

Navigating Floods

An Immersive Exploration through High-Stakes Simulation

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Introduction

In an innovative shift from traditional teaching methods, high-stakes meeting simulations have revolutionised education [1] mainly because: Real-world experience and skill development [2], Increased engagement and knowledge retention [3], Alignment with professional expectations [4]

Method and Concept

This hands-on approach involved fifteen students (Figure 1), divided into groups of five, who assumed critical roles such as government officials, environmental advocates, engineers, and community leaders (Figure 2). They confronted real-world flood disaster scenarios selected from diverse global contexts. Throughout five intense simulations (See Figure 3left as an example), students had just fifteen minutes to negotiate, find common ground, and meet the needs of all stakeholders. Then they will be faced with real cases happened in the reality (Figure 3right). Finally, following discussion fulfilled the learning:

- Describing agreed decisions/plan of each group
- Expressing feeling/interests/challenges of each members
- Comparing taken decisions – similarities and differences
- Analysis the data like power-interest matrix



Figure 2. Demonstration of participants

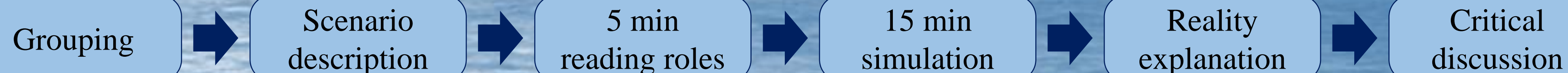


Figure 1. Flowchart of methodology applied for high-stake flood management simulation

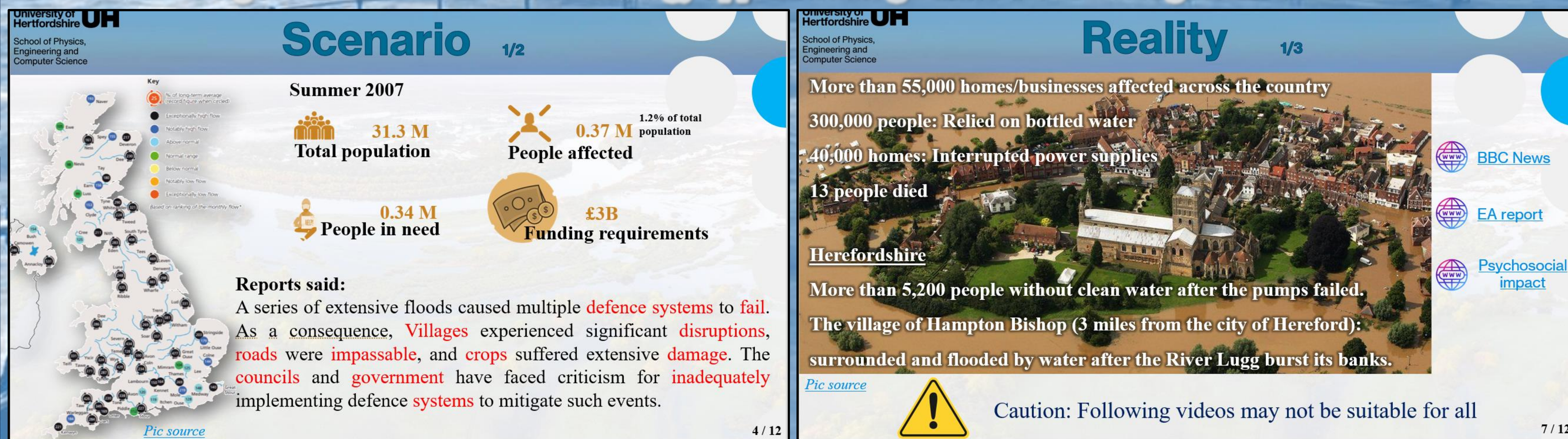


Figure 3. Sample of teaching materials provided: (left): Before simulation, (right) After simulation



Figure 4. Students' feedback: (left): Scores, (right) Interesting points

Results

A high level of engagement, with students valuing the approach as a “effective”, “informative”, “practical”, and “real” experience in floodplain management (See Figure 4). - Feedback indicated that working with actual cases and assuming realistic roles provided students with a tangible sense of the complexities they will face in their future careers. - Beyond the classroom, students shared their experiences with industry professionals, receiving strong support and positive feedback, which further fuelled their enthusiasm. This method effectively bridges the gap between theoretical knowledge and practical application, aligning educational goals with career expectations and preparing students for the challenges of the professional world.

References

[1] Brown and Chidume (2023). Don't forget about role play: An enduring active teaching strategy. Teac. Learn. Nurs., 18(1), pp.238-241. [2] Doddema, M. (2019). Employing a role playing game and debriefing approach to validate practices and identify variations in response dynamics. MethodsX, 6, pp. 143-149. [3] Lexén et al. (2018) Occupational therapy student experiences of a university mental health course based on an integrated application of problem-based and team-based learning. Scan. J. Occup. Ther., 25(1), pp.70-77. [4] Sartain et al. (2021). Utilizing Nursing Students for a Complex Role-Play Simulation. Clin. Sim. Nurs.,60, pp.74-77.