Framing Emergency Management Knowledge Expansion within Current US Academic Curricula

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The field of Emergency Management is in a period of dramatic knowledge expansion. Practitioners from diverse public and private organizations and all levels of government are enjoying increased visibility and resources in combating a string of media enriched disaster events. A growing number of scholars and practitioners from multiple originating disciplines are bringing together an ever-increasing body of written work to support the recognition of Emergency Management as a profession and as a field for academic inquiry. This development in the United States has been propelled by the expansion of Emergency Management issues across disciplines, the establishment of a large number of academic programs across the country, and increasing visibility of disaster and its consequences, including the most recent emphasis on terrorism and homeland security. Within the developing field, given the existing academic curricula, what are some of the core knowledge components of Emergency Management and what is the relative emphasis placed on each of the identified components. And within theses areas of emphasis, to what extent does the curricula content create intersection between originating disciplines and institutions of Emergency Management practice, or more plainly stated, between academics and practitioners.

Key words: emergency management, academic curricula, FEMA

Ⅰ. Introduction

The field of Emergency Management is in a period of dramatic knowledge expansion. Practitioners from diverse public and private organizations and all levels of government are enjoying increased visibility and resources in combating a string of media enriched disaster events. A growing number of scholars and practitioners from multiple originating disciplines are bringing together an ever increasing body of written work to support the recognition of Emergency Management as a profession and as a field for academic inquiry. This development in the United States has been propelled by the expansion of emergency management issues across disciplines, the establishment of a large number of academic programs across the country, and increasing visibility of disaster and its consequences, including the most recent emphasis on terrorism and homeland security.

Ⅱ. Background

Several elements have expanded the debate surrounding emergency management professionalization.

- the increase in the number of academic degree programs for Emergency Management, both undergraduate and graduate
- specialized training initiatives emphasizing leadership and management competencies
- increased interest in program accreditation, certification, professional standards, and performance measurement
- increased diversity within the profession, with more disciplines or specialized groups participating
- increased participation by the business sector
- more professionals seeking Emergency Management as a first career choice (Hecker, Kushma, McKay, Shaw, Buikema, Woodworth, & Fletcher, 1998).

There has also been an increase in the general public's acceptance of Emergency Management in recent years as it has transformed its emphasis from population protection in the Civil Defense era (during the two world wars and the ensuing Cold War) to an all hazards approach. Emergency management continues as an evolving field with its roots in civil defense, its present in addressing all forms of hazards management, and its future at a crossroad between sustainable community development (Winslow, 2001) and homeland security. Through this varied path, emergency managers have acquired an arguably definable body of knowledge and a skill set that many believe constitutes a profession. Though as a scholarly field of study Emergency Management is in its adolescence, it does retain some of the characteristics of an academic discipline which we will address later.

Emergency Management as a field of study, sub discipline, or discipline, has been furthered by the exponential growth of Emergency Management academic programs in the last 10 years. The

field of study includes the understanding of natural and technological hazards; cultural and human influences and impacts; and the relationship between the threats from hazards and the constructed or built environment. Therefore, the growth extends across disciplines in such diverse fields as public administration, sociology, engineering, social work, urban and regional planning, meteorology, geology, geography, business, psychology, and others.

III. Research Problem

Emergency Management as both a field of practice and as an emerging academic program has an obligation to reflect on itself and analyze its origins, present course, and future directions. Through self investigation it should examine the internal and external forces that shape and define the field and the "profession." The growth of a field into a profession is a complex process that includes meeting the expectations of other professions. Definitions or criteria of a profession vary across fields, however, most established criteria include a definable body of organized knowledge and values(Greenwood, 1957; Hatch, 1988; Lee, 1995). It follows that the development of Emergency Management must involve considerable attention to the field's underlying or supporting systematic ontological knowledge base and its underlying axiological values or beliefs. We define here, ontology - what is knowledge vs. axiology - what values go into it.

The knowledge and values within Emergency Management arguably originate from four sources: 1) the existing body of cross disciplined Emergency Management related research; 2) principles of Emergency Management as expressed by the practitioner community; 3) public and private sector training content; and 4) Emergency Management related academic curricula. While all bear an equal responsibility for their impact on the knowledge base and values of the field or sub discipline of Emergency Management, the latter are the focus of this study. The youngest of the four sources, curricula at higher education institutions, helps set the tone not only for future practitioners and educators, but also for future research directions.

Very few would argue against the premise that higher education plays a crucial role in the attainment of a profession. Academics generate, evaluate, organize, and transfer knowledge (Hecker, *et al.,* 1998). They provide students the information required for the creation of a new generation of Emergency Management professionals. For that generation of professionals to be effective, however, requires an understanding on the part of the academic community of what core knowledge and values are needed by the practitioner community and how academic programs and curricula development should meet that need. This study, therefore, is concerned with the following two questions: 1) based on existing academic curricula, what are some of the core knowledge components of Emergency Management and what is the relative emphasis placed on each of the identified components; and 2) how and to what extent does the curricula content create intersection between originating disciplines and institutions of emergency management practice, or more plainly stated, between academics and practitioners.

IV. Study Rationale and Scope

Like most applied interdisciplinary fields, Emergency Management has no single, overarching theoretical base(Thomas & Mileti, 2003). It pulls from a wide variety of disciplines and an even wider range of theoretical underpinnings that address an almost unlimited number of problems and issues that arise from disasters and the hazards that cause them. Central to this study is the identification and examination of core knowledge subjects and values currently being taught in 254 Emergency Management related courses in 86 institutions of higher learning.

V. Outline of Process

Waugh(2000: ix) writes that "Emergency Management is one of those fields that grows the more one gets to know it". By its very nature, Emergency Management is an applied field of study, oriented toward practice. But as McCurdy noted(1986), "No science can exist on applications alone. Someone must do the descriptive work upon which the applications are based." As mentioned before, Emergency Management has been shaped by, and contributes to, a myriad of other disciplines, creating an eclectic base of knowledge. It relies on the contributing disciplines or fields of study of sociology, public administration, political science, business, economics, engineering, psychology, anthropology, geology, ecology, geography, meteorology, environmental science, criminal justice, fire science, urban and regional planning, and public health. And although it evolves through them, it also contributes to them, and consists, in and of itself, as more that the sum of the parts.

The field of Emergency Management has grown too complex and dynamic to be divided up into autonomous and fragmented fields of knowledge. A major problem is the lack of clear categories

to compartmentalize the literature within. For example, an earlier survey of the Emergency Management literature(Dilling, 2002) revealed that there is no one established method for organizing the literature. Predominant methods include "system level" organization, i.e., individual, group, organization, community, society, international(Miletti, Drabek, & Haas, 1975a); by function, i.e., planning, warning, evacuation, etc.(Mileti, 1975; Drabek, 1986); by phase, Preparedness, Response, Recovery, Mitigation(Drabek, 1986; Miletti, Drabek, & Haas, 1975b; Tierney, Lindell, & Perry, 2001). Are any of these the best approach? Are there additional boundaries that can be established? Identifying core knowledge and values that transcend disciplines is one step in formulating a future model for more effectively ordering the literature.

VI. The Need for Synthesis

Apart from the need of ensuring that academic curricula is correctly defining the core knowledge and value base needed to establish Emergency Management as a profession, there are additional reasons to capsulate the information contained in existing academic curricula. Voices from disparate fields of the social science and social professions have asserted that efforts to accumulate new knowledge should be accompanied by a concerted effort to organize and cumulate existing knowledge(Rothman & Thomas, 1994, 134; Guetzkow, 1978). Glass, McGaw, and Smith(1981) argue that rather than "sink to confusion….the rubble ought to be sifted and culled for whatever consistency there is in it"(134). They see this activity as a "genuinely important scholarly endeavor"(Glass, McGaw, & Smith, 1981, 134).

The accumulation of new knowledge should be accompanied by a concerted effort to organize existing knowledge(Rothman, Damron Rodriquez, & Shenassa, 1994). Guestzkow(1978), a political scientist, calls for a time of consolidation. Scholars from other fields have traditionally "sifted" and aggregated this data from a traditional literature review. The flexible integrative qualitative process of the time honored literature review helps organize massive and disorderly research(Rothman & Thomas, 1994). Completing this among all contributing disciplines would be a monumental task. Therefore, this study, rather than "culling" literature, sifted through hundreds of Emergency Management higher education syllabi to "group similar elements or dimensions and visualize connections among distinct languages, concepts, and findings from diverse disciplines and contexts"(Rothman, 1980, 74). What Posner and Strike(1982) would call inductive interpretation, is used to arrange the individual parts or dimensions into consistent and satisfying patterns(Gibson, 1964). The diversity of contributing disciplines to Emergency Management courses underlines the need for creativity in analysis.

Developing a search methodology that cuts across multiple knowledge fields is strongly recommended by many scholars(Rothman, Damron Rodriquez, & Shenassa, 1994; Glass, McGaw, & Smith, 1981; Light & Pillemer, 1994). This is particularly important when synthesizing the Emergency Management related syllabi identified for this study since they have emerged from so many different disciplinary approaches. Although disciplinary differences make knowledge integration more difficult(Rothman, *et. al.,* 1994), this makes the incorporation of multiple bodies of knowledge, here interdisciplinary syllabi, more important in order to reduce or negate disciplinary bias.

VII. Identifying Specific Data Sources

This study encompassed two different sets of data, each containing a number of subsets. In the end, they may or may not bear close resemblance to one another. The first set of data, the primary data used for this study, was taken from syllabi collected by the Federal Emergency Management Agency's(FEMA) Higher Education Program. These data were categorized, coded, and analyzed to answer the first of our questions: based on existing academic curricula, what are some of the core knowledge components of Emergency Management and what is the relative emphasis placed on each of the identified components. Although there are 196 higher education institutions(as of November, 2007) with some level of Emergency Management programs identified by FEMA's Higher Education Project, (see Table 1) not all have provided syllabi of their courses to FEMA. The number of course syllabi provided from each institution ranged from one to nineteen. The number of syllabi submitted may differ from the total number of courses taught at each institution.

These syllabi were solicited by the Higher Education Project office. This is done annually to encourage emergency management programs to learn from one another. Reminders are sometimes sent to programs to encourage greater participation rates. However, since the submission is actively solicited, but not manadatory, some professors have provided syllabi and others have not. During the time of retrieval of the syllabi, 63 percent of the identified institutions had submitted one or more syllabi. Therefore, the data sample is arguably representative, though not inclusive of all institutions.

The institutions do represent a variety of disciplines and types of educational institutions however, increasing the richness of the data. For this study 296 syllabi were downloaded from the

Higher Education site. They were sorted into the following categories by level of education: Associate Level, Undergraduate Level, Graduate Level, Stand Alone Certificates, and Unknown (for which it could not be determined by looking at the syllabus what level of study was represented). The breakouts by syllabi and institutions represented may be seen in Table 2.

Table 1. Emergency Management Higher Education Institutions

Level of Education	Number of Institutions Represented *
Associate Level	36
Bachelor Level	46
Masters Level	49
Doctoral Level	8
Stand Alone or Certificate	57
	196

source : FEMA higher Ed website-retrived on Nov. 29, 2007.(http://www.training.fema.gov/EMIWeb/edu/collegelist/

Table 2. Syllabi Data Set by Category

Level of Education	Number of Syllabi	Institutions Represented
Associate	48	11
Undergraduate	116	42
Graduate	57	25
Certificate	33	8
Unknown Level	42	38
	296	124
Unknown Level discarded	-42	-38
Total for study	254	86*

*Note: Although there were a total of 104 institutions represented in the data, some were represented in more than one category; therefore these numbers represent differing institutions by category.

The data to support this analysis were taken from the results of two studies. The first are the results of a survey of practicing emergency managers in major U.S. cities, conducted in the fall of 2004 by two Oklahoma State University professors, Dr.

William Parle and Dr. Anthony Brown(Parle & Brown, 2006). The purpose of their study was to determine the types of technical and theoretical knowledge that emergency managers at the local level of government considered to be most important in their professional work. First, respondents were asked to assess the importance of a list of job skills that were necessary to be an effective emergency manager. Then, respondents were asked to complete the same assessment process for a list of general knowledge areas related to emergency management(Parle & Brown, 2006). The survey was mailed to those individuals responsible for the emergency management function in the nation's 150 largest cities. Parle & Brown(2006) appropriately selected emergency managers in large municipalities on the assumption that they would have extensive experience in the field of emergency management to attain those positions. They had a response rate of 46.6%, representing 70 cities in 40 states. The cities responding ranged in population size from 141,674 to 8,008,278(Parle & Brown, 2006, 2).

This data was broken down into domains and dimensions as earlier described so that their findings could be cross referenced and intersected to the findings from the analysis of the syllabi. The objective of this analysis was to determine if those subjects and emphasis areas currently being taught by higher education institutions coincide with the areas identified as most important by leading practitioners in emergency management, or between academics and practitioners. This points to an important limitation of this study. These domains and dimensions arising out of both the Parle and Brown study and that of the Thomas and Mileti study mentioned are used to define the definitional framework used to analyze the syllabi of courses taught in the field. In other

words, the definitional framework was pre defined and was not used to identify other possible dimensions that exist within the syllabi. The methodology used in this study might have prevented the emergence of other important dimensions from the syllabi that might not have been captured from the practitioners and subject matter experts in those two studies. Nevertheless, using the definitional frameword provided by the practitioners was deemed to be an important perspective for identifying key dimensions of the curricula without investigator bias.

The second set of data are results of a focus group of fifty five recognized Emergency Management leaders who were convened by the Natural Hazard Center at the University of Colorado at Boulder and the University of Colorado at Denver in partnership with the FEMA Higher Education Project with support from the National Science Foundation(NSF). The working groups, representing both the practitioner community and various academic disciplines(Thomas & Mileti, 2003), set out to determine the core knowledge, skills, and abilities needed by tomorrow's emergency managers. During three days in October of 2003 the group worked on identifying 1) core skills; 2) core knowledge areas; 3) undergraduate curricula; 4) graduate curricula; and, 5) certificates, all germane to this study. They also considered issues and strategies related to 6) research and technology needs; 7) balancing research, theory, and practice; and, 8) continuing education(Thomas & Mileti, 2003, 3). Although significant to the emerging field of Emergency Management, these three areas of the resultant report were not considered in my analysis. These sections of the study are narrative and less specific in nature and not as conducive to the type of word frequency analysis and data comparisons planned here. However, the subjects and areas of emphasis identified in the first five areas mentioned above were compared to the results of the syllabi analysis to contribute to my findings. This set of data, though helpful in validating trends borne out by the Parle and Brown results, was not analyzed to the degree used with the Parle and Brown data. This is due to two limitations of the data: one, the focus group was not solely practitioners but a mixed group of subject matter experts from practice, academia, and the private sector. This makes it less compelling as a means to mark the intersection of academia and practice. Second the data was not organized in the same manner as that in the Parle and Brown study, missing the overarching domains which helped clarify the underlying dimensions or subject areas.

Ⅷ. Parle & Brown Dictionaries

In the Parle & Brown(2004) survey participants were asked to rank the areas(domains, further defined by accompanying subordinate dimensions) on a scale of one (1) being the most important to (5) being the least important. They were asked to rank both what Parle & Brown described as applied skills and professional competencies and another group of subject areas defined as general knowledge or academic background areas(7). The results of the survey, again as described earlier, of the 150 largest emergency management offices in the United States (with a response rate of 46.6%), are provided below.

Applied skills and competencies. The items are ranked in order of importance from highest to lowest based upon the mean score of respondents(Parle & Brown, 12).

1.47 Planning for Emergencies and Disasters
1.47 Monitoring and Evaluating Preparedness
1.56 Responding to Disasters
1.86 Recovery from Disasters
1.90 Community Risk Assessment
2.00 Natural Hazards: Causes and Mitigation
2.11 Technological Hazards: Causes and Mitigation
2.16 Terrorism and Civil Hazards: Causes and Mitigation
2.43 Technology Applications in Emergency Management
2.73 Legal Basis of Emergency and Environmental Management

General Knowledge Areas. The items are ranked in order of importance from highest to lowest based upon the mean score of respondents. The disciplines in parentheses are ones they felt were most closely associated with the knowledge areas(Parle & Brown, 2004, 16).

2.36 Governmental Budgeting and Financial Management (Public Administration)
2.55 Management Theory and Practice (Management and Public Administration)
2.83 Social and Psychological Impacts of Disasters (Sociology and Psychology)
2.87 Intergovernmental Relations (Political Science)
2.90 State and Local Government (Political Science)
2.97 Policy Analysis and Program Evaluation (Economics and Public Administration)
3.16 Urban Planning in the U.S. (Geography)

3.45 Evolution of Disaster Policy in the U.S. (History)
3.75 Probability and Statistics(Mathematics and Statistics)
3.80 Engineering for Non Engineers (Engineering)

For our frequency analysis, both applied and general subjects were included in an MAXDictio dictionary, and these were then applied to all four levels or categories of syllabi. In some cases, not all areas (domains), or their accompanying subjects (dimensions) appeared in the syllabi. If no frequency counts were registered, the domains do not appear in that category of the MAXDictio runs.

IX. Narrative Summary of Methodology and Findings

This study was organized by using Systematic Research Synthesis or SRS (Rothman, Damron Rodriquez, & Shenassa, 1994). It helped us follow a systematic process in determining the steps we needed to follow to meet our end goal. In doing so we followed the general step by step approach repeated below:

1. Defining the Problem/Goal

This study sought to determine the degree of alignment between the perceptions of academics and practitioners in the field. To that end we answered two research questions: 1) based on existing academic curricula, what are the core knowledge components of Emergency Management, and what is the relative emphasis placed on each component; and 2) how and to what extent do the curricular contents create intersection between originating disciplines and institutions of emergency management practice, or more plainly stated, between academics and practitioners.

2. Identifying General Knowledge Areas Relevant to the Problem/Goal

For the relatively young field or sub field of Emergency Management we deemed it important to distinguish individual ontologies and epistemologies that academics bring to the academic Emergency Management literature and relate them to what practitioners value. We explained the rationale behind this study in terms of two overarching theoretical frameworks: systems theory and the sociological theory of professions. These theories helped 1) explain the connectedness of the subsequent cross discipline data analysis and 2) provided a rationale for the investigation itself.

3. Identifying Specific Data Sources

Two data sources were used in this study: 1) a focus group study of academics and practitioners tasked with determining the core elements that should be present in emergency management higher education programs in a paper summarized by Thomas and Mileti(2003); and 2) a survey of emergency management directors for the 150 most populous jurisdictions in the United States in a paper summarized by Parle and Brown(2005). The survey participants were asked to identify the most important skills, competencies, and general knowledge that should be covered in higher education programs in emergency management to prepare future emergency managers for practice. These two studies serve to define the definitional framework used to analyze the syllabi of courses taught in the field. This pre defined framework prevented the identification of other possible dimensions that might exist within the syllabi. Nevertheless, using the definitional frameword provided by the practitioners was deemed to be an important perspective for identifying key dimensions of the curricula without investigator bias. The method used here has, however, identified several important dimensions that are being taught.

4. Determining Appropriate Descriptors for the Search

The data sources mentioned above provided the base data (later to form the dictionaries in MAXQDA Dictio) and represented the practitioner view of what was needed to be taught. Now we needed the data descriptors representing the academic view to search and compare for congruence. This was accomplished by downloading two hundred and fifty four (254) syllabi from one hundred and ninety six (196) different institutions to reflect what was being taught in emergency management programs across the United States. The contents of the syllabi were then used to search for dimensions (terms or subjects) and domains (major theme areas) that matched those identified by the practitioners as important.

5. Establishing Procedures for Codifying Assessing, and Managing Information

The syllabi were divided into four categories associate, stand alone certificate, undergraduate, and graduate related to the level of education they represented. They were scrubbed of all unrelated sections, i.e., grading, honor code, etc. They were then segregated by originating disciplines, i.e., public administration, sociology, etc.

MAXQDA Dictio was used to manage the content analysis of the data by determining word frequency counts and percentages based on dictionaries created by transferring the contents of the two data sources, Thomas and Mileti(2003) and Parle and Brown(2005), into the software. Using the software, the syllabi were run against the dictionaries to determine symmetry between the practitioner and academic perspectives.

6. Establishing Procedures for Developing Consensus Findings

Each of the two research questions were examined, respectively. For the first question regarding knowledge areas identified as important by practitioners and academics, the frequency count results were examined to ascertain the congruence between the two perspectives. For question two involving the relatedness of originating disciplines to the practitioner field, the frequency counts were compared and analyzed by discipline to the practitioner data.

Ⅹ. Conclusions: Generalization of findings to the field of Emergency Management

This study sought to determine the degree of alignment between the perceptions of academics and practitioners in the field. To that end we answered two research questions: 1) based on existing academic curricula, what are the core knowledge components of Emergency Management, and what is the relative emphasis placed on each component; and, 2) how and to what extent do the curricular contents create intersection between originating disciplines and institutions of emergency management practice, or more plainly stated, between academics and practitioners.

It can be argued that the substantive aim of this study was met and the two research questions answered. There were two major findings:

㉠ There are identifiable core components and there is powerful congruence between academics and practitioners about what should be taught in dedicated emergency management courses regardless of discipline.

㉡ That although practitioners have identified the need for multidisciplinary education for emergency management, multi disciplinary perspectives are largely absent from the dedicated emergency management courses, irrespective of the disciplinary orientation of the hosting departments.

The stress on the first finding is the word “core”. There was very strong symmetry on core competencies or what the Parle and Brown study defined as “applied skills and competencies”. There was substantial agreement among practitioners and academics about major topics areas and subjects in this arena. Congruence regarding broad topics between what practitioners say need to be taught and what academics are doing extends beyond disciplinary boundaries. As relates to the sociology of professions, that would indicate emerging maturity or maturation in the field as a profession. A sound profession has agreement regarding its theoretical underpinnings(Greenwood, 1957). Professional education is in line with professional (clinical) need. In employing the framework of the theory of the sociology of professions to guide the direction of this analysis, we may have taken one closer step to agreeing that Emergency Management is indeed a profession. If there is agreement in core knowledge components, a field can gain societal recognition. Defining parameters of knowledge is critically important in the making of a profession. Public Administration, as a field or discipline, has experienced difficulties doing this due to the many broad areas of knowledge it encompasses. Emergency Management, given this part of the analysis, may have a somewhat easier time defining itself, at least as it relates to “core” skills and competencies.

There was not however, symmetry on the more general knowledge areas, which, though not ranked as important as applied skills and competencies by the practitioners, were deemed important to be covered. On this cautionary note, for example, of about 40 specific undergraduate level subject areas identified in the Thomas & Mileti study, only about a dozen received appreciable mention in the syllabi. This suggests that the dedicated emergency management specific courses may be neglecting important knowledge areas. This points to the need for cross disciplinary study since the topics identified do cross disciplinary boundaries.

Our findings concluded with the finding relative to general knowledge areas. The result of the analysis was that these general knowledge areas, e.g., financial management, management theory, intergovernmental relations, policy analysis, etc., are not being taught in dedicated emergency management courses. These general knowledge areas are also being missed in certificate or stand alone programs. If we look at the results of the Parle and Brown practitioner survey and the

Thomas and Mileti focus group study, it seems evident that specialized courses in themselves are not enough to prepare a student to be an effective emergency management professional. More rounded educational preparation may be required.

It would seem that the professionals surveyed by Parle and Brown are really calling for more interdisciplinary studies. Practitioners are calling for multi disciplinary education, more than is being provided in dedicated emergency management courses. Again, it can be assumed that students enrolled in other disciplines that have courses or specializations in emergency management are receiving the more general knowledge areas in their broader program of study. This holds true across disciplines. For example, public administration may provide some of the general knowledge areas, but no single field of study, including public administration, provides all the general topics that are needed to prepare a well rounded emergency management professional. Dedicated certificate or emergency management degree programs, therefore, should be ensuring these broader subject areas are integrated within the more applied subject areas they are addressing.

It would follow that the academic field of emergency management is strengthened by the very nature of its interdisciplinary character. Diversity is advantageous rather than fragmenting for this discipline. For undergraduate or graduate degrees, students should be, not just allowed, but encouraged or required, to take courses in other departments. That of course runs contrary to the funding and budgeting policies of many universities, e.g., emphasis on "full time equivalents (FTE's) etc. Those policies may contradict the educational needs of emergency managers.

In summary, this study has drawn four general conclusions:

- There exists a high level of congruence between academics and practitioners regarding the core knowledge areas of the field of emergency management.
- The core and general knowledge areas within the field of emergency management have developed over time from the influences of a variety of originating disciplines. Since the development of the field has drawn on these many disciplinary influences, it is important that the future of the field remains interdisciplinary.
- There may be deficiencies in the coverage of general knowledge areas, although this study examined only syllabi that were specific to emergency management. Nevertheless, we conclude that it is critical that these general topics be included either in the over arching disciplinary program of study or integrated within stand alone and certificate programs.
- Given the level of coherence that this study has found in core subject areas and incongruence that was identified regarding general knowledge areas, this methodology offers promise for application to other professional fields.

XI. Recommendations for Future Research

There are several avenues for future research and expansion of the ideas in this study. What explains the degree of congruence between the academic and practitioner community for example? I suspect that the Federal Emergency Management Agency's aggressive training program for practitioners mentioned earlier in the study might be one contributor to this. The popularity of FEMA's Higher Education Program and list serve within the academic community could be another. FEMA has assumed a central role in an enlarging network that encompasses both practitioners and academics in the field of Emergency Management. One individual in particular, Dr. Wayne Blanchard, the current Director of FEMA's Higher Education Project, has assumed a policy entrepreneurship role in both the expansion and networking of Emergency Management related higher education programs. He has actively sought to create a social network encompassing the academic and practitioner community. FEMA is also looked on as a source for potential funding and support by both the practitioner and academic community. Therefore, there could be a positive relationship between the centrality of FEMA's role, and that of Dr. Blanchard specfically, in the forming and congruence of the core components of Emergency Management education. The network and policy entrepreneurship literature and an actual network analysis might provide a lens for future research to better understand the origins of existing congruence.

Another avenue to explore is the role and background of the instructor in bridging the gap between practice and academia. Emergency Management's presence in higher education is on a rise. Who are the cadre of instructors that teach in this rapidly expanding field? How do their backgrounds impact the content of their syllabi? For example, how does the status of the instructor, i.e., tenured faculty with little or no background in Emergency Management vs, Adjunct faculty with a practitioner background impact the findings and conclusions on congruence? The conguence could be explained by a large number of former practitioners within the academic community. On the other hand, if there are a substantial percentage of academics that do not have a practitioner background, how have they developed their theoretical frameworks that underlie the syllabi that are so closely congruent?

One additional limitation of this study is that syllabi were grouped together, irrespective of whether they were for required or elective courses. Future research might dististinguish between

these categories of syllabi.

This study is based on a cross sectional design. The syllabi studied were those in existence at a given point in time. It is possible that retroactive studies of earlier syllabi might reveal differing patterns regarding curriculum emphasis and congruence. A cross sectional study such as this can only demonstrate the existence of congruence. It is beyond the scope of this study to explain the causes of that congruence. To do that, longitudinal research of past curricula and network dynamics would be required. For example, it is likely that the dimension of terrorism and homeland security would have been less important prior to 911. Future events may similarly redefine the field. But it seems evident, that emergency management, as both an emerging profession and as a maturing academic field, is here to stay.

Bibliography

Abbott, A. 1988. *The System of the Professions*. London: University of Chicago Press.

Aguirre, B. 1976. *Problems of Methods in the Development of Propositional Inventories in the Field of Disaster Research*. Columbus: Disaster Research Center, Ohio State University.

Anderson, M. S., Louis, K. S., & Earle, J. 1994. Disciplinary and Departmental Effects on Observations of Faculty and Graduate School Misconduct. *Journal of Higher Education*. 65(3): 331-350.

Auerbach, J. S. 1976. *Unequal Justice: Lawyers and Social Change in Modern America*. New York: Oxford University Press.

Babbie, E. 1990. *Survey Research Methods*. Belmont, CA: Wadsworth.

Bailey, K. D. 1973. Monothetic and Polythetic Typologies and Their Relations to Conceptualization, Measurement, and Scaling. *American Sociological Review*. 38(1): 18-33.

Barton, J., Emery, M. Flood, R. L., Selsky, J. W., & Wostenholme, E. 2004. A Maturing of Systems Thinking? Evidence from Three Perspectives. *Systemic Practice and Action Research*. 17(1): 3-36.

Becker, H. S. 1961. *Boys in White: Student Culture in Medical School*. Chicago: University of Chicago Press.

Brown, J. 1992. *The Definition of a Profession*. New Jersey: Princeton.

Carr Saunders, A. M. 1928. *Professions: Their Organization and Place in Society*. Oxford: Clarendon Press.

Carr Saunders, A. M. & Wilson, P.A. 1933. *The Professions*. Oxford: Clarendon Press.

Casey, C. 1995. *Work, Self and Society After Industrialism*. London: Routledge.

Checkland, P. 1981. *Systems Thinking, Systems Practice*. Chichester: Wiley.

Choi, Sang Ok. 2005. *Network Analysis of Workforce Development Programs*. Dissertation, Florida State University.

Chubin, D. E., Porter, A. L., Rossini, F. A., & Connolly, T. 1986. *Interdisciplinary Analysis and Research*. Lomond. City, State: Publishing Company.

Churchman, C. W. 1968. *The Systems Approach*. New York: Delta.

Churchman, C. W. 1979. *The Systems Approach and its Enemies*. New York: Basic Books.

Clark, H. 1996. *Using Language*. City: Cambridge University Press.

Cooper, R. & Law, J. 1995. Organization: Distal and Proximal Views. *Research in the Sociology of Organizations*. 13: 237-274.

Creswell, J. W. 1994. *Research Design: Qualitative and Quantitative Approaches*. Thousand Oaks: Sage.

Darlington, J. D. 1999. *The Profession of Emergency Management: Educational Opportunities and Gaps*. Department of Sociology and Anthropology: Western Illinois University.

Dilling, J. 2002(Oct. 3). *The Creation and Maturation of a Profession: The Growth of Emergency Management Knowledge*. Paper presented at SECOPA, Columbia, SC

Drabek, T. E. 1994. Disaster in Aisle 13 Revisited. In R. R. Dynes & K. J. Tierney(eds.), *Disaster, Collective Behavior, and Social Organization(26-44)*. Newark: University of Delaware Press.

Du Gay, P. & Salaman, G. 1992. The Culture of the Customer. *Journal of Management Studies*. 29(5): 615-633.

Dunne, L. & Dunne, R. Enhancement in HE. Retrieved January 29, 2003, from http://www.ltsn.ac.uk/genericcentre/projects/quaa/enhancement/docs/L&RDunne.rtf

Dynes, R. R. 1970. *Organized Behaviour in Disaster*. Lexington, D.C.: Heath and Company.

Emery, F. 1980. Educational paradigms: An epistemological revolution. In M. Emery (Ed.)(1993), *Participative Design for Participative Democracy*. Canberra: Centre for Continuing Education.

Emery, F. & Emery, M. 1997. Toward a Logic of Hypothesis: Everyone Does Research. *Concepts Transform*. 2(2): 119-144.

Fishbein, M., & Ajzen, I. 1975. *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research*. Reading, MA: Addison Wesley.

Flood, R. L. 1990. *Liberating Systems Theory*. New York: Wiley.

Flood, R. L. 1999. *Rethinking the Fifth Discipline: Learning within the Knowledgable*. London: Routledge.

Foucault, M. 1975. *The Birth of the Clinic: An Archeology of Medical Perception*. New York: Vintage Books.

Foucault, M. 1977. *Discipline and Punish: The Birth of the Prison*. Harmondsworth: Penguin.

Freidson, E. 1970a. *Profession of Medicine*. New York: Dodd, Mead.

Freidson, E. 1970b. *Professional Dominance: The Social Structure of Medical Care*. New York: Atherton Press.

Freidson, E. 1986. *Professional Powers: A Study of the Institutionalization of Formal Knowledge*. Chicago: University of Chicago Press.

Freidson, E. 1988. *Profession of Medicine: A Study in the Sociology of Applied Knowledge*. Chicago: University of Chicago Press.

Freidson, E. 1994. *Professionalism Reborn: Theory, Prophecy and Policy*. Cambridge: Polity Press.

Garber, M. 2001. *Academic Instincts*. Princeton: Princeton University Press.

Geis, D. 2000. By Design: The Disaster Resistant and Quality of Life Community. *Natural Hazard Review*. 1(3): 151-160.

Gold, M.(ed). 1999. *The Complete Social Scientists: A Kurt Lewin Reader*. Washington, D. C.: The American Psychological Association.

Goode, W. J. 1957. Community Within a Community: The Professions. *American Sociological Review*. 22(1): 194-200.

Goode, W. J. 1969. The Theoretical Limits of Professionalization. In A. Etzioni (ed.), *The Semi professions and Their Organization(266-313)*. New York: Free Press.

Greenwood, E. 1957. Attributes of a Profession. *Social Work*. 2(3): 45-55.

Greenwood, R. & Lachman, R. 1996. Change as an Underlying Theme in Professional Service Organizations: An introduction. *Organization Studies*. 17(4): 563-572.

Haber, S. 1991. *The Quest for Authority and Honor in the American Professions(1750-1900)*. Chicago: University of Chicago Press.

Hall, R. H. 1968. Professionalization and Bureaucratization. *American Sociological Review*. 33(1): 92-104.

Hanlon, G. 1996. Casino Capitalism and the Rise of the Commercialized Service Class: An Examination of the Accountant. *Critical Perspectives on Accounting*. 7: 339-363.

Hecker, E., Kushma, J., McKay, J., Shaw, G., Buikema, E., Woodworth, B. & Fletcher, K. 1998. Session Summary from the 1998 Hazard Research and Application Workshop, The Evolving Profession of Emergency Management. Retrieved January 27, 2003, from www.colorado.edu/hazards/ss/ss98/ss2.html.

Hecker, E., McEntire, D., Blanchard, W., McGlown, J., Bokman, L., & Buikema, E. 2001. Session summary from the 2001 hazard research and application workshop, "Professional Emergency and Hazards Management: Update on Key Initiatives". Retrieved January 27, 2003, from www.colorado.edu/hazards/ss/ss01/s3.html.

Heffron, F. 1989. *Organizational Theory and Public Organizations: The Political Connection*. Englewood Cliffs, NJ: Prentice Hall.

Hopwood, A. 1987. The Archeology of Accounting Systems. *Accounting, Organizations and Society*. 12(3): 207-234.

Jamous, H. & Peloille, B. 1970. Changes in the French University Hospital System. In J.A. Jackson(Ed.), *Professions and Professionalization(111-152)*. Cambridge: Cambridge University Press.

Jarausch, K. H. 1990. *The Unfree Professions. German Lawyers, Teachers and Engineers, 1990 1950*. New York: Oxford University Press.

Jones, A. 1991. *Professions and the State*. Philadelphia: Temple University Press.

Keat, R. 1991. Consumer Sovereignty and the Iintegrity of Practices. In R. Keat & N. Abercrombie(Eds.), *Enterprise Culture(216-230)*. London: Routledge.

Kieth, B. & Moore, H. A. 1995. Training Sociologists: An Assessment of Professional Socialization and the Emergence of Career Aspirations. *Teaching Sociology*. 23(3): 199-214.

Klay, W. E. 1999. Positioning a Public Administration Program for the 21st Century.

Public Administration and Management. 1999. 4(2): 18, Retrieved January 29, 2003, from http://pamij.com/99_4_2_Klay.html.

Krippendorff, K. 2004. *Content Analysis: An Introduction to its Methodology(2nd Ed.)*. Thousand Oaks, CA: Sage Publications.

Larson, M. 1977. *The Rise of Professionalism: A Sociological Analysis*. Berkeley: University of California Press.

Leonard, J. 1981. *La Medicine Entre les Saviors et les Pourvoirs. Histore Intellectuelle et Politique de la Medicine Francaise au 19e Ciecle*. Paris: Aubier.

Lilienfled, R. 1978. *The Rise of Systems Thinking*. Chichester: Wiley.

Lincoln, Y. S. & Guba, E. G. 1985. *Naturalistic Inquiry*. Newbury Park, CA: Sage Publications.

Lippmann, W. 1922. *Public Opinion*. New York: Macmillan.

Lortie, D. C. 1959. Laymen to Lawmen: Law School, Careers, and Professional Socialization.

Harvard Educational Review. 29(4): 352-369.

Luhmann, N. 1995. *Social Systems*. Stanford, CA: Stanford University Press.

Marshall, T. H. 1939. The Recent history of Professionalism in Relation to Social Structure and Social Policy. *Canadian Journal of Economics and Political Science*. 5(3): 325-340.

Martindale, D. 1960. *The Nature and Types of Sociological Theory*. Boston, MA: Hougton Mifflin.

Mautz, R. K. 1964. *The Evolution of CPA Ethics*. East Lansing: Michigan State University.

McEntire, D. A. 2004(June 8). *The status of emergency management theory: Issues, barriers, and recommendations for improved scholarship*. Paper presented at the FEMA Higher Education Conference, Emmitsburg, MD.

Meiksins, P. F. & Watson, J. M. 1989. Professional Autonomy and Organizational Constraint: The Case of Engineers. *The Sociological Quarterly*. 30(4): 561-585.

Merton, R. K., Reader, G. G., Kendall, P.(Eds). 1957. *The Student Physician: Introductory Studies in the Sociology of Medical Education*. Cambridge, MA: Harvard University Press.

Miles, M. B. & Huberman, A. M. 1994. *Qualitative Data Analysis: An Expanded Sourcebook (2nd Ed.)*. Thousand Oaks, CA: Sage Publications

Miller, G. A. 1951. *Language and Communication*. New Cork: McGraw Hill.

Millican, P. 2002. *Disaster management: A framework in Queensland. The Macedon Digest*. Retrieved January 29, 2003, from www.wicen.org.au/Principles.html.

Monarch, I., Konda, S. L., Levy, S., Reich, Y., Subrahmanian, E., & Ulrich, C. 1997. Mapping sociotechnical networks in the making. In G. Bowker, S. L. Star, W. Turner, & L. Gasser(Eds.) *Social Science, Technical Systems and Co operative Work: Beyond the Great Divide(331-354)*. Mahwah, NJ: Lawrence Erlbaum.

Monette, D. R., Sullivan, T. J. & DeJong, C. R. 1986. *Applied Social Research: Tool for the Human Services*. New York: Rinehart Winston.

Moore, W. E. 1970. *The Professions: Roles and Rules*. New York: Russel Sage Foundation.

Morgan, G. 1997. *Images of Organization(revised ed)*. Thousand Oaks, CA: Sage.

NASPAA(n.d.). Site Visitor Manual. Retrieved January 28, 2003, from www.naspaa.org/accreditation/seeking/reference/manual.asp

Neuendorf, N. A. 2002. *The Content Analysis Guidebook*. Thousand Oaks, CA: Sage Publications.

Parsons, T. 1939. The Professions and Social Structure. *Social Forces*. 17(4): 457-467.

Parle, W. & Brown, A. 2005. *Educational Needs Survey Report*. Oklahoma State University.

Pease, J. 1967. Faculty Influence and Professional Participation of Doctoral Students. *Sociological Inquiry*. 37(1): 63-70.

Peery, N. 1972. General Systems Theory: An Inquiry into Its Social Philosophy. *Academy of Management Journal*. 15(4): 495-509.

Pepper, S. C. 1942. *World Hypotheses*. Berkeley, CA: University of California Press.

Platt, A. M. 1969. *The Child Savers: The Invention of Delinquency*. Chicago: University of Chicago Press.

Prest, W. R. 1986. *The Rise of the Barristers. A Social History of the English Bar 1590 - 1640*. Oxford, UK: Clarendon Press.

Ramsey, M. 1984. The Politics of Professional Monopoly in Nneteenth Cntury Mdicine. The French Cse and Is Rvals. In G. L. Geison(Ed.), *Professions and the French State 1700-900(225-305)*. Philadelphia: Pennsylvania University Press.

Riffe, D., Lacy, S., & Fico, F. G. 2005. *Analyzing Media Messages: Using Quantitative Content Analysis in Research(2nd Ed.)*. Mahway, NJ: Lawrence Erlbaum.

Roberts, C. W.(Ed.). 1997. *Text Analysis for the Social Sciences: Methods for Drawing Statistical Inferences from Texts and Transcripts*. Mahway, NJ: Lawrence Erlbaum.

Rothman, D. J. 1971. *The Discovery of the Asylum*. Boston, MA: Little, Brown.

Rumble, G. 1988. Animadversions upon the Concept of Distance Education as a Discipline. *Journal of Distance Education / Revue de l'enseignement distance*. 3(1).

Schumacher, S., & Mcmillan, J. H. 1993. *Research in Education: A Conceptual Introduction(3rd ed.)*. New York: Harper Collins.

Senge, P. 1990. *The Fifth Discipline*. New York: Doubleday.

Smelser, N. J. & Baltes, P. B. 2001. *International Encyclopedia of the Social and Behavioral Sciences*. New York: Elsevier.

Sommerlad, H. 1995. Managerialism and the Legal Profession: A New Professional Paradigm. *International Journal of the Legal Profession*. 2(2): 159-185.

Spencer, H. 1914. *The Principles of Sociology(Vol. 3)*. New York: Appleton.

Stanley, C. 1991. Justice Enters the Marketplace: Enterprise Culture and the Provision of Legal Services. In R. Keat & N. Abercrombie(eds), *Enterprise Culture(206-215)*. London: Routledge.

Stone, P. J., Dunphy, D. C., Smith, M. S., & Ogilvie, D. M. 1966. *The General Inquirer: A Computer Approach to Content Analysis*. Cambridge: MIT Press.

Stone, P. J., Cambridge Computer Associates, & Kirsch, J. 1968. *User's Manual for the General Inquirer*. Cambridge, MA: MIT Press.

Subrahmanian, E., Monarch, I., Konda, S., Granger, H., Milliken, R., Westerberg, A., & Then dim

Group. 2003. Boundary Objects and Prototypes at the Interfaces of Engineering Design. *Computer Supported Cooperative Work*. 12(2): 185-203.

Suppes, P. 1974. The Place of Theory in Educational Research. *Educational Researcher*. 3: 3-10.

Swanson, E. R. 1979. Working with Other Disciplines. *American Journal of Agricultural Economics*. 61(5): 849-859.

Tawney, R. H. 1920. *The Acquisitive Society*. New York: Harcourt Brace.

Taylor, B. 1995. Amateurs, Professionals and the Knowledge of Archeology. *British Journal of Sociology*. 46(3): 499-508.

Thomas, D. & Mileti, D. 2003(Oct. 22-24). *Designing Educational Opportunities for the Hazards Manager of the 21st Century*. Workshop Report. Boulder, CO.

Torren, N. 1976. Bureaucracy and Professionalism: A Reconsideration of Weber's Thesis. *Academy of Management Review*. 1(3): 36-46.

Torry, W. I. 1979. Anthropology and Disaster Research. *Disasters*. 3: 43-52.

Valaskakis, K. 1975. Eclectics: Elements of a Transdisciplinary Methodology for Futures Studies. In H. W. Eldredge, A. King, et al., *The Future as an Academic Discipline*. New York: North Holland.

Vogt, W. P. 2005. *Dictionary of Statistics and Methodology: A Nontechnical Guide for the Social Sciences(3rd Ed.)*. Thousand Oaks, CA: Sage Publications.

von Bertananffy, L. 1972. The History and Status of General Systems Theory. *Academy of Management Journal*. 15(4): 407-426.

Waldo, D. 1980. *The Enterprise of Public Administration: A Summary View*. Novato, CA: Chandler and Sharp Publishers, Inc.

Warkov, S. & Zelan, J. 1965. *Lawyers in the Making*. Chicago: Aldine.

Webb, S. & Webb, B. 1917. Special Supplement on Professional Associations. *New Statesman*. 211: 9.

Weber, R. P. 1990. *Basic Content Analysis(2nd Ed.)*. Newbury Park, CA: Sage Publications.

Weber, S. 1987. The limits of professionalism. In S. Weber (Eds.), *Institution and Interpretation: Theory and History of Literature(31: 19-32)*. Minneapolis: University of Minneapolis Press.

Wellington City Council. 2003. Emergency Management Principles. Retrieved January 29, 2003, from http://www.wcc.govt.nz/policy/archive/emergency_management.html

Wiggins, J. S. (1973). *Personality and Prediction: Principles of Personality Assessment*. Reading, MA: Addison Wesley Publishing Company.

Wilensky, H. L. 1964. The Professionalization of Everyone? *American Journal of Sociology*. 70(2): 137-158.

Winslow, F. 2001(Oct.). Recent trends in emergency management: Education. *ASPA Online Columns*. Retrieved January 28, 2003, from www.aspanet.org/publications/COLUMNS/archives/2001/

Oct/winslow1012.html.

Wright, C. R. 1964. Success or Failure in Earning Graduate Degrees. *Sociology of Education*. 38(1): 73-97.

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Framing Emergency Management Knowledge Expansion within Current US Academic Curricula

Janet Dilling

The field of Emergency Management is in a period of dramatic knowledge expansion. Practitioners from diverse public and private organizations and all levels of government are enjoying increased visibility and resources in combating a string of media enriched disaster events. A growing number of scholars and practitioners from multiple originating disciplines are bringing together an ever-increasing body of written work to support the recognition of Emergency Management as a profession and as a field for academic inquiry. This development in the United States has been propelled by the expansion of emergency management issues across disciplines, the establishment of a large number of academic programs across the country, and increasing visibility of disaster and its consequences, including the most recent emphasis on terrorism and homeland security. Within the developing field, given the existing academic curricula, what are some of the core knowledge components of Emergency Management and what is the relative emphasis placed on each of the identified components. And within theses areas of emphasis, to what extent does the curricula content create intersection between originating disciplines and institutions of emergency management practice, or more plainly stated, between academics and practitioners.

Key words: emergency management, academic curricula, FEMA