Development of a Model to Assess the Effectiveness of Emergency Preparedness Through Simulation Training

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George Brown College, in partnership with CAE, has developed blended learning solutions to provide multi-agency emergency preparedness training to individuals and organizations using immersive simulation. Simulation provides experiential learning, which has been shown to be an effective didactic for adult education. To evaluate our simulation training solution, the development of a conceptual model is proposed to show causality between using simulation as a training intervention and the desired system-level outcomes.

Our proposed model builds on Kirkpatrick’s framework which has been used in the corporate sector for many years to evaluate training programs. The framework consists of four evaluation levels (i.e., reaction, learning, behavior, and results) arranged in ascending order of information provided by Kirkpatrick and of difficulty to accomplish. Kirkpatrick’s validation model is relatively new concept in emergency preparedness training. Even so, Kirkpatrick’s model remains the most accepted framework of representing training evaluation criteria.

Our model uses a training matrix to measure the learning outcomes based on Kirkpatrick’s model. Level 1 assesses reaction; Level 2 measures learning; Level 3 measures performance; Level 4 measures system results and return on investment.

Our research will use our model to tie emergency management/preparedness learning outcomes to a local plan and assesses the learner’s factual knowledge and skills through objective measures.

The model uses simulation training to test specific response activities to a local Emergency Response Plan (ERP) both at site and Emergency Operation Centre (EOC) levels.

Benefits to GBC: The multi-level information will assist the college in refining the training system with respect to instructional outcomes and/or delivery, and evaluation indicators. It will also expand the existing evaluation culture in the School of Emergency Management. In addition, it will position the School of Emergency Management as the leading educational/training school in the field of emergency management.

Benefits to Industry: The results may also identify organizational factors (management support) inhibiting or enhancing acquisition and transfer of the simulation training to work, thus clarifying the role of the individual and the employer. Therefore, the model will measure organizational capacity. It may establish communication links and exchange of information among the industry, partners and the educational institution. It is also anticipated it will result in promotion of employees’ motivation.

References