

Session No. 44

Course Title: Social Dimensions of Disaster, 2nd edition

Session 44: Bridging the Gap Between Researchers and Users

1 hr.

Objectives:

- 44.1 Discuss disaster research as applied social science
- 44.2 Describe at least two trends in the professionalism of emergency management
- 44.3 Describe four strategies that researchers should use to increase utilization of study results
- 44.4 Describe three strategies that organizational executives can use to enhance utilization of research results
- 44.5 Identify three different uses of disaster research
- 44.6 Discuss at least three factors that constrain the integration of disaster research and emergency management
- 44.7 Discuss at least three potential academic reforms required to reduce the gap between researchers and users.

Scope:

This is the third of three integrative course summary sessions. Specific content may vary with professional discretion and field trip experiences. Issues within the profession, i.e., nature and type of educational requirements for emergency managers, and the research community, i.e., utilization strategies, are highlighted.

Readings:

Student Reading:

Neal, David M. 2000. "Developing Degree Programs in Disaster Management: Some Reflections and Observations." *International Journal of Mass Emergencies and Disasters* 18:417-437.

Professor Readings:

Wilson, Jennifer and Arthur Oyola-Yemaiel. 2002. "An Emergency Management Profession: Will We Make It?" *Journal of the American Society of Professional Emergency Planners* 9:74-81.

Moore, Jamie. 2002. "Bridging the Generation Gap: Practical Experience vs. Academic Education." *IAEM Bulletin* 19 (November):17.

Neal, David M. 1993. "Integrating Disaster Research and Practice: An Overview of Issues." *International Journal of Mass Emergencies and Disasters* 11:5-13.

Quarantelli, E.L. 1993. "Converting Disaster Scholarship into Effective Disaster Planning and Managing: Possibilities and Limitations." *International Journal of Mass Emergencies and Disasters* 11:15-39.

Background References:

Dawson, Gregg. 1993. "A Comparison of Research and Practice: A Practitioner's View." *International Journal of Mass Emergencies and Disasters* 11:55-62.

Malone, Willie. 1993. "Research Definition and Location of Research: A User's View." *International Journal of Mass Emergencies and Disasters* 11:63-74.

Ruberg, George and John F. Keeling, III. 1993. "Structured Meeting Techniques that Identify Emergency Management Issues Practitioners Really Want to See Addressed." *International Journal of Mass Emergencies and Disasters* 11:75-84.

Yin, Robert and Gwendolyn B. Moore. 1985. *The Utilization of Research: Lessons from the Natural Hazards Field*. Washington, D.C.: Cosmos Corporation.

Laska, Shirley Bradway. 1993. "Environmental Society and the State of the Discipline." *Social Forces* 72:1-17.

General Requirements:

Copy of Course Syllabus.

Use Overheads (44-1 through 44-9 appended).

See individual requirements for each objective.

Objective 44.1 Discuss disaster research as applied social science.

Requirements:

Use Overheads 44-1 and 44-2.

Remarks:

I. Introduction.

- A. **Ask students:** “Your final course examinations are due at the beginning of the next session. Are there any remaining questions about the exam?”
- B. **Explain:** “This is our last substantive session. We will explore a variety of topics so as to further integrate course materials. An overview of the session will assist. This session will help you expand your thinking and understanding of how the gap between **producers** of disaster research and potential **users** might be reduced.”
- C. **Distribute** copy of Course Syllabus.
- D. **Explain:** “As we examine certain topics, it will be helpful to have a copy of the Course Syllabus for reference.”
- E. **Display** Overhead 44-1; “Session 44 Overview.”
- F. **Review** the topics listed and illustrate each briefly.
 - 1. Disaster research as applied social science.
 - 2. Trends in emergency management professionalization.
 - 3. Utilization strategies for researchers.
 - 4. Different uses of disaster research.
 - 5. Barriers that constrain the use of disaster research.
 - 6. Potential academic reforms in emergency management education.

II. Variations in research.

- A. **Display** Overhead 44-2; “Variations in Research.”
- B. **Review** the four types of research listed and use the course syllabus to identify examples.
 - 1. Academic research.

- a. **Ask students:** “Thinking back over the course readings, what are some examples we reviewed of academic research? Realize, of course, that the lines among these four categories are fuzzy. But clearly some of the material we reviewed was more theoretically focused than other studies.”
- b. **Record** student examples on the chalkboard.
- c. **Explain:** “In this context, ‘academic research’ refers to empirical research designed to test, clarify, or extend theory.”
- d. **Examples:**
 - 1) Arata, Catalina M., J. Steven Picou, G. David Johnson and T. Scott McNally. 2000. “Coping with Technological Disaster: An Application of the Conservation of Resources Model to the *Exxon Valdez* Oil Spill.” *Journal of Traumatic Stress* 13:23-39.
 - 2) Dow, Kirstin and Susan L. Cutter. 1998. “Crying Wolf: Repeat Responses to Hurricane Evacuation Orders.” *Coastal Management* 26:237-252.
 - 3) Aguirre, Benigno E., Dennis Wenger and Gabriela Rico. 1998. “A Test of the Emergent Norm Theory of Collective Behavior.” *Sociological Forum* 13:301-320.
- e. **Synthesizing literature reviews**, i.e., theoretically oriented literature summaries.
 - 1) Drabek, Thomas E. 2000c. “The Social Factors that Constrain Human Responses to Flood Warnings.” Pp. 361-376 in *Floods*, (Vol. 1) Dennis J. Parked (ed.). London and New York: Routledge.
 - 2) Fothergill, Alice. 1996. “Gender, Risk and Disaster.” *International Journal of Mass Emergencies and Disasters* 14:33-56.
 - 3) Neal, David M. and Brenda D. Phillips. 1995. “Effective Emergency Management: Reconsidering the Bureaucratic Approach.” *Disasters* 19:327-337.
 - 4) Lindell, Michael K. 1997. (ed.). “Adoption and Implementation of Hazard Adjustments.” *International*

Journal of Mass Emergencies and Disasters 15:327-453.

2. Applied Research.

a. **Ask students:** “In contrast to these more theoretically oriented studies, what examples do you recall of more applied studies? These are studies that have minimal reference to broader theories of the social sciences.”

b. Examples:

- 1) Larson, Erik. 2000. *Isaac’s Storm*. New York: Vintage Books.
- 2) Wedel, Kenneth R. and Donald R. Baker. 1998. “After the Oklahoma City Bombing: A Case Study of the Resource Coordination Committee.” *International Journal of Mass Emergencies and Disasters* 16:333-362.
- 3) McEntire, David A. 2001b. “Multi-organizational Coordination During the Response to the March 28, 2000, Fort Worth Tornado: An Assessment of Constraining and Contributing Factors.” (Quick Response Report #143). Boulder, Colorado: Natural Hazards Research and Applications Information Center.

3. Action research.

a. **Ask students:** “Some social scientists conduct research of various types because they want to propose or guide disaster management policy. One of the aims of their research is to formulate conclusions that might provide food for thought for practitioners. Which studies most reflect that objective?”

b. Examples:

- 1) Wilson, Jennifer L. and Arthur Oyola-Yemaiel. 2000. “The Historical Origins of Emergency Management Professionalization in the United States.” *The Journal of the American Society of Professional Emergency Planners* 7:125-153.

- 2) Cosgrove, John. 1996. "Decision Making in Emergencies." *Disaster Prevention and Management: An International Journal* 5:28-35.
- 3) Simpson, David M. and Gregory A. Howard. 2001. "Issues in the Profession: The Evolving Role of the Emergency Manager." *The Journal of the American Society of Professional Emergency Planners* 8:63-70.

4. Evaluation research.

a. **Ask students:** "Some researchers will conduct studies to evaluate specific programs. Others will collect descriptive data on existing programs so that a comprehensive picture can be obtained. What studies from this course most reflected these types of objectives?"

b. **Examples:**

- 1) Sattler, David N. and Amanda L. Marshall. 2002. "Hurricane Preparedness: Improving Television Hurricane Watch and Warning Graphics." *International Journal of Mass Emergencies and Disasters* 20:41-49.
- 2) Hooper, Michael. 1995. "The Value of Community Policing in Preventing Civil Disorder." *The Network* 13:33-37.
- 3) Green, Walter G. III. 2001. "The State of the Local EOC: A Preliminary Study." *The Journal of the American Society of Professional Emergency Planners* 8:71-85.

III. The message.

- A. **Diversity**, i.e., research studies vary widely in the degree to which they are theoretically focused.
- B. **Value**, i.e., regardless of the degree of theoretical focus, research studies can be useful to different user groups.
- C. **Prestige**, i.e., typically, university review groups (including tenure and promotion committees) will highlight research that is published in journals that require more of a theoretical focus. While other forms of research are recognized and accepted as "legitimate" contributions, academic research is accorded the highest level of prestige within most university systems.

Supplemental Considerations:

The key **message** of this section is that research is **diverse**. Some studies are intended to accomplish **objectives** other than theory testing. By using the Course Syllabus as a **discussion guide**, the distinctions among **types of research** can be illustrated easily. Also, this procedure will **facilitate** the course **integration** objective.

Objective 44.2 Describe at least two trends in the professionalism of emergency management.

Requirements:

Overhead 44-3.

Remarks:

I. Introduction.

A. **Exercise.**

1. **Remind** students of exercise procedures.
2. **Divide** class into four groups and assign roles.
 - a. Chair.
 - b. Reporter.
 - c. Timer.
3. **Announce** time limit: 5 minutes.

B. **Display** Overhead 44-3; “Workshop Tasks.”

1. Group 1 – According to Neal (2000), what are the major issues of “legitimacy” regarding emergency management programs within institutions of higher education and the profession?
2. Group 2 – According to Neal (2000), what are the major curricular issues in emergency management programs within institutions of higher education?

3. Group 3 – According to Neal (2000), what are the major student recruitment issues in emergency management programs within institutions of higher education?
4. Group 4 – According to Neal (2000), what are the major job placement issues in emergency management programs within institutions of higher education?

C. **Start** discussion.

D. **Stop** discussion.

II. Professionalism issues.

A. Group 1 report: 2 minutes.

B. **Supplement** as required with points like these (adapted from Neal 2000, pp. 419-425).

1. **Is there a relevant and adequate body of knowledge?** (p. 420)
2. **Are there enough adequately trained faculty?** (p. 421)
3. **What roles can advisory boards play?** (p. 423)
4. **Should faculty be active in practitioner organizations?** (p. 424)
5. **Should faculty be required to have practitioner experience plus their academic qualifications?** (p. 424)

C. Group 2 report: 2 minutes.

D. **Supplement** as required with points like these (adapted from Neal 2000, pp. 425-429).

1. **What should be the home department for emergency management programs?** (p. 425)
2. **What disciplinary major should emergency management faculty reflect?** (p. 426)
3. **What core courses should comprise a major in emergency management** (p. 427)
4. **What courses in related departments should be accepted, e.g., collective behavior in sociology?** (p. 427)

E. Group 3 report: 2 minutes.

F. **Supplement** as required with points like these (adapted from Neal 2000, pp. 429-431).

1. **What unique recruiting strategies might be required for programs at universities located outside metropolitan areas?** (p. 430)
2. **What mix of full-time “traditional” versus part-time employed students is desired?** (p. 430)
3. **What administrative challenges, e.g., time of day for course offerings, does the student mix reflect?** (p. 431)
4. **What impact on enrollments might “distributive learning” classes have in emergency management programs?** (p. 431)

G. Group 4 report: 2 minutes.

H. **Supplement** as required with points like these (adapted from Neal 2000, pp. 431-434).

1. **Should most emergency management program graduates expect employment within the government sector?** (p. 431)
2. **What private sector employment opportunities are available to emergency management program graduates?** (p. 432)
3. **What international sector employment opportunities are available to emergency management program graduates?** (p. 432)

III. Wilson and Oyola-Yemaiel 2002.

A. Professional requirements (p. 74).

1. **Autonomy**, i.e., capacity for self-regulation.
2. **Monopoly**, i.e., exclusive right to perform the activity.

B. Key issues within the emergency management “profession.”

1. **Certification**, i.e., by whom? Standards? Regulation?
2. **Accreditation**, i.e., by whom? Standards? Regulation?

- C. **Conclusion:** “The field is becoming increasingly complex and more than ever, needs a myriad of disciplines to accomplish its mission. Professionalization of emergency management means that emergency managers should become the integrator of the theoretical and practical knowledge of the field.” (p. 80).

IV. Practitioner viewpoint – Moore 2002.

- A. “With the ‘practitioners’ worried about saving their jobs and the ‘academics’ worried about getting recognition within the emergency management community, some are missing out on an indispensable opportunity to help one another.” (p. 17).
- B. “Petty bickering about who has a degree – and who does not – is not helpful for our profession, and in no way enhances our ability to do our jobs.” (p. 17).

Supplemental Considerations:

The key **message** of this section is that emergency management is an **evolving** profession confronting a wide variety of complex issues. Student **understanding** of these issues will be **enhanced** through the proposed exercise. Professors must be **careful**, however, **not** to leave an **impression** of total **chaos**. Conversely, students must become aware of the rapid changes that are occurring. Some professors may wish to interject homeland security issues and thereby expand the session. For example, “Given the rising threat of terrorism, should higher education programs in emergency management seek name changes and the requisite curricular expansion?” “Should a series of Departments of Emergency Management – Homeland Security, be established?” “Should it be Homeland Security – Emergency Management or just Homeland Security?” During a 2003 workshop (Thomas 2004), participants identified numerous emerging issues regarding future educational opportunities in emergency management. Among these were: 1) “consistency of terminology”; 2) “specialization versus broad training”; 3) “meeting the needs of the profession, but at the same time creating jobs (with appropriate pay)”; and 4) “the role of emergency management in relation to the current emphasis on terrorism” (adapted from Thomas 2004, p. 10). Finally, some professors will **integrate discussion** from the **field trips** in a variety of ways. For example, “Which of the field trip speakers raised these types of professional issues? Why do you believe they were less salient to the other speakers?”

Objective 44.3 Describe four strategies that researchers could use to increase utilization of study results.

Requirements:

Overheads 44-4 and 44-5.

Remarks:

- I. Research topic selection strategies.
 - A. **Explain:** Ruberg and Keeling (1993) explored ways that researchers might identify topics of interest to emergency managers.
 - B. **Display** Overhead 44-4; “Topic Identification Strategies.”
 - C. **Review** the three strategies and illustrate as required (adapted from Ruberg and Keeling 1993, pp. 76-83).
 1. **Nominal Group Technique (NGT).**
 - a. Four step process (p. 76).
 - 1) Group member writes down a few key research issues.
 - 2) Group members orally share the issues; facilitator records on flip chart.
 - 3) Discussion for clarification.
 - 4) Group members vote to rank priority.
 - b. Emergency management application (p. 77).
 - 1) National Task Force on Hazardous Materials Emergency Preparedness.
 - 2) Workshop groups.
 - a) Training and education.
 - b) Emergency planning.
 - c) Prevention and enforcement.
 - d) Response and recovery.
 2. **Role playing.**
 - a. Workshop participants play a designated role to identify action items (p. 78).
 - b. Emergency management application (p. 79).

- 1) Assigned role of Department of Energy personnel responsible for transportation of hazardous materials.
- 2) Participants divided into teams.
- 3) Mock report given to team.
- 4) Team challenged to develop program plan.
- 5) Over 50 action items identified and then ranked in priority.

3. **Tabletop exercises.**

- a. “What if” scenarios are developed and reviewed by group (p. 80).
- b. Emergency management applications (p. 82).
 - 1) Interface between EOC and field command post.
 - 2) Effectiveness of emergency public information systems.
 - 3) Mobilization during off hours.
 - 4) Coordination of information flow.

II. Yin and Moore (1985) utilization strategies.

A. **Method:** case studies of hazards research projects with varied levels of utilization.

B. **Selected projects** included:

1. Association of Bay Area Governments (ABAG) – assessment of local government liability for injuries or losses due to earthquakes.
2. ABK Joint Venture (three Los Angeles-area engineering firms, i.e., Agbabian Associates, S.B. Barnes and Associates, Kaviotis, Kesler and Allys) – designed a cost-effective means to evaluate and retrofit unreinforced masonry buildings to withstand earthquakes.
3. National Academy of Sciences (NAS) – project to assess the social, economic, political, behavioral, and legal consequences of earthquake predictions.

C. **Display** Overhead 44-5; “Utilization Strategies for Researchers.”

D. **Review** and illustrate the points listed.

1. **Participate in practitioner organizations.**

- a. Maintain official membership.
- b. Be active.

2. **Identify potential user groups early.**

- a. Prior to starting research.
- b. Additional groups as study develops.

3. **Be flexible in research design.**

- a. Suggestions from users.
- b. Accept change when appropriate.

4. **Be responsive to users.**

- a. Study methods.
- b. New study topics.

5. **Produce a user group product.**

- a. Publish results in a summary manner for user groups.
- b. Do not limit publication to academic journals.

Supplemental Considerations:

The **key message** of this section is that there are many strategies researchers could use to **increase** the changes that their research conclusions might be **utilized** by practitioners. Some professors might **expand** this section by reviewing the Dawson’s (1993) analysis. By focusing on a few **evacuation studies**, Dawson contrasted several research **conclusions** with his **experiences** in Fort Worth – Tarrant County. His conclusion? “Again, I encourage community planners and managers to ‘read the research’ on these topics and make it available to those around you.” (p. 58) He makes a strong argument that too often emergency managers just do not read or use research that could be available with minimal effort.

Objective 44.4 Describe three strategies that organizational executives can use to enhance utilization of research results.

Requirements:

Overhead 44-6.

Remarks:

- I. Introduction.
 - A. **Ask students:** “OK, there clearly are many things that researchers can do to increase the utilization of their findings and conclusions. But what about agency executives? What can they do to increase the chances of research utilization?”
 - B. **Record** student responses on the chalkboard.
- II. Utilization strategies for organizational executives.
 - A. **Explain:** The research by Yin and Moore (1985), described in the section above, documented three strategies for executives.
 - B. **Display** Overhead 44-6; “Utilization Strategies for Organizational Executives.”
 - C. **Review** and illustrate the three strategies (adapted from Yin and Moore 1985, p. 78).
 1. **Policy problem focus.**
 - a) Practical in content.
 - b) Identified by user group.
 2. **Select investigator; institutional culture.**
 - a) Continual interaction with knowledge users.
 - b) Reward structure accepts applied research.
 3. **Select investigator; communication with user groups.**
 - a) Active participant.

b) Prior track record.

Supplemental Considerations:

This section may be **very brief**. The key **message** is that **agency executives** who are funding research can take **actions** to increase the probability that the research will meet the **desired needs**. Some professors may wish to **expand** this section by providing examples of research consultants. There can be a productive **range of interactions** wherein some organizational executives are **unsure** of the type of product they desire. At times the proposed research is **not feasible** for any of a variety of reasons. Effective researcher consultants will **challenge** the executive and assist them in attaining **new definitions** of the research problem.

Objective 44.5 Identify three different uses of disaster research.

Requirements:

Overhead 44-7.

Remarks:

- I. Introduction.
 - A. **Ask students:** “When research is completed, it can be used for very different purposes. Thinking about some of the research articles listed on the Course Syllabus, how might some of these be used differently?”
 - B. **Record** student responses on the chalkboard.
- II. Uses of disaster research.
 - A. **Explain:** E.L. Quarantelli, one of the founders of the Disaster Research Center, University of Delaware, prepared a reflective essay on how he has seen disaster research studies used by various groups.
 - B. **Display** Overhead 44-7; “Uses of Disaster Research.”
 - C. **Review** the three uses, **integrate** with student responses, and **illustrate** as necessary (adapted from Quarantelli 1993).
 1. **Conceptual uses** (p. 19).
 - a. Example: Researchers documented most disaster victims are transported by unofficial means.

- b. **Conclusion:** “The research users finally understood that a basic assumption they had implicitly made – namely that the EMS system could always control the input of patients into the system – led them to have an incorrect model for the delivery of EMS at times of disaster.” (p. 19).

2. **Instrumental users** (p. 22).

- a. **Example:** should victims be brought to medical facilities or should EMS personnel put a priority on treatment at the disaster site?
- b. **Conclusion:** “. . . in most large mass casualty situations, bringing the hospitals to the victims is the better way of delivering reasonable treatment.” (p. 22).

3. **Symbolic users** (pp. 24-25).

- a. **Example:** Research can legitimate perspectives on disaster planning.
- b. **Example:** Research can justify new programs.
- c. **Conclusion:** disaster-relevant crisis intervention program in the National Institute of Mental Health.

Supplemental Considerations:

The key **message** of this section is that research can perform a **variety** of functions. By helping students **better understand** the many possible ways that research can be used, the ability to **articulate** the need for research will be **enhanced**. As potential participants in the emergency management community such **understandings** will encourage a willingness to **support** and **participate** in future research studies.

Objective 44.6 Discuss at least three factors that constrain the integration of disaster research and emergency management.

Requirements:

Overhead 44-8.

Remarks:

I. Introduction.

- A. **Ask students:** “What are some of the major barriers that make it difficult to integrate disaster research into the emerging profession of emergency management?”
 - B. **Record** student responses on the chalkboard.
- II. Social factors that constrain the integration of disaster research and emergency management.
- A. **Display** Overhead 44-8; “Social Factors that Constrain the Integration of Disaster Research and Emergency Management.”
 - B. **Review** the three types of constraint and illustrate as necessary.
 - 1. **Interdisciplinary profession** (adapted from Quarantelli 1993, p. 36).
 - a. Most research is framed within a theoretical foundation based on a single discipline, e.g., psychology, sociology, etc.
 - b. Most practical problems and applications require multi or interdisciplinary perspectives.
 - 2. **Language differences** (adapted from Quarantelli 1993, p. 36).
 - a. So-called “scientific jargon” actually reflects the language of a particular discipline.
 - b. Role of “scientific jargon” is to permit precision in analysis.
 - c. Unique terms are found in all fields and occupations be it sports, fire or police agencies, or plumber.
 - 3. **Cultural spanners** (adapted from Quarantelli 1999, p. 37).
 - a. New for generalist that can span different disciplines and aspects of various occupations and professions.
 - b. Emergency management is an emerging profession that is located at a unique structural location, i.e., interfaces with a large array of agencies.
 - c. Emergency managers may not be researchers or even direct users, but may facilitate communication across all such groups.

Supplemental Considerations:

The key **message** of this section is that there are very real **constraints** that **neutralize** or at best **complicate** efforts to **integrate** disaster research with emergency management. It is **essential** that students develop an **enhanced** understanding of these constraints and develop **realistic** expectations. Some professors may wish to **expand** this section by engaging students through guided discussion. Questions like these could be incorporated: 1) “Why are the languages of academic disciplines used and how does this constrain the utilization of research?”; 2) “How might graduates of this course and other university-based programs in emergency management serve as “cultural spanners” between disaster researchers and users?”; 3) “What strategies do you believe should be used by researchers, emergency managers, and funding organizations to reduce the gap between users and knowledge producers?”

Objective 44.7 Discuss at least three potential academic reforms required to reduce the gap between researchers and users.

Requirements:

Use Overhead 44-9.

Remarks:

- I. Introduction.
 - A. **Ask students:** “Thinking back to the assigned reading, i.e., Neal 2000, what types of academic reforms would you propose that might help reduce the gap between researchers and users?”
 - B. **Record** student responses on the chalkboard.
- II. Potential academic reforms.
 - A. **Display** Overhead 44-9; “Potential Academic Reforms.”
 - B. **Review** and illustrate the four points on the Overhead and integrate with student responses.
 1. **University reward structures.**
 - a. Basic research published in technical journals will remain top priority.
 - b. Reports of application should be valued also.
 2. **Interdisciplinary research.**

- a. Home department must receive credit for faculty participation in interdisciplinary venture.
- b. Strategic interdisciplinary ventures could receive full university endorsement and support, e.g., funding for applied research center.
- c. Joint ventures should be encouraged, e.g., university-state agency; university-private sector.

3. **Research training.**

- a. Instill commitment to utilization.
- b. Provide examples of successful utilization.
- c. Train students in utilization strategies as part of research instruction.

4. **User-researcher interactions.**

- a. University support for faculty to attend user group meetings, conventions, workshops, etc.
- b. University support for workshops to bring user groups on campus for research briefings, research design exploration, etc.
- c. University support and encouragement to bring users into traditional academic professional meetings, e.g., panel sessions.

Supplemental Considerations:

The key **message** of this section is that various types of university **reforms** are required to assist in bridging the **gap** between researchers and users. Many disciplinary areas, e.g., engineering, chemistry, physics, etc. have made much progress in this process. Increasingly, major research **centers**, most notably the Natural Hazards Research and Applications Information Center, University of Colorado, have been **successful in building bridges**. Given the university **reforms** required, intensity of various **constraints** described above, and many other factors, this issue will **merit review** for the foreseeable future.

Course Developer References:

- I. Dawson, Gregg. 1993. "A Comparison of Research and Practice: A Practitioner's View." *International Journal of Mass Emergencies and Disasters* 11:55-62.
- II. Laska, Shirley Bradway. 1993. "Environmental Society and the State of the Discipline." *Social Forces* 72:1-17.
- III. Malone, Willie. 1993. "Research Definition and Location of Research: A User's View." *International Journal of Mass Emergencies and Disasters* 11:63-74.
- IV. Moore, Jamie. 2002. "Bridging the Generation Gap: Practical Experience vs. Academic Education." *IAEM Bulletin* 19 (November):17.
- V. Neal, David M. 2000. "Developing Degree Programs in Disaster Management: Some Reflections and Observations." *International Journal of Mass Emergencies and Disasters* 18:417-437.
- VI. Neal, David M. 1993. "Integrating Disaster Research and Practice: An Overview of Issues." *International Journal of Mass Emergencies and Disasters* 11:5-13.
- VII. Quarantelli, E.L. 1993. "Converting Disaster Scholarship into Effective Disaster Planning and Managing: Possibilities and Limitations." *International Journal of Mass Emergencies and Disasters* 11:15-39.
- VIII. Ruberg, George and John F. Keeling, III. 1993. "Structured Meeting Techniques that Identify Emergency Management Issues Practitioners Really Want to See Addressed." *International Journal of Mass Emergencies and Disasters* 11:75-84.
- IX. Thomas, Deborah. 2004. "Converging Themes: Educational Opportunities for the Hazards Manager of the 21st Century." *Natural Hazards Observer* 28:9-10.
- X. Wilson, Jennifer and Arthur Oyola-Yemaiel. 2002. "An Emergency Management Profession: Will We Make It?" *Journal of the American Society of Professional Emergency Planners* 9:74-81.
- XI. Yin, Robert and Gwendolyn B. Moore. 1985. *The Utilization of Research: Lessons from the Natural Hazards Field*. Washington, D.C.: Cosmos Corporation.