

The challenges and future opportunities of emergency management education:

a student's perspective

Introduction

With only fifty years as an organised field, emergency management is still relatively new both academically and professionally. The Federal Emergency Management Agency is therefore justified in promoting the establishment of emergency management curriculums throughout the United States. While the quantity of emergency management programs is being addressed, there is also a need to assess the quality of such curriculums. In other words it is imperative to ensure that emergency management curriculums will encompass the full scope of issues that face professional emergency managers.

This paper will mention a few of the challenges facing current emergency management curriculums and discuss how the University of North Texas Emergency Administration and Planning (EADP) program is addressing them. Recommendations will be put forth for current and future programs, including the means to overcome present difficulties in emergency management curriculums. The goal of this paper therefore is to provide some direction, from a student's perspective, on where emergency management curriculums should be headed in the future. Before proceeding, it will be necessary to provide background information about the EADP program.

Information about the EADP program

In 1983 the University of North Texas developed a degree program specialising in emergency management. Currently, the university provides the opportunity for students to earn a Bachelor of Science degree with a major in Emergency Administration and Planning. As a four-year college, the University of North Texas requires that students complete 128 semester hours, 42 of which must be advanced, in order to become a candidate for an EADP degree. Specifically, EADP degree candidates must complete 36 hours within the major. Students are also required to complete 18 hours within a selected minor, nine of which must be advanced.

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While the University of North Texas has cultivated a successful program, it has faced challenges that are likely to be common to any educational institution offering an emergency management degree. Based on my personal observations and discussions with Dr. David McEntire, the EADP program coordinator, these challenges include emergency management program structure, providing interdisciplinary courses, integrating academic and pragmatic perspectives on emergency management, relying on diverse literature sources, providing practical experience and utilising modern instructional technologies. Each of these issues will be discussed in turn.

Emergency management curriculum structure

A fundamental challenge facing emergency management education is curriculum structure. With the prevalence of emergency management related minors, certificates, Associate degrees and Bachelor degrees, curriculum structure is becoming increasingly important. The structure of a curriculum is going to be determined by the goals of the program. For example, programs must determine whether to focus on the theoretical aspects of disaster issues, or to address the more practitioner related aspects of emergency management. Furthermore, rather than teach a comprehensive emergency management curriculum, some programs may focus on specific issues, such as engineering, meteorology or sociology.

The purpose of a program and the availability of resources will determine whether a curriculum should be independent or housed within a pre-existing related program, as well as influence curriculum placement within a four-year or two-year college. For example,

institutions seeking to offer emergency management issues as a minor, certification program or Associate degree will most likely provide curriculums that address specific emergency management issues. Thus, institutions may choose to place such curriculums within an existing department, such as public administration, political science, and public policy degree programs. In addition, while emergency management minors may be applicable to either four-year or two-year colleges, the limited scope of certification programs and Associate degrees may make them more appropriate within two-year educational institutions.

Emergency management Bachelor degree curriculums are best suited to four-year institutions. Four-year colleges are more likely to have the necessary resources to support comprehensive emergency management degree curriculums. Thus providing the option of supporting an independent emergency management program or placing an emergency management curriculum within a pre-existing department. Four-year colleges are also able to structure curriculums to provide an assortment of interdisciplinary courses, as well as meet the needs of a diverse student body.

The University of North Texas is a four-year college that has structured its EADP curriculum to provide a comprehensive emergency management education. The goal of the EADP degree program is to prepare students to become emergency management practitioners. The interdisciplinary structure of the EADP degree program allows it to be housed within the Department of Public Administration, while also collaborating with other departments. For example, the EADP curriculum incorporates several electives from various departments, such as sociology, geography, and business administration. Furthermore, the EADP program also has degree requirements with other departments, such as Technical Writing as a component the English requirement, as well as Geology courses that are part of the laboratory science requirement. EADP students must also

select a minor, thus encouraging students to broaden their awareness of related fields.

The EADP curriculum is also structured to accommodate a variety of students. These include traditional and non-traditional students, full-time and part-time students, as well as pre-service students and in-service professionals. This is accomplished by offering evening classes that meet once a week. Thus enabling working adults to study for a degree while maintaining their professional occupations.

Facilitating interdisciplinary instruction

Perhaps the largest obstacle currently facing emergency management programs is the lack of interdisciplinary courses. The broad scope of emergency management requires that courses from various disciplines be incorporated into academic curriculums. There are several relevant disciplines that should be included in emergency management curriculums. Sociology courses aid in the understanding of patterns of human behavior including emergency warnings and evacuations, as well as a variety of other response and recovery issues. Sociological studies also give insight into organisations and their complex interactions.

Public Administration courses provide insight into the processes of leadership and management within governmental agencies, which also has linkages to the private and nonprofit sectors. Political Science courses offer a wide variety of economic and governmental theories that provide the contextual setting of the constraints and opportunities related to the emergency management offices and functions. Physical and natural science courses such as chemistry, physics, geology, and meteorology prepare emergency management students for the variety of radiological, nuclear and natural hazards they will encounter as professionals. Technical writing courses may add an important element to emergency management curriculums as the ability to communicate clearly is a fundamental component of writing grants, plans, and proposals, and educating the community. Finally, secondary languages aid in communication with various special populations.

It is essential to teach a broad academic perspective to students in order to better prepare them for entry into the field of emergency management.

The University of North Texas has

attempted to resolve this issue by offering a wide variety of courses that apply to the major. Courses include:

- Introduction to Emergency Management
- Emergency Preparedness
- Disaster Response
- Disaster Recovery
- Hazard Mitigation
- Leadership and Organisational Behavior
- the Capstone Course in Emergency Management.

Elective courses within the program include:

- Images of Natural and Technological Disasters in Film and Media
- Special Populations
- Computers in Emergency Management
- Terrorism and Emergency Management
- The Federal Emergency Management Agency and Disasters
- Flood Plain Management
- Private Sector Issues (Business Continuity)
- International Disasters
- Hazardous Materials Planning and Management.

Students are also required to take a technical writing course and either geography or geology to fulfill their University English and Laboratory Science requirements. A variety of seminars (such as public administration, sociology, risk management, workplace health and safety) also earn credit as electives toward the Emergency Administration degree. Furthermore, professors also strongly encourage students to minor in a related field such as sociology, public administration, criminal justice, natural or physical sciences, chemistry, computer science, anthropology, foreign languages, business management, political science and psychology.

The possibility of integrating other courses (e.g. non-profit sector issues, geographic information systems, urban planning) into the curriculum is currently being explored as well.

The EADP program also incorporates a large amount of interdisciplinary articles and essays into its curriculum. These readings address all types of hazards, and the diverse actors and activities involved in each of the four disaster phases.

Many of these articles are case studies of particular disasters while others review previous research findings on a plethora of mitigation and/or emergency management functions. These articles allow students to become familiar with the broad scope of emergency management and the inter-related nature of various fields and actors.

Integrating academic and practical perspectives

Emergency management programs have a unique opportunity to incorporate a practitioner orientation into their curriculums, both as course material and as guest lecturers. Emergency management practitioners are able to relate real-world experience to academic subject matter. An example of a practitioner-oriented topic for emergency management education is the Incident Command System. Notably, one of the more complex concepts of emergency management, practitioners who have real-world experience with the Incident Command System may be able to present a pragmatic approach to the subject. By presenting a working model of various concepts, practitioners will be able to facilitate the student's education with a realistic approach to emergency management.

At the University of North Texas, alumni of the program and other emergency management related professionals are frequently invited to guest lecture to classes in order to facilitate a better understanding of course material and to bring course content to life. These and other practitioners come from diverse organisations and agencies, and include Federal Emergency Management Agency program managers, local emergency managers, Red Cross disaster specialists, Radio Amateur Civil Emergency Services personnel, hazardous material responders, private sector consultants, hospital risk managers, insurance representatives, wind engineering researchers, and fire department officials. In many cases these practitioners provide specialised information, such as mitigation, exercise development and implementation, emergency communications, grant writing, and hazardous material regulations and response procedures. Professors in the program have also coordinated with practitioners to provide field trips to FEMA Region VI Headquarters, local and county Operating Centers, Red Cross chapters, and FEMA's National Tele-registration Center. These trips also allow students an opportunity to link emergency management principles to their real world settings.

Because competition for jobs in emergency management is fierce, students need to gain experience in a professional setting in order to increase opportunities for employment. The University of North Texas has attempted to facilitate this goal by requiring that all Emergency Administration and Planning students participate in an internship based on interests in the

public, private, and non-profit sectors of emergency management. Students have completed internships recently with the FEMA, local emergency management offices, the Red Cross, hospitals, consulting companies, congressional representatives (involved in disaster committees), the aviation industry, and the military. In many cases, students have helped to develop emergency operations plans, participate in disaster exercises and perform a plethora of daily functions. Such internships provide students the opportunity to apply their academic knowledge. Internships likewise supplement education with real-world experience. Through internships students are also able to earn academic credit, become associated with professional organisations, and become involved with emergency management practitioners. One of the most valuable experiences that emergency management curriculums can offer students, therefore, is the opportunity to serve as an intern.

Another way emergency management students can gain experience is through emergency management student organisations. At the University of North Texas, students have organised and participate in the International Emergency Management Student Association (IEMSA). IEMSA is a student organisation founded on the principle of advancing emergency management knowledge among students. IEMSA helps students become involved in community activities, as well as attend academic and professional conferences. Previous community service projects have included assisting in the development of a local school's emergency operations plans and revising an area hospital's disaster procedures. IEMSA has also developed conferences, such as the Professional Development Workshop, where students and professionals assemble to discuss issues such as damage assessment, shelter operations, severe weather events, and various aspects of planning. Another benefit of IEMSA is that it allows students to network with professors and professionals throughout the world. Each year the University of North Texas hosts an International Disaster Day Conference in which IEMSA helps to coordinate activities, booths, and guest speakers. Consequently, IEMSA is another unique forum in which emergency management students can increase their experience and interact with academics and practitioners in the field.

Utilising modern instructional technologies

The advancement of technology is fur-

thering the opportunities available to emergency management curriculums. The internet is becoming an important tool for emergency management students. With today's computers, students are able to communicate with professors and professionals, and contact virtually any governmental agency or professional organisation. Students can also harness modern technology to research vast amounts of emergency management and disaster related information through access to distant libraries and databases throughout the world. The Federal Emergency Management Agency, the American Red Cross, the Office of Foreign Disaster Assistance in the United States Agency for International Development, the United Nations Department of Humanitarian Affairs, the Disaster Research Center, and the Natural Hazards Center provide clearinghouses of emergency management related information that can be accessed through their Internet sites.

Technological developments are also valuable in that they allow emergency management students to witness events as they occur and to keep abreast of current world disaster news. In addition, there are also various CD-ROM and multi-media applications that are available to facilitate student's learning. Current CD-ROM technologies include professional applications such as the Computer Aided Management of Emergency Operations (CAMEO) and Areal Locations of Hazardous Atmospheres (ALOHA), which aid in responding to hazardous material events. Advancements in multi-media software, such as the encyclopedias Britannica and Encarta, allow students to simultaneously access text, audio and video information for a variety of topics. Exposure to professional related applications can be used to supplement emergency management student's education. Finally, computers and the internet also open up opportunities for long distance learning by increasing access to emergency management programs.

Professors at the University of North Texas are attempting to capitalise on this technology. For instance, lists of web sites are distributed and students are encouraged to monitor the internet to facilitate class discussions regarding current events. In fact, time is set aside in most classes to discuss on-going disaster activities. Students are also encouraged to use the internet when looking for information for term papers. Currently, the University of North Texas does not offer distance learning courses. However, it has created one on-line course and

intends to create four additional web-based courses to enable non-degreed practitioners to obtain emergency management credentials and certificates. Such technological advances therefore open many learning opportunities for students and should be incorporated into the emergency management programs of various universities.

Conclusion

A great deal of emphasis is being given to the quantity of emergency management programs. However, the quality of such programs also deserves examination. The arguments presented here indicate that the majority of emergency management programs are likely to face various challenges and opportunities resulting from the complex nature of the profession and the limitless possibilities of technology. Emergency management programs will have to overcome these challenges and capitalise on such opportunities as providing interdisciplinary curriculums, incorporating practitioner and practical oriented materials, offering students the opportunity to work with professionals, and utilising modern technology. While the Emergency Administration and Planning program at the University of North Texas has seen significant changes over the years, it still has room for improvement. Primarily, it needs to further its practical orientation and continue to solidify its ties with the local emergency management community. The program would also benefit by increasing its number of faculty and continuing its emphasis on interdisciplinary knowledge.

It is hoped that this examination of emergency management programs, specifically the Emergency Administration and Planning program at the University of North Texas, has provided some lessons for current and future emergency management programs. Current and future programs must be assessed in order to facilitate the development and professionalisation of emergency management education.

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