups as resources on the health-illness-health continuum (e.g. arthritis foundation) and use their expertise and support for specific clients.						
n. Recognize effects of competency statement of 4d on family structure and psychological support.						
o. List sources of information to determine diagnosis of patient in the health continuum (i.e. books, journals, etc.)						
p. Demonstrate that function (a) maintains health; (b) lessens impact of illness--or retards its progress, and that dysfunction can result in loss of health or aggravation of illness.						
q. Integrate physical and psychosocial dysfunction components into a health-illness-health, or function-dysfunction continuum.						

40

4. <u>HEALTH-ILLNESS-HEALTH CONTINUUM</u>	Absolutely Essential Essential Probably Essential Minimally Essential Useful, But Not Essential					Comments
	5	4	3	2	1	
r. Identify the effect of neurodevelopmental treatment on children with developmental delays as the treatment procedure of choice and its underlying basis.						
s. Explain the effect of sensory integration on children described in competency statement 4e.						
t. Become aware of various outside personal sources and facilities to use as resources in providing total patient care.						
u. Prioritize treatment interventions for the individual related to his/her health status and values.						
v. Demonstrate knowledge of the interrelationship of psychological, biological and social health and lack of health.						
5. <u>HUMAN DEVELOPMENT PROCESS</u>						
The following competencies were submitted in Round #1. Please express your opinion as to the essentiality of each.						
p. Describe/illustrate several different frames of reference for "Developmental Tasks." (Havinghurst, Erikson, Llorens, Levinson, etc.						

41

	Absolutely Essential Essential Probably Essential Minimally Essential Useful, But Not Essential					Comments
	5	4	3	2	1	
5. <u>HUMAN DEVELOPMENT PROCESS</u>						
q. Use all frames of reference for "Developmental Tasks" in assessing adaptive skills, occupational performance, etc.						
r. Explain the development process of the nervous system and the effect of stimulation to it.						
s. Apply psychoanalytic theory to the developmental process, with particular focus on skill attainment as it pertains to activity behavior.						
6. <u>OCCUPATIONAL THERAPY THEORY</u>						
The following competencies were submitted in Round #1. Please express your opinion as to the essentiality of each.						
f. Analyze critically the results of intervention based on analysis.						
g. Apply OT theories to clients through first hand experiential situations.						
						42

43

	Absolutely Essential Essential Probably Essential Minimally Essential Useful, But Not Essential					Comments
	5	4	3	2	1	
7. <u>OT PRACTICE: INDIRECT CLIENT SERVICES</u>						
The following competencies were submitted in Round #1. Please express your opinion as to the essentiality of each.						
tt. Be able to teach others (parents, family, teacher, etc.) how to carry out OT related programs.						
uu. Acquire knowledge and skill to appreciate, understand, and critique research, and analyze methodology of research articles.						
vv. Demonstrate an ability to document services rendered in a manner that clearly describes OTs unique contribution to the improvement of, or maintenance of optimal functioning.						
ww. Demonstrate an ability to analyze a health program for clients, making sure it enhances optimal growth and functioning through proper use of activities.						
xx. Demonstrate ability to develop and justify charges for service, equitable to similar professions.						
yy. Demonstrate ability to develop basic policies, procedures and recording methods for one therapist departments using guidelines available from AOTA.						
zz. Know sources for supplies, and be able to order supplies and equipment.						

7. OT PRACTICE: INDIRECT CLIENT SERVICES

- | | Absolutely Essential | Essential | Probably Essential | Minimally Essential | Useful, But Not Essential | Comments |
|--|----------------------|-----------|--------------------|---------------------|---------------------------|----------|
| | 5 | 4 | 3 | 2 | 1 | |
| aaa. Be able to maintain tools, equipment and supplies (preventive maintenance, proper storage and use.) | | | | | | |
| bbb. Demonstrate ability to work efficiently and effectively with other appropriate professionals to provide comprehensive, overlapping but not repetitive services. | | | | | | |
| ccc. Describe the concept of change and change agent, and have an opportunity to apply knowledge in relation to OT. | | | | | | |
| ddd. Know the concept of marketing goods and services and how it applies to OT. | | | | | | |
| eee. Know the medical care system and other health systems, their organization, manpower, purpose and relationship to OT. | | | | | | |
| fff. Know how the regulatory system and regulations pertain to OT. | | | | | | |
| ggg. Have basic knowledge of management and organizational concepts and skills. | | | | | | |
| hhh. Describe role delineation as a reference and resource to use in direct and indirect services. | | | | | | |

44

45

8. PERSONAL PERFORMANCE SKILLS AND ATTITUDES

- | | Absolutely Essential | Essential | Probably Essential | Minimally Essential | Useful, But Not Essential | Comments |
|--|----------------------|-----------|--------------------|---------------------|---------------------------|----------|
| | 5 | 4 | 3 | 2 | 1 | |
| The following competencies were added in Round #1.
Please indicate your opinion as to the essentiality of each. | | | | | | |
| o. Recognize contributions of others (by name and contribution) and not suggest that all statements pertain to therapists' own work and inventions. | | | | | | |
| p. Demonstrate an interest in learning and self-evaluation through supervision by a more experienced professional (preferable an OT). | | | | | | |
| q. Be flexible in selecting needed equipment based on availability. | | | | | | |
| r. Demonstrate knowledge of one's own strengths and weaknesses; obtain help when needed, and work to increase knowledge in weak areas. | | | | | | |
| s. Demonstrate ability to work with people, understanding and accepting them as they are. | | | | | | |
| t. Demonstrate skill in performing a self-evaluation to identify personal skills, weaknesses, values, interests, etc., and identify how these will be assets and liabilities in working with people. | | | | | | |

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