In 1947 the first postprofessional programs leading to graduate degrees were established for registered occupational therapists. At that time, undergraduate courses in occupational therapy consisted primarily of techniques for patient treatment. Consequently, knowledge of and application of the theory base for occupational therapy was an appropriate outcome for graduate students of that era. Currently, the objectives of theory knowledge and application are being met in entry-level, primarily undergraduate, occupational therapy programs. This situation prompted an undergraduate occupational therapy instructor to express concern regarding what could now be taught in postprofessional occupational therapy theory courses. There are several possible approaches. Before discussion of these approaches, key terms must be defined.

As delineated in the occupational therapy literature (Mosey, 1992; Reed, 1984; Sieg, 1988b), the term theory has many meanings. Likewise, the terms proposition and concept may be understood by therapists in different ways. As used in this paper, these three terms are defined as follows. A concept is a word or collection of words expressing mental images of phenomena. Examples of concepts are “green,” “table,” “hope,” and “intrinsic motivation.” A proposition is a statement about one or more concepts. An example of a proposition is “Occupational performance is related to mental health.” A theory is an ordering of propositions to facilitate explanations and predictions about phenomena. The sensory integration rationale developed by the late A. Jean Ayres (Sieg, 1988a) is as close to a theory as currently exists in occupational therapy. Three potential approaches to teaching theory in postprofessional occupational therapy courses might be called in-depth, developmental, and analytical.

In-Depth Approach

The first approach is to study known theories in greater depth. Theories known from undergraduate and clinical experiences can be studied from primary sources and can be enhanced by details and by reading the original research studies that support these theories. The result is that graduate students may learn the application of theories at a more sophisticated level than could be learned in undergraduate courses. This approach can certainly be justified as postprofessional learning. However, many occupational therapists can obtain this level of expertise without formal graduate education.

Developmental Approach

A second approach to teaching occupational therapy theory in postprofessional courses is to emphasize theory development. Among the skills the occupational therapist would need to refine to develop theory would be the ability to critique extant occupational therapy theories in
terms of their structure and merit as theories, rather than limiting critique to their value in patient intervention.

Sieg (1988b) analyzed occupational therapy theories and found three patterns of development: (a) applying theory from other fields to occupational therapy practice, which leads to development of occupational therapy theory; (b) addressing occupational therapy practice questions through research and integrating results into theory; and (c) integrating occupational therapy theory with theories from other fields to develop new occupational therapy theory that leads to research and practice. Any of these patterns mandates a long-term scholarly involvement. I believe that theory development as an outcome goal for master's level postprofessional education is unrealistic because of the considerable amount of time and expertise required. This approach may be more appropriate as an outcome from postprofessional education at the doctoral level.

Analytical Approach

A third approach, the analytical approach, is appropriate for the time requirement for master's programs and is certainly within the standards for graduate study. Additionally, the analytical approach is intimately related to the students' work in research proposal design, which is typically also found in occupational therapy master's programs, the majority being for postprofessional occupational therapy education. I have found this analytical approach effective with occupational therapy master's students at the University of Florida, where I have used it for 5 years.

In this approach, students initially review the major ideas of the various theorists as learned in their undergraduate occupational therapy studies. Then they are ready to identify and analyze the concepts and propositions from the writings of these theorists. Theoretical works that I might include are those of Claudia Allen, A. Jean Ayres, Gail Fidler, Gary Kielhofner, Lela Llorens, Anne Cronin Mosey, and Mary Reilly. However, the analytical approach allows flexibility of choice of theoretical material, which can vary with the departmental philosophy in any occupational therapy educational setting.

Fawcett and Downs (1986) identified and classified concepts and propositions. I borrowed their notions for use in my analytical approach to teaching occupational therapy theory. During initial implementation of the analytical approach, I found that a major value of this type of classification was that propositions identified can be directly related to the kinds of research methods: descriptive, correlational, or experimental. By classifying the propositions and operationally defining the concepts, students can derive specific research questions or hypotheses from the occupational therapy theories and identify the appropriate type of research design for their investigation. Furthermore, the results of the investigation of these questions or hypotheses will be directly related to occupational therapy theory.

Concepts

In the classification scheme, the two types of concepts are observable concepts and constructs. Observable concepts are directly observable through the sensory processing system, concepts such as "desk" or "book." Constructs are concepts lacking physical referents. They are either not directly observable through sensory input or are indirectly observable. Propositions from occupational therapy theoretical writings typically relate constructs rather than observable concepts. Examples of constructs from Mosey's Acquisitional Frame of Reference (Mosey, 1988) are "attention," "perception," and "motivation." For the student, identification of constructs from theoretical writings is not difficult, but operationally defining these constructs, that is, putting them into measurable terms, is difficult. Before the propositions in which these constructs occur can be converted to hypotheses or specific research questions, each construct must be operationally defined. For the operationalized constructs to relate to the occupational therapy theory under analysis, these operational definitions must be consistent with the theorist's point of view. For example, an operational definition of perception could be "scores on a test for astereognosis." In Mosey's statement, "Attention and perception influence learning" (1988, p. 3-62), such a narrow definition of perception distorts the theorist's meaning. Thus, the student must have a firm grasp of the theoretical material under discussion to appropriately operationalize the construct. Often it is necessary to provide a dictionary definition of the construct consistent with the theory before trying to put the construct in measurable terms.

Propositions

Propositions also are of two types: nonrelational and relational. A nonrelational proposition is a statement about one concept. A relational proposition specifies the relation between or among concepts.

A nonrelational proposition often defines the concept or tells what it is composed of. Kielhofner and Burke's statement, "Occupational behavior is an activity in which persons engage during most of their waking time" (1985, p. 12), is a nonrelational proposition. Nonrelational propositions suggest specific research questions for descriptive research projects. A sample descriptive research question consistent with the Kielhofner and Burke statement is "In what activity does the typical patient over age 80 who resides in a nursing facility engage for the greatest amount of time?"

Eight types of relational propositions from the Fawcett and Downs (1986) classification scheme are Exis-
tence, Direction, Shape, Strength, Time, Cause and Effect, Contingency, and Symmetry. These propositions are all statements linking two or more concepts.

Existence. This kind of proposition merely states that a relationship exists between or among concepts. The statement, “Diminished body balance is associated with poor integration of sides of the body” (Ayres, 1963, p. 224), is an example of an Existence proposition and can be addressed with correlational research procedures.

Direction and Shape. In these kinds of propositions, a prediction is made as to how the values that define each of the concepts co-vary, that is, whether scores increase together or whether one set decreases as another increases, whether the data produce a straight line or a curvilinear pattern, and so on. Again, correlational research procedures are used to examine these propositions. An example of this type of proposition is “The greater the communication, the greater will be the validation of observations” (Fidler, 1957, p. 11). As usual, major concern is the finding of operational definitions for such constructs as “communication” and “validation of observations.”

Strength. The proposition may deal with the magnitude of the association among or between the concepts. The computed correlation coefficient is a measure of the strength of the relationship. An example of a Strength proposition is “The praxis tests were also positively related to each other, with the Sequencing Praxis Test having the highest average correlation (r = .45) with the other five tests” (Ayres, Mailloux, & Wendler, 1987, p. 100).

Time. This type of proposition deals with the temporal relationship between concepts. Again, a correlational research method is appropriate. Allen’s work provides this example: “With primary affective disorders the change can be fairly rapid, moving from Level 3 to 6 within a few weeks” (1988, p. 3-21).

Cause and Effect. This type of proposition specifies that manipulation of one concept brings about a change in another concept. Cause-and-Effect propositions require quasiexperimental or true experimental designs. They are converted to hypotheses by operationalization of every concept. Many hypotheses can be derived from the following proposition: “Behavior responses result from stimulus processing, intersensory interaction, response feedback into the system, and reverberation” (Llorens, 1986, p. 106).

Contingency. In Contingency propositions, one concept leads to another but is dependent on a third concept for this relationship to occur. Multivariate designs are necessary for testing this kind of proposition and can be used if all concepts can be operationally defined. Some therapists may consider qualitative rather than quantitative research methods appropriate for study of these complex propositions. The famous quotation from Reilly, “Man, through the use of his hands as they are energized by mind and will, can influence the state of his own health,” (1962, p. 2) is an example of a Contingency proposition. Humans can use their hands to influence their state of health, but this situation is contingent upon their hands being energized by will and mind. Constructs in Reilly’s proposition would be essentially impossible to define operationally for implementation through quantitative research procedures. Another example of a Contingency proposition is “When an activity relates realistically and symbolically to an individual’s needs and personal characteristics it is an agent for learning and growth” (Fidler & Fidler, 1983, p. 269). Again, operationalization is a problem because of the difficulty of finding adequate measures for complex constructs. An example of a less complex Contingency proposition that might be addressed with multivariate procedures comes from the work of Orr, Reznikoff, and Smith (1989): Occupational therapy may lead to improved body image of persons with severe burns if they also have adequate peer support.

Symmetry. Propositions of the seven previously named classifications may or may not also be classified as a Symmetry proposition. If the relationship of the concepts is considered to be reversible, the proposition is symmetrical. If the relationship is irreversible, the proposition is asymmetrical. The proposition from Ayres above, “Diminished body balance is associated with poor integration of sides of the body,” is a symmetrical proposition, because it is reasonable to state it as “Poor integration of sides of the body is associated with diminished body balance.”

Student Outcomes from the Analytical Approach

I have found that most occupational therapy graduate students are able to appropriately classify propositions by the end of this theory course. They are able to provide definitions of all constructs from the point of view of the therapist from whose work the propositions are drawn. Operationalization of constructs from very complicated propositions is probably the most difficult task the students accomplish. At the least, students gain insight into the relation of research and theory in occupational therapy.

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