Engaging Students in Disaster Relief Training Exercises

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Incorporating National Incident Management System training and exercise principles into homeland security and emergency management learning can help university students develop emergency response capabilities through practical application of knowledge in simulated incidents. In addition, they gain team-building and leadership skills, establish relationships with professionals that will carry forward into their careers, and obtain confidence in their abilities to respond under pressure to simulated critical incidents. This case study describes student experience in disaster relief and humanitarian service exercises in the United States, Kosovo, and the Former Yugoslavian Republic of Macedonia. The DEAL approach to critical thinking is used to provide student feedback concerning the use of exercises as an applied-learning tool.

The National Incident Management System (NIMS), when established by presidential directive in 2004, required all federal agencies to use incident management in emergency prevention, preparedness, response, recovery and mitigation programs and activities. To obtain federal funds state, local, and tribal authorities were also required to adopt NIMS standards. Training and exercises were included in this

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mandate. Responders benefited from emergency response exercises because they built confidence, developed teamwork, established interagency relationships, and tested and improved knowledge and skills.

Studies that have documented the impact of training and exercises on professional emergency responders were used to establish a framework to examine the effect of similar techniques on university student cognitive and affective learning (Moynihan, D.P, 2008; Miller, 2012; Reissman & Howard, 2008). A case study approach, using interpretive analysis of interviews, journals, and other documents, established the level of learning and benefits for students. Three propositions were devised about the impacts of student involvement in disaster simulations. Participation in exercises should increase student ability to use the incident management system, improve student skills in working together, and provide a view of how responders from various disciplines can work together.

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For almost ten years crisis response students from various institutions including Northwest Missouri State University and Indian River State College have been involved in table-top, functional and full-scale exercises in classrooms and in the field here in the United States and overseas in Macedonia. This program is described as background to the more recent experience of students from Utah Valley University, who were involved in training and simulation exercises in Macedonia in conjunction with students from the International Balkans University. This case study describes how the application of NIMS principles in disaster relief exercises has benefited university students and provides recommendations for their adoption in developing programs. Students have developed emergency response capabilities through practical application of knowledge in simulated incidents. From their association with other students in exercises, they have obtained team-building and leadership skills. Through the participation of professional responders, students have established relationships that will carry forward into their careers. Finally, students have gained confidence in their abilities to respond under pressure to simulated critical incidents.

FRAMEWORK FOR ANALYSIS

First, as part of a framework for analysis, applied-learning principles are related to NIMS and its exercise program. Then, the NIMS exercise and training program is described, detailing its purpose, its components, and the kinds and function of exercises.

APPLIED LEARNING AND NIMS-TYPE EXERCISE

Applied learning is defined as "learning by doing." It's the integration of "knowing that" and "knowing how." It involves putting principles into practice. These are "pedagogical principles and practices associated with engaged scholarship, communities of practice, civic engagement, experiential education, and critical pedagogy" (Schwartzman and Henry, 2009). While education is a primary goal, applied learning may be part of a course or separate stand-alone exercises. Examples are study-abroad, community-based learning, service-learning, independent research, and internships or clinical experiences.

Examples specific to disaster management and homeland security are shadowing a professional, ride-alongs, role-playing, and demonstrating techniques or skills. Also, participating in local emergency management training simulations (i.e., active shooter exercise) fits under the definition of applied learning. Finally, internships and actual employment can provide applied-learning experiences to emergency services students. Utah Valley University students get internship credit by working for the university's emergency response team, a student-sponsored initiative that provides first response on campus for medical emergencies. The students also work as EMTs for ambulance compa-

nies and volunteer firefighters. Criminal justice students volunteer as police cadets and work as TSA agents.

NIMS uses Merriam-Webster's definition to describe exercises: "Something performed or practiced in order to develop, improve, or display a specific power or skill." Exercises are different from activities. Activities are usually presented as part of a lesson, while exercises usually are stand-alone training (FEMA, 2008).

PREPARATION OF EMERGENCY SERVICES PROFESSIONALS

The National Incident Management System (NIMS) is "a comprehensive, national approach to incident management that is applicable at all jurisdictional levels and across functional disciplines" (FEMA, 2014b). Originally published on March 1, 2004, the NIMS document was revised in 2008 to reflect the experience of stakeholders in recent national emergency incidents, including Hurricane Katrina.

NIMS is intended to:

- Be applicable across a full spectrum of potential incidents, hazards, and impacts, regardless of size, location or complexity.
- Improve coordination and cooperation between public and private entities in a variety of incident management activities.
- Provide a common standard for overall incident management (FEMA, 2014b).

NIMS provides consistency in preparedness and response across all levels of government, including federal, state, local, and tribal, as well as in the private sector and non-governmental agencies (NGOs). It allows agencies from all levels to work together to prepare for, respond to, recover from, and mitigate the effects of catastrophic events no matter the cause, size, location, or complexity. NIMS provides common protocol and procedures for training personnel and purchasing and using equipment so that when different agencies from varying jurisdictions arrive at an incident, they work together to respond effectively to resolve the situation. NIMS advocates using incident command, and establishing unified command if the event is large enough (FEMA, 2014b).

COMPONENTS OF NIMS

The components of a comprehensive incident management system include:

- Preparedness
- Communications and Information Management
- Resource Management
- Command and Management
- Ongoing Management and Maintenance

NIMS provides elected and appointed officials who are responsible for jurisdictional policy decisions a clear understanding of their emergency management roles and responsibilities to better serve their constituencies.

Following is a summary of each major component of NIMS (FEMA, 2014c, p. 2.15).

- ***Preparedness.*** Effective incident management and incident response begins with preparedness, which involves integrating"planning, procedures and protocols, training and exercises, personnel qualification and certification, and equipment certification." Ongoing preparedness is achieved through training and exercises.
- ***Communications and Information Management.*** A common operating picture is important to the effective management and response to incidents. NIMS sets the standards for communications. Effective communications and information systems require "interoperability, reliability, scalability, portability, resiliency, and redundancy."
- ***Resource Management.*** NIMS defines standardized mechanisms and establishes the resource management process to assure that resources (such as personnel, equipment, and/or supplies) support critical incidents. This requires that the amount and timing of resources are "fluid and adaptable" to the requirements of the incident. Resource management functions include identifying requirements, ordering and acquiring, mobilizing, tracking and reporting, and recovering and demobilizing resources. Also, the reimbursement and inventory of resources is part of the management process.
- ***Command and Management.*** Within NIMS command and management structures allow effective and efficient incident management and coordination. The Incident Command System (ICS), multiagency coordination systems (like the Emergency Operations Center (EOC) and Unified Command), and public information provide "flexible, standardized incident management structures."
- ***Ongoing Management and Maintenance.*** The Department of Homeland Security and Federal Emergency Management Agency (FEMA) maintain NIMS by developing NIMS pro grams and processes as well as keeping the NIMS document current.

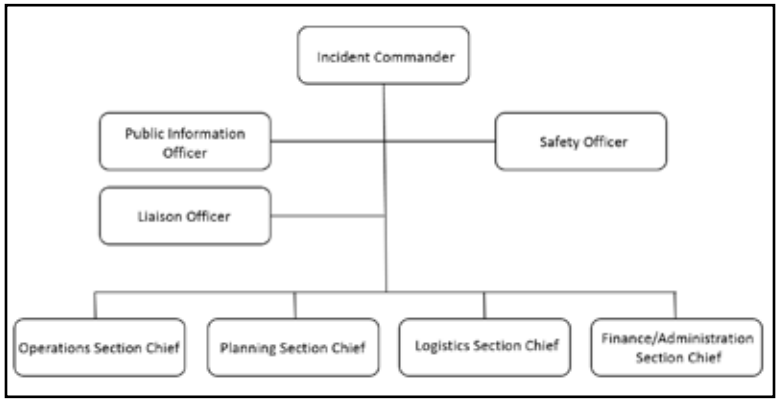
INCIDENT COMMAND SYSTEM (ICS)

The key tool used to establish command and management is the Incident Command System (ICS). Much of the training and exercises of responders focuses on ICS. ICS helps ensure integration of response efforts so that response occurs in a seamless, coordinated

fashion. According to NIMS (FEMA, 2014c), "ICS is a standardized, on-scene, all-hazards approach to incident management. ICS allows all responders to adopt an integrated organizational structure that matches the complexities and demands of the incident while respecting agency and jurisdictional authorities." While it promotes standardization, it also is flexible so that its "organizational structure can expand or contract to meet incident needs" (p. 6.7).

Certain management functions are performed in every incident. Regardless of the size of the incident, five management functions still will apply: incident command, operations, planning, logistics, and finance / administration. In every situation, the problem must be identified and assessed, a plan developed and implemented, and the necessary resources procured and paid for. Figure 1 shows the Incident Command structure and the names of the officers who provide leadership each function (FEMA, 2010a).

Figure 1. Incident Command Structure (4.11)



TRAINING AND EXERCISES

Training is essential in preparing responders to deal with incidents. Exercises are the basis of the training program mandated by NIMS. An exercise program has the following important characteristics:

a) The program is carefully planned to achieve identified goals.
b) It is made up of a series of increasingly complex exercises.
c) Each successive exercise builds upon the previous one until mastery is achieved (FEMA, 2010b, p. 2.1).

Table 1 shows the exercise process by organizing the tasks into two dimensions: (a) exercise phase (pre-exercise, exercise, and post-exercise) and (b) type of task (those related to design and those related to evaluation) (FEMA, 2010b, p. 3.4).

The five main types of exercises in a comprehensive exercise program include (a) orientation seminar, (b) drill, (c) tabletop exercise, (d) functional exercise, and (e) full-scale exercise (FEMA, 2010b).

Table 1. Exercise phase and type of task.

	Pre-exercise phase	Exercise Phase	Post-Exercise Phase
Design	• Review plan • Assess capability • Address costs and liabilities • Gain support/issue exercise directive • Organize design team • Draw up a schedule • Design exercise using 8 design steps	• Prepare facility • Assemble props and other enhancements • Brief participants • Conduct exercise	
Evaluation	• Select evaluation team leader • Develop evaluation methodology • Select and organize evaluation team • Train evaluators	• Observe assigned objectives • Document actions	• Assess achievement of objectives • Participate in post-exercise meetings • Prepare evaluation report • Participate in follow-up activities

The orientation seminar is the simplest form of exercise. It provides an overview or introduction. It familiarizes responders with roles, plans, procedures, and equipment. It helps resolve questions about coordination and assignment of responsibilities. Orientation seminars are used to a) discuss a topic or problem in a group setting, b) introduce something new (policies and plans), c) explain existing plans to new people, d) introduce a cycle of exercises or preparing participants for success in more complex exercises, and e) motivate people for participation in subsequent exercises. In the post-secondary setting, orientation seminars can be provided in the tradition face-to-face classroom. Seminars are supported with group activities and discussions (p. 2.5).

A drill is a coordinated, supervised exercise activity, normally used to test a single specific operation or function. Drills are not used to coordinate the activities of organizations or fully activate the Emergency Operations Center (EOC). It's used to practice and perfect one small part of the response plan and help prepare for more all-encompassing exercises, in which several functions will be coordinated and tested. Drills are effective when they focus on a single aspect of the overall emergency management system. They are used to test a specific operation or to provide training with new equipment, to develop new policies or procedures, or to practice and maintain current skills. In the emergency services classroom, drills can be used to practice medical procedures in an EMS class or put on Personal Protective Equipment (PPE) in a firefighting class. Evacuation procedures or the use of extraction equipment might be other examples of classroom drills. Drills usually are used as part of the "present, demonstrate and practice" model of teaching (p. 2.7).

Tabletop exercises lend themselves to "low-stress discussion of coordination and policy, provide a good environment for problem solving, provide an opportunity for key agencies and stakeholders to become acquainted with one another, their interrelated roles, and their respective responsibilities, and provide good preparation for a functional exercise." Participants examine and resolve problems based on existing operational plans and identify where plans need to be refined.

The exercise begins with the reading of a short narrative, which sets the stage for the hypothetical emergency. Then, the facilitator may encourage discussion by use of problem statements or simulated messages. Maps, charts or other printed material may be used to set the environment for the situation. Participants (who might be organized in groups) role-play their responses to the statements and then discusses their response afterwards. The tabletop exercise provides an opportunity to analyze procedures and improve on processes. As part of the emergency services classroom, the tabletop exercise could serve well as summative evaluation at the end of a unit of instruction (p. 2.10).

Functional exercises are similar to full-scale exercises, without the equipment. Functional exercises permit testing of several functions with several agencies or departments without incurring the cost of full-scale exercises.

A functional exercise is "a fully simulated interactive exercise that tests the capability of an organization to respond to a simulated event." The exercise tests multiple functions from an organization's Emergency Operations Plan (EOP) and involves outside agencies and responders. Every effort is made to make it appear to be "a coordinated response to a situation in a time-pressured, realistic simulation."

The exercise is an interactive simulation of a real situation. Every effort is made to make it as realistic as possible without moving resources to the actual site. Messages (also called inputs or injects) are used to show the ongoing events and problems that might occur in an actual event. Because the exercise is in real time, it uses all the players' resourcefulness and knowledge to respond on-the-spot to the situation; it can be stressful. A response from one player could trigger a sequence of unanticipated responses from other players. While the problem situation and injects should be scripted beforehand, because of the complexity of the situation, it is impossible to anticipate all actions or responses that might occur in the exercise.

It is good to do a functional exercise before doing a full-scale exercise. Some organizations (like hospitals) could perform a full-scale exercise as part of a community functional exercise. In the college situation, simulations as part of Campus-Community Emergency Response Team (C-CERT) would be designed as a functional exercise (p. 2.12).

A full-scale exercise is "designed to evaluate the operational capability of emergency management systems in a highly stressful environment that simulates actual response conditions." It simulates a real event as closely as possible. To create this realism, all emergency personnel, equipment, and resources are mobilized and placed in action. It tests most functions of the emergency operation plan.

At the beginning of the full-scale exercise responders are called up in the same manner as they would be to a real incident. When they arrive on the scene or to their assigned locations, they see a "visual narrative" in the form of a mock emergency. It could be a plane crash with victims, a "burning" building, a simulated chemical spill on a highway, or a terrorist attack. From then on, actions at the scene provide inputs to the Emergency Operations Center (EOC) (p. 2.15).

Because they are expensive and time consuming, few colleges use full-scale exercises to train students for the emergency or humanitarian services. The following case study describes several attempts to use full-scale exercises in training students.

PROBLEM STATEMENT

NIMS has made training exercises a convention among first responders and emergency services personnel. NIMS claims that responders benefit from emergency response exercises because they build confidence, develop teamwork, establish interagency relationships, and test and improve knowledge and skills. Few traditional students going into the emergency services have had the experience of exercises. This research focuses on the impact of training exercises on the emergency service student and asks if the training exercise experience provides the same results for emergency services students as NIMS claims it does for professional responders.

The primary research question is this: Do training exercises build confidence, develop teamwork, establish relationships, and test and improve emergency knowledge and skills among university students studying in the field of emergency services?

A secondary question is this: How do students perceive training exercises in relationship to classroom learning?

METHODOLOGY

Yin (2013) defines a case study as an empirical study that examines in depth a "contemporary phenomenon" (a case) within a "real-world" context. Sometimes the lines between the phenomenon and the context are not clear. A goal of the case study is to help clarify these boundaries, which are not always "sharply distinguishable." The number of variables within a case study may be more numerous than those in a survey where the variables are limited. Multiple sources of evidence may exist, but conclusions may result that are based more on assumptions than on hard proof. Case studies benefit from the "prior development of theoretical propositions to guide data collection and analysis" (pp. 16, 17).

While psychologists, anthropologists, and social scientists frequently use case studies as a valid research approach, hard scientists can also benefit from the methodology. It is useful in testing whether scientific theories and models really work in a real world context. While case studies generally have been oriented toward a "realist" epistemological perspective, they can also focus on multiple realities—a relativist approach. Luck, Jackson, and Usher (2006) argue that the case study has broad research application and epistemological, ontological and methodological flexibility, which provides "a structural process within which any methods appropriate to investigating a research area can be applied" (p. 103).

A case study is valuable as a tool in the evaluation of an organization (or a phenomenon) with the aim of improving functions (Yin, 2013; Fidel, 1984). Usually, it may be used to arrive at findings from multiple cases rather than just a single situation. It can draw from both qualitative and quantitative data or use solely qualitative data. Fidel (1984) claims the case study is appropriate when a) a large variety of factors and relationships are examined, b) no laws exist to show which factors are important, and c) when the factors and relationships can be observed directly.

This case study looks at several situations where exercises are used in the training and education of emergency services students. It compares the results from these situations to the expected outcomes from the application of exercises using NIMS principles to train emergency personnel. Recommendations are generated for the improvement and use of exercises in training post-secondary students, both in emergency services and other fields.

Documents, field notes, and interviews are used to provide information for analysis. Students were interviewed to provide critical reflection about their experience in a "global and multicultural humanitarian service experience" held in the Balkans in 2014. The DEAL model of critical reflection was used to provide student feedback.

DEAL critical reflection (Ash & Clayton, 2009; Fisher & Mittelman, 2013) answered the following questions:

1. What did I learn?
2. How did I learn it?
3. Why does it matter?
4. What will I do in light of it?

In a follow-up interview students also were asked the following: How did your experience training and doing exercises with International Balkan University students advance your self-confidence? How did it foster teamwork and enhance your leadership skills? How did it help you in establishing relationships with team members, students at the International Balkan University, and emergency managers in the Balkans? How did it test and improve your emergency knowledge and skills? How would you compare the training exercises to your experience learning in the classroom?

The researchers used a modified grounded theory approach for sorting and analyzing student responses (Glasser & Strauss, 1967). Transcripts of the interviews were reviewed, key words were highlighted, and themes were identified. Themes and student comments were summarized in the findings. These resulted in the development of propositions for further study and to provide greater understanding of the use of reflection in the education process. The coding process revealed three emergent themes: cultural awareness, relationships, and field experience. Using inductive reasoning, propositions were generated from the findings and reported in the conclusions. To present the findings, the researchers developed narrative case descriptions based upon the three themes in order to present and interpret the findings (Yin, 2013).

BACKGROUND

The case study first examines the use of exercises in the Comprehensive Crisis Response Minor at Northwest Missouri State University, including C-CERT training and its relationship to the Consortium for Humanitarian Service and Education. This provides background for the discussion of the application of NIMS principles and student exercises in the Utah Valley University Emergency Services Department.

COMPREHENSIVE CRISIS RESPONSE MINOR

The Comprehensive Crisis Response (CCR) Minor at Northwest Missouri State University (2010) used a multi-disciplinary approach to study crisis, drawing from courses and faculty in Geography, Psychology, Social Sciences and Communications. While half the classwork involved a crisis management core, electives offered flexibility so that students could tailor the minor to their individual and specific academic and professional needs. This approach provided the student with both theoretical and practical knowledge that is valued in the public, private, and nonprofit sectors. Also, students were encouraged to participate in

field exercises in Florida and now in Northwest Missouri and employ best practices through involvement with Northwest's C-CERT program.

Northwest launched its CCR program in January 2009 as an interdisciplinary minor housed in the Department of Social Sciences. The program expanded to be offered as an academic major in 2012 with a BS in Geography with an emphasis in Emergency and Disaster Management. The program now has 60 students enrolled (Northwest Missouri State University, 2014). The CCR core included five courses: Disaster Psychology, Crisis Communication, Principles of Public Administration, Introduction to Disaster Response and Recovery, and Principles of Humanitarian Relief. Students chose electives from two other areas of study and were required to be involved in an internship and could get credit for attending training exercises through the Consortium for Humanitarian Service and Education (CHSE). For the first time in fall 2013 Northwest hosted its own full-scale exercise, called Missouri Hope. Students studying crisis and disaster management are required to attend. All students were encouraged to take C-CERT training.

MISSOURI HOPE TRAINING EXERCISE

The Missouri Hope 2013 Disaster Response Field Training Exercise, an intensive three-day domestic disaster relief field training exercise that is required for students studying majors or minors in comprehensive crisis response (CCR), took place Mozingo Outdoor Education Recreation Area (MOERA) and the Mozingo Youth Camp (near Maryville, Missouri) on October 4-6.

The exercise consisted of three major training lanes Friday and Saturday: rescue and evacuation on the ropes challenge course, disaster simulation, and incident command post. The American Red Cross conducted an introduction to disaster services course Friday evening and shelter fundamentals training Saturday. A mock news conference was held Sunday morning along with after-action reviews.

While the event was required for students studying crisis and disaster management, all students were invited. Credit was available for participation, which cost $50 per participant. Over 30 students participated in the three-day exercises. Twenty-eight faculty, responders, and student leaders (28) provided support for the event.

"This is an amazing applied leadership experience," said Dr. Mark Corson, a professor in the CCR program and chair of the Department of Natural Sciences. "Many people find these experiential opportunities life-changing because they are challenged in ways in which they've never been challenged. People learn much about themselves as leaders and followers."

Participants were assigned to disaster response teams and rotated leader and follower roles. In addition to building their leadership skills, participants learned important first responder skills to ensure they are prepared when disaster strikes.

"Our catch phrase is 'Be a responder and not a victim,'" Corson said. "Crises happen all the time. You can never tell when and where

Table 2. Missouri Hope training schedule

	Thursday	Friday	Saturday	Sunday
Morning		Team Orientation	Disaster Response – ICS - LSAR	AAR - Graduation
Afternoon		ICS – LSAR – Disaster Response	LSAR – Disaster Response - ICS	
Evening	Staff Orientation	Red Cross Intro to Disaster Ops	Red Cross Shelter Operations	

they will happen. People who are trained and ready will be able to take care of their families and neighbors, and they will be a responder and not a victim" (Northwest Missouri State University, 2013).

CAMPUS-COMMUNITY EMERGENCY RESPONSE TEAM (C-CERT

C-CERT is modified CERT for post-secondary students and campuses. C-CERT is used as a means of student recruitment at both Northwest Missouri State University and Utah Valley University. CERT training was established to prepare citizens to respond to emergencies while waiting for first responders. Once first responders have arrived in the scene, CERT members can continue to assist where required. The CERT website states:

Following a major disaster, first responders who provide fire and medical services will not be able to meet the demand for these services. Factors as number of victims, communication failures, and road blockages will prevent people from accessing emergency services they have come to expect at a moment's notice through 911. People will have to rely on each other for help in order to meet their immediate lifesaving and life sustaining needs.

One also expects that under these kinds of conditions, family members, fellow employees and neighbors will spontaneously try to help each other. This was the case following the Mexico City earthquake where untrained, spontaneous volunteers saved 800 people. However, 100 people lost their lives while attempting to save others. This is a high price to pay and is preventable through training (FEMA, 2014a).

CERT was established in 1985 by the Los Angeles Fire Department to train citizens to assist in disaster situations so as to avoid a repeat of a Mexico City type tragedy, where so many rescuers lost their lives. It spontaneously spread across the United States and was adopted first by Citizen Corps and then FEMA as a means of training and preparing citizens for disasters.

CERT training is a good model of how exercises become progressively more complex as they build upon the previous exercises. CERT

training combines orientation seminars, drills, and tabletop exercises, until a final simulation or functional exercise. The following lists the CERT course content, offered in six lessons during 24 classroom hours.

- Unit 1: Disaster Preparedness
- Unit 2: Fire Safety
- Unit 3: Disaster Medical Operations—Part 1
- Unit 4: Disaster Medical Operations—Part 2
- Unit 5: Light Search and Rescue Operations
- Unit 6: CERT Organization
- Unit 7: Disaster Psychology
- Unit 8: Terrorism and CERT
- Unit 9: Course Review and Disaster Simulation

In summary, "CERT is about readiness, people helping people, rescuer safety, and doing the greatest good for the greatest number. CERT is a positive and realistic approach to emergency and disaster situations where citizens will be initially on their own and their actions can make a difference. Through training, citizens can manage utilities and put out small fires; treat the three killers by opening airways, controlling bleeding, and treating for shock; provide basic medical aid; search for and rescue victims safely; and organize themselves and spontaneous volunteers to be effective" (FEMA, 2014a).

FIELD TRAINING EXERCISE "ATLANTIC HOPE"

The Northwest MISSOURI HOPE field exercises were designed after the model used by the Consortium for Humanitarian Service and Education (CHSE), called ATLANTIC HOPE. Field Training Exercise ATLANTIC HOPE is held annually at the Public Safety Training Complex of Indian River State College in Fort Pierce, Florida. This four-day exercise, sponsored by the Consortium for Humanitarian Service and Education (CHSE), tests the ability of disaster relief and humanitarian students to apply what they have learned about the planning and conduct of relief missions in a full-scale simulated disaster exercise (CHSE, 2013).

In this exercise participants are members of a humanitarian relief agency called International Humanitarian Action (IHA) and "deployed" on Thursday to the fictional country of Atlantica to help out in complex emergency. When participants arrive Thursday evening, the exercise begins, and students begin the role-play as if they were actually in the war-torn and earthquake-stricken country of Atlantica.
On Friday they participate in a series of team-building and technical classes offered "in-country" by subject matter experts to prepare them before moving to the disaster area. By Friday evening they are in the field in Atlantica and on Saturday they begin the full-scale exercises, where students rotate through different simulations where they practice incident command, search and rescue, and medical first aid. Participants leave Sunday afternoon following an after-action report and press conference. In addition to technical skills, participants learn leadership and team-building as they work with students from other post-secondary institutions.

A second four-day full-scale exercise has been added for advanced students (who have attended the initial training exercises), graduate students, and first responders. This has replaced the two-week full-scale exercises that were held in Macedonia in 2006-2010.

FULL-SCALE EXERCISE "SVETLINA" HELD IN MACEDONIA

The Summer Institute for International Disaster Relief (an affiliate of the Consortium for Humanitarian Service and education) held two-week full-scale exercises in Macedonia in May 2006 through May 2010. The exercises called SVETLINA (or Light) were held at an army facility, Camp Pepeliste, in the south of the country. The Army of the Republic of Macedonia supported the event, providing logistics, security, role players, and some training. American and Macedonian students were divided into three groups, which were assigned to various tracks during the exercises. Students within the groups rotated leadership and other roles on a daily basis.

All participants received a handbook called *A Road for Peace: A pocket guide to peace-keeping and humanitarian operations in the field* (Forage, 2010). The handbook described the background for the simulation and provided readings about humanitarian services to use as guidelines in responding to incidents throughout the exercises. As in the four-day exercise, the simulation started as soon as student participants arrived on the first day. Incident command was established on the first day and rotated daily throughout the two weeks. During the first week students spent most of their time training at Camp Pepeliste. In the evenings they were involved in negotiations with the various role-players in the simulation—the Army of the Republic of Atlantica and the rebels. The goal was to obtain safe passage into the rebel-held territory and establish humanitarian space for serving victims of an earthquake that had devastated the country. Later they began negotiations for a prisoner exchange between the warring parties. At the end of the first week participants had an opportunity to do village assessment and meet and dine with real Macedonian people. A student gave his impressions of this experience:

During the first weekend, we split into smaller groups for our "village assessment." I went to Crevl Bregovi with several other participants in an effort to learn about the locals and their needs. It was an incredible experience. Local leaders invited us into their homes, shared their food, and spoke with us at length about their lives. For the most part, locals there live in conditions that many would consider to be somewhat squalid—there was a general filth that was pervasive within the village. Few had functioning automobiles, and not many more had

access to computers or cellular phones. Much of their lives are based around subsistence, not money or assets or stature—these men and women are simply trying to meet their basic needs on an everyday basis, and they aren't always successful. Sewage systems are faulty or non-existent, clean water is nowhere to be found, and few have jobs outside of the village. In a way, it was beautiful. Heartbreaking, but beautiful. It made me wonder what it might be like to reduce my life to the very essentials; I feel like I would gain a new appreciation for the people and the things around me. Such may be the duality of rural life (Fisher, 2010).

At the beginning of week two participants moved from the barracks in Camp Pepeliste to tents in the field. They worked in their groups in search and rescue, medical first aid, flood rescue, fire suppression, and mine detection. They set up and managed a camp for internally displaced persons (IDPs). A student described his impressions of week two events: "Week two centered around the construction and operation of a camp for internally displaced persons, or IDPs. This involved creating a thorough operating outline including administrative and logistical planning, as well as coordinating the labor required to set up shelter and accommodations for approximately 20 villagers (many hundreds more in most real world situations). Setting up tents and food distribution systems was quite a challenge, as was providing the necessary security in order to protect the people in the camp. Atlantica in a state of crisis, and maintaining the safety and security of innocent civilians is certainly a top priority for any humanitarian" (Fisher, 2010).

At the end of the week participants worked on a humanitarian service project for a local community. In 2009 they built a shelter for a rural preschool. In 2010 they laid cement for a basketball court at an elementary school. In 2010, 15 American students participated from four universities—Northwest Missouri State University, West Point, the Citadel, and Indian River State College. In addition to travel and other expenses, American students paid a $1,500 participation fee. Seven Macedonian students attended free from the peace and justice program at Ss. Cyril and Methodius University of Skopje (Fisher, 2009, 2010).

Overall the feedback from both Americans and Macedonians about the exercise was positive. One student reported: "Over the course of the exercise, we touched on a lot of humanitarian subjects—safety, negotiations, incident command, camp building, search and rescue, fire suppression, and media relations. There was also a lot of focus on strategic thinking and situational awareness, two concepts that are integral to the work of any successful humanitarian. Overall, though, I must say that I enjoyed negotiating the most. I was either the lead or the co-lead on three separate occasions, and it was a great learning experience." He described the experience as "life-changing" (Fisher, 2010).

Table 3. Two-week Master Scenario Events List (MSEL)

Day	Morning	Afternoon	Evening
Monday	Travel	Welcome – Registration	Safety Orientation
Tuesday	ICS Orientation	Humanitarian Security	Negotiations – Humanitarian Space
Wednesday	Medical Operations	Medical Operations	Negotiations – Civil Military Relations
Thursday	Disaster Response	IED Mines Training	Negotiations – Prisoner Release
Friday	Navigation Exercise	Hike	Media Relations – Press Conference
Saturday	Humanitarian Project	Humanitarian Project	After Action review (AAR)
Sunday	Village Tour	Village Dinner	Rest
Monday	Camp Logistics	Convoy Training	Convoy – Establish Camp
Tuesday	Earthquake Village	Earthquake Village	Negotiations – Military
Wednesday	Flood Rescue	IDP Camp	Negotiations – Rebel Camp
Thursday	Fire Suppression	Village Project Prep	Negotiations – Prisoner Release
Friday	Construction Project	Construction Project	Negotiations – Press Conference
Saturday	Construction Project	AAR	Final Reception
Sunday	Camp Clean-up	Travel	

CRISIS AND DISASTER MANAGEMENT AT UTAH VALLEY UNIVERSITY

Utah Valley University offers two bachelor's degrees in Emergency Services Administration. The Emergency Care degree graduates students with a paramedic certificate. The Emergency Management degree is 100% online and targets mid-career police, firefighters, paramedics, and military who need leadership and management courses for advancement in their careers. About 20 percent of the 600 majors in the Emergency Management program are traditional students who are seeking careers in government and non-profit agencies in crisis and disaster management and humanitarian services. Unlike the majority of students in the program, they don't have years of field experience. Students can take a number of courses that are specific to the area of crisis manage-

ment and disaster response: Principles of Disaster and Emergency Management, Humanitarian Services and Disaster Relief, Disaster Response and the Public, and Crisis and Disaster Management.

In response to this group of traditional students, UVU has designed supplemental experiential learning that will provide both the experience and connections with professionals in the field of emergency services. The following applied-learning activities were instituted so students could gain both experience and professional networks.

- Incorporate CERT training into basic course.
- Provide orientation and use table top exercises in all courses (including online courses).
- Use professional responders to help teach courses.
- Require internships and service-learning experiences (i.e., membership in the UVU Emergency Response Team, volunteer with Red Cross, other agencies, and active involvement in CERT)
- Encourage students to obtain EMT certification and use it to get work in ambulance services, critical care units.
- Get involved in training exercises with professionals (such as a recent active shooter exercise at UVU and the annual state wide Great Shakeout Earthquake Exercise).
- Join professional organizations like the Utah PIOs and EMS association.
- Qualify and be available for deployment to disasters.
- Provide opportunities for global and multicultural humanitarian service experiences and learning from international professionals.

In May 2014 students participated in a global and multicultural humanitarian experience in the Balkans. The experience was designed so that students would gain real-life humanitarian encounters with international professionals and train students at a university in the Balkans. Six students participated in the 2014 service learning project. They were required to have pre-requisites: CERT training, EMT certification or attend humanitarian service classes. While in Europe, they would be able to share their experience with other students, have a teaching opportunity, be involved in training exercises, and provide community service.

Students visited three countries in the Balkans—Kosovo, Macedonia, and Greece—where they met with and learned from professionals about programs and disaster response procedures in those countries. They met with (a) the faculty and administration of the Kosovo Academy for Public Safety, (b) the mayor of Gjilan, Kosovo (an area frequently struck by earthquakes), (c) officials of the Macedonia Protection and Rescue Directorate, (d) training officers of the Public Affairs Regional Centre, Macedonia Department of Defense, (e) a doctor in a hospital in Skopje, and (f) trainers and volunteers with the Hellenic Red Cross in Athens, Greece.

In Skopje they had the opportunity to train students and hold functional exercises at a cooperating university, the International Balkans

University. The six students divided into teams of two and taught three groups of 15 students each. The students had not had previous emergency training, so they were excited to learn about disaster response principles, search and rescue, triage, and emergency medical care. Following the training the three groups were involved in three simulations—an earthquake, bus accident, and fire. Each group of students had an opportunity to apply its new skills in search and rescue, triage, and medical care (Fisher, 2014).

FINDINGS

Following the Balkans trip, students were asked to reflect critically on their experience, using the DEAL approach (Ash and Clayton, 2009). In interviews, students were asked to answer four questions. What one thing did you learn from your experience? How did you learn it? Why is it important? And, what will you do in light of it? In addition, students were interviewed to respond to the following questions: Do training exercises build confidence, develop teamwork, establish relationships, and test and improve emergency knowledge and skills among university students studying in the field of emergency services? How do students perceive training exercises in relationship to classroom learning? Five student participants responded to the questions. Their responses are organized under the three themes: cultural awareness, relationships, and field experience. Sub-themes also are reported: differences in handling disaster response, leadership and teamwork, testing and developing skills, applied learning versus classroom learning, and self-confidence and trust.

CULTURAL AWARENESS

One student respondent (R2) indicated she got a greater appreciation of the culture of the people in the Balkans. She had the impression that the Balkans were a "third world country" and she arrived in the region with "fear of the unknown." She thought the people would be unfriendly and even dangerous. She found instead that the people "educated, nice, and welcoming."

R2 realized from her experience that she shouldn't prejudge people and should be more respectful of people. While their government may not be the best, the people have a "fairly decent life."

"This definitely tops every other learning experience I've had," said R4. "To be immersed in different cultures. To have to learn your skills and trust yourself to be able to teach other people who honestly don't necessarily speak English that well. It's a big learning curve to adjust to that. You grow so much and you learn to trust yourself so much more. And you really feel you know what you are doing."

One of the respondents (R5), who works as an EMT on an ambulance, said the trip helped him "integrate with the culture and people." Doing

emergency management in an international setting and taking into account cultural sensitivities helped him "break through cultural divide." He said, "It helped me use some skills that I don't get to use in my job in terms of leadership and management. It was something I don't get from my own work and in the classroom."

R5 recounted how his understanding of international relationships increased. Knowing the people he met helped to "humanize" them and helped him understand their culture better. He said he learned "by making his own connections and building relationships."

DIFFERENCES IN HANDLING DISASTER RESPONSE

The Balkans trip helped students gain a greater appreciation of the importance of disaster preparedness and the needs of people in other countries, and increased their desire to go into humanitarian service.

"Because disasters happen anytime, understanding the challenges other countries face could be beneficial if [responders in] the United States [are] called upon to help," mused R1, a female student who recently graduated in crisis management and disaster relief.

Discussions with disaster personnel in Kosovo, Macedonia, and Greece helped her make a comparison between what she knows about the United States disaster response system and that of these countries. She noted some of the difficulties faced by responders in these countries: small villages in Kosovo, many islands in Greece, and extreme poverty of some populations throughout the region. These challenges make recovery more difficult and longer, she said.

R1 indicated that she gained a greater appreciation for emergency management in the United States, where greater community outreach exists partly because of funding and training of first responders. "We may not be more knowledgeable, but we can get there faster," she said.

From her experience in the Balkans another female student (R4) realized that disasters are a global issue and that every country needs emergency management. The trip also helped her see that while people may have differences, they are "just people" and "all need help."

"It was interesting to me," said R2, "that most of the average public does not have any basic first aid knowledge or training." Students at the International Balkan University were able to learn both in the classroom and during simulation disaster situations. "They had very little knowledge on basic first aid, and until they experienced simulation exercises, they didn't comprehend just how important having basic first aid knowledge is," she commented. R2 said she learned to be more culturally sensitive from meetings with the various emergency services agencies in each of the countries the group visited. She also learned it from the other students and friends she made.

RELATIONSHIPS

Student Respondent 2 connected culture with building relationships. "I think building relationships was the biggest part for me," she said. "I learned so much about their culture and values, and I hope I was able to teach them just as much in return."

She added: "As we assembled back together as a group at the end of the exercises the students expressed how grateful they were for the opportunity to participate and be educated by hands on experiences."

"I think just by the hands on work with the students and time spent teaching them the skills that we have learned reinforced our own skills as well as building relationships with them," commented R1.

R3, a criminal justice student, said he was pleased by the reception given him and his fellow students from the many agencies they visited. "We learned how they did things and they listened to us." For example, he learned that candidates at the police academy are already hired, their studies are much more intensive, and that last a shorter time. They also live right at the school. He enjoyed the training and simulations with the students at the International Balkans University. He found they were eager to learn and learned quickly.

"We had good experience with the students," he said. "Everything we shared was an added bonus to what they were learning." He said he still connects with some of them through social media.

R4 said she also uses social media to keep in touch with the friends she established in the Balkans. "So I know that I feel like we have made a lasting impression on these people and I know they have made a lasting impression on us. They have made a difference for us. It has been really positive to have those connections," she said.

"We met with all sorts of groups of people meeting with professionals at the crisis center, Red Cross, and teaching at the school." The connections were mutually beneficial, learning from each other, said R5.

He said, "It sounds like a lot of information sharing rather than information teaching because they had a knowledge on emergency management. Any [future] work that would happen would be more of a collaboration rather than teaching on our part."

Working abroad is important, said R5, because "in the humanitarian field we learn about cultures and backgrounds; if we take the initiative to build relationships, we can gain a lot from them." Building relationships is a skill that he thinks will help him in humanitarian service and in his job search.

LEADERSHIP AND TEAMWORK

Relationships with the other students who travelled to the Balkans helped build teamwork and leadership skills. R1 said she thinks the experience in the Balkans "helped develop teamwork among our group in preparing and planning not just for the teaching at the school but also the trip as a whole."

R3 said people stepped up when certain kinds of leadership were needed. "I took more of a security role to make sure we were safe and gave directions to get where we need to be. That's kind of where I thought I was an asset." But he added, "We all went in there being equal but one person needed to take lead. Once [R1] took that role things went smoothly."

R3 also discussed teamwork: "Each one of us in the group had different skill levels so as we split up, we each taught differently but were able to cover the same tasks…. The students were all able to what they needed to do to be involved in the exercises. We got together and discussed about what we needed to do so everyone was on the same page. The relationship we were able to build was strengthened."

"You build a friendship there," said R4. "You learn to work around each other's skills and enhance them with your own."

R4 added, "Two heads are better than one and we had six. So we were all able to come together and make ideas that were efficient that we could work with. Even when we had moments when we questioned whether we had what we needed. We would ask: 'What can we use instead if we can't get this?' Just all that brainstorming and all that collaboration together made it possible for us to work for the same goal even though we all came from different places with different experiences."

R5 also described the relationship process: "We were thrown into a situation where we needed team building," said R5. "At first we established our own team and then established ourselves as leaders of teams when we started working with the school volunteers. We were thrown right into the fire. We each had our own background experience which we brought to the situation. We had shared that and it became a really good exercise in team building."

"You really do make friends with people. [As] you make connections you help enhance your own personal life as well as your professional life," concluded R4.

FIELD EXPERIENCE

The field experience in the Balkans provided students an opportunity to test and develop their emergency response skills and helped build self-confidence and trust. Trust is essential in developing relationships with team members and those people the responder serves. The field experience also provided an applied-learning experience, which supplemented and augmented their classroom experience.

TESTING AND DEVELOPING SKILLS

Respondent 1 said: "Everything we taught in the training exercises was material that we learned in CERT and from our own emergency responder background. This just gave us the opportunity to really apply our own learning and teach it to others."

R3 felt he was tested quite a bit. "For me this was a big eye opener," he said, "because I have never done anything like this before. I figured the training I had was something everyone would know but when I got over there I realized that that was not true and I knew something more than the basics. I was able to share my experience with other people. It helped me to understand more of immediate things responders go through to better my skills so I can be a more helpful participant."

R3 said he was surprised to discover that as a nation "we are not as prepared as we think we are." European countries do exercises and training with each other. From the Hellenic Red Cross, he learned about European Union exercises that involve many nations and a multitude of agencies.

R4 also felt her knowledge and skills increased from the experience. "When you teach something you really learn it. You engrain it in your mind deeper. And you learn a lot of things connect when you are teaching—a lot of I things you didn't realize when you learned it in class."

From teaching the students at the International Balkans University, she realized how little they knew about preparation and recovery from disasters. Meeting with the Red Cross and other agencies reinforced this impression. She said she discovered she has a "passion" for humanitarian services and disaster relief. This made the trip and all the expense worthwhile. "It was exactly what I needed."

R5 said "it was good practice in being a manager. It was an exercise in building skills—leadership, management and teamwork skills."

APPLIED LEARNING VERSUS CLASSROOM LEARNING

"I am a firm believer of learning on the job—or in the field," said R2. "You can only learn so much in the classroom. It is only until you experience disaster situations or have hands on experience during real or simulation disasters that you can comprehend how to respond and improve on mistakes made."

"In the classroom we were able to teach the International Balkan University students basic first aid and emergency response such as triage and patient assessment. We did demonstrations in the classroom to help their understanding of what we were talking about, but it was not until the simulation exercises that the students grasped and comprehended how crucial basic first aid skills are" (R2).

"Exercises were a great step learning how to change the things from classroom and books to teach it to people who didn't know this basic information," echoed R3. "A lot of this you can't learn from a book. Hands on is far more productive and helps me retain information I'm learning and teaching."

R4 commented: "Classroom learning can only get you so far. Classroom learning is honestly mostly theory. And, while what we are learning is based on real life experience, until you go out and test that…. When you do go outside the classroom you step into a whole other world and you start to understand the benefit of what you are learning."

R4 continued, "Sometimes college can seem very arbitrary in today's world and you wonder why you are spending all this time doing all this. You ask, 'Is it really worth it?' Having this kind of experience is not only fun but it also shows that your education is useful—that you can benefit yourself and other people by doing it. You really get to see what you are going to be doing in your field and you really get to understand what you can do and the influence you can have for good."

Although R5 gets experience working for an ambulance service, he found that the Balkans trip allowed him to use some skills like leadership and emergency management that he doesn't use regularly in his job. "I was also able to do emergency management in an international setting—breaking down cultural barriers and taking into account cultural sensitivities. It was something I don't get from my own work and in the classroom."

SELF-CONFIDENCE AND TRUST

Respondent 4 (R4) talked about the relationship between self-confidence and trust. "Self-confidence is built by helping to teach the skills we are already learning. Self-confidence comes when you recognize that you already know the information that you are teaching. Self-confidence comes when you actually realize that you know the information well enough to teach it. Self-confidence is important for anyone in our industry because there is so little time to respond. You have to trust yourself and your skills to be effective. Self-confidence builds trust. Trust is extremely important."

R5 had similar positive feelings. "Teaching helps build self-confidence," he said, "because it puts you on the spot. You have to go back and review what you thought you knew and make sure you do know it."

SUMMARY COMMENTS

R1 told how beneficial the training and exercises were with the International Balkan University. "We could have been better prepared in running drills," she said. "We did a good job teaching the disaster response material but we could have done better with the simulation. It was a little chaotic." She recommended that students doing something similar overseas have several classes before they leave so they could learn what to expect and practice and prepare.

R4 felt the number of students going on the trip was just right and the length of the trip was about right. However, she felt that the training of students should have been in more depth. More time should be spent teaching and working with the students at the university—perhaps two or three days would be enough. "This definitely tops every other learning experience I've had," she said. "To be immersed in different cultures. To have to learn your skills and trust yourself to be able to teach other people who honestly don't necessarily speak English that well. It's a big learning curve to adjust to that. You grow so much and you learn to trust yourself so much more and really feel you know what you are doing."

"The experience helped me integrate with the culture and people although a longer trip would help more," said R5. "A longer trip would help inundate you into their culture and help you acclimate, become more acquainted with them. In the short time we were there we were able to establish a fairly strong relationship, which I think would be the basis of me going back and feeling comfortable even by myself."

CONCLUSIONS

From this case study examining student applied learning in the humanitarian services and disaster relief, it is apparent that student involvement in exercises benefited their educational experience and prepared them for work in the field of emergency services. Students at Northwest Missouri University benefit from the school's participation in the Consortium for Humanitarian Service and Education (CHSE) and a full range of exercises from the orientation seminar to the full-scale exercise. Students at Utah Valley University are not only involved in exercises but also are able to develop professional networks through their association with local first responders and international emergency personnel.

This study shows how the application of NIMS principles in disaster relief exercises has benefited university students. The case demonstrates how students have developed emergency response capabilities through practical application of knowledge in simulated incidents. From their association with other students in exercises, they have obtained team-building and leadership skills. Through the participation of professional responders, students have established relationships that will carry forward into their careers. Finally, students have gained confidence in their abilities to respond under pressure to simulated critical incidents. The applied-learning experience of training and exercises supplements and augments their classroom learning.

The following table shows examples of student training matched to NIMS exercises.

Three themes and five sub-themes emerged from the student participant responses to interview questions. The themes were cultural awareness, relationships, and field experience. Sub-themes were: differences in handling disaster response, leadership and teamwork, testing and developing skills, applied learning versus classroom learning, and self-confidence and trust.

Following their participation in the global and multicultural humanitarian service experience in the Balkans, the American students reported a heightened cultural awareness which helped create understanding of the disaster response capabilities in the Balkans as well as developed relationships with students and emergency personnel. They indicated that they gained greater respect for the differences that exist in handling disaster response and a greater appreciation of the culture of the people they met. As one student said, the people are "educated, nice, and welcoming." Good relationships among the students led to shared leadership and teamwork. They reported that as they applied their knowledge and skills to training the International Balkan University students, they gained greater self-confidence and built trust. The applied-learning experience supplemented and augmented their classroom work. A student summarized the experience saying, "When you do go outside the classroom you step into a whole other world and you start to understand the benefit of what you are learning."

Table 4. NIMS exercises matched with student training.

NIMS exercises	Student Training
Orientation seminar	Course: Humanitarian Services and Disaster Relief Course: Crisis and Disaster Management CERT training 3-day, 2-week exercises
Drill	CERT training
Tabletop exercises	Course: Humanitarian Services and Disaster Relief Course: Crisis and Disaster Management CERT Training
Functional exercises	CERT Training Training and simulation with International Balkan University students
Full -scale exercises	Missouri Hope Atlantic Hope 2 week Macedonia experience - Svetlina

This study is limited in its scope, since it examines the use of exercises at two universities—Northwest Missouri State and Utah Valley University. However, a number of propositions can be drawn from the findings in this study. These require further testing and verification.

- Using professional models of borrowed from NIMS is effective in teaching university students in the emergency services
- Experiential learning is a powerful component of teaching and enhancing the student educational experience.
- In addition to the opportunity to test and improve technical skills, leadership and team-building are important training elements that come from exercises and simulations.
- Students build self-confidence and trust by doing exercises. Trust leads to the development of relationships among participants.
- Individual university programs can benefit from cooperative programs with other universities and agencies.
- International experience is valuable because U.S. students can learn about other cultures and gain a greater understanding and appreciation for how disasters are handled elsewhere.

- Programs offered by these two universities can serve as models for other universities. University programs that are not now using exercises as part of the education of their students would benefit from the adoption of training exercises designed after the NIMS model.

This case study confirms that exercise and training as mandated through NIMS for first responders also works in the education and development of students in the emergency services field. Exercises using simulation methods also provide applied-learning experiences that augment and supplement classroom learning. Students benefit from emergency response exercises because they build confidence, develop teamwork, establish professional and personal relationships, and test and improve disaster response knowledge and skills.

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