



6-2019

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### Recommended Citation

Hueston, Harry and Orton, "Chip" George K. III (2019) "Introducing a virtual emergency operations center into a higher education curriculum," *Administrative Issues Journal*: Vol. 9 : Iss. 1 , Article 5.

Available at: <https://dc.swosu.edu/aij/vol9/iss1/5>

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## Introducing a virtual emergency operations center into a higher education curriculum

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### Abstract

*At West Texas A&M University, faculty members in the Criminal Justice and Emergency Management programs teach students how to deal with man-made and natural disasters. These program courses require students to learn about the National Incident Management Systems (NIMS) in addition to passing certain requirements. Each student must pass NIMS courses 100 and 200 as part of their coursework where students are given the opportunity to work through a table-top exercise involving a natural or man-made disaster.*

*Over the past several years, due to the success of these exercises, one of the criminal justice professors proposed a funding project to create a classroom designed for crisis management exercises in the future.*

*This article conveys important qualitative discussions in two significant areas: how the crisis management classroom was created, designed, and integrated into the emergency operations center for the Texas Panhandle; and how the crisis management classroom was provided with the opportunity to integrate a virtual emergency operations center (VEOCI), making West Texas A&M University the fifth university in the United States to have access to the new virtual management system.*

**Keywords:** NIMS, Emergency Operations, Man-Made Disaster Management, Natural Disaster Management Recovery Processes, Virtual Emergency Operations on the Internet (VEOCI)

Collaborations between universities, first responders, and emergency operations centers have occurred following many natural or man-made disasters during past decades. Globally, there are several universities that have participated in collaborative efforts when responding and recovering from large natural/man-made disasters. Sweden has had several examples of these types of collaborative efforts over the past decade. Sweden’s use of educational facilities working with first responders has been labeled the “Holy Grail” for first responders in Europe (Sparf & Petridou, 2018). In the United States, these types of collaborative efforts are apparent in higher educational institutions when implementing various federal mandates.

Federal laws implemented in K-12 schools or in universities and colleges that involve the Individuals with Disabilities Act, the Clery Act, or a variety of Equal Employment Opportunity Commission (EEOC) mandates are required to be implemented annually. Each of these provisions has provided a platform through which collaborative efforts between K-12 administrators or college and university administrators implement processes for each of these federally mandated provisions in effectively governing their schools’ or campuses’ compliance (Rock, 2000).

Other examples of ongoing collaborative efforts between universities and first responders have been seen in measuring a community's satisfaction with the delivery of police services in a community or campus environments (Griffin, Hueston, Wilson, Moyers, & Hart, 2004). Emergencies involving incidents of active shooters in Columbine, Virginia Tech, and Sandy Hook have created an immediate training need for K-12 schools and universities and colleges to develop response plans to prepare to deal with these types of incidents on their campuses. As a result, higher educational institutions have developed training programs for teachers, administrators, and police/fire responders on how to react and recover after these incidents (McCabe, Hueston, & Andersen, 2008).

### **Purpose and Significance of the Crisis Management Classroom**

During the past decade, the West Texas A&M University (WTAMU) Police Department, working with the Criminal Justice Department, created several active shooter training scenarios involving hundreds of police officers, firefighters, paramedics, and trauma personnel in working through an active shooter situation on the WTAMU campus (Burns & Hueston).

These types of collaborative efforts led to the crisis classroom proposal funded and created in July 2018. With the assistance of the Director of Emergency Management, who is in charge of an inter-jurisdictional emergency agency in Amarillo, Texas, the design of the crisis management classroom allowed the implementation of a virtual emergency operations center (VEOCI) once the classroom was completed. This emergency management software tool is currently being used in the Panhandle of Texas in dealing with any type of natural or man-made disaster.

### **What is VEOCI?**

VEOCI is a virtual emergency operations tool that is used in over 180 airports, government entities, and educational institutions throughout the United States and internationally (Shaw, 2018). Locally, the Amarillo Area Office of Emergency Management (OEM) migrated into using VEOCI approximately three years ago. VEOCI provides the OEM and Emergency Operations Center (EOC) instant feedback from the scene of a disaster in order to manage and inform personnel from thirty agencies. VEOCI also integrates NIMS forms and updates conditions, personnel, and first aid contingencies throughout the disaster recovery process. The Director of the Emergency Management for the Amarillo area OEM has described the use of VEOCI as the "Facebook for Emergency Management." However, the use of this type of tool is not unique to WTAMU. There are four other universities in the United States using VEOCI in a number of areas. These universities use VEOCI as a monitoring system for lighting, equipment, and personnel management, as well as for emergency management. In addition, over 180 government agencies and airports are using VEOCI as an emergency management tool, and for additional monitoring of various utilities and transportation areas.

The use of technology in assisting collaborative efforts between emergency operations centers and universities has been implemented in other local areas in the past decade. The University of Oregon, dealing with an H1N1 virus outbreak, initiated the use of cloud-based technology in spring 2014. This software system coordinated over 139 people from a variety of university departments and first responders in dealing with this type of incident. During the emergency, the incident management team created reporting systems to handle and anticipate the outbreak involving students and employees. All personnel involved in this crisis shared resources and updates via emails, texts, or voice communications. Following this success, the University of Oregon has continued to use this cloud-based technology to include fire departments, police departments, school districts, and community colleges in handling a variety of other types of emergency situations (Roscorla, 2014).

Implementing the use of VEOCI into the West Texas A&M University System (WTAMU), and then into the crisis management classroom, was a process involving three key areas: (1) WTAMU administrative personnel, (2) VEOCI executive people, and (3) the Director of the Amarillo Area OEM. Local first responder agencies were not involved at this time because VEOCI was not operational in their jurisdictions. Following several months of discussions on the proposed use of VEOCI at WTAMU, first as a learning tool in the criminal justice and emergency management classroom and then as part of the curriculum for a new Doctorate of Education program, VEOCI agreed to provide WTAMU with access to the tool. WTAMU is the fifth university in the United States to have access to VEOCI.

The use of VEOCI at WTAMU will include: (1) table-top exercises implementing VEOCI technology in managing recovery efforts following man-made and/or natural disasters, (2) an archival history of information used by emergency management personnel, (3) new curriculum focused on crisis management for the Doctorate of Education Program, and (4) an integrated management program used in rural independent school districts in response and recovery efforts when facing man-made and/or natural disasters.

Currently, the crisis management classroom has been used in several demonstrations for state officials, local government managers, first responders, and local K-12 administrators.

Faculty in the criminal justice and the emergency management programs can use VEOCI in creating a variety of natural disasters facing rural school districts in Texas. For example, VEOCI provides the opportunity for individuals to see how fast a wildfire is approaching a rural school, what resources are immediately available, where to place these resources, and how to evacuate the impacted school. Additionally, VEOCI integrated Google Maps, which provides both satellite views and map overviews of an impacted area. VEOCI has been implemented in the Texas Panhandle 2018 due to ongoing drought conditions resulting in numerous wildfires throughout the area. WTAMU is the first university to implement the use of VEOCI into these areas. Additional use in the past six months included a full-scale OEM exercise involving a downed aircraft at the Amarillo International Airport and the collision of a news helicopter into a school bus in town. This full-scale exercise involved all first responders from Potter and Randall Counties, as well as, responders from the cities of Amarillo and Canyon (Watkins, 2018). The exercise was created to meet a federal training requirement for the OEM/EOC operations in Amarillo. The incident lasted five hours and involved a number of victims and over 200 first responders. During the exercise, students and university personnel observed the recovery efforts in the crisis management classroom. This provided a first-time opportunity for students, faculty, and administrators to see how a crisis of this magnitude was handled by local first responders, in addition to providing an excellent teaching opportunity.

### **Conclusion**

Future use of the crisis-management classroom will include several new areas. Curriculum for the new Doctorate in Education Program starting in January 2019 will involve a crisis-management course including numerous exercises using this classroom. The use of VEOCI will provide future school administrators with the tools to manage crises in rural areas. The training program for local government administrators, along with university administrators and school district administrators, will take place in summer 2019. Training programs have been developed to provide administrators with four to eight-hour courses on dealing with crisis management using VEOCI in combination with NIMS forms. These efforts demonstrate recovery procedures from natural and/or man-made disasters using state and federal funding. Finally, WTAMU undergraduate students in the fields of criminal justice and emergency management, and graduate students in criminal justice administration, and public administration will

have the opportunity to study prior incidents using VEOCI archival data, as well as, up-to-date information on working through disaster recovery efforts while collaborating with local EOC personnel and first responders.

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