

Educational Needs Survey Report
Fire and Emergency Management Program
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In the fall of 2004, a survey of practicing emergency managers in major U.S. cities was conducted. The purpose of the survey was to determine the types of technical and theoretical knowledge that emergency managers at the local level of government considered to be most helpful in their professional work. The study was conducted under the auspices of the Fire and Emergency Management Program (FEMP) at Oklahoma State University.

FEMP is a graduate level program that merges the professional career tracks and academic discipline areas of fire service management and emergency management. Students completing the program receive a Master of Science in Fire and Emergency Management Administration graduate degree from Oklahoma State University. The degree has been offered since 1997 and is administered through the Department of Political Science. Students in the program come from a variety of professional backgrounds in the general field of emergency management. Almost all students in the program work full time and are pursuing their degree on a part time basis. They are employed as emergency managers, law enforcement officers, fire service personnel, emergency medical professionals, health care administrators, higher education faculty, and government planners.

The investigators, who teach and assist in the administration of the graduate program, were interested in the views of practicing and experienced emergency managers regarding the technical training and academic preparation they think is important in their job. Results of the survey are to be used in the evaluation of the current FEMP curriculum and the development of curriculum for a proposed Ph.D. degree in fire and emergency management.

Survey Questionnaire

The survey questionnaire consisted of four parts. First, respondents were asked to provide demographic information. Included were questions about their personal characteristics, previous work experience, and educational background. Second, respondents were asked to assess the importance of a list of job skills that are, in their opinion, necessary to be an effective emergency manager. Third, respondents were asked to complete the same assessment process for a list of general knowledge areas related to the function of emergency management.

The skill and general knowledge items were developed from a review of the literature on emergency management. In addition, FEMA training materials were reviewed as well as the curricula at other higher education institutions offering programs in emergency and disaster management. For the items on each list, respondents were asked to indicate which of the proposed topics would be most important to their work as an emergency manager by circling the appropriate position on a five point “importance scale” below each item. Because the items in the second and third section of the survey were forced response and finite, respondents were given the opportunity to provide unrestricted comments about the survey items at the end of the survey instrument.

Data presented in the report was collected in the fall of 2004. The survey was mailed to those individuals responsible for the emergency management function in the nation’s 150 largest cities. Emergency managers in large municipalities were selected on the assumption that they would have extensive experience in the field of emergency management. In larger cities, the emergency management function is more likely to be assigned to a single individual whose primary duty is emergency management. And organizationally the emergency management function is more likely to be independent from other municipal functions and more clearly differentiated. Competition for emergency management positions in large municipalities was assumed to be greater and more likely to attract public managers who had chosen emergency management as a career. Finally, experienced emergency managers were targeted in order to gather information on their previous educational and work experience as well as benefiting from their informed and experiential judgment about career preparation and skill requirements.

A list of survey respondents was developed by identifying the chief emergency management officer in each of the 150 cities. In most cases, the information was available on the municipality’s Web site. The Internet search was supplemented with telephone inquiries when necessary to identify the name of the emergency management director. A self-administered questionnaire and a cover letter were mailed to each potential respondent. The cover letter explained the purpose of the survey, how the data was to be used, requested that the chief emergency management officer personally complete the questionnaire, and promised confidentiality of responses. A minimum of two follow-up contacts were made to initial non-responders. Respondents were given the option of receiving and responding to an electronic version of the questionnaire during the call-back phase.

A total of 70 usable questionnaires were returned, a response rate of 46.6%. The cities responding ranged in population size from 8,008,278 to 141,674. A total of 40 states were represented by city respondents. The number of cities responding from each state ranged from a high of 15 from one state to a low of one city response from 14 states.

A Profile of Respondents

Most of the respondents fell into older age groups, were male, and Anglo. Almost half (48.6%) of respondents were between the ages of 50 and 60 (see Table 1-1). The majority of respondents was male (84.3%) (see Table 1-2) and white (74.3%) (see Table

1-3). 15.7% of respondents were female. Other ethnic groups represented were Hispanic (7.1%), Asian (4.3%), African American (4.3%), and Native American (2.9%).

Table 1-1: Age of Respondents

Age	Frequency	Percent
Under 30	3	4.3
30-39	10	14.3
40-49	21	30
50-60	35	48.6
Over 60	2	2.8
Total	70	100.0

Table 1-2: Gender of Respondents

Gender	Frequency	Percent
Male	59	84.3
Female	11	15.7
Total	70	100.0

Table 1-3: Ethnic Identification of Respondents

Ethnicity	Frequency	Percent
European American	52	74.3
African American	3	4.3
Asian American	3	4.3
Hispanic/Latino American	5	7.1
American Indian	2	2.9
Total	65	100.0

As a group, they are well educated (see Table 1-4). 77.1% have a bachelor's degree and 21.4% have a master's degree. Collectively they hold 3 doctorates, 22 Master degrees, 54 bachelor degrees, and 25 Associate degrees. Note that some respondents hold more than one degree. The degrees held by respondents cover a wide range of academic fields including the social sciences, humanities, business, engineering, and the natural sciences. While a few held Associates and Bachelors degrees related to emergency response fields such as fire protection or criminology, none held degrees specifically in emergency management. The absence of degrees in emergency management is not unexpected given the age and seniority of the respondents. Until recently, degrees in emergency management simply did not exist. As one respondent commented, "we just had to learn on the job."

Opportunities for in-service training and professional continuing education are important given the newness of the emergency management field. Respondents were asked to characterize the opportunities for professional development provided by their employers. The results are presented in Table 1-5. 75% rated their employer as excellent or good in providing professional development opportunities.

Table 1-4: Respondent's Education Level—All Degrees Held

Degree	Frequency	Percent	Percent of Respondents with This Degree (N=70)
Associates Degree	25	24.0	35.7
Bachelors Degree	54	51.9	77.1
Masters Degree	22	21.2	21.4
Doctoral Degree	3	2.8	4.2
Total	104	100.0	

Table 1-5: Professional Development Opportunities Provided by Employer

Rating	Frequency	Percent
1-Excellent	31	45.6
2-Good	20	29.4
3-Fair	12	17.6
4-Poor	5	7.4
Total	68	100.0

The majority of respondents (57.1%) have been in their current position for a relatively short period of time—less than 5 years (see Table 1-6). 20% have held their current position from 6 to 15 years. While tenure in their current office may seem short, this may reflect the newness of a distinct emergency management position in local government rather than a career pattern. The institutionalization of emergency management owes much to the 1988 Stafford Act which required state and local governments to engage in emergency planning as a requirement for receiving federal disaster aid. The requirement has been in place for only 17 years.

On the other hand, most respondents reported that they have been in the emergency management field for a significant length of time (see Table 1-7). 34.3% have had more than 20 years of experience and 57% have been in the field for 11 or more years. The relatively short tenure in their current position coupled with long tenure in the profession suggests a high rate of job transfer within the profession.

Table 1-6: Respondent's Time in Current Position

Years	Frequency	Percent
Less Than 5 Years	40	57.1
6 to 10 Years	14	20.0
11 to 15 Years	10	14.3
16 to 20 Years	2	2.9
More Than 20 Years	4	5.7
Total	70	100.0

Table 1-7: Respondent's Years of Experience in the Field of Emergency Management

Years	Frequency	Percent
Less Than 5 Years	20	28.6
6 to 10 Years	10	14.3
11 to 15 Years	10	14.3
16 to 20 Years	6	8.6
More Than 20 Years	24	34.3
Total	70	100.0

Respondents' level of professional activity is fairly high (see Table 1-8). 36.9% reported that they are members of the International Association of Emergency Management, the major professional association for local government emergency managers. In addition, 10% reported membership in the National Emergency Management Association, the major professional organization for state emergency management officials. Slightly over half the respondents indicated that they were members of other professional organizations. Respondent comments indicate that the other professional organizations are largely state emergency management associations.

Another indicator of professionalism is compensation. Respondents were asked to identify the salary range for their position (see Table 1-9). The majority of respondents fall into the upper level of salary schedules. 33.3%, the largest number of respondents in one category, receive a salary that ranges between \$70,000-\$89,999. With only a few exceptions, all make above \$50,000.

Table 1-8: Respondents' Professional Affiliations

Organization	Frequency	Percent	Percent of Respondents with This Affiliation
IAEM	36	36.9	51.4
NEMA	9	10.0	12.9
Other	46	50.4	65.7
Total	91	100.0	100.0

Table 1-9: Highest Scheduled Salary for Respondent's Position

Salary Range	Frequency	Percent
Less Than 50,000	4	6.1
50,000-69,999	14	21.2
70,000-89,999	22	33.3
90,000-109,999	13	19.7
110,000-130,000	8	12.1
Over 130,000	5	7.6
Total	66	100.0

Size of the emergency management agency in terms of employees gives some indication of the importance of the emergency management function within the municipal organization. Respondents were asked to report the number of full and part time

employees in their agency (see Table 1-10). There is a wide range in size of the emergency management organization among the cities responding to the survey. They range in size from one part time employee—a Fire Chief who also serves as the Emergency Manager in one city—to an agency with several hundred employees. The two largest cities in the survey employed 340 and 70 respectively while the remaining cities employed 10 or fewer. The organizational picture is complicated because the emergency management function is often embedded in emergency response agencies such as fire departments.

Table 1-10: Number of Full and Part Time Employees in Respondent’s Agency

Number of Employees	Frequency	Percent
Less Than 1	2	3.1
1 to 2	32	50.0
3 to 4	12	18.8
5 to 6	10	15.6
7 to 8	3	4.7
9 to 10	3	4.7
Over 10	2	3.1
Total	64	100.0

Respondents were asked to provide employment history in order to better understand the career track of emergency managers. 76.1% have had previous experience in an emergency response field (see Table 1-11). Fire protection was the common area of prior experience followed by law enforcement and career military (see Table 1-12). Emergency medical experience and experience with a private disaster agency such as the Red Cross also were represented. Contrary to what some of the older literature suggests, only one respondent indicated having prior experience in civil defense as an emergency response field. Note that some respondents had prior experience in more than one emergency response field and that not all of those who indicated that they had emergency response experience indicated the specific field of experience.

For those with prior emergency response experience, the majority (60.9%) rated that experience as either extremely or highly important in performing their current duties (see Table 1-13). The remaining 39.1%, however, judged their experience as only somewhat or not that important in performing their current responsibilities.

The division in assessing the importance of their first responder experience may reflect the fact that emergency management is still an evolving field and/or it is a field whose importance is highly susceptible to political events. As the 1990s came to a close, federal policy had come to focus on mitigation as the key to disaster policy. As a result, emergency managers came to be seen more and more as emergency planners and advocates, and less as the coordinators or directors of emergency response efforts. The events of 9/11, however, have to some extent refocused federal policy on emergency preparedness and the ability to respond effectively to a crisis or disaster.

Table 1-11: Prior Experience in an Emergency Response Field?

Response	Frequency	Percent
Yes	54	76.1
No	16	23.9
Total	70	100.0

Table 1-12: Respondents' Field(s) of Prior Experience

Field	Frequency	Percent
Law Enforcement	10	20.4
Fire Protection	25	50.1
Emergency Medical Response	2	4.1
Civil Defense	1	2.0
Career Military	9	18.4
Private Disaster Agency	2	4.1
Total	49	100.0

Table 1-13: Importance of Experience as an Emergency Responder

Rating	Frequency	Percent
Extremely Important	24	34.8
Highly Important	18	26.1
Somewhat Important	19	27.5
Not Too Important	8	11.6
Not at All Important	0	0.0
Total	69	100.0

In summary, the emergency managers responding to the survey tend to:

- Be older white males
- Have considerable experience
- Be relatively well educated
- Have learned emergency management on the job
- Have considerable prior experience in emergency response fields
- See this experience as important.

Respondent Perceptions of Educational Needs

The overall strategy employed by the study was to have respondents rate the importance of the various items that might be found in a comprehensive curriculum intended to prepare individuals for careers as emergency manager supervisors. There are many ways to design such a curriculum, but generally professional preparation emphasizes both theory and practice. Typically, theory is presented first followed by practice. For example, medical students begin by attending classes which present medical science largely from a theoretical perspective. This is followed by internships and residencies in which students learn to apply the theoretical knowledge that they have mastered in the classroom to actual medical cases and patients in hospital or medical clinic settings.

In an effort to separate theory and practice in order to capture the qualitative differences between the two perspectives, respondents were presented with two lists of topics. The first list of topics contained items which were described as “applied skills or professional competencies”. Each topic on the list was closely related to a specific task that an emergency manager might be required to perform on the job. Examples include preparing a community risk assessment such as performing a hazard and vulnerability analysis. Each topic was followed by a brief descriptor indicating more precisely what would be covered by that topic.

In terms of academic curriculum format, the items in the “applied” list could possibly be used as the subject of complete courses. They are likely to fit better, however, as topics within a broader higher education course. The applied topics also work well in workshop or short course formats designed to facilitate on the job training or continuing education.

The second list of topics emphasized the general knowledge or academic background that the investigators felt might be particularly relevant to the work of emergency managers. The list two topics are more or less equivalent to traditional university courses in their broad coverage and in the fact that they tend to emphasize theory over practice. For example, a course in probability theory and statistics (list two) would provide background knowledge necessary to perform and interpret a community risk analysis (list one), but would not cover how to do such an analysis step by step. A course title was presented for each item followed by a brief description of course content. The academic discipline for each of these hypothetical courses was indicated in parentheses after the course title.

The items on both lists were selected by the researchers based on: (1) an examination of curricular offerings in a number of university level emergency and disaster management programs, (2) a review of various FEMA training materials, and (3) the experience of the researchers as instructors of public and emergency management courses at OSU. For the items on each list, respondents were asked to indicate which of the proposed topics they considered to be most important to their work as an emergency manager by circling the appropriate position on the five point “importance scale” below each item.

Ranking of Applied Skills and Competencies

Respondents were given a list of specific job competencies or skills related to emergency management. The central question posed to respondents was, “What must effective emergency managers be able to do?” The items represent specific topics that could be included in broader university courses or that could be the primary topic taught in short courses or workshops. Respondents were asked to rank the items on a five point scale ranging from “Extremely Important” with a value of 1 to “Less Important” with a value of 5.

Tables 2-1 through 2-10 that follow present the frequency distributions for each of the applied skills topics. Also reported are the mean and standard deviation for each topic. Mean and standard deviation scores were calculated for each item using the 5 points of

the “importance scale”--the lower the mean score for the item, the more important the item. The standard deviation provides a measure of the extent to which those responding were in agreement—the lower the standard deviation, the greater the agreement on the rating among the respondents. The questionnaire items and their corresponding table are presented below in rank order of their mean score, from lowest (most important) to highest (least important).

Table 2-1: Planning for Emergencies and Disasters
 (Covers basic planning concepts, federal and state emergency planning and planning requirements, and development of a community emergency operations plan—EOP)

Rating	Frequency	Percent
(1) Extremely Important	42	60.0
(2) Highly Important	23	32.9
(3) Important	5	7.1
(4) Somewhat Important	0	0.0
(5) Less Important	0	0.0
Total	70	100.0

Mean: 1.47

Standard Deviation: 0.630

Table 2-2: Monitoring and Evaluating Preparedness
 (Covers the development and administration of training exercises and simulations for monitoring and evaluating planning and preparedness)

Rating	Frequency	Percent
(1) Extremely Important	16	22.9
(2) Highly Important	30	42.9
(3) Important	22	31.4
(4) Somewhat Important	2	2.9
(5) Less Important	0	0.0
Total	70	100.0

Mean: 1.47

Standard Deviation: 0.804

Table 2-3: Responding to Disasters

(Covers the work of emergency responders, incident command and management systems, operation of the Emergency Operations Center, and obtaining state and federal assistance)

Rating	Frequency	Percent
(1) Extremely Important	39	55.7
(2) Highly Important	23	32.9
(3) Important	8	11.4
(4) Somewhat Important	0	0
(5) Less Important	0	0.0
Total	70	100.0

Mean: 1.56

Standard Deviation: 0.694

Table 2-4: Recovery from Disasters

(Covers short and long term recovery from disasters including the role of federal and state assistance programs, community recovery strategies and actions, and post disaster mitigation planning)

Rating	Frequency	Percent
(1) Extremely Important	25	35.2
(2) Highly Important	32	46.5
(3) Important	11	15.5
(4) Somewhat Important	2	2.8
(5) Less Important	0	0.0
Total	70	100.0

Mean: 1.86

Standard Deviation: 0.785

Table 2-5: Community Risk Assessment

(Covers methods and models for identifying hazards and assessing vulnerability and risk)

Rating	Frequency	Percent
(1) Extremely Important	25	35.7
(2) Highly Important	29	41.4
(3) Important	14	20
(4) Somewhat Important	2	2.9
(5) Less Important	0	0.0
Total	70	100.0

Mean: 1.90

Standard Deviation: 0.819

Table 2-6: Natural Hazards—Causes and Mitigation
 (Covers causes and mitigation of various natural hazards such as floods, storms, and earthquakes)

Rating	Frequency	Percent
(1) Extremely Important	20	28.6
(2) Highly Important	31	44.3
(3) Important	18	25.7
(4) Somewhat Important	1	1.4
(5) Less Important	0	0.0
Total	70	100.0

Mean: 2.00

Standard Deviation: 0.780

Table 2-7: Technological Hazards—Causes and Mitigation
 (Covers causes and mitigation of various technological hazards such as chemical releases, structural failures, and similar hazards)

Rating	Frequency	Percent
(1) Extremely Important	14	20.0
(2) Highly Important	35	50.0
(3) Important	20	28.6
(4) Somewhat Important	1	1.4
(5) Less Important	0	0.0
Total	70	100.0

Mean: 2.11

Standard Deviation: 0.733

Table 2-8: Terrorism and Civil Hazards—Causes and Mitigation
 (Covers causes and mitigation of various civil hazards such as terrorist acts, riots, and hate crimes)

Rating	Frequency	Percent
(1) Extremely Important	15	21.1
(2) Highly Important	30	43.3
(3) Important	24	35.2
(4) Somewhat Important	1	1.4
(5) Less Important	0	0.0
Total	70	100.0

Mean: 2.16

Standard Deviation: 0.733

Table 2-9: Technology Applications in Emergency Management
(Covers use of technology in emergency management, GPS mapping, HAZUS and related software programs, communications, and incident management software programs)

Rating	Frequency	Percent
(1) Extremely Important	10	14.3
(2) Highly Important	27	38.6
(3) Important	27	38.6
(4) Somewhat Important	5	7.1
(5) Less Important	1	1.4
Total	70	100.0

Mean: 2.43

Standard Deviation: 0.878

Table 2-10: Legal Basis of Emergency and Environmental Management
(Covers laws and case law related to emergency and environmental management)

Rating	Frequency	Percent
(1) Extremely Important	4	5.7
(2) Highly Important	24	34.3
(3) Important	30	42.9
(4) Somewhat Important	11	15.7
(5) Less Important	1	1.4
Total	70	100.0

Mean: 2.73

Standard Deviation: 0.844

In summary, respondents ranked the applied skills and competencies in the following order from most important to least important. The mean score for each item in the Applied Skills and Competencies portion of the survey is listed in front of each item. The lower the mean score, the more important the item to the respondent in terms of his or her job responsibilities. The items are ranked in order of importance from highest to lowest based upon the mean score of respondents.

- 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

The ranking indicates the importance of the planning function in emergency management and the importance of skills related to the response to and recovery from disasters.

Ranking of General Knowledge Areas

In the third section of the questionnaire, respondents were given a list of general knowledge areas related to emergency management. In parenthesis by each area, respondents were given the academic discipline most commonly associated with the area. The central question posed to respondents was, “What must effective emergency managers know?” They were asked to rank the importance of each item in terms of its importance to their work as an emergency manager. The same five point scale of importance was used with rankings based upon mean respondent scores for each item. The lower the mean score for an item, the greater degree of importance was assigned to the item by respondents. As with previous items, a standard deviation was calculated for each response item. The lower the standard deviation is indicates a greater degree of agreement among the respondents in their ranking of the item. The results are reported in Table 3-1 through Table 3-10 below. The tables are presented according to their mean score ranking, from most important to least important as a knowledge area for emergency managers.

Table 3-1: Governmental Budgeting and Financial Management (Public Administration)
(Covers governmental financial management, budgeting processes, and the politics of budgeting)

Rating	Frequency	Percent
(1) Extremely Important	12	17.4
(2) Highly Important	28	40.6
(3) Important	21	30.4
(4) Somewhat Important	8	11.6
(5) Less Important	0	00.0
Total	70	100.0

Mean: 2.36

Standard Deviation: 0.907

Table 3-2: Management Theory and Practice (Management and Public Administration)
(Covers designing, building, and directing organizations with emphasis on recent developments in management theory and practice)

Rating	Frequency	Percent
(1) Extremely Important	8	11.6
(2) Highly Important	26	37.7
(3) Important	26	37.7
(4) Somewhat Important	7	10.1
(5) Less Important	2	2.9
Total	69	100.0

Mean: 2.55

Standard Deviation: 0.932

Table 3-3: Social Impacts of Disasters (Sociology)

(Covers the short and long term economic, social, and psychological impacts of disaster on individuals, groups, and communities)

Rating	Frequency	Percent
(1) Extremely Important	3	4.3
(2) Highly Important	18	26.1
(3) Important	35	50.7
(4) Somewhat Important	13	18.8
(5) Less Important	0	0.00
Total	69	100.0

Mean: 2.83

Standard Deviation: 0.780

Table 3-4: Intergovernmental Relations in the U.S. (Political Science)

(Covers legal, financial, and other relationships between governments in the U.S. federal system)

Rating	Frequency	Percent
(1) Extremely Important	3	4.3
(2) Highly Important	22	31.9
(3) Important	29	42.0
(4) Somewhat Important	11	15.9
(5) Less Important	4	5.8
Total	69	100.0

Mean: 2.87

Standard Deviation: 0.938

Table 3-5: State and Local Government in the U.S. (Political Science)

(Covers the role played by state and local governments in the American political system)

Rating	Frequency	Percent
(1) Extremely Important	5	7.2
(2) Highly Important	17	24.6
(3) Important	32	46.4
(4) Somewhat Important	10	14.5
(5) Less Important	5	7.2
Total	69	100.0

Mean: 2.90

Standard Deviation: 0.987

Table 3-6: Policy Analysis and Program Evaluation (Economics and Political Science)
 (Covers various approaches to evaluating public policies and programs including
 evaluation research and cost benefit analysis)

Rating	Frequency	Percent
(1) Extremely Important	8	11.6
(2) Highly Important	18	26.1
(3) Important	18	26.1
(4) Somewhat Important	18	26.1
(5) Less Important	7	10.1
Total	69	100.0

Mean: 2.97

Standard Deviation: 1.19

Table 3-7: Urban and City Planning in the U.S. (Geography)
 (Covers the history and development of city and urban planning in the U.S. including
 basic theories and concepts)

Rating	Frequency	Percent
(1) Extremely Important	0	0.00
(2) Highly Important	14	20.3
(3) Important	34	49.3
(4) Somewhat Important	17	24.6
(5) Less Important	4	5.8
Total	69	100.0

Mean: 3.16

Standard Deviation: 0.816

Table 3-8: Evolution of Disaster Policy in the U.S. (History)
 (Covers the history of disasters and disaster policies in the U.S. from colonial times to the
 present)

Rating	Frequency	Percent
(1) Extremely Important	1	1.4
(2) Highly Important	7	10.1
(3) Important	26	37.7
(4) Somewhat Important	30	43.5
(5) Less Important	5	7.2
Total	69	100.0

Mean: 3.45

Standard Deviation: 0.832

Table 3-9: Probability and Statistics (Math and Statistics)
 (Covers various mathematical models commonly used in research and forecasting)

Rating	Frequency	Percent
(1) Extremely Important	0	0.00
(2) Highly Important	6	8.7
(3) Important	20	29.0
(4) Somewhat Important	28	40.6
(5) Less Important	15	21.7
Total	69	100.0

Mean: 3.75

Standard Deviation: 0.898

Table 3-10: Engineering for Non-Engineers (Engineering)
 (Covers basic civil and structural engineering concepts for non-engineers)

Rating	Frequency	Percent
(1) Extremely Important	0	0.00
(2) Highly Important	6	8.7
(3) Important	22	31.9
(4) Somewhat Important	21	30.4
(5) Less Important	20	29.0
Total	69	100.0

Mean: 3.80

Standard Deviation: 0.964

The ranking of general knowledge areas by respondents is summarized below. The items are listed below in order of importance from most to least with the mean response score preceding each item. The academic discipline most commonly associated with the knowledge area is listed in parenthesis by each item.

- 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 Mathematics and Statistics
- 3.80 Engineering for Non-Engineers (Engineering)

The ranking suggests the importance of management, both fiscal and human resource, and general knowledge about the context in which the emergency manager must manage.

Conclusions and Implications

1. As measured by their mean scores, the applied items in list one tended to rank somewhat higher than the general knowledge items in list two. This is not unexpected given the immediacy of applied knowledge in the work of emergency managers.
2. The ranking of the applied items in list one indicates the importance of the planning function in emergency management and the importance of skills related to the response to and recovery from disasters.
3. The two highest ranking items in list one—planning and monitoring—may reflect: (1) the controversial shift in federal emphasis from mitigation to preparedness following 9/11, and (2) the current need to prepare mitigation plans in order to be eligible to compete for the new pre-disaster mitigation grants.
4. Within in the applied items, discreet processes tended to be preferred to functions. For example, how to prepare a migration plan for FEMA—a discreet process—was ranked higher than applying current mitigation strategies for various natural hazards.
5. The ranking of the general knowledge items in list two suggests the importance of management, both fiscal and human resource, and the context in which the emergency manager must manage. General management and budgeting received the highest scores followed by governmental processes and politics. These topics also tend to be the mainstay of traditional public administration programs.
6. More technical knowledge areas in list two such as computer mapping, probability theory, and basic engineering concepts were seen as less important by the respondents.
7. For those responsible for designing academic programs to serve the growing profession of emergency management, it is important to know what practitioners see as their most important needs. It is important that practitioner input be included along with more academic and theoretical input. The unique responsibility of the academic community is to illustrate and illuminate the integration of theory and practice in the “real world”. Every practice is grounded in some theory.