

FEEDBACK FROM THE FIELD

Developing Degree Programs in Disaster Management: Some Reflections and Observations*

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This paper highlights what I see as key issues for new, developing, and even established degree programs in disaster management.¹ As I explain below, a number of factors have created a demand for educated, professional disaster managers. Based upon my experience in the areas of disaster research and disaster management education, I outline what I see as some key issues that developing and established disaster programs should consider.

Today, a number of factors are helping to initiate and sustain university degree programs in disaster management. First, we continue to see a rise of disasters, victimization, and economic losses from disasters. Not only are these increases occurring in the United States, but throughout the world (Mileti 1999). Second, the Federal Emergency Management Agency (FEMA), through its Higher Education Project, is helping to promote degree programs throughout the United States. FEMA would like to see an associate's degree, a bachelor's degree, or [p. 418] a master's degree program in every state by 2002 (FEMA 2000). Third, employers in the public, private, volunteer, and other disaster management job sectors desire people with a strong knowledge base in the field. Finally, the push for professionalization, certification, and accreditation within the field by such organizations as the International Association of Emergency Managers (IAEM), FEMA, National Emergency Management Association (NEMA), and state disaster management organizations all continue to increase the need for well educated professionals (Wilson 2000). In short, college programs in disaster management are needed to meet the multiple expanding needs of the profession.

Disaster management degree programs are relatively new. Between 1983 to about 1998, only two undergraduate degree programs graduated students in the United States. During this time, the Institute of Emergency Administration and Planning (EADP) at the University of North Texas (UNT) accounted for almost all emergency management degrees. Through 1998, EADP had graduated about 400 students in its program. During the same time Thomas Edison College, primarily though distant learning, graduated a handful of students. However, other students used emergency management as one of their "concentration" areas.

Not until the mid- and late 1990s did other new programs begin to emerge. For example, George Washington University initiated the first graduate degrees in disaster management. Oklahoma State University started a master's program in fire and emergency management. Arkansas Tech also began a bachelor's program. In 1999, the University of Akron received

formal approval from to launch its undergraduate degree program. At about the same time, Jacksonville State University initiated a formal concentration in emergency management within its Master's of Public Administration degree and is currently developing a bachelor's program. Other universities either have undergraduate and graduate degree programs in their infancy or are considering courses, certificate programs, or degree programs (FEMA 2000).

Thus, an increasing number of disasters, an expanding job market, FEMA's higher education initiative, the push for certification, accreditation, and professionalization by professional organizations (e.g., IAEM, NEMA) have all created an environment that supports the need for college degree programs in disaster management. With this recent surge of interest in disaster programs not only in the United States but also in the rest of the world, I will discuss a number of issues that new, developing, and existing disaster management degree programs should [p. 419] consider to develop and sustain themselves.

I draw my information and comments within this paper from my wide range of activities (e.g., teaching, administration, presentations, consulting, formal and informal discussions) related to disaster management education. For example, between August 1989 and August 1998, I was a member of the first disaster degree program (i.e., EADP) and served as its director between 1996 and 1998. During the early 1990s I served as member of the National Coordinating Council on Emergency Management's (NCCEM, now known as IAEM) certification committee (e.g., Neal 1990). I have also given a number of presentations on the topic to a wide array of audiences (Neal 1992, 1996a, 1996b, 1998, 2000). Furthermore, I have talked formally and informally with a wide range of officials about the creation of disaster management certificate and degree programs. These discussions, primarily over the last five years, include: university administrators (i.e., presidents, provosts, academic vice presidents, deans, chairs), faculty members and other academics; disaster planners in the public, private, and volunteer sectors; local and state politicians; alumni of the EADP program; and others. I have also talked with some officials in countries outside the United States regarding the initiation of disaster degree programs (e.g., Neal 1996a, 1998, 2000). In short, this paper is a summary of my experiences and observations related to the growing area of disaster management education.

Any institution of higher education that initiates a disaster program will have many opportunities. Yet, both external and internal conditions may also inhibit or even prevent a program's growth. Below, I outline a number of issues, suggestions, and activities that I believe can enhance a program's chance for success. In general terms, these key issues include academic and professional legitimacy, administrative location of the program, curriculum development, recruitment of students, and the job market. In some cases I present examples of issues and possible solutions. However, the present and future may have new or different questions, or a new series of answers. Therefore, I suggest that my points and suggestions be used as a guide, not as a panacea.

The Issue of Legitimacy

New degree programs often raise issues of legitimacy. I have encountered valid questions regarding the legitimacy of disaster management both within the academy and the profession. Below, I discuss these issues and offer possible strategies to mitigate these legitimacy issues. [p. 420]

Legitimacy within the Academy

The issue of legitimacy within the academy, I believe, revolves around two related topics. They include the issue of a body of knowledge and the availability of qualified faculty. In my many discussions with administrators, one legitimate question often asked by them pertains to whether a strong body of knowledge exists to support a disaster management degree. The clear answer is yes. In documenting my response, I typically first cite a paper by Quarantelli and Dynes (1977) where they comment that social/behavioral research in the field was growing exponentially. I then compare the output of important codification efforts over the last 25 years. For example, the main text of Drabek, Mileti, and Haas' (1975) review of the field focusing on sociological findings is 149 pages long. They also list about 206 citations on 16 additional pages. About a decade later, Drabek's (1986) updated review of sociological findings has 422 pages of main text. His master bibliography of 56 additional pages list over 1,000 citations. Mileti's (1999) most recent assessment of the field between 1975-1995 will result in the publication of at least five or six books reviewing the field. In summarizing the assessment, he notes that he uses few citations in his text. His reasoning in part further highlights the growth of the field: ". . . because the logistics of attempting to cite everything published in the past 20 years would be overwhelming and would increase the manuscript's length by well over 100 pages" (Mileti 1999, p. vii-ix). In short, these data continue to confirm the exponential growth of disaster research and help document that a body of knowledge clearly exists.

I also refer to some key journals in the field (i.e., *International Journal of Mass Emergencies and Disasters*, *Disasters*, *Environmental Hazards*, *Natural Hazards Review*), a key organization (the International Research Committee on Disasters), and the wide range of academic meetings available to researchers (e.g., Natural Hazards Workshop; sociology and geography international, national, and regional meetings). In addition, I point out that many agencies fund disaster-related research. For example, these sponsors include the National Science Foundation, FEMA, the United States Geological Survey, the Centers for Disease Control, the Environmental Protection Agency, the National Aeronautics and Space Administration, the Department of Justice, and the Department of Defense. Branches of the American National Red Cross have also sponsored research. Thus, key national organizations and agencies find disaster research important for [p. 421] a wide range of applied and policy reasons. Regional, state, and local offices also support disaster research. Disaster management faculty members have opportunities to obtain external funds and further build a body of knowledge related to disaster management.

Embedded within the concern regarding a body of knowledge is the issue of whether disaster management is a profession. Put in a slightly different way, does there exist a specific set of knowledge, skills, and abilities that are special to the field of disaster management? The Certificate in Emergency Management (CEM), given by IAEM, has defined one set of knowledge, skills, and abilities (for more specific background on this process, see NCCEM 1990 and Sample 1991). Looking at the issue nationwide and in Florida, recently Wilson (2000) has concluded that the area of disaster management is on its way to becoming a profession. However, she also notes that the profession has not yet fully achieved the key characteristics of a profession, such as autonomy/self regulation and monopoly/exclusiveness. Universities and university degree programs can continue to play an important role in assisting disaster management to meet the requirements of becoming a full profession.

Quality faculty members provide another key condition for developing academic legitimacy. Ideally, at least one faculty member within a new program should have a Ph.D. from an

accredited university, tenure, and a publication/research record in the disaster/hazards field. A faculty member with these characteristics can better manage the political landscape and perceptions of legitimacy with the needed authority and less fear of political retribution than nontenured faculty who may or may not have full academic credentials. Also, a fully qualified faculty member is typically more familiar with the political twists and turns that occur within the academy than would a practitioner or junior faculty member coming in as a sole faculty member or even director. Put another way, in what other field would a university hire a person to direct a program with no more than a master's degree, have little or no knowledge of the academy, have no tenure, and/or little if any knowledge of the research literature?

At least some of the degree programs have struggled with these issues. For example, in one case I know of, the university administration was going to name the new director of a disaster program. Although this person had tenure, she/he had no knowledge or background in the field. In addition, this person was also slated to teach disaster management courses. In another case, the director of a new program had a master's degree, no tenure, little knowledge of university politics (and [p. 422] academic perceptions), and minimal practitioner's experience. These cases illustrate how two wrong messages about disaster management develop. First, anybody can direct a disaster program. Second, anybody can teach about disaster management.

Currently, I believe that faculty recruitment may be the most important challenge faced by universities in creating, developing, or maintaining a disaster degree. Most pointedly, during FEMA's Higher Education Workshop held during June 2000, the issue of faculty recruitment topped the list as the key barrier to developing programs. During this meeting, university administrators begged to find qualified faculty with a Ph.D. Some rather recent cases of recruitment that I have been told about directly further illustrate the current problem of faculty recruitment. At one university, no more than five people initially applied for a new disaster management position. Only three of the applicants had some background in disaster. In another case, only three people, none with Ph.D.s, applied for two faculty openings. The program filled only one of the two positions. In a third case, a new program had initially only one applicant (albeit well qualified) for the position. Finally, a university this year advertised for a faculty position in which the university required a minimum of a master's degree in order to improve recruitment. The reality is that existing and new programs will have a challenge finding qualified faculty, whether at the junior or senior level. Qualified people at both the junior and senior level certainly exist. However, quality people, I believe, are not willing to accept the current conditions of these programs. Other barriers related to quality faculty recruitment I elaborate on later in this paper.

Another means to provide legitimacy is to establish some type of research institute with a wide focus to assist practitioners, to research a specific hazard (perhaps based upon the location of the disaster program), or to assist a specific type of client (e.g., local disaster managers, business disaster managers). The institute could accumulate a wide range of materials (e.g., books, articles, newsletters, videos) for its specialization topic to create a resource center for practitioners. Formal institutes also provide an important organizational component for obtaining external funds.

In summary, academic legitimacy is an important issue for many new degree programs. In the case of disaster management programs, many roads, often intertwined, can assist with the path to academic legitimacy. Hiring a senior faculty member with tenure and disaster research credentials and establishing of a research institute are important steps in creating academic legitimacy for a program in disaster management. [p. 423]

Legitimacy among Practitioners

A successful disaster program also needs legitimacy from practitioners. Interaction and program exposure with practitioners can and do provide important insights in such areas as curriculum development, trends in the profession, internships, and of course employment. A number of strategies can increase the legitimacy of a disaster program among practitioners. These include developing an advisory board with practitioners, participating actively in national, regional, and/or local practitioner groups, hiring a well qualified practitioner as a faculty member, using practitioners as guest speakers, and initiating internships. In discussing these strategies, I draw heavily upon my experience with the EADP program. I feel my colleagues and I were quite successful in establishing and maintaining strong links with the practitioner world.

The EADP advisory board consisted of a wide variety of practitioners from federal, state, local governments, volunteer organizations (at the federal and local level), (international) nongovernmental organizations (NGOs), and the private sector. The advisory board gave us excellent input on such issues as curriculum and new trends. The board also assisted with such activities regarding interns, student employment, and potential project work. These contacts and activities further increased our legitimacy among practitioners. We also established a strong alumni association. Tied into university homecoming activities, EADP had its annual Beer Beans and Barbecue Bash where advisory board members, alumni, students, and other guests all had a chance to mingle and share ideas. A good time was had by all.

Second, faculty should become active in some of the practitioner organizations and their meetings. For example, EADP faculty maintained our annual membership with the National Coordinating Council on Emergency Management (now known as the IAEM). We also served on various boards (e.g., certification process) and gave presentations at its national meetings. Other organizations that faculty may join include a state's emergency management professional organization, membership to the Local Environmental Protection Committee, national or local organization for business recovery and continuity, local Red Cross, or other similar volunteer organization. Many opportunities exist for faculty to become involved actively with practitioners, their professional organizations, or their activities. Not only are such organizations looking for members, but often guest speakers. As a result, further linkages for interns, student employment, sponsored work, name recognition, [p. 424] and legitimacy are enhanced.

Third, hiring an academically qualified faculty member (i.e., minimally a master's degree) with a strong practitioner background can further increase and enhance legitimacy among practitioners. During my association with EADP, it always had at least one faculty member with extensive field experience. For example, faculty member Tom Joslin had over 20 years of experience with FEMA and its forerunners. Tom's experience and his respect by others in the field also helped open many doors for internships and employment. Following his unexpected death in 1993, we were fortunate to recruit Jane Kushma, a well-known, liked, and highly respected practitioner from the American National Red Cross. Like Tom, Jane provided us the "applied" perspective to insure those in the profession that we were teaching more than "book theory." Jane is now using her knowledge and expertise to develop a new disaster program at the University of Tennessee-Chattanooga and is also finishing her dissertation. I see Jane's background as the prototype for future disaster management faculty—an experienced practitioner with full academic credentials.

Other activities with practitioners can give attention and credence to a developing disaster program. Drawing upon disaster managers as guest lecturers can heighten program exposure while also providing students with good doses of reality. This has to be done carefully, however, since I have seen a strong streak of anti-book learning among a vocal minority of practitioners. In fact, the issue of college education became a hotly debated topic among practitioners during the NCCEM certification meetings. Fortunately, key practitioners still support the need for education. Such people as former NCCEM presidents Ellis Stanley and John Pickett and state directors John White (Tennessee) and Joe Myers (Florida) come to mind. Practitioners can highlight the importance of combining “book-learning” and practical experience. For example, Gregg Dawson (an EADP graduate), who is currently the Director of Disaster Preparedness for the City of Fort Worth, Texas, wrote an excellent article on knowing and applying research (Dawson 1993).

Finally, a strong internship program can help provide important links with practitioners. Internships encourage interaction among faculty, students, and practitioners. Internships can also facilitate hiring students following graduation, which in turn strengthens connections with the practitioner world.

In summary, a new disaster management program may face the problem of legitimacy from two fronts—the academy and the profession. Academics may view the area as not having a true “body of [p. 425] knowledge.” Practitioners may see such programs focusing too much on “books” and not enough on practical experience. However, various strategies can minimize the problem of legitimacy among both academics and practitioners.

Administrative Location

Since the disaster management profession is still emerging and defining itself (Wilson 2000), university administrators often puzzle where a disaster management program should be placed. For example, programs currently exist in colleges of arts and sciences, health colleges, and schools related to community service. Furthermore, since most programs are small, having no more than one or two full time faculty members, they are generally placed within some other department. Among departments, the most popular location of disaster programs seems to be within political science/public administration. Putting disaster degree programs within these academic areas makes some organizational sense. First, disaster degrees deal primarily with people or management types of issues. Second, a large perception exists, albeit not necessarily accurate, that the main job market for disaster managers is (local) government.

However, contrast the above-mentioned administrative locations with the existing research institutes and disciplines training a majority of graduate students. Over the last 50 years, a clear majority of the social science research generated has come from sociologists and (social) geographers. Second, the research institutes responsible for training a large number of disaster researchers are generally associated with sociology (Disaster Research Center, University of Delaware; Natural Hazards Research and Applications Information Center, University of Colorado-Boulder; International Hurricane Center, Florida International University) and geography (Natural Hazards Research and Applications and Information Center, University of Colorado; Hazards Research Lab, University of South Carolina). The Natural Hazards Reduction and Recovery Center at Texas A&M includes planners, sociologists, and architects.

Thus, a structural/organizational problem exists regarding administrative location that carries implications for faculty recruitment. Programs and faculty lines may be within political science,

public administration, or health science programs, but sociology and geography generate many of the Ph.D. candidates and potential applicants. New sociology and geography Ph.D.s may not feel comfortable initiating their first tenure-track job outside of their discipline. They may fear (although that perception may be misplaced) that faculty in their potential department may not understand or support disaster and hazard research.

In fact, these fears and potential perceptions are grounded partially in one case. One disaster program within a larger department (but neither sociology nor geography) has had two junior faculty members on tenure-track positions. One member's contract was not renewed after one year of service. The other faculty member's contract was not renewed after four years of service. In addition, another faculty member with a joint appointment with this program had her/his tenure delayed for a year. Within the same department, when an experienced member of the disaster program moved her/his tenure line back to her/his home discipline, the department chair terminated the faculty member's association with the program. A year later, a veteran of the program who had served as acting director left to pursue other interests. As a partial result of these and other developments, the recently retired director of the program has also refused to continue his/her association with the program (e.g., adjunct teaching). Thus, within a four-year period, all three assistant professors had tenure problems, and four faculty members left the department and the disaster management program. Three of the most recent people to hold the title "director" no longer have an affiliation with the program. Let me caution, these departmental actions may be totally legitimate. Yet, one can see how such incidents and resulting perceptions can contribute to the broader issue of inhibiting quality faculty recruitment not only for the program involved, but disaster management programs in general. Quality faculty simply will not risk their careers in such a turbulent environment.

Since a clear perception exists that a major barrier to program development is faculty recruitment, then new disaster management programs should be located in a stable environment where recruitment can be enhanced. As noted above, the academic areas with the strongest history of research and training Ph.D. students would be sociology or geography.² Although such a location would not prevent problems, I believe it would help mitigate the problem of faculty recruitment.

Other more general issues that may haunt smaller programs located within larger departments and could impact disaster programs include autonomy and (budget) control. For example, social work programs have often found themselves administratively under other departments (e.g., sociology perhaps being most common). In order to protect the faculty, the program, and the profession, the accreditation process of [p. 427] social work programs stresses budgetary and administrative autonomy from the larger department. A similar approach is needed for disaster programs placed within larger departments. Although part of a larger department, disaster management programs must operate with some degree of fiscal and administrative autonomy. Otherwise, administrators with little or no knowledge of the field will control the destiny of the program and may make decisions not in the best interest of the disaster program. Such decisions may be innocuous (e.g., no knowledge of the disaster management field) or destructive (e.g., using the resources of the unprotected disaster program to support the larger department). Of course, such problems are not new to the academy. Programs within smaller departments, including criminal justice, women's studies, social work, sociology, public administration, and anthropology, have all struggled with similar situations.

In summary, based on substantive, research, and faculty recruitment reasons, until disaster management programs grow to become their own departments, I recommend that sociology or

geography departments are best suited to house new and developing disaster degree programs. Furthermore, when housed within larger departments, disaster programs should be provided a degree of administrative and budgetary autonomy afforded other professional programs such as accredited social work programs.

The Curriculum

When I joined EADP in 1989, my colleagues Tom Joslin and Bob Reed had established a generic approach to the curriculum. Specifically, we wanted to provide a general overall view of the field. Although EADP continued to revise our curriculum through the years to meet the changing needs of the profession, it always maintained this approach. As a result, students could and did obtain employment in the public, private, volunteer, and international sectors. Once hired, their employer provided the specifics. Our discussions with alumni and advisory board members generally supported this concept. If desired, students could focus on a specific subfield by taking other content-specific EADP courses (e.g., business continuity) and a related minor (business, computer science).

Drawing upon the National Governors' Association report (1979) and the concepts of Integrated Emergency Management (IEM) and Comprehensive Emergency Management (CEM), EADP used the four phases of disaster management (i.e., preparedness, response, recovery, [p. 428] mitigation) as the foundation of the curriculum. Thus, the introductory course provided an overview of IEM, CEM, salient legislation and historical events, and key social/behavioral findings within the four phases of disaster. We also offered specific courses on each disaster phase. A case studies course, which later became more of a "capstone" course, provided an overview of current issues and showed how all the components of the field fit together. Finally, an internship program gave students a strong dose of the "real world." These seven courses provided the foundation of our program. Of these courses, the introductory course, mitigation (strongly based upon FEMA Director Witt's programs stressing mitigation), and capstone courses were all required. Traditional students, and/or those with no background in the broadly defined area of "emergency services," were generally required to have an internship.

We required three other courses. One was a course on leadership, in part based upon FEMA's leadership course in the Professional Development Series. The course explored not only the psychological and social psychological dimensions of leadership but also social structural components. A course on "Special Populations" was required as far back as the mid-1980s. Early in EADP's development, the faculty recognized the large number of people at greater risk for disaster because of a wide range of conditions (persons with disabilities, social class, gender, ethnicity, age, etc.). Today, such a class would encompass and perhaps should be called more broadly "Issues in Social Vulnerability."

The final required course was "Collective Behavior." Clearly, the field of collective behavior represents a key theoretical and empirical foundation to understanding disaster (Wenger 1986; Dynes and Tierney 1996). Many researchers (e.g., Dynes, Quarantelli, Turner, Drabek, Stallings, R. Perry, Neal, Phillips, Fischer) draw upon collective behavior as a central approach to understanding panic, warning, emergence, organizational response, convergence, and citizen response and participation. Second, every collective behavior textbook for at least the last 30 years devotes large sections to disaster behavior. Finally, events under the rubric of collective behavior have also become part of disaster manager's concern. These incidents include crowds, riots, social protest, social movements, terrorism, mass hysteria, and panics. Former students

have told me how collective behavior has helped them plan, anticipate, and deal with such incidents as the Olympics, air shows, political protests, and of course more traditional disaster response-related issues.

As the field of disaster management developed, we also responded to emerging trends with new courses. For example, EADP developed such courses as Computers in Emergency Management, Business [p. 429] Continuity, Hazardous Materials, SARA Title III, Department of Defense and Emergency Management, and International Disasters. During the early 1990s and at the ending of the Cold War, we deleted our civil defense course. However, we included key points from this course in the introductory course as part of the history of the field. Existing courses were overhauled (e.g., special populations, case studies). Also, other disciplines supplemented our curriculum. Courses on local government (public administration), geographic information systems (geography), environmental issues (sociology), and relief work (anthropology) all gave focus to specific students' needs and interests. Generally, if a student made a strong case for a course outside of EADP to count toward the major, we would allow it. Let me caution, however, that a disaster management program projecting an image of legitimacy and providing a cohesive approach to disaster management should have a core set of required courses under its own rubric. Overall, EADP devised a flexible degree plan that drew upon required courses and electives (both within and outside our program) to maintain flexibility in curriculum design as the profession emerged. The need for a broad disaster management curriculum was well summarized by EADP's former director Bob Reed. He often mentioned that "Other than (modern) dance, any course would be relevant to emergency management."

However, other approaches may exist. Based upon the social and organizational environment, members of a new program may decide to focus on a specific specialization. Business continuity, hazardous materials, volunteer organizations, international disaster relief, or even social vulnerability are bases on which a program could be built. Other possibilities certainly exist that I have not considered.

Overall, since both the degree and the profession of disaster management are still quite new, a curriculum at this point should not be set in stone. A disaster degree program should reflect the same traits as effective disaster management—flexibility and the ability to change with an uncertain and turbulent social environment.

Student Recruitment

Without students, a program cannot develop. During the Summer 2000 FEMA Higher Education workshop, program representatives generally agreed that the second greatest problem facing most new programs was student recruitment. A few new programs (e.g., Arkansas Tech, Jacksonville State, Oklahoma State) have developed a strong student base. Other developing programs seemed to be struggling in recruiting [p. 430] students. A number of factors can help enhance student enrollment.

As real estate experts note, location is important. A program located close to or within a large metropolitan area will have more opportunities to recruit. One key factor to UNT's initial success was its location within the Dallas/Fort Worth Metropolitan Area. With over 4.5 million people, over 70 political jurisdictions, and little if any local, regional, or national competition until recently, enrollment thrived during the 1990s. The annual number of majors rose from about 30 in 1990 to over 100 by 1995 and stayed around 100 the rest of the decade. In 1989, 11 students graduated from the program. By 1992 and through most of the decade, between 40 to 50

students a year graduated. Initially, enrollment was spurred by recruiting firefighters, paramedics, and police officers. Since many students were also nontraditional, EADP offered evening classes. As the program matured, more traditional students enrolled in the program, including those from out of state.

However, not all programs can and will be located in such large metropolitan areas. Three new programs located in rural areas have initial strong student enrollment. Oklahoma State's fire and emergency management master's program has over 80 students. In its first year, Jacksonville State's master's emergency management concentration in public administration attracted over 30 students. Dean Rollins of Arkansas Tech noted during the 2000 EMI Higher Education Conference that its undergraduate degree program has well over 80 students. These universities have drawn upon various nontraditional means to meet the needs of their students. I discuss some of these techniques later in this section.

As alluded to above, a new program probably will not draw traditional students. Therefore, more flexible approaches may be necessary to establish and increase enrollment. For example, from its beginning EADP taught all of its courses during the evening, allowing those employed to make class after work. Once a semester, EADP scheduled two classes back-to-back. This cut back on the number of times students had to commute on campus. Also, these scheduled times allowed traditional students to enroll in classes. Using another approach, the Oklahoma State University program has started its "Summer Institute." During the summer, one course a week for five weeks is offered on campus. Students can select any of the intensive courses for their degree work. Students must also complete assignments before and after the on-campus experience. Programs could consider other approaches such as intensive weekend courses. In summary, disaster degree programs should explore alternative and flexible [p. 431] means of offering courses.

Another factor impacting student recruitment is university size. Many students come to college unsure of a career path, and other students will change their minds many times. Thus a university with over 15,000 students will have many more "undecided" students that could be attracted to a disaster program. Except for just a few universities (e.g., UNT, Oklahoma State University), most universities and colleges involved with disaster-related programs generally have student populations of under 10,000 students.

As a result, a key component to successful student recruitment appears to be distributive learning. Distributive learning is the combined use of the Internet, videotapes, e-mail, innovative scheduling, and other similar activities. Distributive learning can reach out to those who want a degree in disaster management but do not have the time or the opportunity to travel long distances for education. The most recent FEMA Higher Education Workshop indicates that most of the degree and certificate programs are involved in some form of distributive education.

However, distributive learning may not be a panacea for all programs. First, start-up costs are high. Course development is labor intensive. Faculty must be given release time and/or other incentives to develop and then manage (additional) courses. Computers and other equipment are expensive to purchase and update. Second, for nontraditional educational approaches, universities must have an effective system in place for recording students' payments and academic credit. Third, a means to run and manage courses that are not concurrent with typical semester or quarter systems must be fair and in place. Fourth, the issue of intellectual property and fair use must be explicitly defined. Fifth, new emerging issues regarding academic integrity must be considered. Without going into other details, distributive education may be a path for some programs. However, it is fraught with numerous challenges.

In short, traditional students do not arrive at a university wanting to be a professional disaster manager. As a result, most degree programs must draw upon non-traditional students for both programs. Urban areas offer higher degrees of student recruitment, but universities in more rural areas can compete for enrollment by drawing upon innovative scheduling and perhaps some components of distributive learning.

The Job Market

I believe that a number of job sectors currently exist (albeit they are not mutually exclusive categories). They include the public sector [p. 432] (including local, state, or federal government), volunteer organizations, international disaster planning, humanitarian, or relief agencies (i.e., NGOs), business continuity, agent-specific areas (e.g., hazardous materials, flooding), and consulting. I will discuss briefly my impressions of each market and also make a few brief comments on “minors” that students could select to improve their marketability for a specific area.

Probably the most often considered source of employment in disaster management is the public sector. Employment with local government seems to be the most thought of source of employment. A minor in political science, public administration, sociology, or geography may best suit those looking for employment in the public sector.

Volunteer agencies such as the American Red Cross (ARC) present another opportunities. ARC alone has over 1,500 separate chapters as well as regional and national offices. Other organizations, especially associated with religious organizations, have yet to be tapped for employment opportunities. Sociology or social work would be appropriate minors.

Another job sector is in the international market. Often, jobs may be found with NGOs. They typically serve as conduits for aid from wealthy countries or foundations to disaster stricken (developing) nations. Another opportunity would be with federal agencies in the United States or other organizations (United Nations, Organization of American States) that assist with disaster planning or aid projects. A minor in political science or anthropology, coupled with a strong background in a foreign language (Spanish or French would be the most logical), would help students position themselves for employment. Although I do not see this area booming with job opportunities, and the pay is often rather low, jobs will continue to exist and grow as developing nations continue to have more and worse disasters. These type of positions are certainly for those who have a sense of adventure.

Probably the market with the largest potential is in the private sector. To the best of my knowledge, all major companies have business continuity planners. Not only do these positions exist at corporate headquarters, but generally also at regional offices. Literally thousands of opportunities exist in business continuity, not only in the United States but throughout the world. I have seen EADP students position themselves for jobs in the private sector with a minor in such areas as business, computer science, and sociology.

Another emerging source of opportunities involves what I call agent-specific jobs. For example, firms dealing with hazardous materials need to be not only chemical experts but also employees familiar [p. 433] with such topics as SARA Title III and disaster management. Similar opportunities exist within the nuclear-related industries. For example, a firm in Denton, Texas, has hired a large number of EADP graduates to assist them with their successful, growing nationwide business of managing train derailments involving hazardous materials. Depending

upon the type of agent under consideration, appropriate minors may include, but not be limited to, chemistry, physics, geology, environmental science, or meteorology.

Finally, consulting and consulting firms represent another job market. For example, some EADP graduates have joined some major consulting firms to assist with disaster-related activities. Others graduates have been employed by consulting firms that deal only with disaster issues. A few others, after accumulating both the degree and job experience, have started their own consulting firms. Any of the minors mentioned above would serve as additional courses of study.

In summary, I see the existence and expansion of job opportunities in disaster management. Although traditional opportunities will continue to exist in the public sector, I believe in the future this niche will be overshadowed but growing opportunities in business, voluntary organizations, agent-specific settings (e.g., hazardous materials, earthquake), consulting, and in areas that we have not even considered.

Conclusion

Currently, a growing number of universities are beginning to develop degree programs in disaster management. Factors such as the increasing number of disasters, the need for educated disaster managers, the push for the professionalization of the field, and strong assistance from FEMA's Higher Education Project have all played a salient role in enhancing new program development. In starting and even maintaining quality degree programs, universities face a number of challenges. First, program directors may encounter perception problems of legitimacy from both within the academy and the profession. Second, administrators may be unsure where to locate administratively disaster programs. Third, programs will probably experience the problem of recruiting qualified faculty. Finally, disaster programs must also struggle with topics related to curriculum development, student recruitment, and the future job market.

However, solutions can be found to these issues. Hiring a director with tenure and a Ph.D. from an accredited university who also has an established track record in disaster/hazard research is a good start. [p. 434] Developing strong contacts with practitioners and their organizations also can aid a developing program. Placing a program within disciplines having institutionalized disaster research (i.e., sociology, geography) can facilitate faculty recruitment. Providing programs with some degree of administrative and budgetary autonomy similar to social work accreditation requirements allows a program the needed space to grow, to assess its own needs, and to define itself. Disaster programs must also develop an environment for junior faculty to not only become creative but also improve the opportunities to obtain tenure. In summary, I believe that these and other strategies noted above can create a synergetic effect to enhance the development of disaster management programs.

If programs can successfully manage the above mentioned and other emerging issues, they will have potential for growth and other opportunities. For example, universities and disaster programs have a unique position in playing a central salient role with such emerging issues as certification, accreditation, and professionalization of the field. I see new research projects focused on not only the needs of certification, accreditation, and professionalization, but also on topics that directly impact the professional disaster manager. For universities willing to expend a few extra resources for their disaster management programs, the potential and payoffs are quite real. As long as there are disasters, human suffering, economic losses, and the need to recover and rebuild effectively, there will be a need for educated disaster managers and the profession of

disaster management. Finally, I believe this paper has touched upon only a few key issues regarding disaster management education and the broader issue of professionalization in disaster management. Hopefully, this paper will initiate a dialogue on issues that I have mentioned in this paper, and on topics that I have neglected.

Notes

* A much earlier version of this paper titled “The Problem of Applied Fields in Academic Settings: Disaster Management and the Search for Legitimacy” was presented at the first annual Federal Emergency Management Agency Higher Education Conference in June 1998. I would like to thank my former colleagues associated with the Institute of Emergency Administration and Planning (i.e., Bob Reed, Tom Joslin, Jane Kushma, and Swaroop Reddy) and the many graduates of the program for the extensive hours of discussion we had on issues that are related to this paper. I would also like to thank Brenda Phillips for her feedback. However, all comments and conclusions are strictly my own.

1. Please note that I use the phrase “disaster management” rather than the more often used phrase “emergency management.” This distinction I believe is quite important to the profession and rests within the theoretical debate of defining disaster (e.g., see Quarantelli 1998). Drawing on the theoretical commentary by most authors in Quarantelli’s (1998) edited book and in Britton’s (1986) article, I make an important distinction between “emergency management” and “disaster management.” Emergency management refers to the day-to-day activities that fire or police departments perform that are part of their planned, anticipated, budgeted daily routine. These activities may include putting out house fires, rescuing injured victims from vehicle accidents, tending to heart attack victims, directing traffic, or even rescuing cats from trees. In addition to being part of the planned daily routine which does not upset the overall patterns of a community, these types of events do not generate unmet organizational needs. Disaster management refers to those situations, events, or occasions when a community’s resources are perceived as not sufficient, and unmet social needs are generated. Social life becomes disrupted for much of the community, and the community must reach to the outside environment for additional resources. For example, such occasions may include the *social* consequences of tornadoes, hurricanes, floods, blizzards, or hazardous materials accidents. The disaster manager, rather than being in “response mode” every day, has a totally different set of tasks. Her/his tasks are to work with a wide range of community members to assist with the preparedness, mitigation, and recovery of such events. In short, although some overlap does exist, many of the knowledge, skills, and abilities for those in “emergency management” are much different than those in “disaster management.”

2. By no means do I intend to diminish the work of political scientists or public administrators in disaster research. Such figures as Louise Comfort, Peter May, Richard Sylves, and Bill Waugh, just to name a few, have made and continue to make important contributions to the field. Rather, my comments reflect the lack of their disciplines’ creating and maintaining major research institutes that also generate a flow of trained graduate students. As a result, no steady stream of political science or public administration disaster researchers are coming from institutes to fill potential new faculty lines in disaster management.

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