

A STUDY OF SCHOOL PREPAREDNESS PLANNING
AND NATURAL DISASTERS

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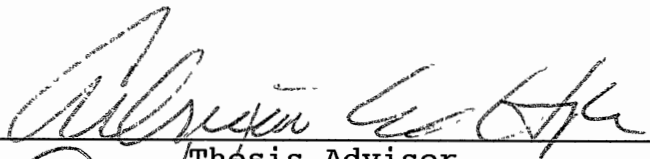
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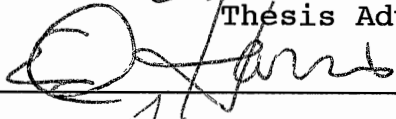
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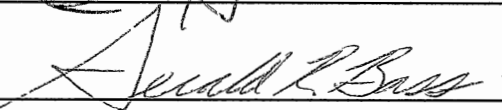
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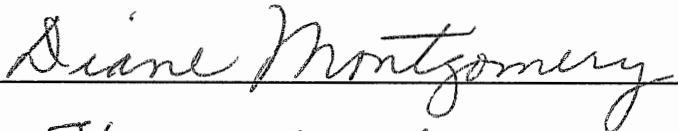
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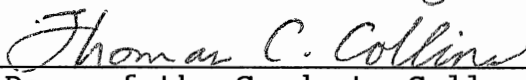


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CHAPTER I

DESIGN OF THE STUDY

Natural disasters occur in all regions of the United States; the Southwest is afflicted by earthquakes, the Midwest by tornadoes, the Southeast by hurricanes, the Gulf Region by floods and severe winter storms have stricken many northern states. Man-made disasters, such as chemical spills, bombs, aircraft accidents, explosions and terrorists attacks can occur close to or on school grounds without warning. To complicate matters, these disasters may transpire during the time when students and staff are at school, a time when safety is the responsibility of school officials.

Emergency preparedness is a serious subject for all schools in the United States. School authorities have a moral and legal responsibility to protect the health, safety and general welfare of all students and school personnel (Garrett, 1991). This responsibility includes the safety and protection of students and staff in the event of both natural and man-made disasters (Walters, 1991).

The school's primary role in an emergency is to provide and care for the safety of children (Walters, 1991). Currently, school emergency preparedness with respect to natural and man-made disasters concerns itself primarily

with what measures must be taken should a disaster occur. For example, the state department of education in Oklahoma instructs schools to prepare for tornado activity by determining an appropriate shelter, establishing an alarm signal and by teaching students the "duck and cover" position. In the event of a fire or bomb threat, Oklahoma students and staff are instructed to evacuate the school building (Dahl, 1991). These plans, however, do not include actions for post-disaster emergency procedures.

In California, plans and preparation for emergencies and disasters affecting schools are different. The California Education Code requires public and private schools, kindergarten through twelfth grade, to develop emergency plans to conduct "duck, cover and hold" drills. The drill involves ducking under a sturdy desk or table; covering the head with arms or other available items such as coats, blankets, or cardboard boxes; and holding onto the desk or table for at least 30 seconds. The California Government Code (Chapter 7, Article 12, Section 8612) states that upon an extreme emergency all public employees become civil defense workers prepared to function as self-sufficient units for 72 hours (Corona-Norco Unified School District, 1990). In addition, Governor Pete Wilson has supported the school's role of providing more information to school children and their families by organizing the "Beat the Quake" California Earthquake preparedness school planner (Wilson, 1991).

Unlike Oklahoma, California's emergency preparedness extends beyond meeting the needs of pre-disaster responsibilities in schools to recovery actions taken during the aftermath of a disaster. Schools collect and maintain emergency supplies to add to the safety and comfort of students and staff after an earthquake occurs. Preparedness includes in-service training workshops on first aid, shelter management, damage assessment and other related topics for school staff (Wilson, 1991). Students are instructed to assemble emergency kits consisting of dry or canned foods and beverages, space blankets, a family photo, a note of encouragement from parents for psychological support and phone numbers of friends and relatives who live outside local phone calling areas (N. S. Jameson, personal communication, April 11, 1991). Classrooms are equipped with flashlights, first aid kits, bottled water, tools, sanitation supplies and other items for safety and comfort. Emergency preparedness for an earthquake disaster involves the participation of schools in an earthquake disaster exercise. An exercise scenario simulates the sequence of events, incidents that occur at local school sites and a response/action plan (T. Molter, personal communication, April 18, 1988). In appearance, California has a truly comprehensive post-disaster emergency plan.

Statement of the Problem

While students are at school, their safety is in the

hands of school personnel. Legally, administrators and teachers act "in loco parentis," which imparts rights and duties of the parents to provide a safe environment for students while attending school.

Natural and man-made disasters are inevitable. Without warning, a disaster can strike a school and cause considerable damage and chaos to a school's environment. Disasters may occur during the time when students and staff are at school. Without notice, school officials would be forced to respond to the actuality of a disaster. An effective response would involve previous planning and preparation.

Given the "in loco parentis" responsibilities of schools and given the inevitability of disasters, what planning is done in school districts nationally to meet these challenges?

- * Does the diversity of the Oklahoma and California plans reflect the national norms?

- * Do the legislatures from each of the 50 states mandate that schools develop a comprehensive disaster plan?

- * What governs school disaster preparedness throughout the nation?

- * Do administrators believe they are truly prepared for potential disasters?

- * What advice might be generated by administrators to enhance safety or change a preparedness plan?

Theoretical Frame

The theoretical frame for this study is guided by the disaster preparedness principles developed by Quarantelli (1984) and the sources of change described by Fullan (1991). By examining disaster preparedness planning among school districts in the United States, it might be possible to determine whether the idea of planning or the perception of change affected the concept of disaster preparedness planning.

Disaster Preparedness

The disaster preparedness principles developed by Quarantelli (1984) and the sources impacting change described by Fullan (1991) will serve to frame this examination of school district disaster preparedness. According to Dr. Enrico Quarantelli (1984), Director of the Disaster Research Center at the Ohio State University, disaster planning is undermined or weakened by the assumptions that disasters are merely accidents of a different degree. He has found that emergency personnel such as fire fighters, police departments and hospital staff believed that preparedness planning was nothing more than an extension of daily operations, the only difference being one of degree. However, he believes that "an accident cannot be perceived as a little disaster, nor can a disaster be viewed as a big accident" (Quarantelli, 1984, p. 5).

The Disaster Research Center promotes the following general principles of disaster preparedness planning:

- * Convening meetings for the purpose of sharing information;
 - * Holding disaster drills, rehearsals and simulations;
 - * Developing techniques for training, knowledge transfer and assessments;
 - * Formulating memoranda of understanding and mutual aid agreements;
 - * Educating the public and others involved in the planning process;
 - * Obtaining, positioning and maintaining relevant material resources;
 - * Undertaking public educational activities;
 - * Establishing informal linkages between involved groups;
 - * Thinking and communicating information about future dangers and hazards;
 - * Drawing up organizational disaster plans and integrating them with overall community-mass-emergency plans; and,
 - * Continually updating obsolete materials/strategies.
- (Quarantelli, 1984, pp. 24-25)

For this study, these principles provided the criteria or lens for examining the disaster preparedness plans in effect, both regionally and nationally.

Change

How do disasters impact the planning and implementation of change in a school district? Is it possible that school districts develop disaster preparedness plans as a result of their experience with a disaster? Or, do school district personnel believe that should a disaster strike their schools, response will be automatic? Fullan (1991) believes that three events affect change in educational policy:

1. natural disasters such as earthquakes, floods, famines, and the like;
2. external forces such as imported technology and values, and immigration; and
3. internal contradictions, such as when indigenous changes in technology lead to new social patterns and needs, or when one or more groups in a society perceive a discrepancy between educational values and outcomes affecting themselves or others in whom they have an interest. (Fullan, 1991 p. 17)

For this study, these events provided the criteria for examining information gathered from school administrators who survived a natural disaster at their school.

Purpose of the Study

The purpose of this study was to identify disaster preparedness planning in school districts in the United States, compare the plans against the criteria prescribed by

Quarantelli (1984) and cast the data against Fullan's (1991) Change Model. Specifically, this study will evaluate and categorize the data in relation to disaster preparedness education, information dissemination and disaster practice. Following data categorization and plan evaluation, comparisons will be made and a ranking, nationally and by region/disaster, will be presented. Throughout this process, evidence in support of and refuting Fullan's (1991) Change Model will be documented. Through this analysis, it is hoped that exemplary achievements might be recognized and plans for improvements be made.

Research Questions

The following research questions were developed to guide the research:

1. What guidelines govern school preparedness in regard to natural and man-made disasters? Specifically, what is mandated at federal, state, and local governmental levels?

2. What disaster preparedness plans are in effect for public schools in the United States? In what ways do the plans change by:

- a. type of disaster,
- b. district size,
- c. administrator perceptions of the need for preparedness, and
- d. state department support.

3. Given the principles outlined by Quarantelli (1984), in what ways do state department of education plans meet his standards? In what ways do state department of education plans fall short of his standards?

4. For those administrators who have experienced a natural disaster at their school, what changes in plans would they suggest for school preparedness?

5. What is the relationship of disaster response driven change to Fullan's theoretical change process?

Significance of the Study

School districts must establish comprehensive and appropriate disaster preparedness plans. Since the effects of disasters are not predictable, plans cannot encompass every possible solution. However, comprehensive, well-planned procedures can minimize personal injury and protect property. This research should be of benefit to practitioners, theorists and researchers.

Practitioners

State departments of education would be able to assess their needs and develop pertinent staff development programs for school administrators, teachers and staff. School administrators would be able to consult with one another and share ideas or plans that would be appropriate and beneficial to their individual school situation. Such awareness could possibly effect a change and perhaps

strengthen local, state and federal regulations which govern school disaster preparedness. Practice should therefore benefit from the efforts of this research.

Theory

Through the identification of disaster preparedness plans of school districts in the United States, a comparison of plans against the requirements proposed by Quarantelli (1984) could serve as a guideline to provide direction for school districts. Fullan's (1991) change theory supports the examination and probable augmentation of district disaster plans following a true disaster. This study should provide a clear record of changes made or not thereby confirming or altering existing change theory.

Research

Research in the area of school preparedness planning and natural disasters is minimal. This study will initiate a national and regional knowledge base by identifying present school district disaster plans.

Procedures for the Study

Given the purpose of this study, the following data needs, data sources, data collection strategies and data analysis emerged. To ensure the rights of the participating human subjects, approval of the study was given by the Oklahoma State University Institutional Review Board

(Appendix A).

Data Needs

For this study, data from state departments of education relating to the laws and regulations that govern disaster preparedness in schools were needed to enable comparisons. Disaster plans, that had been deemed exemplary, were also needed to provide data for evaluation and ranking of plans. The names and addresses of administrators who had survived a natural disaster were also needed to fulfill the planned change portion of the study.

Data Sources/Population

The state departments of education nationally constituted one data source. A second data source was the school districts in each state deemed exemplary in terms of preparedness plans by their respective state department of education. Administrative experts who had survived a disaster in their school were the third source.

Data Collection Strategies

Data collection occurred in three phases as follows:

Phase I: National Policy. The first data collection strategy was obtaining documents concerning disaster preparedness nationally from the federal representative locally (Oklahoma Civil Defense Agency).

Phase II: Regional/State Plans and Policy. The second

data collection strategy included a letter (Appendix B) sent by the Council of Chief State School Officer's Electronic Communications via GTE/ES to state departments of education in the United States. The letter requested information such as governmental guidelines which regulate school preparedness in regard to natural and man-made disasters and known disaster experts, those administrators who had survived disasters. When necessary, a second request for information was sent through the electronic mail system. Additionally, representatives from selective regional state departments of education were interviewed by telephone.

Phase III: Local Representatives. Following receipt of this information, administrators were contacted and information was gathered about their experiences and perspectives on change within district following the disaster (Appendix C).

Data Analysis

The researcher's task was to review the documents received by the state departments of education; compare the data among the responses received; evaluate the disaster preparedness plans against Quarantelli's (1984) guidelines; rank the disaster plans both nationally and regionally; and interview school disaster survivors in order to assess how information gathered alters or augments Fullan's (1991) proposed process of change.

Analysis of the interview data involved a comparison of each administrator's experiences against Fullan's (1991) change theory. Consistencies and irregularities were noted and discussed. The interview data will also be inductively (specific to generalized statements) examined in the hopes of clarifying or reformulating components of Fullan's (1991) theory of change.

Reporting

Chapter I presented the statement of the problem, purpose of the study, significance, research questions and procedures. A review of the literature is addressed in Chapter II. Chapter III, Presentation of the Data, includes demographics of the population, exemplary programs and change interview responses. The Analysis and Results of the Study are presented in Chapter IV. Chapter V includes the Summary, Conclusions, Implications and Recommendations.

CHAPTER II

REVIEW OF THE LITERATURE

The literature associated with school preparedness planning and natural disasters is scarce. Perry (1989) reports that only a handful of articles over the past 20 years have addressed the issue of school disaster planning. The following review of literature will examine the variety of issues related to school disaster preparedness planning. Specifically, it will examine the impact of governmental guidelines and legislative mandates on disaster preparedness planning, including national level agencies which support disaster preparedness or response. One specific state response for disaster preparedness will follow. Administrative concerns and concerns for children's reactions to disasters will complete the review.

Governmental Guidelines

Disasters may be defined as a sudden occurrence or imminent threat of wide spread or severe damage, injury, or loss of life or property resulting from any natural or man-made causes, including, but not limited to, fire, flood, earthquake, hurricane, tornado, high water, landslide, mudslide, wind, storm, wave action, volcanic activity, epidemic, air contamination, blight, drought, infestation,

explosion, radiological accident or water contamination (Article 2-B, Section 20, Executive Law, New York Codes, Rules and Regulations, 1978). Natural disasters cannot be prevented nor, at times, even predicted. Fortunately, warning signs for imminent tornadoes, hurricanes and floods can be transmitted to the public via the radio or television emergency broadcast system. However, in the case of earthquakes which are both unpredictable and uncontrollable, no warnings may be given. Disaster preparedness planning is an unprecedented responsibility which requires the expertise and knowledge of several agencies including the federal government.

Siegel (1985) reports that several public jurisdictions and individuals are legally responsible for natural and man-made disaster preparedness planning, mitigations, response and recovery. The United States Corps of Engineers is charged with the duty of constructing the major flood control works while the United States Geological Survey prepares disaster maps of the United States. Siegel states that the United States government conducts and finances disaster research because many disasters overwhelm a single state and it would be difficult to respond both ecologically and economically. He concludes that "many national policies are responsive to some aspect of the management of emergencies, and a significant symbiotic relationship exists between states and the federal government" (p. 109).

Relationships also exist between governmental agencies

and private agencies in regard to disaster response. Disaster responsibilities involve a network of governmental departments, regulatory commissions and independent agencies such as the U. S. Fire Administration, the American Red Cross, Civil Defense and the Federal Emergency Management Agency (FEMA). Siegel (1985) points out that this relationship between agencies promotes a system of cooperation and coordination based on participative planning.

U. S. Fire Administration

The National Fire Protection Association's (NFPA) mission is to protect people and property from the dangers of fire (NFPA, 1991). It is their responsibility to produce firesafety materials, publish fire codes and standards, conduct fire research and investigations and develop educational programs. The United States Fire Administration also furnishes information to citizens and community groups for the prevention and protection of loss due to fire. Pamphlets, brochures, books, curriculum materials and films are available for schools, businesses and community groups to promote fire safety (National Fire Protection Association, 1991).

The former Governor of California, George Deukmejian (1984), summarizes the benefits offered by this organization in the following:

It takes a community effort, citizens and their

government working together, to achieve public safety objectives. The United States Fire Administration has put this theory to work, bringing together citizen volunteers, State and local government officials and fire service professionals under the National Community Volunteer Fire Prevention Program in a cooperative effort to reduce tragic losses of life and property by promoting public education and awareness of the threat of fire. (FEMA, 1986, p. 4)

Private Agencies

Coordinated efforts of both privately funded and government sponsored agencies work together to provide relief assistance to those in need. Various organizations, such as the American Red Cross, Salvation Army and church groups are called upon during disasters to supply equipment and commodities to the needy. The American Red Cross will refer clients to groups which have clothing and furnishings available. Often, the American Red Cross will set up mass care facilities in public buildings, such as churches and schools to provide services.

Generally, state social services agencies are aware of community groups that offer housing and food grants. Contact with one helping group will usually connect citizens to a network of agencies for relief assistance (FEMA, 1987).

Civil Defense

According to Dahl (1991), the school disaster plan should be coordinated with the local community disaster plan and state Civil Defense planning officials. He suggested that the school disaster plan involve representatives from the local police and fire departments, the sheriff's department and the local Civil Defense. Local government officials should work closely with school officials to develop plans for fallout shelters and warning systems. Cooperation with community members and school personnel is essential to develop a comprehensive disaster plan.

Federal Emergency Management Agency

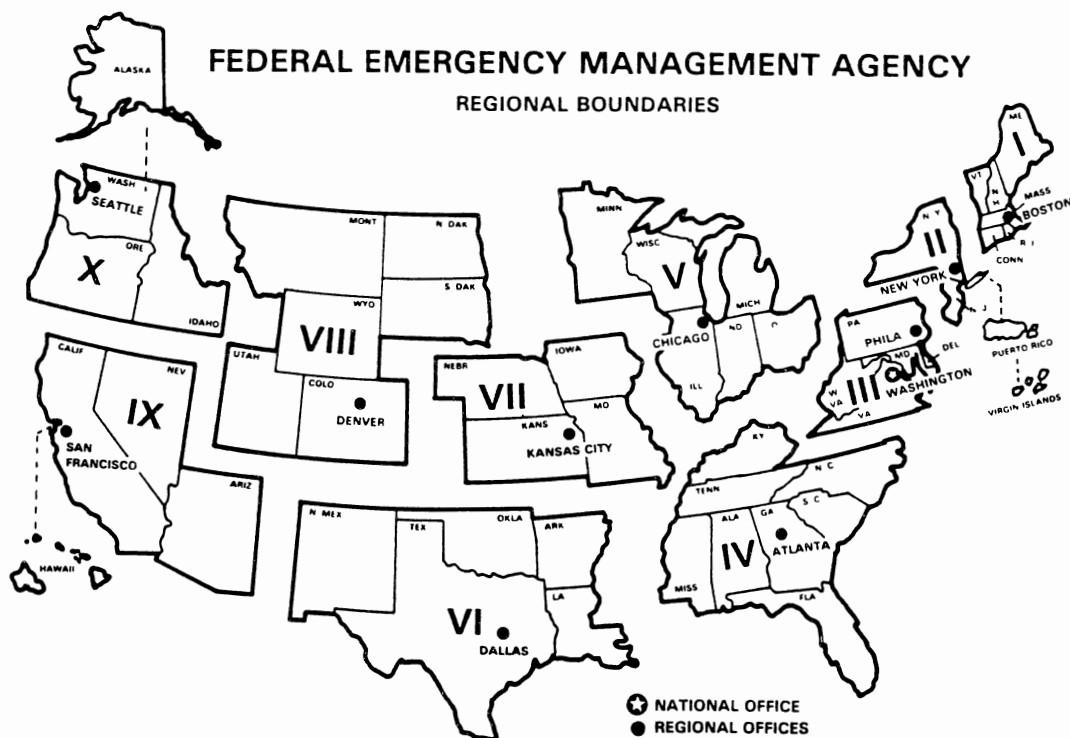
FEMA provides numerous materials for schools, families, businesses and agencies, both public and private, to use for the development of disaster planning. Emergency preparedness publications which can be obtained by simply writing to FEMA, include general information, fire safety, Civil Defense and natural disasters.

According to the Federal Register (1989), "it is the policy of FEMA to encourage the development of comprehensive disaster preparedness and assistance plans, programs, capabilities and organizations by the States and Local governments" (p. 22165).

A State Coordinating Committee has been established by FEMA to assist local governments, fire departments,

community groups, business and industry and schools in their efforts to generate disaster plans. FEMA has also determined regional boundaries for contacting regional representatives, shown in Figure I below:

Figure 1. FEMA Regional Boundaries.



Legislative Mandates

Disaster assistance programs for public schools are implemented by the Stafford Act. The Robert T. Stafford

Disaster Relief and Emergency Assistance Act, Public Law 93-288, amended by Public Law 100-707, states:

The State shall set forth in its emergency plan all responsibilities and actions specified in the Stafford Act and these regulations that are required of the State and its political subdivisions to prepare for and respond to major disasters and emergencies and to facilitate the delivery of Federal disaster assistance. (p. 22166)

Summary

Disaster preparedness planning is guided by the cooperative efforts of both governmental and private agencies. Agencies which are involved in participative planning include the U. S. Fire Administration, private agencies, Civil Defense and FEMA. The federal government also empowers the states and local governments through the Stafford Act to prepare and respond to disasters.

State Responses: An Example

Each state is responsible for preparing an emergency plan. While plans differ from state to state, this is one example: Oklahoma.

The Oklahoma Civil Defense Agency (1991), under the direction of its current governor David Walters, has prepared an Emergency Disaster Planning Guide for Oklahoma

Schools. The guide was prepared with the cooperation of the state department of education, to assist schools in developing an emergency disaster program.

The stated responsibilities of the Oklahoma Civil Defense Agency are:

1. Prepare and distribute recommended guides and materials for development of a school emergency disaster plan,
2. Provide specialized consultative services as needed,
3. Recommend and prepare legislative proposals for adequate implementation and operation of school emergency disaster planning programs at the district and state levels, and
4. Provide resources for classroom/assembly use by schools and teachers, such as, speakers, film, video, slides, pamphlets, and sample plans. (Oklahoma Civil Defense Agency, 1991, p. 1)

Dahl (1991), Director of the Oklahoma Civil Defense, suggests that:

Through the guidance of the superintendent, the school district should participate in planning an adequate emergency and disaster plan, as part of the total disaster plan for the community, to be incorporated into the District policy book. Your school should be prepared for the event of such disasters such as tornadoes, floods, blizzards, nuclear warfare and

unexpected hazards in the school such as fires, explosions, and bomb threats. (p. iii)

While earthquakes are commonly associated with California, more than 675 earthquakes have occurred in Oklahoma since 1976. The Oklahoma Geological Survey (1991), assisted by the American Red Cross and FEMA, prepared an earthquake preparedness brochure which states:

In comparison with California, earthquakes located in the Midwest can do more damage far from the center of the earthquake since the solid rock formations in the Midwest will carry the tremors longer distances.

Consequently, a major earthquake along the New Madrid fault located along the eastern border of Missouri and Arkansas could cause damage as far west as Oklahoma City. (p. 1)

The Oklahoma Geological Survey (1991), the American Red Cross and FEMA, all agree that with a potential earthquake disaster, residents in Oklahoma should become aware of how to take care of themselves. Their findings suggest that an earthquake could cause possible cracks in buildings and breaks in underground utilities including gas, electric, telephone and water and sewer lines. Preparation for earthquakes increases the chances of avoiding injury and property loss.

A common reaction to a warning of an upcoming disaster is denial, a feeling that "it can't happen to me" (Glenn, 1979). Mr. L. Brewer (personal communication, August 12,

1991), Planner for the Oklahoma Civil Defense, agrees. He states that Oklahomans have a relaxed attitude concerning tornadoes and other natural disasters. Oklahoma is considered the "tornado capitol of the world" and yet it appears that school districts have been negligent in preparing a comprehensive disaster plan.

Administrative Concerns

School administrators are inundated with a vast array of school responsibilities including curriculum, student discipline, supervision, effective teaching, evaluation, school facilities, political issues and school finances. One responsibility that receives little attention is school preparedness in natural or man-made disasters (Perry, 1989). According to Perry (1989) school districts are increasingly at risk for a possible disaster:

In an environment where each year many schools around the country are being damaged or destroyed by disasters, it would appear that educational research and administrators are not preparing for the possibility of a sudden catastrophe that would both cripple the educational progress and drain the financial resources of the district. (p. 11)

School districts in the United States have a general sense of what actions will be taken should a fire or other emergency occur. However, Wilkins (1985) postulates that schools are not prepared to deal with the aftermath of a

disaster or make the decisions that will be necessary to prevent further damage from occurring following a disaster.

Computerized Records

Administrators depend heavily upon the use of computers for financial records, student records, documentations, reports and correspondence. In the event of a disaster, natural or man-made, would school districts be able to operate with minimal disruption? Wold (1987) states that "the need for a comprehensive disaster recovery plan is vital in today's operating environment because of the increasing dependence on automated systems and technology in most school districts" (p. 22).

Libraries

School libraries are not exempt from the effects of natural or man-made disasters. Earthquakes and arson have destroyed library collections in California, while hurricanes and flooding have caused considerable damage to libraries in the Carolinas. Rutherford (1990) suggests that every library have a written disaster plan stored off campus in the homes of key officials. Specific disaster plans should be developed in cooperation with appropriate authorities such as the fire marshall and insurance agent. Rutherford also believes that advance planning could minimize the damage to library collections in the aftermath of a fire or flood.

Staff Training

Rutherford (1990) further explains that proper disaster planning includes staff training:

A basic part of effective disaster training is staff training and education in emergency routines, use of fire extinguishers, building evacuation, actions to take to save vital records, and periodic testing of all safety devices and equipment to make sure they are in working order. (p. 275)

In 1983, disaster struck the Huntsville Alabama School District when a fire was started by an arsonist at a middle school. As a result, the school district developed a thorough emergency response plan which includes specific responsibilities, communications and training and updating the plan (Caylor, 1991). Unfortunately, the disaster plan was tested when a devastating tornado hit the district in 1989. Superintendent Caylor recalls:

Without the quick response of teachers and other adults at the school, security and safety personnel, administrators and maintenance workers-and without the organized and efficient system we'd established for dealing with the news media and responding to parent and community concerns-dealing with the crisis would have been far more difficult. (p. 24)

Disaster Recovery Team

It is the school official's responsibility to develop a disaster preparedness plan so that recovery occurs in the shortest amount of time with the least cost to the school (Wilkins, 1985). One approach to developing disaster plans is a Disaster Recovery Team (DRT). The Disaster Recovery Team should be comprised of both educators and noneducational personnel, under the direction of a trained coordinator (Perry, 1989). Perry (1989) states that the essential role of the Disaster Recovery Team is to spearhead all disaster recovery procedures and to get the school environment back to normal as quickly as possible.

The Disaster Recovery Team should receive unique training in the area of needs assessment relating to educational concerns, specifically, recovery of educational supplies, materials and equipment. Wilkins (1985) also points out that the Disaster Recovery Team may provide assistance following a disaster for the emotional and psychological needs of faculty and staff due to serious injuries or deaths.

Recommended Strategies

On November 16, 1989, nine elementary students in Coldenham, New York, were killed at school when tornado-like winds blew in the glass and a concrete wall of the school cafeteria during the lunch hour (Rinere, 1990). Rinere

(1990) states, "while the requirements for disaster planning were already in the works, New York schools and state agencies now have an even greater commitment to improving communication systems and emergency response activities" (p. 32).

According to Wold (1987) "most external auditors strongly recommend that school districts develop a comprehensive, consistent statement of all the actions to be taken before, during and after a disaster" (p. 22). He suggests that a disaster recovery plan be developed in the following phases:

Phase I: Obtain the support and involvement of top management official and prepare an outline of the contents of the plan.

Phase II: Prepare a written agreement for backup alternatives.

Phase III: Prepare procedures to test the plan.

Phase IV: Perform detailed testing of the plan, evaluate the test results and revise the plan as required. (pp. 22-23)

Larkin and Brevard (1992) found that emergency preparedness was vital for a quick recovery from Hurricane Hugo's damaging winds which passed through the Berkeley County School District in South Carolina. Their suggestions for school districts are:

1. Develop a comprehensive written emergency-preparedness plan.

2. Study insurance policies carefully.
3. Get an advance commitment from an architectural and engineering firm and from a general contractor to come to your aid after a disaster.
4. Survey your buildings to see which are most vulnerable.
5. Have a prior commitment from several suppliers for repair materials.
6. Know where to obtain roofing materials that are quick, effective and permanent.
7. Have a supply of "pioneering" equipment on hand, such as chain saws, axes, hammers, nails, chains, flash lights and batteries.
8. Have an adequate supply of food and water.
9. If you have advance warning of a storm, protect large expanses of windows and tie down items that high winds can lift. (pp.35-36)

Summary

Evidence has been provided for the need for administrative planning and implementation of disaster preparedness plans. Successful strategies are already in place in some states, such as the disaster recovery team, however, the range and diversity of plans and administrative actions are great. It seems apparent that administrators should assume the responsibility of disaster planning and that plans should be comprehensive in that they include

actions to be taken before, during and after a disaster.

Concerns for Children

Children and parents should also be involved in the school's disaster preparedness planning. Children have the capability to understand various affects of disasters, however, they usually do not understand their emotional feelings of confusion, anxiety and fright (FEMA, 1986). Teachers can provide understanding and helpful intervention which can reduce the concerns of a child. Intervention in this case would include the teacher's manner of effectively handling routine situations in helping the students cope with fears resulting from a disaster. In addition to routine practice drills, schools can include disaster preparedness planning in the curriculum.

A school's parent-teacher association can establish programs where the district's policies concerning disaster preparedness and mitigation, emergency response and recovery plans are discussed (Bay Area Regional Earthquake Preparedness Project, 1989). One of the goals of California's Corona-Norco Unified School District in Corona (1990) was to develop and distribute a school and family disaster and survival guide. The purpose of the guide was to explain safety plans at the schools and to help families prepare for and survive a major disaster. Wilkins (1985) claimed "the official who has planned an effective disaster recovery program provides a good indication to the schools

and the community of the administration's concern for the safety of both lives and property" (p. 35).

In Great Falls, Montana, the school district's superintendent sends out an annual letter to parents and guardians explaining the procedures for a school crisis. The superintendent informs the parents that their children will be safely cared for at school or an alternate site, in an event of a disaster and directs them to listen to the radio or television for procedures of picking up children (Olson, 1990). The Great Falls crisis-management plan advises other school districts to develop a plan which ensures communications, puts someone in charge and informs everyone what to do in the event of a crisis. It was also recommended that schools contact local the Civil Defense, American Red Cross, police, fire, sheriff's department, hospital and other local agencies.

Summary

The Federal Emergency Management Agency sets forth the legislation which encourages state and local governments to develop comprehensive disaster preparedness plans. The review of literature on disaster preparedness planning indicates that there is a need for cooperative planning between governmental agencies, local agencies and school officials to provide a safe school environment. Administrators should participate with the American Red Cross, Civil Defense and the State's Fire Marshall to

develop a disaster plan which is part of the overall community disaster plan.

Administrators depend heavily upon today's advanced technology. While there are a variety of disasters, some predictable, others not, disaster planning can help minimize the crippling effects on educational progress and the financial resources of a school district. Disaster planning and training for staff is vital for the protection of school records and equipment and most importantly, the protection of the students.

Students and parents should be involved in the school's disaster planning. Through curriculum and intervention, teachers can help reduce a child's fear about what transpires before, during and after a disaster. Communications between school and family can enhance the feeling of safety.

Generally, the literature is limited and scattered. The consistent message, however, is that disaster preparedness plans include, mitigation, emergency response and recovery. Planning is vital and appears to be the key issue in disaster preparedness.

CHAPTER III

PRESENTATION OF THE DATA

The purpose of this study was to identify disaster preparedness planning in school districts in the United States, compare the plans with those prescribed by Quarantelli (1984) and cast the data against Fullan's (1991) Change Model. This chapter presents data collected from state governmental agencies, state departments of education and school districts, including responses from administrators who have survived a natural disaster at their school. Data reports highlight national policy, required procedures and local norms.

Phase I: National Data Reports

When a disaster strikes a community, citizens rely on the government to respond to the emergency. FEMA is responsible for working with state and local governments to help communities plan and prepare for natural disasters and technological emergencies (FEMA, 1989). The following data describe the governmental guidelines which govern school preparedness in regard to natural and man-made disasters.

Data Collection Strategies

The data presented in this section represent material collected in person from the Oklahoma State Civil Defense Agency. The data include FEMA preparedness publications categorized as General, Civil Defense, Fire Safety and Natural Disasters. FEMA publications may be obtained through each state's civil defense or emergency management office or by writing to FEMA, P. O. Box 70274, Washington, D.C., 20024.

Governmental Levels

At the federal level, there are no guidelines mandated specifically for disaster preparedness for schools. FEMA policies affect school districts through state policies, plans and statutes. Part III of the Federal Emergency Management Agency (1989), 44 CFR Part 206-Federal Disaster Assistance, Subpart A-General, Section 206.3-Policy states:

It is the policy of FEMA to provide an orderly and continuing means of assistance by the Federal Government to state and local governments in carrying out their responsibilities to alleviate the suffering and damage that result from major disasters and emergencies by:

- (a) providing Federal assistance programs for public and private losses and needs sustained in disasters;

(b) encouraging the development of comprehensive disaster preparedness and assistance plans, programs, capabilities, and organizations by the States and local governments;

(c) achieving greater coordination and responsiveness of disaster preparedness and relief programs;

(d) encouraging individuals, states and local governments to obtain insurance coverage and thereby reduce their dependence on governmental assistance; and

(e) encouraging hazard mitigation measures, such as development of land use and construction regulations, floodplain management, protection of wetlands, and environmental planning, to reduce losses from disasters. (p. 22165)

FEMA may provide assistance to public and private organizations when help is needed and they are approached by such organizations. Since there are no federal mandates which govern disaster preparedness planning, organizations are encouraged to utilize FEMA's resources to develop comprehensive disaster plans and programs which can reduce losses incurred by a disaster.

Section 206.4 details the following requirements for state emergency plans:

The State shall set forth in its emergency plan all responsibilities and actions specified in the Stafford Act and these regulations that are required of the State and its political subdivisions to prepare for and

respond to major disasters and emergencies and to facilitate the delivery of Federal disaster assistance. (p. 22166)

According to the Disaster Relief Act of 1974, Public Law 93-288, amended in 1988 to Public Law 100-707, which is now the Stafford Act, state organizations such as public schools, are required to incorporate the actions and responsibilities of disaster planning. These actions include development of comprehensive disaster plans, response measures and mitigation to reduce losses from disasters.

At the federal level, FEMA is charged with the responsibility to protect lives and reduce property loss from natural disasters and other emergencies. FEMA acts as the focal point for all levels of government in developing a national emergency management capability that can deal effectively with any major emergency (FEMA, 1990).

The Federal Emergency Management Agency is a reassuring partner to state and local governments and the public and private organizations and groups which contribute to emergency management. States and local governments can usually manage most life- and property-threatening emergencies. FEMA supports these efforts by providing resources and guidance and by being ready to respond when demand exceeds local capabilities.

Upon Presidential declaration of an emergency or major

disaster, the Director of FEMA is responsible for implementing programs to reimburse, replace or repair the damage of school property caused by the disaster. Resources are provided to schools through the Stafford Act.

FEMA assists state and local governments with disaster preparedness by:

- * Coordinating civil emergency preparedness for nuclear attack by developing evacuation plans and public fallout shelters.
- * Supporting state and local governments in a wide range of disaster planning, preparedness, mitigation, response and recovery efforts by providing publications on family emergency planning and technical support.
- * Planning to ensure continuity of government and coordinating mobilization of resources during national security emergencies through the use of the Emergency Broadcast System.
- * Coordinating Federal aid for Presidentially declared disasters and emergencies under the Robert T. Stafford Disaster Relief and Emergency Assistance Act.
- * Coordinating civil emergency preparedness for peacetime radiological accidents, including those at nuclear power plants and hazardous materials incidents by constructing home and public shelters.
- * Reducing the nation's fire losses through fire prevention programs. (FEMA, 1990)

The Federal Emergency Management Agency directs communication between local and state governments during emergencies. FEMA is assisted by the Radio Amateur Civil Emergency Service (RACES) during natural disasters. A disaster such as a tornado or an earthquake frequently damages normal communication systems, therefore, RACES provides amateur radio operators for emergency communications. In an emergency, RACES operators are assigned frequency bands as directed by FEMA.

Summary

At the national level, the Stafford Act governs response measures to disasters or emergencies declared by the President. The Federal Emergency Management Agency coordinates the efforts of the federal government with state and local governments to assist with disaster preparedness by assisting state and local governments in the development of disaster plans, mitigation, response and recovery measures for disasters.

Phase II: Regional and State Data Reports

FEMA has established regional boundaries for each state in the United States, including Puerto Rico and the Virgin Islands. Table 1 presents these FEMA regional groupings. The states which are in bold print represent the states that participated in this study.

Table 1

Representative States in FEMA Regional Boundaries

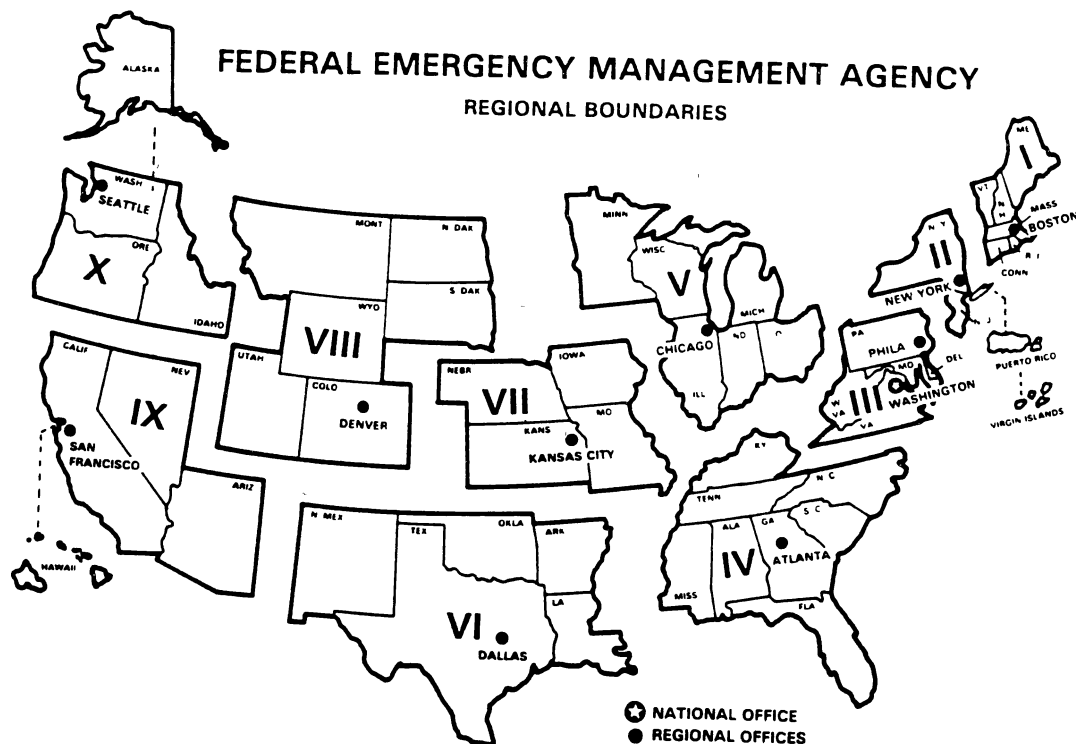
REGION I	Maine, Massachusetts , New Hampshire, Vermont, Connecticut, Rhode Island
REGION II	New York , New Jersey, Puerto Rico, Virgin Islands
REGION III	Delaware, Maryland, West Virginia, Virginia, Pennsylvania , Washington D.C.
REGION IV	Kentucky, Tennessee, Georgia, Florida , North Carolina, South Carolina, Mississippi, Alabama
REGION V	Minnesota, Wisconsin , Michigan, Illinois, Indiana , Ohio
REGION VI	New Mexico, Texas , Oklahoma , Arkansas, Louisiana
REGION VII	Nebraska, Iowa , Kansas, Missouri
REGION VIII	Montana, North Dakota, South Dakota, Wyoming , Utah, Colorado
REGION IX	California , Nevada, Arizona, Hawaii
REGION X	Washington, Oregon , Idaho, Alaska

Data Collection Strategies for Regional/State Data

The initial data collection strategy was a letter (Appendix B) sent via the electronic mail service through the Oklahoma state department of education to all state departments of education requesting federal and state governmental guidelines, current disaster preparedness plans in effect for their state and names of administrators who had survived a natural disaster in their state. After a period of one month, a second request for information was again sent through the electronic mail service. Eight of the 50 state departments of education responded to the letter: Oklahoma, Wisconsin, Indiana, Ohio, Iowa, Wyoming, California and Oregon. These states represent FEMA regions five through ten. Two months after the original request for data, an additional four state departments of education from regions one through four were randomly contacted by phone: Massachusetts, New York, Pennsylvania and Florida. The criteria for selection of these states was the need for a representative from each of the ten regions established by FEMA. Texas, from Region VI, was also randomly selected in order to receive data from another state in this region in addition to the data from my home state of Oklahoma. A total of 13 state departments of education comprise the national sample.

FEMA regional boundaries served as the structure for data collection and presentation as illustrated in Figure 2.

Figure 2. FEMA Regional Boundaries



Findings

The following tables present an overview of the data for each FEMA Region by length of plan, details of plan, agency involvement and plan guidance. Length refers to the quantity and thoroughness of the plan, while the details of the plan focus on the definitions of who, what, when, where, how and plan review. Agency involvement is defined as the conglomeration of outside groups which contribute to disaster preparedness planning. The direction, instruction and delineation of disaster preparedness planning,

mitigation, response and recovery are considered the plan guidance.

The data have been categorized as extensive, sufficient, or sparse. For the purpose of this study, extensive is defined as comprehensive if specific references were made to policy, contact people/agencies, samples and detailed direction given. Sufficient is defined as general reference to policy, contact people/agencies and brief direction. A one page plan submitted without specific guidelines, contact people/agencies and direction were considered sparse. Table 2 presents length of plans, Table 3 presents details of each state plan, Table 4 presents each plan's involvement of agencies and Table 5 presents each plan's guidance and recommendation.

Table 2

Length of District Plans

Region	Extensive	Sufficient	Sparse
I	X (MA)		
II	X (NY)		
III	X (PA)		
IV			X (FL)
V		X (OH)	X (IN)
VI	X (OK)		X (TX)
VII			X (IA)
VIII			X (WY)
IX	X (CA)		
X			X (OR)

Table 3

Details of District Plans

Region	Extensive	Sufficient	Sparse
I	X (MA)		
II	X (NY)		
III	X (PA)		
IV			X (FL)
V			X (IN) X (OH)
VI	X (OK)		X (TX)
VII			X (IA)
VIII			X (WY)
IX	X (CA)		
X			X (OR)

Table 4

District Plan's Involvement of Agencies

Region	Extensive	Sufficient	Sparse
I	X (MA)		
II	X (NY)		
III	X (PA)		
IV		X (FL)	
V			X (IN) X (OH)
VI	X (OK)		X (TX)
VII			X (IA)
VIII			X (WY)
IX	X (CA)		
X			X (OR)

Table 5

District Plan's Guidance

Region	Extensive	Sufficient	Sparse
I	X (MA)		
II	X (NY)		
III	X (PA)		
IV			X (FL)
V			X (IN) X (OH)
VI	X (OK)		X (TX)
VII			X (IA)
VIII			X (WY)
IX	X (CA)		
X			X (OR)

Most regional plans fall into one of the categories across Table 2 through Table 5. The plans were either extensive in the case of Massachusetts, New York, Pennsylvania, Oklahoma and California, or sparse in the case of Florida, Ohio, Indiana, Texas, Iowa, Wyoming and Oregon. Few were merely sufficient. Specific data reports for each region follow.

Region I

State: Massachusetts

Source: State Department of Education's

School Facilities Management Services

Comprehensive Emergency Management Plans (CEMPs) are developed for each political subdivision (town or city) in Massachusetts according to Federal Emergency Management Agency guidelines and requirements. The Massachusetts Emergency Management Agency (MEMA) assists towns and cities in writing these plans so as to insure that they will conform to federal and state standards while still meeting each community's unique needs. Although each plan is tailored to the needs of the individual community, much of the text is standard in all plans (D. Forbes, personal communications, July 1, 1992).

Integral and implied parts of each community's plan are the actions which address school preparedness for and response to all natural and technological disasters. Technological disasters may include aircraft accidents, air

pollution, energy supply loss, gas leak, hazardous material leaks, radiological incidents and water emergencies. It is assumed that all schools, both public and private, have their own internal disaster plans which include evacuation procedures, sheltering procedures, bus pick-up priorities and routing.

Included in the data from Massachusetts was the following statement about drills:

The classic school fire drill is a perfect example of a school's disaster plan being exercised. When an actual disaster is impending or occurs, the overall "fire drill" concept is enlarged upon and carried to its logical extreme as the buildings and grounds are evacuated and students are bussed away to reception centers and shelters. (D. P. Forbes, personal communication, July 1, 1992)

Data received from Massachusetts included details of the basic plan, responsibilities and organizational assignments, protective actions and hazard specific information. Spills from hazardous materials such as oil, gas, chemicals, pesticides and biological or radiological materials are addressed in the plan. Additionally, the plan details specific utilization of emergency services from the civil defense, police and fire departments, public health, emergency medical services, American Red Cross, communications officer and radiological officer. The plan also offers guidance for disaster preparedness, mitigation,

response and recovery by specifically addressing these phases of disaster management in each disaster situation.

Region II

State: New York

Source: State Department of Education's
Bureau of Educational Management Services

Section 155.13 of the Regulations of the Commissioner of Education requires school districts and Boards of Cooperative Educational Services (BOCES), except New York City (they have their own requirements through the City Municipal Government), to adopt and periodically revise school emergency management plans (Article 2-B of New York State Executive Law).

Data received from New York included requirements of 155.13 of the Regulations of the Commissioner of Education, board policy, emergency planning committee duties, command post procedures, first aid procedures, incident report form, annual written instructions to students and staff, resources available, drills, parent/guardian notification and checklist for school emergency plans. The plan details specific utilization of emergency services from fire and police departments, county emergency coordinator, county health department, American Red Cross, hospitals, transportation and radio stations. The plan also offers guidance for disaster preparedness, mitigation, response and recovery by specifically addressing these phases of disaster

management in each disaster situation.

Region III

State: Pennsylvania

Source: State Department of Education's
Director of Emergency Management

Pennsylvania Act 87 is the empowering legislation which requires schools to prepare a disaster plan in cooperation with local and county emergency management agencies. Local school districts modify the State and Federal disaster models to meet the specific needs for their school district. School districts are required to practice a weather emergency drill at least once a year with the coordination of the local emergency management agency.

Data received from Pennsylvania included a copy of Senate Bill No. 1167, plan development guidelines, a hazard vulnerability analysis, warning systems, flood plans, hazardous materials chart, emergency drills, emergency management organization, hints for school principals, flow charts and sample plans. The plan details specific utilization of emergency services from the city council, police and fire departments, health department, sanitation and transportation departments, emergency medical services, American Red Cross, media and volunteers. The plan also offers guidance in disaster preparedness, mitigation, response and recovery by specifically addressing these phases of disaster management in each disaster situation.

Region IV

State: Florida

Source: State Department of Education's
Risk Management and Educational Facilities

Disaster planning for school districts is coordinated with the State Department of Community Affairs. Also, school districts plan with "local agencies."

Data received from Florida did not include details of the plan. While the data states that the plan involves the services of local agencies, there was no mention of specific names nor did the data provide information for disaster guidance.

Region V

State: Ohio

Source: State Department of Education's
School Facility Consultant

Ohio requires it's regional planning districts to have a strategic plan, in particular, for hazardous material incident response. School administrators either serve on regional planning boards or actively participate in plan preparation and incident practice drills. Additionally, Ohio has five regional nuclear material plants (3 federal plants, 2 electrical utilities) which require individual school building evacuation plans (J. Hunter, personal communication, May 1, 1992).

State mandates cover two functions:

- a) periodic tornado or fire drills and a description of such plan in their general policy handbook.
- b) required to participate with their regional disaster planning board.

Although, Ohio promotes Local Educational Agency (LEA) planning and preparation of emergency response handbooks, only a handful have such a manual or even a written policy. Most school districts depend on local fire departments for incident response and appropriate action.

Data received from Ohio did not include details of the plan. The plan mentions the use of local fire departments as an outside agency involved in disaster response, but the plan does not offer guidance in disaster preparedness, mitigation, response and recovery.

Region V

State: Indiana

Source: Department of Education's

School Traffic Safety/Emergency Planning

Rule 2. 511 IAC 6-2-1 of the Certification

Recommendation Report notes the following for schools:

Section 1, B, 7: All schools shall meet the following minimum standards: Each school (or attendance center) shall provide emergency preparedness instruction to pupils at all grade levels during each school year in conformance with the policies and procedures

established by the Department of Education and the school corporation.

The data received from Indiana did not include details of the plan. The plan does not mention the involvement of other agencies, nor does the plan offer guidance for disaster preparedness, mitigation, response and recovery.

Region VI

State: Texas

Source: Texas Education Agency's

Director State Funding and Facilities

There are no laws that require the Texas state department of education to develop disaster preparedness plans in schools. The state department of education encourages school districts to plan cooperatively with city and county counsels.

The data received from Texas did not include details of the plan, agency involvement, nor does it provide disaster guidance.

Region VI

State: Oklahoma

Source: State Department of Education's

School Plant Services Section

Through the guidance of the superintendent, the school district should participate in planning an adequate emergency and disaster plan, as part of the total disaster

plan for the community, to be incorporated into the District policy book. Schools should be prepared for the event of such disasters such as tornadoes, floods, blizzards, nuclear warfare and unexpected hazards in the school such as fires, explosions and bomb threats.

The superintendent is responsible for administering the district emergency/evacuation plan. S/He will establish rules, regulations and procedures for administering and using the district's facilities, equipment, supplies and staff during an emergency or disaster. The superintendent shall be responsible for the general welfare of the students and staff of the school district. (Oklahoma Civil Defense, 1991)

The plan lists responsibilities of disaster planning for administration, teachers, staff, students and parents, along with the civil defense agency. Guidelines include evacuation routes, shelter areas, drills for natural and man-made disasters, bus accidents and basic first aid procedures. Additionally, the plan includes the use of outside agencies such as the police and fire departments, news media and the American Red Cross.

Data received from Oklahoma included response actions of school personnel, specific information for response to several natural and man-made disasters and sample emergency evacuation plans. Agency involvement included police and fire departments, civil defense, American Red Cross and the news media. The plan also offers guidance for disaster

preparedness, mitigation, response and recovery.

Region VII

State: Iowa

Source: Department of Education's
Bureau of School Administration

Iowa requires fire and tornado drills, as described in the State Fire Marshall Code, 100.31 and school bus evacuation drills as described in the Iowa Administration Code, 281-43.40 (285). Iowa does not have a statewide disaster preparedness plan for schools.

The data received from Iowa did not include details of the plan. The data does not mention the involvement of agencies nor does the data offer disaster guidance.

Region VIII

State: Wyoming

Source: Department of Education's
Facility Consultant

The Wyoming Emergency Management Agency follows the guidelines and requirements of the Robert Stafford Disaster Relief and Emergency Act (93-288 as amended).

The Wyoming statute (WS 19-5-102), Section 108, requires all public schools to develop an emergency plan.

The data received from Wyoming did not include details of the plan or the involvement of outside agencies nor did

it offer disaster guidance.

Region IX

State: California

Source: State Department of Education's
School Facilities Planning Division

There are very few mandates in California relating to disaster preparedness in schools. The Katz Bill (AB 2787, Chapter 1669, 1984; Education Code 35295-35297) requires governing boards of school districts to establish an emergency earthquake preparedness system. Also, Title 5 of the California Code of Regulations requires civil defense and disaster plans. However, there is no enforcement authority for determining if districts have disaster preparedness plans, there are fairly general standards in law for what entails an adequate plan.

Data received from California included sample plans detailing earthquake response actions such as the establishment of an earthquake task force, model earthquake emergency procedure system, shelter sites, earthquake damage assessment procedures, equipment and supplies checklists, hazard identification checklists and earthquake drill scenarios. Agency involvement includes the American Red Cross, police and fire departments and local hospitals. The data offers information for earthquake disaster preparedness, mitigation, response and recovery.

Region X

State: Oregon

Source: Department of Education's
School Business Services

Under the Oregon Administrative Rules, Chapter 581, Division 22-Department of Education, Emergency Plans and Safety Programs, Section 581-22-706: "The school district shall maintain a comprehensive safety program for all employees and students."

The data received from Oregon did not include details of the plan, nor does the data mention the involvement of agencies or offer disaster guidance.

Summary

Although the guidelines which govern school preparedness planning differ from state to state, it is apparent that individual school districts are responsible for planning and implementing natural and man-made disaster plans and these plans can vary by state.

Phase III: District Plan and Administrator
Interview Reports

Disaster plans in school districts throughout the United States differ according to the type of disaster most commonly associated within a particular location, district size and the administrator's perception of the need for

preparedness. The following data describe plans which are in effect for school districts and interview data from administrators who had survived a natural disaster at their school.

Data Collection Strategies

State departments of education were asked to submit exemplary disaster preparedness plans from rural and urban school districts and names and addresses of school administrators who had survived a natural disaster at their school. Plans were received from Regions I, II and IX, the states of Massachusetts, New York and California.

Five names, addresses and phone numbers of administrators who had survived a natural disaster were submitted. Each of the five administrators were sent a consent form (Appendix C) asking permission to contact them by phone for an interview. Regions II, III, V, VI and IX are represented in the administrator interview data, New York, Pennsylvania, Ohio, Oklahoma and California respectively. The data include information from phone conversations, records and reports written after the disaster.

Table 6 presents the data for each FEMA Region that responded to the request to forward district plans and administrator interviews. Quarantelli's (1984) principles have been reorganized into three general principles of education, information dissemination and practice provide

the categories for the data presentation.

Table 6

FEMA Regions and Quarantelli's Principles

QUARANTELLI'S PRINCIPLES	I	II	III	IV	V	VI	VII	VIII	IX	X
INFORMATION DISSEMINATION meetings memoranda groups thinking and communication	X	X							X	
EDUCATION developing techniques public resources	X	X			X	X			X	
PRACTICE drills integrating plans updating	X	X	X		X	X	X		X	

District plans which incorporate Quarantelli's (1984) principles of information dissemination, education and practice include Regions I, II, and IX. Regions V and VI include both education and practice. Regions III and VII include only practice in their plans. Data were not forwarded by Regions IV, VIII and X, therefore, ratings for these regions could not be conducted.

Region I

Region I submitted a disaster plan specifically for an emergency at a local nuclear power plant. The major considerations of the plan include precautionary transfer, evacuation or sheltering of students and coordination of transportation resources for the transfer or the evacuation of schools. Precautionary transfer may occur on alert at the discretion of the state. Students depart for a designated host school where sheltering is provided during the emergency. Specific criteria are outlined for general emergencies: Civil Defense notification, site area emergency actions, administrative actions, evacuation procedures and notification to special facilities, principals, transportation officer and state department of education.

The plan outlined specific responsibilities and response actions for the superintendent, principals, teachers, custodians, nurses and other support staff. The superintendent notifies personnel at the emergency site area

and the host school. Principals notify faculty and staff, coordinate the relocation of students to a host school for sheltering and informs the Superintendent of the status of the alert. Teachers supervise students during transport to the host school and release students to parents/designees or to the American Red Cross Mass Care Shelters.

Transportation needs worksheets, student departure log sheets, maps of host locations, agency notification forms and school status sheets were part of the disaster preparedness plan. The plan is designed to respond to an emergency while schools are in session and when schools are not in session (afternoon, evening, vacations). The plan is reviewed annually by school officials and agency personnel.

Region II

Region II submitted both a rural and urban plan as well as administrator interview data.

Urban Plan. The urban plan resulted from the need to enhance the district's ability to manage all emergency situations. The plan was prepared by school district officials working cooperatively with city and county emergency service agencies. Development of the plan included a systematic investigation and analysis of potential hazards which could effect schools throughout the district, an assessment of the capabilities in the district and the city and county's ability to deal with potential

problems resulting from an emergency or disaster.

This plan describes in detail the centralized direction of requests for assistance and the understanding that the governmental jurisdiction most affected by an emergency is required to involve itself prior to requesting assistance. Accordingly, each school (public or private) in the district prepares separate plans and operating procedures. The plan is intended to provide a general all-hazards management guidance, using existing organizations and lines of authority to allow the district to meet its responsibilities before, during and after an emergency occurs.

The plan outlines specific duties for all school personnel for several emergencies: epidemic/food or water poisoning, fire/explosion, hostage/dangerous person/kidnapping, inclement weather, loss of building, medical emergencies, natural or man-made disasters, oil/gasoline diesel spills, school bus accident/fire and systems failure. Specifically, the plan defines six procedures: administer first aid; summon expert help; follow instructions of the expert; evacuate to a safe place; shelter inside the building; and send everyone home.

Part of the preparedness plan was to draft letters of understanding with private sector organizations and mutual aid agreements with neighboring districts for resource support, updated annually. The school district, along with local emergency management officials conduct one annual drill to test the emergency plan. The drill specifically

test sheltering and early dismal procedures, as well as the communications and transportation systems. The drill should reveal the school staff's ability to effectively respond to emergencies and to reveal shortcomings of the plan.

Education and awareness programs are part of the urban plan for Region II. School staff and students are taught the potential hazards which could affect their school and what measures should be taken to respond to emergencies arising from the hazard. Available resources from FEMA, books and kits dealing with all aspects of emergency management and materials developed by the State agencies are provided for classroom use.

Rural Plan. The rural school district represented in Region II had prepared a plan different from the one represented by the urban school district. The rural plan includes information such as names and phone numbers of administrators, command post duties and equipment which needs to be on hand, staff who is qualified to administer first aid, incident report forms, duties of staff during an emergency, parent/guardian notification forms and transportation needs forms for each school in the district. The plan also includes a master supply list of food items, menu suggestions and recipes to feed between 50-100 students if they must remain at school due to a natural or man-made disaster.

The rural plan for Region II explains the responsibility of the Superintendent to provide written

instructions on emergency procedures in the district for all students and staff. The written plan consists of a school district newsletter mailed to all district residents and handouts for students to carry home. The written instructions include information about the alarm warning system, various response actions, the name of the District Emergency Coordinator along with the names and role of each member of the Emergency Planning Committee and methods for disseminating information during an emergency.

The above plans in Region II were given their impetus from the state department of education following a review of events which led to a tragic wall collapse at an elementary school in November, 1989. The Commissioner of Education made recommendations to the Governor concerning appropriate safety procedures for schools to follow in the event of severe weather/tornado watches and warnings. These recommendations led to a School District Emergency Plan-Model to be used as a guidelines for schools to follow. The plans are required to meet the Regulations of the Commissioner of Education.

Administrator Interview. The administrator from Region II discussed two incidents which occurred in a New York school district. In 1988, a gas line leading to a hot water heater exploded, leveling a three story school building. "There were no injuries due to the fact staff and students were not at school." Although there was not a plan in place, the administrator telephoned "key" personnel and

discussed options for holding school in a neighboring school district.

The second incident from Region II dealt with an ice storm emergency. In this case, the county government, under executive law, declared a state of emergency and closed the schools for several days. Also, the state police and public utility companies asked that schools be closed because of the fear that buses would hit sagging power lines. "Three of the schools in the district were set-up as American Red Cross shelters, equipped with generators, food, water and other supplies."

Region III

Region III's administrator from Pennsylvania, described an episode where a weather front came through which produced high winds and stripped the roof off an elementary school building. "The high winds also extinguished all power and utilities. Even though the principal was out of the building during the disaster, students and staff went to a designated area for shelter." The administrator was confident that practice drills made the difference in surviving the disaster. He also noted that the same weather front continued toward, Coldenham, New York, where the nine students at an elementary school were killed.

Region V

The administrator from Region V is a Superintendent in a rural Ohio school district. The administrator responded to three different disasters. In 1988, an arson fire destroyed an elementary school and high school. "On the way to the fire, the superintendent made several decisions concerning class scheduling, graduation requirements, handicapped student requirements and alternate school locations." A few considerations the administrator contemplated were code enhancements due to the fact the schools were built in the late 1800's and early 1900's; transition to a new school; and the tradition of the community.

In 1989, a furnace at an elementary school failed, which produced carbon monoxide poisoning. "The children were complaining of headaches, nausea and some were passing out upon arrival to the principal's office." The administrator's reaction was to evaluate the situation and evacuate the building by signaling the fire alarm. "Emergency squads from several areas transported nearly 300 students to area hospitals for treatment." Auxiliary staff, secretaries and central office personnel assisted by calling parents and maintaining student emergency report forms. The administrator said, "the actions taken were basic procedures and common sense."

The same administrator experienced a flood in her

township which affected a junior high and two elementary schools. FEMA and the state department of education assessed the damage, which after their evaluation, granted the school district the opportunity to receive Impact Aid.

The school district's disaster plan resulted from an unfortunate accident in 1987, when two high school boys were playing with a handgun and one student was shot and killed. The school district developed a crisis team and provided counselors for the students. The disaster plan involves the cooperation of the American Red Cross and local hospital teams by holding mock disaster drills biannually.

Region VI

Region VI suffered a devastating tornado which leveled an Oklahoma school district's campus in April 1991. Students and staff were not at school, but at their homes which were also hit by the same tornado. There was not a disaster plan in effect, only the requirements of the State Fire Code and annual security drills. "The school district loss their transportation fleet totaling \$800,000 dollars, qualifying them for state and federal monies."

The superintendent of the school district offered this advice for developing a disaster preparedness plan:

- * The plan should have a thorough review of the insurance policies, annually.
- * The developers of the plan should consider the

"worst case scenario."

- * Developers should think about building design and the safest place for students to seek shelter.
- * Each school site should possess battery powered radios and flashlights.
- * The plan should establish a meeting place for Board members to discuss the disaster and reaction and recovery procedures.
- * The disaster plan should include security measures and insurance policies.
- * After the disaster, with the student needs considered the top priority, the administrative staff should:

1. identify all of the problems,
2. group the problems,
3. assign the problems, and
4. solve the problems.

One of the most difficult tasks the superintendent encountered was the announcement to the cooks, custodians and maintenance workers, that their services were no longer needed. "The choice these workers had were either be laid off or resign their position." The superintendent negotiated with the construction companies to hire the support staff employees during the clean-up operations and reconstruction period.

Region IX

Rural plan. Region IX submitted a rural disaster plan. The purpose of the plan was to organize the teaching staff so they can help take care of each other and their classes before outside help arrives. The plan directs the principals to place in the student handbook and the first newsletter to parents, information regarding disaster procedures. The information includes emergency procedures for students at school or on a bus, instructions for parents to pick up students and the names of radio stations to listen to for updated information.

A specified week during the school year, a drill should take place to test the plan. Detailed directions are included for staff, students, support personnel and the principal. The plan involves procedures for actions taken before, during and after the disaster. After the drill, the staff completes an evaluation form and returns it to the principal so that it can be tallied and sent to the district office.

The earthquake/disaster preparedness drill lists a variety of conditions that may occur during the disaster. The circumstances range from a broken limb, to the teacher being killed. Under each condition, the plan describes the symptoms of the condition and treatment to be administered. Also included in the plan are organizational plans for the command post, checklists of duties and supplies, forms for

staff responsibilities and student check out forms.

Administrator Interview. An earthquake in 1989, close to San Francisco, California was survived by a Superintendent in Region IX. While the administrator thought he had a good disaster plan, the plan did not fit the disaster due to the fact the earthquake struck during after school activities. During the earthquake, 30 children were located in a childcare room at the school and 50 students were in a volleyball tournament in the gymnasium. "If students were at school, in their classrooms, the superintendent felt unprepared in an impossible situation due to inoperable windows and the jamming of doors." The earthquake also caused blocked roads in and out of the area and the phone system to fail.

The students were trapped for 72 hours. "The American Red Cross brought food to the school and neighbors took over tents and blankets." Twenty-five seriously injured students were evacuated by helicopter to local hospitals. "The plan did not provide for a checklist for keeping track of the victims who were evacuated and who were on location." Nor did the plan provide for outside communications because of the loss of utilities. However, a battery operated radio was lifted into the school by helicopter.

The superintendent pointed out that disaster plans cannot encompass every situation, especially pull-out programs and field trips. He noted that the people in charge will need to make the decisions and not depend on

outside service agencies because of their inability to respond. The superintendent offered this advice:

1. An emergency plan must be simple and must be practiced. An Emergency Response Team must exist at each school, as well as Districtwide.
2. Schools must plan to operate a plan completely independent of any assistance for at least 24 hours.
3. An emergency communication network must be set up to avoid the use of the telephone. A private dedicated line should be installed for emergency purposes. All buses and district vehicles should be equipped with radios. Hand held radios, beepers and walkie talkies should be purchased and used often.
4. The standard 4% reserve fund in most districts will not begin to cover the immediate costs of cleanup and repairs.
5. The buildings will not fall down. The greatest danger is from non-structural things flying around the room or overturning: cabinets, shelves, equipment, computers, typewriters, which must be attached with velcro or bolted down.
6. Plate glass and panes larger than one square foot should be covered with an adhesive to prevent shattering. Upper window panes could be replaced with plastic. However, it is important to have some glass to break out in case the door jams.
7. Quake shutoff valves should be installed next to

the gas meter. All electrical, gas and water shutoff valves should be sprayed with luminous paint regularly and mapped in the plan.

8. Tools and emergency lights must be stored properly and protected. A map of storage areas should be a part of the plan and posted in many places.

9. First aid supplies must be appropriate for the potential number and type of injuries. Schools identified as mass care shelters should have a huge supply in storage.

10. Preparing for an earthquake should begin with the non-structural hazards and need not be expensive.

Summary

The district plans included disaster preparedness plans specifically for the type of disaster most likely to occur within their region. Responsibilities and actions are listed for all personnel. The plans appear to be comprehensive in that guidelines are presented for actions taken before, during and after a disaster. The administrator interviews provided data from administrators who had survived a natural disaster at their school. While one administrator was assured that practice drills provided safety to students and staff during a wind storm, three administrators relied on the disaster plan and common sense to respond to a fire, tornado and an earthquake. The administrators offered several considerations and advice for

disaster preparedness planning.

Summary

Although there are no federal mandates for disaster preparedness planning at the national level, guidelines are provided by the Stafford Act which governs response to disasters and emergencies declared by the President. The Federal Emergency Management Agency imparts resources and assistance to state and local governments and encourages the development of comprehensive disaster plans.

Data presented in this chapter included disaster plans submitted by representatives from FEMA's ten regional groupings. The disaster plans were presented in tables reflecting the length of plans, details of plan, agency involvement, plan guidance and categorized as either extensive, sufficient, or sparse.

District plans and administrator interview reports were presented and categorized according to length, plan details, agency involvement and plan guidance. The district plans proposed guidelines for actions to be taken before, during and after a disaster. Administrators who had survived a natural disaster at their school offered advice for the development of disaster preparedness plans.

CHAPTER IV

DATA ANALYSIS AND RESULTS OF THE STUDY

This chapter will present an analysis of the data collected from state governmental agencies, Departments of Education and administrators who survived a natural disaster at their school. The data were categorized in relation to Quarantelli's (1984) disaster preparedness education, information dissemination and disaster practice and comparisons of disaster plans and a ranking by region/disaster will be presented in terms of the type of disaster, district size, administrator perceptions and state department of education support. Finally, the data were examined from the perspective of lending support to or refuting Fullan's (1991) sources of change.

Analysis of District Plans

District Plans

The district plans presented in Chapter III differ according to the perceived needs of the individual school district. The plan submitted by a district in Region I is particular to a disaster involving a nuclear power plant, while the district plan from Region IX was for an earthquake disaster.

Type of Disaster

Four specific plans were received from three states. Although several types of disasters can occur in all regions of the United States, the districts submitting data provided plans for disasters more likely to affect their individual school district. Region I's disaster plan is primarily concerned with a nuclear power plant accident. The plan specifically delineates evacuation and transportation procedures for students. Region II's urban disaster plan outlines specific duties for personnel to manage a variety of emergencies and disasters, from epidemic/food and water poisoning to oil/gasoline spills. The rural plan from Region II describes in great detail measures to be taken before, during and the aftermath of a nuclear accident, hazardous chemical spill and man-made disasters. Region IX's disaster plan summarizes the actions taken before, during and after an earthquake. The plan describes a variety of conditions that may occur and actions to follow as a result of the disaster.

There appear to be similarities among the regional plans. The regions affected by unpredictable disasters such as a nuclear power plant accident, epidemic/food and water poisoning and earthquakes have developed comprehensive disaster preparedness plans. The plans include actions to be taken before, during and after the disaster. In contrast, the regions affected by predictable disasters such

as tornadoes, hurricanes, floods and winter storms have few details, little guidance and limited contact with outside agencies. It can be speculated that the lack of comprehensive plans would cause greater uncertainty during the response and aftermath of a disaster.

District Size

While the plans did not mention the size of the district, it appears that the rural plan from Region II provides precise details as to feeding 50-100 students during the aftermath of a disaster. Additionally, the plan states the specific duties and responsibilities of administrative personnel. The superintendent of the rural school district communicates via a newsletter the emergency procedures to be followed to all district residents. This procedure may be virtually impossible financially and logistically for larger school districts.

Administrator and Plan Indicators

From the data received, administrator perceptions for the need of disaster preparedness planning are not clear. The extensive plans and the advice of administrators submitted from Regions I, II, III, VI and IX support the notion that well, thought-out disaster plans provided the necessary information for disaster preparedness, mitigation, response and recovery. The insufficient plans submitted by Regions IV, V, VII, VIII and X suggest that administrators

depend on intuition, "common sense" or outside service agency support for disaster response.

State Department Support

Only the plans submitted by districts in Region II were initiated by the state department of education following a disaster which resulted in the deaths of nine elementary students. Recommendations for disaster preparedness were made by the Commissioner of Education to the Governor. This plan now serves as a model for school districts throughout the state to emulate.

Discussion

Disaster preparedness plans in this study illustrate that at least for some rural and urban school districts, an effort has been made to provide for the care of students and staff in the event that a natural disaster should strike their school. The plans described in Chapter III are limited to a particular disaster, however, it can be assumed that measures or actions taken for one disaster may be beneficial to the response of another disaster. Nevertheless, evidence discussed in the Review of Literature, confirms the need for school districts to plan for a variety of emergencies and the aftermath of disasters.

School districts across the United States who do not have any type of disaster plan prepared should be extremely concerned. It would be an extremely stressing experience

for an administrator to be faced with an unexpected disaster without any plan of action. Administrators need to assume the responsibility of disaster planning and develop a comprehensive plan which includes actions to be taken before, during and after a variety of disasters.

State departments of education should strengthen their standards and require that each school district file comprehensive disaster plans, annually. State departments of education, in cooperation with local agencies should provide disaster training for administrators, teachers and staff to assure that appropriate actions will be taken to minimize the loss of life and reduce the loss of property.

Analysis of Quarantelli's Principles

The principles described by Quarantelli (1984) in Chapter I have been reorganized to three general principles: information dissemination, practice and education.

Information Dissemination

The following Table shows how districts in each region met Quarantelli's (1984) principles of information dissemination:

Table 7

Quarantelli's Principles of Information Dissemination

QUARANTELLI'S PRINCIPLES	I	II	III	IV	V	VI	VII	VIII	IX	X
INFORMATION DISSEMINATION										
meetings	X	X							X	
memoranda	X	X							X	
groups	X	X							X	
thinking and communication									X	

The districts representing Regions I, II and IX provided data which indicated that disaster preparedness planning included meetings, memoranda, group involvement and communicating concerns about future dangers and hazards. In Region I, representatives of the Massachusetts Emergency Management Agency (MEMA) meet with towns and cities to assist in disaster plan writing. In Region II, students are instructed and parents/guardians are notified of the school's disaster plan. In Region IX, meetings convene under the direction of the earthquake task force whereby

information is shared by governmental agencies and school officials. In addition, local school districts and PTA's work cooperatively to develop family disaster plans and survival guidelines. The remaining regions did not provide data which supported this category of Quarantelli's principle.

Education

The following Table shows how districts in each region met Quarantelli's principles of education.

Table 8

Quarantelli's Principles of Education

QUARANTELLI'S PRINCIPLES	I	II	III	IV	V	VI	VII	VIII	IX	X
EDUCATION										
developing	X	X			X	X			X	
techniques	X	X			X	X			X	
public	X	X							X	
resources									X	

The school districts representing Regions I, II, V, VI and IX include education, training and instruction in their disaster plans. In Region I, education in personal and family survival and training in first aid are reported in

the plan. Annual written instructions to students and staff are included in Region II's disaster preparedness plan. The districts in Region II also conduct disaster awareness programs whereby students and staff are taught the potential hazards which could affect their school and what measures should be taken to respond to emergencies arising from hazards.

The districts in Region II utilize resources from FEMA, books and kits dealing with all aspects of emergency management and materials developed by the State agencies. Region V requires as a minimum standard that all schools provide emergency preparedness instruction to pupils at all grade levels during each school year. The plan did not detail how the instruction occurred or what resources were utilized. Region VI incorporates the education principle by integrating emergency response information into regular classroom instruction. Through their policy, teachers and staff should assume the responsibility to become informed about new developments relating to natural and man-made disasters.

Region IX presented data which directs the principals to place in the student's handbook information regarding earthquake disaster procedures. Written communication to parents provides information concerning emergency procedures for students at school or on a bus. Additionally, a resource directory is supplied which list agencies and organizations which can provide assistance and materials to

help develop a disaster preparedness plan.

Practice

The following Table shows how school districts in each region met Quarantelli's (1984) principles of practice.

Table 9

Quarantelli's Principles of Practice

QUARANTELLI'S PRINCIPLES	I	II	III	IV	V	VI	VII	VIII	IX	X
PRACTICE										
drills	X	X	X		X	X	X		X	
integrating plans	X	X	X		X				X	
updating	X	X							X	

The districts representing Regions I, II, III, V, VI, VII and IX, submitted data which described the use of disaster drills, simulations and range of practice. The districts in Regions I and II mention drills, however, do not detail the interval of practice. The district in Region III requires school districts to practice weather emergency drills at least once a year, whereas the school district in Region V requires periodic tornado and fire drills. The

guidelines for Region VI include drills for natural and man-made disasters but do not detail the interval of practice. Region VII requires fire and tornado drills, as described by their State Fire Marshall Code.

The district in Region IX submitted a detailed earthquake scenario for an entire school district. The drill included response actions to be taken during the aftermath of an earthquake by describing the use of command post, first aid team, sweep team, installation of water, food supply, sanitation and morgue stations and parking lot supervision. Region IX was the only region to submit plans which indicated practice for an aftermath of a disaster.

Discussion and Ranking

The principles developed by Quarantelli (1984) provided the criteria for examining the disaster preparedness plans which are in effect for school districts in the United States. Only two of the district regional plans meet his standards.

Region IX's disaster plan ranks first among Quarantelli's (1984) principles. The data report that students, parents, community members and school officials share the information regarding disaster preparedness plans. Practice in this region is superior in comparison to the other regions. The data demonstrates that this is the only region that considers the aftermath of a disaster as part of the practice and not merely the practice drills prior to a

disaster occurring. Education is addressed in the instructional curriculum, legislative mandates and a resource directory provided by the governor's office. The plan also considers training, community involvement and plan evaluation.

Regions I and II extensive disaster plans appear to be good examples of information dissemination, education and practice. The data indicate that the plans seem to be comprehensive. An exception to Quarantelli's belief was presented in the data by Region I which included a statement in opposition to Quarantelli. The statement referred to the classic school fire drill as a perfect example of a school's disaster plan being exercised. The statement indicated that the overall "fire drill" concept is enlarged upon and carried to its logical extreme when an actual disaster occurs. Quarantelli (1984) believes that "an accident cannot be perceived as a little disaster, nor can a disaster be viewed as a big accident" (p. 5). If the plan excluded the above statement, the data supports the standards of Quarantelli's education and practice principles.

While the plans appear to be extensive in Regions V and VI, the data does not address the information dissemination principle in these regions. It is interesting to note that while these regions provide extensive data, the information does not indicate that others are receiving the disaster plans.

Regions III and VII only incorporate the principle of

practice in their plans. Unfortunately, Regions IV, VIII and X either do not have disaster plans which include information dissemination, education, or practice, or the data were not reported.

Support for Fullan's Change Model

Fullan believes that events such as natural disasters affect educational policy change. He also believes that plans for change should be desirable and implementable. Fullan submitted four questions that should be answered when making a decision of change:

1. Does the change address an unmet need?
2. Is it a priority in relation to other unmet needs?
3. Is it informed by some desirable sense of vision?
4. Are there adequate resources committed to support implementation? (Fullan, 1991 p. 17)

Region II

A remarkable diversity exists between the administrator interview data from Region II and the urban and rural plans from Region II. From the data reported by the administrator in Region II, the answer to Fullan's four questions would be no. In this situation, the administrator responded to a hot water heater explosion and an ice storm emergency which both occurred during the hours when students and staff were not present. It appears that the response to these disasters were intrinsic rather than led by an informed sense of

vision. The affect of these disasters on educational policy change were not a priority nor did it address an unmet need. Perhaps if students and staff were at school during the explosion and ice storm, a change in policy would have addressed an unmet need.

Unlike the administrator data, the urban and rural plans were given their impetus from the state department of education following a review of events which led to a tragic wall collapse at an elementary school. The data support Fullan's change model in that educational policy was changed due to a natural disaster; the state department of education provided the support for implementation of disaster plans; and the state department of education established legislation which guided the preparation of disaster plans.

Region V

The data reported by the administrator in Region V suggests that response to a carbon monoxide leak, a flood and an arson fire were inherent, a common sense response. With the arson fire, the superintendent inferred that decisions were made concerning class scheduling, graduation requirements, handicapped student requirements and alternate school sites were made "on the way to the fire." However, in this situation, the school district had a disaster plan in effect prior to the disasters due to an unfortunate accident which took the life of a high school student.

The data support Fullan's change model in that the

actions taken to respond to the disasters were basic disaster procedures and common sense. The events mentioned above affected educational policy by addressing an unmet need; the disaster plan was considered a priority; and the change in policy involved the cooperation and commitment of outside agencies.

Region VI

The superintendent from Region VI admitted that a disaster plan was not in effect during the time a tornado leveled the school district's campus. Although there was not a disaster plan, the tornado disaster did give rise to serious advice for future development of disaster plans, therefore supporting Fullan's change model. The effect of the tornado disaster did address an unmet need; priority was given over other unmet needs; the advice offered guidance and direction for disaster planning; and commitment from the superintendent and resources from state and federal aid helped implement the change for disaster planning.

Again diversity exists between the administrator interview data and the information provided by Region VI's state department of education. The state department of education's data state: "Through the guidance of the superintendent, the school district should participate in planning an adequate emergency and disaster plan...Schools should be prepared for the event of such disasters as tornadoes..." Is it possible that other state departments

of education have direction for disaster planning for school districts and it is left to the administrator to implement or abide by the regulations? Is it also possible that until a disaster strikes, plans will develop to address the need as reported by the data from the administrator interview in Region VI? If the later is true, Fullan's change model affects educational change as a result of a natural disaster.

Region IX

The administrator interview data from Region IX suggested that disaster plans which are in effect will not always address the problems associated with a disaster. The superintendent concluded that disaster plans cannot encompass every situation. However, an earthquake which caused considerable damage to the school's environment did allow for the superintendent to bring forth valuable advice for future development of disaster plans. The advice which is offered does in fact support Fullan's change model. Change in educational policy is affected by an informed sense of vision of what is desirable in a disaster plan. The significant point this administrator imparts is that people in charge will need to make decisions and not depend on outside agencies for assistance. His experience suggests that disaster planning must be a commitment for each administrator to address and implement.

Discussion

The data presented in this research clearly demonstrate that change in educational policy to develop disaster plans is given its impetus by the affects of natural disasters. Theoretically, the change process is not affected by external forces such as imported technology and values, immigration and external values such as local changes in technology or society's perception of change. Perhaps because of the technological advances in natural disaster predictions, particularly tornadoes, hurricanes, floods and winter storms, school districts depend heavily on technological information to provide safety to students and staff. Natural and man-made disasters which are not easily predicted such as earthquakes and nuclear accidents rely on past experience to plan for and to provide safety for students and staff.

Summary

The federal government does not mandate guidelines specifically for schools to prepare disaster plans. Each state is responsible for establishing disaster plans as specified by the Stafford Act. Local governments are encouraged to develop plans with local agencies such as the Civil Defense, American Red Cross and State Fire Marshall.

Individual school districts have developed disaster

plans according to the perceived needs of the school. The type of disaster which would most likely strike a school district has provided the direction for disaster planning. It appears that regions affected by unpredictable disasters such as a nuclear accident or an earthquake, prepare a more comprehensive disaster plan than school districts who are affected by disasters which can be predicted.

Only three regions reported all of Quarantelli's principles of information dissemination, education and practice used in the development of disaster plans. The principle of practice is used in the development of disaster plans in seven regions. Three of the regions did not report the use of either principle.

The data presented augment Fullan's Change Model. Change in educational policy is indeed affected by natural disasters. Administrators who have survived a natural disaster have developed plans or altered plans as a result of the disaster. The data do not support Fullan's belief that external forces and internal contradictions affect educational change in regard to disaster preparedness planning.

CHAPTER V

SUMMARY, CONCLUSIONS, IMPLICATIONS, RECOMMENDATIONS AND COMMENTARY

Disaster preparedness planning in schools is a vital issue for all school districts in the United States. Because natural and man-made disasters can occur at any time and any place, school officials must fulfill their responsibility to protect the health, safety and welfare of all students and staff while at school. School officials must develop appropriate and carefully designed disaster preparedness plans which include actions to be taken before, during and after a disaster.

Summary of the Study

The purpose of this study was to identify disaster preparedness plans in school districts throughout the United States, compare the plans against the general disaster preparedness principles established by Quarantelli (1984) and examine the data against Fullan's (1991) Change Model. This purpose was accomplished by:

- * Evaluating and categorizing the data in relation to disaster preparedness education, information dissemination and disaster practice;

- * Comparing, evaluating and ranking the plans, both nationally and by region/disaster; and

- * Describing how the data supports or refutes Fullan's Change Model.

Data Needs

To achieve the purpose of the study, data presenting laws and regulations which govern disaster preparedness planning in schools were needed. Exemplary disaster preparedness plans were also needed to provide data for evaluation and ranking of plans. The names and addresses of administrators who had survived a natural disaster were also needed to fulfill the planned change portion of the study.

Data Sources

Three data sources were used. State departments of education nationally were one data source; school districts in each state deemed exemplary in terms of preparedness plans were a second source; and administrative experts who have survived a disaster in their school were the final source.

Data Collection Strategies

The first data collection strategy was a letter sent by the Council of Chief State School Officer's Electronic Communications via GTE/ES to all state departments of education in the United States. The letter requested

governmental guidelines which regulate school preparedness planning in regard to natural and man-made disasters, plans from school districts which were deemed exemplary and experts, those administrators who had survived a natural disaster.

The names and addresses of administrators forwarded by the state departments of education were contacted by mail and then telephoned for interview data. Selective regional state departments of education were also contacted by telephone for requested information.

Data Analysis

The data were analyzed by first presenting and evaluating the documents received by the state departments of education and then by comparing the data among the responses received. Data were evaluated by comparing the plans with the principles prescribed by Quarantelli (1984) and a ranking of the disaster preparedness plans both nationally and regionally were presented. The administrator interview data were assessed to determine if the information gathered alters or augments Fullan's Change Model.

Conclusions

Governmental Guidelines

At the federal level, there are no guidelines mandated specifically for disaster preparedness planning for school

districts in the United States. FEMA acts as the focal point for encouraging disaster planning and offers disaster assistance and resources to all private and public organizations.

District Plans

District plans which incorporate all of Quarantelli's (1984) principles of information dissemination, education and practice were provided by states in Regions I, II and IX. District plans representing Regions V and VI included both education and practice. District plans representing Regions III and VII included only practice in their plans. Data were not forwarded by states in Regions IV, VIII and X, therefore, ratings for these regions could not be conducted.

Quarantelli's Principles

The data indicate that FEMA Regions I, II, IX report extensive disaster plans which incorporate Quarantelli's principles of information dissemination, education and practice. Of the ten FEMA Regions, California of Region IX, ranks first among Quarantelli's principles. The data exhibit disaster plans which encompass actions to be taken during the aftermath of a disaster. Practice in this plan is superior in comparison to plans of the other regions. The findings in this study show that of the ten FEMA Regions, seven regions report that the principle of practice is part of the disaster plan. Three of the regions did not

report the utilization of either information dissemination, education or practice principles.

Fullan's Change Model

The data presented augments Fullan's Change Model. Change in educational policy is affected by natural disasters. Theoretically, educational policy in regard to disasters is not affected by the change process, rather educational policy is affected by the actions and response to a natural or man-made disaster.

The data do not support Fullan's belief that external forces and internal contradictions affect educational change in regard to disaster preparedness planning, nor do they refute these sources of change.

Implications

The data reported in Chapter III from the state departments of education presented in this research are assumed to be the data available. State departments of education that forwarded data which was considered sparse or state departments of education that did not participate in this study may or may not have had data to offer.

It appears that the regions most affected by an unpredictable natural disaster have more comprehensive disaster preparedness plans than regions which are affected by predictable natural disasters. Nevertheless, man-made disasters are considered to be unpredictable and therefore,

all regions should prepare disaster plans to meet the needs of a variety of emergency situations. But, most regions do not.

The findings in this research should be of benefit to practitioners, theorists and researchers.

Practice

Through both governmental guidelines and specific data reports, state departments of education have been provided with examples of general principles of disaster preparedness planning and a variety of disaster plans which are in effect for school districts in the United States. Administrators can use the findings presented in this research to augment, alter or develop disaster preparedness plans in their school districts. The findings of this research, indicate unfortunately that administrators will not look at disaster plans in their locales and assess how the plans address disaster planning, mitigation, response and recovery because response is typical only after a disaster.

By utilizing Quarantelli's (1984) principles of information dissemination, education and practice, state departments of education could develop pertinent staff development and training programs for school administrators, teachers and staff. The review of literature indicates that administrative planning and development of comprehensive disaster plans is vital for the protection of students, staff and property. The guidelines that Quarantelli present

may only be a beginning for the development of comprehensive disaster plans in both rural and urban school districts.

Theory

Fullan's Change Theory provides a clear rationale for why educational policy is affected by natural disasters. The evidence presented in this study supports the belief that disaster response driven change and not the theoretical change process is the catalyst for disaster preparedness planning. The data does not support external or internal forces impacting educational change or policy.

Research

Obviously, so little is known in the area of disaster preparedness planning; further research in the area of school preparedness planning and natural disasters is needed. All states need to be represented and more administrator data collected. This study has provided an overview of national policy, initial review of district plans nationally and administrator insights to disaster preparedness planning. More needs to be done.

Recommendations

Given the findings of the study, the following six recommendations are made:

1. A universal definition of disaster is needed. The representatives whom I spoke with in several state

departments of education as well as the individuals associated with this dissertation all reflected a lack of awareness and agreement about a definition of disaster.

2. The aftermath of a disaster is an important issue in disaster preparedness planning and needs to be added to Quarantelli's principles of disaster preparedness. School officials must plan not only for actions taken before and during a disaster, but must explore strategies to deal with the aftermath of a disaster. In this study, only California successfully met this criteria.

3. A standardized, nationally recognized position title of a contact person in the state departments of education would assist researchers in their inquiry. The method used to gather information for this research was a letter sent via the electronic mail service to all state departments of education. Because of the low response rate, state departments of education in unrepresented regions were contacted by telephone requesting information for this study. From the telephone contacts, it appeared that state departments of education were unsure and some were unaware of a contact person who would be able to reply to this research request. Therefore, researchers need to be apprised that a number of different groups of individuals are accessible for research assistance.

4. Administrators need to be educated about disaster preparedness planning. It appears that only those administrators who have survived natural or man-made

disasters are taking the necessary steps to plan for disasters and their aftermath. Because there are few state mandates and no federal mandates concerning disaster preparedness planning, this is especially important. Given Fullan's (1991) Change Theory, the response of administrators to overlook disaster preparedness planning is normal. But, the way to educate administrators and school officials may be to have internal forces (teachers) or external forces (PTA's) aid in this process.

5. Consistency in plans nationally is needed.

Quarantelli's (1984) principles offer an excellent guide for all school districts. The data in this study indicate that current plans reflect individualized perceived needs and not Quarantelli's (1984) principles. If all else fails, federal legislation may need to mandate comprehensive disaster preparedness planning in schools. School districts should seriously consider Quarantelli's (1984) principles of information dissemination, education and practice and develop disaster plans which include actions taken before, during and after a disaster.

6. Further research is needed to explain any differences that might occur by type of disaster, district size and rural/urban locales and the impact of this information upon Quarantelli's (1984) principles and Fullan's (1991) Change Theory. The request for information was general in hopes that data would be generated beyond a specific request for information such as plans for fire,

tornado and earthquake drills. This method would be recommended for further research in hopes that disaster plans encompassing diverse viewpoints would be presented which are not included in the scope of this study. Open-ended questioning may generate disaster data that may inadvertently be omitted from the literature. Additionally the impact of school district size (population) needs to be explored further to determine whether Quarantelli's (1984) principles and Fullan's (1991) sources of change affect disaster preparedness planning, mitigation, response and recovery.

Commentary

This study was initiated after a discussion with my sister and her children's school earthquake disaster plan. I was impressed and fascinated with the comprehensiveness of her school district's disaster plan and how the plan addressed actions to be taken during the aftermath of an earthquake. My reaction to my school district's disaster plan, created uncertainty to the possible effects of a natural or man-made disaster. The plan was limited to preliminary actions to be taken before a fire or tornado emergency. How can it be that some school districts in the United States develop comprehensive disaster plans? Does the nature of the disaster prescribe the details of a disaster plan? What would happen to my school and students should a tornado strike during school hours?

My inquiry, along with my interest in school safety issues guided me to research the answers to these questions. After all, I believe students and staff should feel that they are safe and have a sense of security while at school.

After finishing this study, I now know that a diversity exists among disaster preparedness planning and natural disasters in school districts in the United States. While there are some school districts which primarily plan for an impending disaster, there are others which plan for actions to be taken before, during and in the aftermath of a disaster. Additionally, some school districts have developed extensive, detailed plans which offer real guidance and involve local agencies in plan preparation. In contrast, other school districts depend upon common sense, "the classic fire drill" for practice and the help from local agencies to respond to the affects of a disaster.

FEMA provides resources and guidance and are ready to respond when demand exceeds local capabilities. Resources include numerous brochures, pamphlets, articles, books, kits and human resources which are readily available to all public and private organizations. FEMA provides guidance to state and local governments by positioning it's support through policies, plans and statues. School districts are encouraged to utilize in their disaster planning the vast resources which FEMA offers. Possibly, federal mandates and legislation should require school districts and community groups to work cooperatively with FEMA and local agencies to

develop comprehensive disaster plans.

Since school officials have been endowed with the responsibility to protect the health, safety and general welfare of all students and school personnel, actions must be taken and priority must be given to disaster preparedness planning in all school districts. Administrators must not wait until a disaster occurs to develop and implement changes in educational policies. Experts, administrators who have survived a natural disaster, have generated beneficial and thought-provoking advice which could serve as guidance in district disaster plan preparation.

REFERENCES

- Bay Area Regional Earthquake Preparedness Project. (1989).
Manual. San Fransico: Author.
- Caylor, M. J. (1991). Trial by fire (and tornado) taught us to plan for crises. The Executive Educator, 13, 22-24.
- Corona-Norco Unified School District. (1990). School and family disaster and survival guide. Corona, CA: Author.
- Dahl, J. D. (1991). Emergency Disaster Planning Guide for Oklahoma Schools. Oklahoma City: Oklahoma Civil Defense Agency.
- Deukmejian, G. (1984). Partnerships against fire. Federal Emergency Management Agency. FEMA 78.
- Federal Emergency Management Agency. (1986, July).
Coping with children's reactions to earthquakes and other disasters. FEMA 48.
- Federal Emergency Management Agency. (1986, August).
Partnerships against fire. FEMA 78.
- Federal Emergency Management Agency. (1987, March).
After the fire! Returning to normal. FEMA 46.
- Federal Emergency Management Agency. (1989, July).
Are you prepared? FEMA 166.
- Federal Emergency Management Agency. (1990, September).
Emergency preparedness publications. FEMA L-164.

- Federal Register. (1989, May 22). Federal Emergency Management Agency: Rules and Regulations, 54, 22162-22173.
- Fullan, M. G. & Stiegelbauer, S. (1991). The new meaning of educational change (2nd ed.). New York: Teachers College Press.
- Garrett, S. (1991, July). [Letter to Superintendent]. Emergency Disaster Planning Guide for Oklahoma Schools. Oklahoma City: Oklahoma Civil Defense Agency.
- Glenn, C. (1979). Natural disasters and human behavior: Explanation, research and models. Journal of Human Behavior, 16, 23-26.
- Larkin, R. & Brevard, H. (1992). Weathering the storm. The Executive Educator, 14, 35-36.
- Oklahoma Geological Survey. (1991). Earthquake Preparedness. Oklahoma City: Author.
- Olson, A. (1990). Expecting the worst. The American School Board Journal, 177. 32-33, 42.
- Perry, L. (1989). The school disaster recovery team: A concept whose time has come. School Business Affairs, 55, 10-12.
- Quarantelli, E. L. (1984). Organizational behavior in disasters and implications for disaster planning. Monographs of the National Emergency Training Center, 1(2).
- Rinere, C. (1990). Keeping up with the laws-there's safety in numbers. School Business Affairs, 56, 31-33.

- Rutherford, C. (1990). Disaster: Planning, preparation, prevention. Public Libraries, 29, 271-276.
- Siegel, G. (1985). Human resource development for emergency management. Public Administration Review, 45, 107-117.
- Walters, D. (1991, July). [Letter to Oklahoma School Administrators]. Emergency Disaster Planning Guide for Oklahoma Schools. Oklahoma City: Oklahoma Civil Defense Agency.
- Wilkins, J. (1985). Disaster recovery planning. School Business Affairs, 51, 34-35.
- Wilson, P. (1991). Beat the quake! California earthquake preparedness school planner. Sacramento, CA: Governor's Office of Emergency Services.
- Wold, G. (1987). Preparing for disaster and recovery. School Business Affairs, 53, 22-23.

APPENDIXES

APPENDIX A

OKLAHOMA STATE UNIVERSITY REVIEW
BOARD FOR HUMAN RESEARCH

OKLAHOMA STATE UNIVERSITY
 INSTITUTIONAL REVIEW BOARD
 FOR HUMAN SUBJECTS RESEARCH

Proposal Title: A STUDY OF SCHOOL PREPAREDNESS PLANNING AND NATURAL DISASTERS

Principal Investigator: Dr. Adrienne Hyle/Wynona Smith

Date: April 23 1992

IRB # ED-92=050

 This application has been reviewed by the IRB and

Processed as: Exempt Expedite Full Board Review

Renewal or Continuation

Approval Status Recommended by Reviewer(s):

Approved

Deferred for Revision

Approved with Provision

Disapproved

Approval status subject to review by full Institutional Review Board at next meeting, 2nd and 4th Thursday of each month.

 Comments, Modifications/Conditions for Approval or Reason for Deferral or Disapproval:

PROVISIONS RECEIVED (ATTACHED)

Signature: _____

Maria S. Tilley
 Chair of Institutional Review Board

Date: July 9, 1992

IRB "

APPLICATION FOR REVIEW OF HUMAN SUBJECTS RESEARCH
(PURSUANT TO 45 CFR 46)
OKLAHOMA STATE UNIVERSITY INSTITUTIONAL REVIEW BOARD

Title of project (please type): A Study of School Preparedness Planning
and Natural Disasters.

Please attach copy of project proposal.

I agree to provide the proper surveillance of this project to ensure that the rights and welfare of the human subjects are properly protected. Additions to or changes in procedures affecting the subjects after the project has been approved will be submitted to the committee for review.

PRINCIPAL INVESTIGATOR(S): Adrienne E. Hyle _____
(If student, list
advisor's name first) Typed Name Signature

Wynona K. Smith _____
 Typed Name Signature

 Typed Name Signature

<u>Educational Administration</u>	<u>Education</u>
Department	College
<u>309 Gunderson Hall</u>	<u>744-7244</u>
Faculty Member's Campus Address	Campus Phone Number

TYPE OF REVIEW REQUESTED: EXEMPT EXPEDITED FULL BOARD
(Refer to OSU IRB Information Packet or the OSU IRB Brochure for an explanation of the types of review.)

- Briefly describe the background and purpose of the research.

The purpose of this study is to identify disaster preparedness planning in school districts in the United States. Specifically, this study will evaluate and categorize data in relation to disaster preparedness education, information dissemination and disaster practice.

2. Who will be the subjects in this study? How will they be solicited or contacted? Subjects must be informed about the nature of what is involved as a participant, including particularly a description of anything they might consider to be unpleasant or a risk. Please provide an outline or script of the information which will be provided to subjects prior to their volunteering to participate. Include a copy of the written solicitation and/or an outline of the oral solicitation.

The subjects will be the 50 State Departments of Education in the United States. Also, school administrators which have survived a natural disaster in their school district will be contacted by mail, then by phone for an interview.

Letter included in this packet.

3. Briefly describe each condition or manipulation to be included within the study.

The study will involve the collection of data by the 50 State Departments of Education. In addition, information will be gathered from administrators who have experienced a natural disaster in their school district.

4. What measures or observations will be taken in the study? Include a copy of any questionnaires, tests, or other written instruments that will be used.

The researcher of this study will gather data for a descriptive analysis. Administrators will be asked to furnish the disaster preparedness plan (s) for their school district and provide suggestions for changes in disaster preparedness planning as a result of their experience with a natural disaster.

5. Will the subjects encounter the possibility of stress or psychological, social, physical, or legal risks which are greater, in probability or magnitude, than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests?
 Yes [] No [x] If yes, please describe.

6. Will medical clearance be necessary before subjects can participate due to tissue or blood sampling, or administration of substances such as food or drugs, or physical exercise conditioning?
Yes [] No [x] If so, please describe.

Note: Refer to the OSU IRB Information Packet for information on the handling of blood and tissue samples.

7. Will the subjects be deceived or misled in any way? Yes [] No [x]
If yes, please describe and include an outline or script of the debriefing.
8. Will there be a request for information which subjects might consider to be personal or sensitive? Yes [] No [x] If yes, please describe.
9. Will the subjects be presented with materials which might be considered to be offensive, threatening, or degrading?
Yes [] No [x] If yes, please describe.

10. Will any inducements be offered to the subjects for their participation? Yes [] No [x] If yes, please describe.
If extra course credits are offered, are alternative means of obtaining additional credits available?

11. Will a written consent form be used? Yes [x] No [] If yes, please include the form, and if not, please indicate why not and how voluntary participation will be secured.

Note: The OSU IRB Information Packet illustrates elements which must be considered in preparing a written consent form. Conditions under which the IRB may waive the requirement for informed consent are to be found in 45 CFR 46.117 (c), (1) and (2).

copy attached

12. Will any aspect of the data be made a part of any record that can be identified with the subject? Yes [] No [x] If yes, please explain.

13. What steps will be taken to ensure the confidentiality of the data?

Names of administrators and identifiers of school districts will not be recorded.

14. Will the fact that a subject did or did not participate in a specific experiment or study be made a part of any record available to a supervisor, teacher, or employer? Yes [] No [x] If yes, please explain.

15. Describe any benefits that might accrue to either the subject or society. (See 45 CFR 46, section 46.111 (a) (2)).

If requested, subjects will be provided with a summary of findings.

Signature of Head or Chairperson

Date

Department or Administrative Unit

College/Division Research Director

Date

Checklist for Application Submission

- [✓] Proposal
- [✓] Informed Consent Form/Assent (if appropriate)
- [✓] Instrument(s) (questionnaire, survey, testing, field)
- [—] Curriculum Vita (not necessary for Exempt review)
- [✓] Departmental/College/Division Signatures

Number of copies to be submitted:

Exempt Review: 2 copies
Expedited Review: 3 copies
Full Board Review: 7 copies

APPROVED 10-13-88

THE FOLLOWING TO BE COMPLETED BY IRB REVIEWER

Date: _____ IRB # _____

IRB ACTION:

- Approved
- Approved with Provision
- Deferred for Revision
- Disapproved

Comments:

Signature: _____ Date: _____
IRB Reviewer

PROPOSAL

The purpose of this study is to identify disaster preparedness planning in school districts in the United States and compare the plans with those prescribed by Dr. Quarantelli (1984). Specifically, this study will evaluate and categorize the data in relation to disaster preparedness education, information dissemination and disaster practice. Once this data is collected and comparisons made, evaluation of plans and a ranking both nationally and by region/disaster will be presented. Through this analysis it is hoped that exemplary achievements might be recognized and plans for improvements be made.

Submitted: April 1992

Name: _____
Wynona K. Smith

Department: Educational Administration

APPENDIX B

STATE SUPERINTENDENT LETTER

April 11, 1992

Mr. John Dahlander
Oklahoma State Department of Education
2500 N. Lincoln Blvd.
Oklahoma City, OK 73105

Dear Mr. Dahlander:

I sincerely appreciate your assistance with my dissertation research. I have enclosed my cover letter along with my research questions for each of the 50 state departments of education.

Please contact me if you should have any questions regarding the information I am requesting from each of the state departments. Again, thank you for your time and assistance with my research involving disaster preparedness planning.

Sincerely,

Wynona K. Smith
7611 N. W. 113th Place
Oklahoma City, OK 73162
(405) 722-3103

Dear State Superintendent of Public Instruction:

You have been selected to participate in a study involving disaster preparedness planning in school districts.

Please take a few moments to read the questions on the following page. Your assistance in forwarding the requested information would be greatly appreciated.

I realize how important your time is, so I thank you for your participation.

Sincerely,

Wynona K. Smith
Doctoral Student
Oklahoma State University
Stillwater, Oklahoma

Adrienne Hyle, PhD
Associate Professor
Oklahoma State University
Stillwater, Oklahoma

PLEASE RESPOND TO THE FOLLOWING QUESTIONS

1. What guidelines govern school preparedness in regard to natural and man-made disasters in your state?
 - a. Specifically, what is mandated at the federal level?
 - b. What is mandated at the state level?

2. What disaster preparedness plan(s) is in effect for public schools in your state?

In addition to answering the above questions, I would be interested in reviewing exemplary disaster plans which you may have in your records, one for a rural and one for an urban school district.

Also, if possible, please submit the name and address of a school administrator who has survived a natural disaster in your state.

Please forward this information to:

Wynona K. Smith
7611 N.W. 113th Place
Oklahoma City, OK 73162

If needed, I may be reached by phone at:
(405) 722-3103

May 14, 1992

Mr. John Dahlander
Oklahoma State Department of Education
2500 N. Lincoln
Oklahoma City, OK 73105

Dear Mr. Dahlander:

I would like to thank you for your time in sending out my request for school preparedness planning and natural disasters to the State Departments of Education throughout the country. To date, I have received information from 6 State Departments of Education. If possible, would you be willing to send my request a second time?

Perhaps we could add to the cover letter that the information requested would be greatly appreciated and lend valuable support for my research.

Again, I thank you for your assistance and cooperation with my dissertation research. If you should have any questions, please feel free to call me at work (942-8673) or at my home (722-3103).

Sincerely,

Wynona Kay Smith
7611 N. W. 113th Place
Oklahoma City, OK 73162

Dear School Administrator:

You have been selected to participate in a study involving school preparedness planning and natural disasters. Your name and address has been given to me by the State Superintendent of Public Education.

It is my understanding that you were a school administrator at a time a natural disaster struck your school district. I am interested in learning the disaster preparedness plan of your district during the time of the disaster. Also, I am interested in changes in disaster preparedness planning you would suggest as a result of the disaster striking your district.

It is my wish that I may contact you for a personal interview in the near future. You may give me permission to contact you by returning the attached consent form in the enclosed envelope today.

Sincerely,

Wynona K. Smith
Doctoral Student
Oklahoma State University
Stillwater, Oklahoma

APPENDIX C

CONSENT FORM

"I understand that participation is voluntary, that there is no penalty for refusal to participate, and that I am free to withdraw my consent and participation in this project at any time without penalty after notifying the project director.

I may contact Wynona Smith at telephone number (405) 722-3103 should I wish further information about the research. I may also contact Terry Maciula, University Research Services, 001 Life Sciences East, Oklahoma State University, Stillwater, OK 74078; Telephone: (405) 744-5700.

I have read and fully understand the consent form. I sign it freely and voluntarily. A copy has been given to me.

"Date: _____ Time _____ (a.m./p.m.)

"Signed _____
(Signature of Subject)

(person authorized to sign for subject, if required)

"Witness(es) if required _____

"I certify that I have personally explained all elements of this form to the subject or his/her representative before requesting the subject or his/her representative to sign it."

"Signed _____"
(project director or his/her authorized representative)

NOTE: There are circumstances under which (a) some or all of the elements in the above form may be altered or waived and/or (b) the requirement for the consent form to be signed may be waived. See 45 CFR 46, Sections 46.116 and 46.117.

Preferred time to call _____

Phone number () _____

VITA

Wynona Kay Smith

Candidate for the Degree of
Doctor of Education

Thesis: A STUDY OF SCHOOL PREPAREDNESS PLANNING AND
NATURAL DISASTERS

Major Field: Educational Administration

Biographical:

Personal: Born in Hammond, Indiana, October 31,
1955.

Education: Graduated from Highland High School,
Highland, Indiana, in June, 1973;
received Bachelor of Arts in Physical
Education degree from Purdue University,
West Lafayette, Indiana, in May, 1977;
received Master of Education degree from
the University of Central Oklahoma,
Edmond, Oklahoma, July, 1984; completed
the requirements for the Doctor of
Education degree at Oklahoma State
University, Stillwater, Oklahoma,
December, 1992.

Professional Experience: Physical Education
Teacher, Windsor Hills Elementary School,
Putnam City Schools, Oklahoma City, Oklahoma,
1979 to present.