

A Cognitive Approach to Understanding the Conceptual Structure of the Parks, Recreation, and Leisure Services Field

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Abstract

The purpose of this study was to compare a cognitive approach (pile-sort technique) and an attitudinal approach (Importance-Performance type analysis) to understanding the conceptual structure of the parks, recreation, and leisure services field to determine if differences in results existed between the two measures. Leisure studies management students ($N = 19$), public recreation managers ($N=20$), and leisure studies academicians ($N = 19$) categorized the concepts contained in the NRPA Accreditation Standards according to their similarity. The similarity data was used to generate a hierarchical clustering solution for each group. The measurement and analysis of the structure of the content domain allowed for alternative explanations for the few differences among the three groups uncovered by the Importance-Performance analysis, and illuminated other areas where discrepancies may exist. These findings suggest the need for further study of recreation practice from a cognitive perspective.

Key words: Professional preparation, Theory-practice, Conceptual domain, Cognitive structure

Biographical Information

This paper is based on the author's doctoral dissertation written under the direction of Dr. Garry Chick at the University of Illinois, Urbana-Champaign.

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Introduction

The field of parks, recreation, and leisure services has been struggling for a professional identity throughout its history. A key element in developing professional status is a unique body of theory-based knowledge. This body of knowledge serves to guide further research and provides practitioners with a rationale for the delivery of recreation and leisure services (Sylvester, 1989). Recent studies have demonstrated that a lack of consensus exists regarding the conceptual structure of the knowledge base among groups of academicians and various types of recreation practitioners (Blumenthal, 1991) and even within groups of academicians, practitioners, and leisure studies students (Parr, 1992/1993). These findings suggest the

boundaries of the recreation and leisure services field, and thus the knowledge base of the field, are not clearly delineated.

According to Sessoms (1990), the field of parks and recreation suffers from an ill-defined mandate and this has implications for recruitment of quality professionals, training of those professionals according to a unique body of knowledge, and for employment to fulfill the profession's role. In order to prepare professionals to enter the field, academicians need an understanding of what practitioners do (Mobily, MacNeil, & Teague, 1984). The National Recreation and Park Association (NRPA) accreditation standards for curriculum content represent core areas of knowledge required for practice in the field of leisure services. These standards are assumed to represent the minimum level of preparation. In other words, students preparing to enter the field of leisure services should at least have knowledge of (or been exposed to) the content areas outlined in the standards.

Theoretically, academicians could simply teach the content outlined in the standards for accreditation and certification and assume that "future" professionals are adequately prepared. Unfortunately, evidence suggests that this approach does not necessarily narrow the gap between theory and what is required for practice. (The term theory, as it is used here, refers to "book" knowledge or knowledge gained, however practical, in the classroom rather than in a "real-world" setting.) In studying the continuing education needs of practitioners, Hulvershorn (1979) and Henderson (1982), found that when asked about their needs, practitioners usually request topics supposedly covered in academic degree programs, implying that the coverage of the material in academic programs was somehow incomplete (Mobily et. al, 1984).

Academicians/researchers can gain a greater understanding of the work of practitioners by analyzing the tasks that leisure service providers perform on their jobs. Job analysis research also contributes to the standardization of job descriptions and the identification of appropriate content for certification examinations. This type of research has a strong behavioral focus in that it asks practitioners to reveal what they do and/or what they think ought to be done in various recreation jobs and to rate the identified tasks in terms of relevance and importance to their jobs (e.g., Brademas, Lowrey, Gress, & Bostrom, 1981; Busser & Bannon, 1987). Investigations that focus on direct questions such as "What skills are important?" provide general ideas of important content areas to be included in recreation education programs and are reflected in the Accreditation Standards (NRPA, 1991). However, the results of such studies explain little of how these content areas are related to each other, and to the practice of park and recreation management.

According to Broudy, an educational psychologist, "Different types of knowledge make different claims on the curriculum. . . . The actual teaching transaction, moreover, is partly prescribed by the way the disciplines, the repositories of the different types of knowledge, are organized as conceptual systems" (pp. 3-4). Teaching effectiveness also requires an understanding of how the conceptual system will be used in relation to the way it is learned (Broudy, 1977).

It is hypothesized in this study, that differences in perceptions of the parks and recreation conceptual domain exist among academicians, practitioners and students and that these differences represent differences in meaning, not necessarily differences in evaluation of relative importance. For example, if Practitioner A rates financial management as very important and Academician B rates the item as moderately important, one interpretation is that the concept has a shared meaning between the two respondents, and they differ only on their perceived importance of the item. However, a second interpretation may be that the respondents perceived them differently in importance because the item has a different connotational meaning, depending upon the respondent's individual experience with the concept and the organization's values. Additionally, the two respondents may differ in their perceptions of how the item relates to the overall conceptual domain. The investigative methods of assessing the nature of parks and recreation practice outlined previously won't uncover these differences in meaning. Understanding the knowledge base as a conceptual system may provide a clearer picture of the nature of the gaps between theory and practice.

Cognitive Psychology and Categorization

The theoretical perspective for the hypothesis that differences in the perceptions of the conceptual domain represent differences in meaning, not necessarily differences in evaluation of relative importance comes from the field of cognitive psychology, and more specifically, the areas of categorization and cognitive structure. A cognitive perspective reflects a concern for mental processes such as perception, thinking, knowledge representation, and memory that can be inferred from, and are responsible for, types of human behaviors (Shuell, 1986). Most researchers agree that the human mind has a limited capacity for processing information and, due to this limited capacity, information must be "chunked" into categories in order to be accessible (e.g., Smith & Medin, 1981).

Weller and Romney (1988) defined a conceptual domain as "... an organized set of words, concepts, or sentences, all on the same level of contrast, that jointly refer to a single conceptual sphere" (p. 9). Weller and Romney further suggested that the concepts that comprise the domain be defined by informants, rather than the investigator, in order to eliminate bias. The content domain under investigation in this study is comprised of the 1991 NRPA Accreditation Standards for park and recreation curriculum. This content presumably represents the conceptual sphere of parks, recreation, and leisure service delivery. These standards have been developed over a period of several years, with input from researchers, academicians, and practitioners. The accreditation standards were used to represent the content domain in this study because they are the generally accepted knowledge areas to which students in leisure studies/parks and recreation degree programs have been exposed.

A common method of assessing an individual's understanding of a content domain is the pile-sorting technique (Weller & Romney, 1988). In this method, research participants are asked to sort the concepts included in the content domain according to the perceived similarity of the concepts. The resulting similarity matrix is then subjected to hierarchical clustering analysis in order to produce the aggregate categorization scheme for each group. The results presumably reflect the participants' mental representation, or structure, of the conceptual domain.

This study was exploratory in nature, attempting to test the usefulness of the cognitive approach to understanding the leisure services content domain as a conceptual system, rather than a list of things practitioners do or isolated concepts that instructors teach. Two methods of data collection were employed in order to compare the results generated from an attitudinal approach that asks respondents to rank the importance of pertinent concepts, their perceptions of the importance of job tasks and (importance-performance analysis) and a cognitive approach (pile-sort). Specifically, the research questions addressed in this study were (a) Do differences exist among students, practitioners, and academicians in their understanding of the conceptual domain of parks, recreation, and leisure services, and what is the nature of these differences?, and (b) Does a cognitive approach to understanding the conceptual domain yield different results than an attitudinal approach? While the results of comparisons among groups are not generalizable to their respective wider populations, due to the purposive nature of the sampling procedure, future areas of inquiry may be suggested.

Method

Subjects

Categorization research suggests that groups of people categorize concepts differently based on their interaction and experience with the concepts. Thus, leisure studies students, leisure service practitioners, and leisure studies academicians would likely categorize the concepts differently. It is also likely that subgroups within these larger groups exist (see Blumenthal, 1990; Mobily, et al. 1984). The statistical procedures used in this study to analyze the categorization schemes require a minimum of 18-20 subjects per group. Because the pile-sort data collection procedure requires direct researcher interaction with participants and is resource intensive, the sample sizes for each group were necessarily small. Subgroups of leisure service practitioners, academicians and students were identified and attempts were made to homogenize the subgroups as much as possible.

A purposive sampling approach was used to identify potential participants in each subgroup. Purposive sampling is appropriate when the research being conducted is exploratory, rather than testing theory in order to generalize to wider populations (Patton, 1980); and if data collection procedures and limited resources necessitate a small sample size (Kalton, 1983). Therapeutic recreation students, practitioners, and academicians were not included in this study because it was believed that these individuals may interact with the concepts differently and thus perceive the content domain differently than those with a management focus. The practitioner sample and the academician sample were delimited to include individuals within reasonable driving distance of the researcher's base of operations. Other requirements were imposed on the practitioner and academician groups for inclusion in the study and will be discussed later.

Students

The sampling frame for the student group consisted of all senior-level leisure studies students with a concentration in program management at a midwestern university in the Spring semester of 1992 (N=24). All of the students were enrolled in their final semester of

coursework prior to completing their internships. Each student was contacted by telephone and invited to participate in the study. Two individuals refused, citing a lack of time and three individuals failed to show up for their appointments and attempts to reschedule were unsuccessful. Eleven female and eight male students took part in the study for a participation rate of 79%. The students ranged in age from 21 to 23 years.

Practitioners

Following Mobily, et al.'s (1984) findings that practitioners' level of commitment to the field of leisure services is positively correlated with the degree to which job competencies are rated as essential, the initial subject pool for the leisure service practitioner group was delimited to include members of the professional association of a midwestern state who met the following criteria: a job title indicating CEO status, at least a bachelor's degree in recreation/leisure studies, and at least three years experience. This selection process yielded a pool of 25 public recreation managers of whom 20 agreed to participate. Three of the managers were female (15%) and 17 were male (85%).

Academicians

The third group of respondents were identified using the NRPA SPRE Curriculum Catalog. This group consisted of faculty members at parks and recreation/leisure studies degree programs in the midwest who held at least one degree in recreation/leisure studies with teaching experience in courses included in the professional core and/or courses specific to recreation management. Also, faculty members who indicated an interest in administration, commercial recreation, public recreation, and/or tourism in the SPRE Curriculum Catalog were selected. Nineteen (63%) of the 30 individuals identified as fitting the requirements of the study agreed to participate. Two of the academicians were female (11%) and 17 were male (89%).

Materials

The materials used in the cognitive assessment portion of the study included a deck of 29, 3" x 5" cards. Each of the 29 content areas included in the Accreditation Standards for Curriculum Content were printed on a separate card (see Table 1). The order of the cards was randomized to avoid any potential bias that may be inherent in the way the standards are ordered in the Accreditation Standards. Each participant received the cards in the same randomized order.

TABLE 1
Content Areas Printed on the Test Cards

Item no.	Item description
1.	Knowledge of the history and development of the leisure services profession
2.	Knowledge of the theory and philosophy of leisure
3.	Knowledge of human and natural resources

Table continues

Item no.	Item description
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4.	Knowledge of the interrelationship of leisure delivery systems
5.	Knowledge of the legislative process
6.	Knowledge of the nature of leisure activities
7.	Knowledge of assessment techniques
8.	Knowledge of the program planning process
9.	Knowledge of leadership techniques
10.	Knowledge of the responsibility to disadvantaged and special populations
11.	Knowledge of modification, accessibility, and assistance techniques
12.	Knowledge of design and maintenance of facilities
13.	Knowledge of leisure education
14.	Knowledge of contemporary professional issues
15.	Knowledge of the concept of a profession
16.	Knowledge of research procedures
17.	Knowledge of advocacy
18.	Knowledge of professional and ethical behavior
19.	Knowledge of principles and procedures of organization
20.	Knowledge of principles and procedures of legal foundations of operations
21.	Knowledge of principles and procedures of long-term planning
22.	Knowledge of principles and procedures of marketing and promotion
23.	Knowledge of principles and procedures of finance
24.	Knowledge of principles and procedures of public relations
25.	Knowledge of principles and procedures of personnel practices
26.	Knowledge of principles and procedures of business practices
27.	Knowledge of principles and procedures of decision-making
28.	Knowledge of principles and procedures of problem-solving
29.	Knowledge of principles and procedures of evaluation techniques

In order to compare the results of the cognitive approach (pile-sort) with an attitudinal approach, an Importance-Performance (I-P) type questionnaire was developed for each group. All participants were asked to rank order a sample of the 29 standards consisting of ten test concepts on the dimensions of "importance to the job" and student "preparedness" in that area (Item numbers 1, 2, 4, 8, 16, 17, 19, 21, 23, and 28 listed in Table 1) with 1 = most important and 10 = least important. The test concepts "knowledge of the history and development of the leisure services profession" and "knowledge of the theory and philosophy of leisure" were automatically included in the sample because they were of particular interest to a larger study. The other eight test concepts were randomly selected from the remaining concepts using a random numbers table.

Procedures

A pile-sorting technique was the method used to ascertain the cognitive structure of the content domain. The data were collected from the academicians and the managers during working hours at the office of each participant. Data were collected from the students in the office of the investigator. The participants were instructed to sort the items into piles according to their similarity. (For a detailed description of the pile-sort technique, see Parr 1992/1993). The criteria for judging similarity was determined by the participants. After finishing the pile-sort task, participants completed the I-P questionnaire by rank-ordering the ten concepts described in the previous section. Finally, each participant was asked to comment on how their categories (piles) related to one another. This information was tape-recorded and used in the interpretation of the HC solutions for each group.

Results

Question 1: Differences Among Students, Managers and Academicians

The importance and preparedness (I-P) rankings for each group were compared using a one-way ANOVA and Scheffe's post hoc procedure and yielded very few significant differences among the three groups (four out of the forty comparisons were significant, see Table 2). The students did not differ with the academicians on any items and differed with the managers on one preparedness item (i.e., finance; $F(2, 55) = 12.31, p=.000$). The academicians and the managers differed in terms of preparedness in the areas of finance ($F(2, 55) = 12.31, p=.000$) and theory and philosophy of leisure ($F(2, 55) = 3.51, p=.03$). They also differed in terms of importance in the area of research procedures ($F(2, 55) = 6.09, p=.004$). However, when the measures of cognitive structure were considered in conjunction with the importance - preparedness rankings, some additional differences among the three groups were uncovered.

TABLE 2
Comparisons of Mean Importance and Preparedness Rankings by Group

Item	Group	Importance		Preparedness	
		Mean	F	Mean	F
Research procedures	Students	7.95	6.10**	6.47	2.73
	Managers	8.65 ^a		6.18	
	Acadamecians	6.68 ^a		8.05	
Principles of finance	Students	5.05	0.92	7.21 ^b	12.32***
	Managers	4.45		8.29 ^{ab}	
	Acadamecians	5.53		5.21 ^a	
Theory & philosophy of leisure	Students	5.05	0.50	4.47	3.52*
	Managers	4.40		3.35 ^a	
	Acadamecians	3.95		5.53 ^a	

Note. Significant differences between groups are indicated with the following superscripts: a = significant difference between managers and academicians; b = significant difference between students and managers.

* $p<.05$ ** $p<.01$ *** $p<.001$

The HC solutions for each group (students, managers, and academicians) are presented in Figures 1, 2, and 3, respectively. The HC procedure combines concepts into clusters depending on their psychological similarity. Concepts that are highly similar are combined first and the new cluster is then compared to the remaining concepts. Concepts that are most similar to the cluster are then added to form a new cluster. The analysis continues until all concepts and clusters are combined. This process is reflected in the “tree” structures depicted on the right side of each figure. For the convenience of the reader, the major categories and subcategories are outlined and labeled on the left side of each figure.

All three of the HC solutions were similarly broken into two main categories; one associated with administration (labeled A in Figures 1, 2, and 3), and the other associated with “recreation specific” knowledge (labeled B in Figures 1, 2, and 3). One manager described these categories as “deal[ing] with basic philosophical precepts of the profession and the other [is] technical skills necessary to complete the job.” Upon further examination, several differences among the groups became apparent. The managers included leadership techniques in the main administration category (subcategory A1 in Figure 2), while the students and academicians associated leadership with the program planning process (subcategory B3 in Figure 1 [students] and subcategory B2 in Figure 3 [academicians]). This difference in perspective may be a function of the focus of recreation leadership classes in most curricula. Undergraduate courses in recreation group leadership tend to focus on face-to-face activity leadership, whereas these managers were describing organizational leadership.

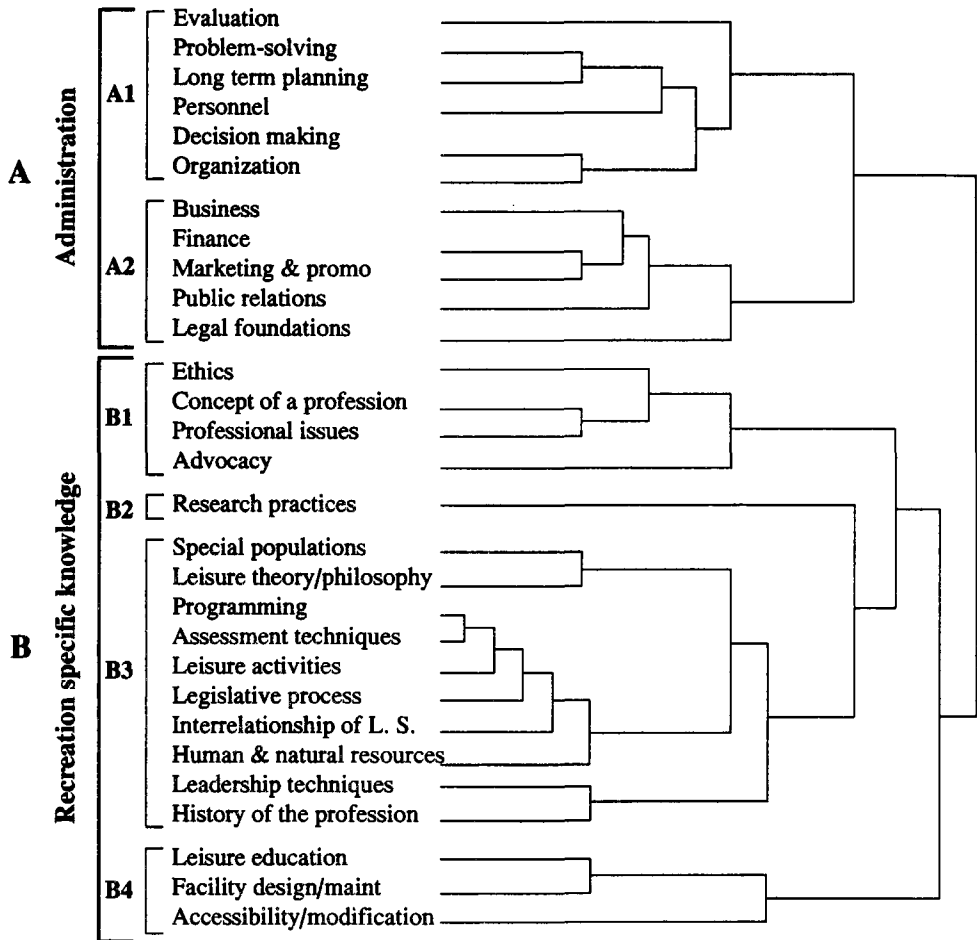


Figure 1. Students' cluster solution

Another difference in the HC solutions was in the placement of the "history of the profession" item. The students and academicians associated it with the program planning process (subcategory B3 in Figure 1 [students]; subcategory B2 in Figure 3 [academicians]), while the managers associated it with professional issues (subcategory B1 in Figure 2). Most of the students described this item from an agency perspective; a means of learning, evaluating, and improving the quality of the organization and its services. The managers and academicians interpreted it from the perspective of recreation as a profession. This difference in perspectives may be an indication that the students do not understand the relevance or impact of the historical roots of the profession.

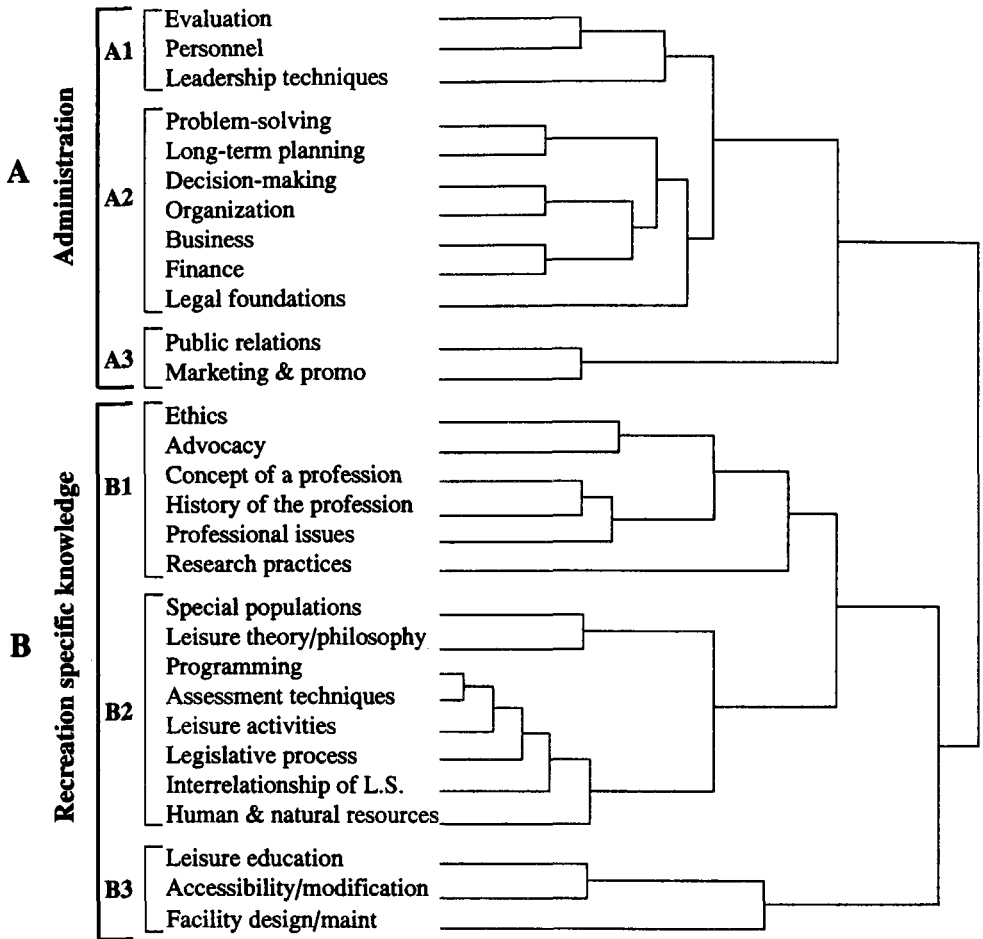


Figure 2. Managers' cluster solution

Research procedures was another item placed in different categories by the groups. The academicians placed research in a subcategory with evaluation in the main category of administration (subcategory A1 in Figure 3). For the students, research procedures was a single item subcategory within the recreation specific main category (subcategory B2, Figure 1). The managers also associated research with the recreation specific main category but placed it in the professional ethics subcategory (subcategory B1 in Figure 2). The students and managers seem to associate research with more abstract concepts and not a part of day-to-day operations. The term "research" may have connotations of sophisticated, scientific inquiry and perhaps the students and managers do not see themselves as engaged in this type of activity. They may further associate research with abstract, theoretical outcomes that do not apply to their specific situation. The academicians, however, viewed research as associated with the administration of a leisure service agency.

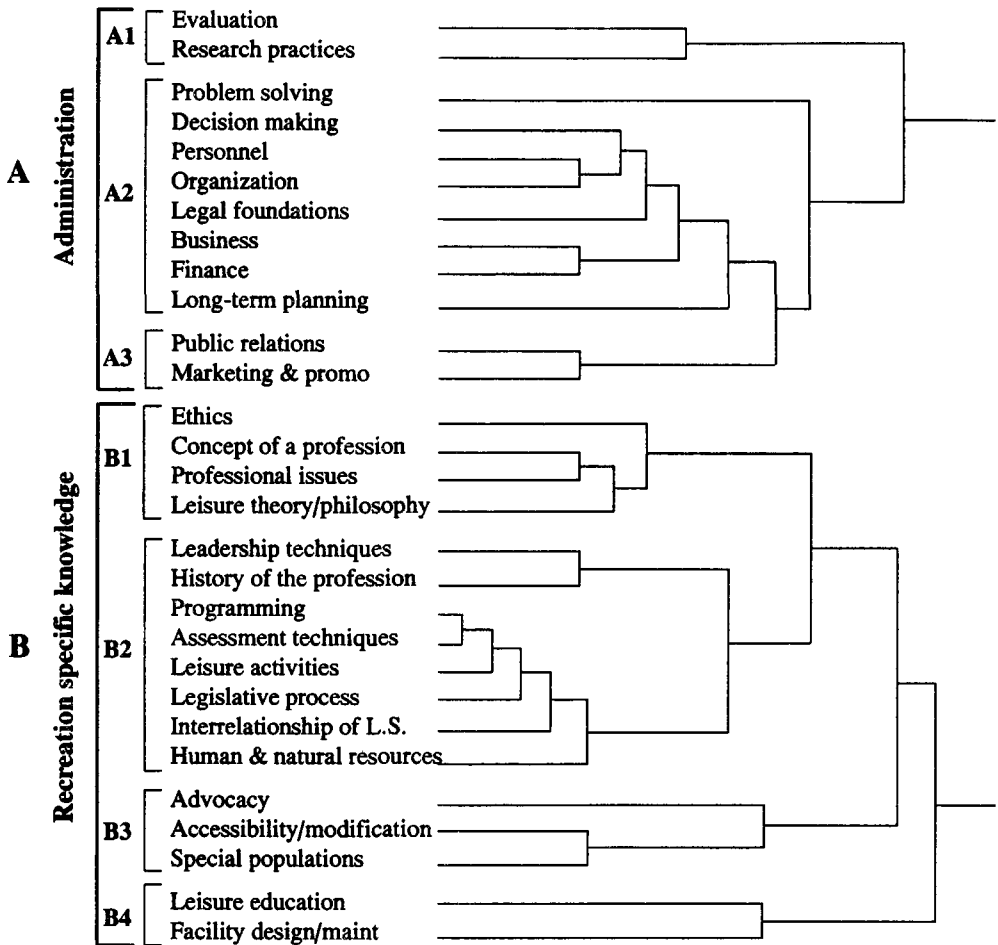


Figure 3. Academics' cluster solution

Question 2: Comparison of Methods

In comparing the two methods of assessment (cognitive structure and Importance-Performance) two approaches were taken. First it is important to look at the concepts that were identified as discrepant among the three groups in *both* analyses. The concept "research procedures" was the only item that was found to receive significantly different importance rankings between the academicians and the managers *and* was placed in different categories by the academicians and the managers and students. Based on the HC analysis, it is possible that the differences in importance can be attributed to differences in meaning, i.e., it differs in importance because it differs in meaning. The academicians associate it with evaluation and administration of the agency, whereas managers associate it with items related to the profession and professional status.

The second comparison approach involves identifying the concepts that were identified as discrepant among the three groups in the HC analysis but not in the I-P analysis. These include "leadership practices" in the manager cluster solution (see Figure 2) and "history of the profession" in the student cluster solution (see Figure 1). The fact that these discrepancies were uncovered through the HC analysis and not the I-P analysis suggests that importance ratings/rankings might not uncover the whole picture. Practitioner A and Academician B may agree on the importance of a concept but the concept may have different meanings. With the I-P analysis alone, there is no way to determine if the variation reflects a true difference in importance or preparedness, or a difference in meaning. The additional measurement and analysis of the structure of the content domain allowed for alternative explanations for the differences uncovered by the importance - preparedness analysis, and illuminated other areas where discrepancies may exist.

Discussion and Implications

The findings outlined above suggest that discrepancies do exist, at least for these respondents, between what is taught and what is learned (academician - student comparisons), what is learned and what is practiced (student - manager comparisons), and what is taught and what is practiced (academician - manager comparisons). It is not the purpose of this study to evaluate the "correctness" of either the classroom reality or the practical reality, but simply to identify where these discrepancies lie. One such discrepancy is in the importance and meaning of research. The academicians ranked this item significantly higher in importance than did the managers. Reasons for this discrepancy were discussed previously and involve perceptions associated with research.

Another discrepancy between academicians and managers identified in the I-P analysis is in the students' level of preparation in the area of leisure theory and philosophy. The managers believed recent graduates to be well prepared in this area, while the academicians perceived this to be an area in need of improvement. The nature of this discrepancy may lie in differing perceptions of the level of understanding needed for successful practice. Perhaps the managers perceive that a general understanding of concepts associated with leisure is adequate and that students receive this information through their formal education. The academicians require (for their own "practice" of research and teaching) a much deeper understanding of the leisure phenomenon.

As noted earlier, the results of this study may not be generalizable to the larger populations of leisure services management students, public recreation managers, and academicians due to the small sample size and the purposive nature of the sampling procedure. However, the differences identified among the groups in this study may serve as the basis for future inquiry. The areas of discrepancy identified in this study may serve as "watch areas." Informal assessments of students' understanding and touching base with local practitioners would assist academicians in communicating a shared meaning among academicians, practitioners, and students. In addition, formal investigations should be designed to evaluate the effectiveness of various teaching methods. Clearly, students,

practitioners, and academicians in other subfields (particularly therapeutic recreation) should be studied and compared to the "management" groups.

Previous studies, focusing on practitioner behaviors, did not uncover differences in meaning associated with the concepts. Asking practitioners to rate concepts included in the accreditation standards on some dimension such as importance is not very informative if there is very little shared meaning attached to the items and the domain as a whole. This study demonstrated that groups of individuals interpret the domain in different ways and further demonstrated some of the areas where discrepancies in meaning may exist. Therefore, researchers, faculty, and practitioners should use caution when applying the standards to research problems, curriculum evaluation, and in the development of "leisure professional" certification examinations. Future research should focus on eliciting the shared knowledge associated with the conceptual domain of parks, recreation, and leisure services.

This research also demonstrated the value of studying the conceptual domain from a cognitive perspective, rather than solely an attitudinal assessment of important tasks and behaviors. This type of cognitive approach has been utilized extensively in the area of teacher training; a field that also struggles with a gap between theory and practice. According to Berliner (1987) this type of research, in terms of teacher training, can "... help us codify, formalize, and systematize the knowledge of experienced/expert teachers ... put[ting] an end to the concerns of many scholars that teachers have no shared body of knowledge upon which to call" (p. 77); a criticism that has also been leveled at the field of parks, recreation, and leisure services (Burdge, 1985). In the field of leisure service delivery, this type of research can serve to identify a more realistic conceptual system, and provide direction for bringing classroom knowledge and experiences into line with real-world practice.

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