Experiential Learning in Digital Forensics: Are Simulations Effective?

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Curiosity

- Have you ever wondered—what if students could step into the shoes of real forensic investigators instead of just learning about it from lecturers' slides and textbooks?

- Would they retain more? Would they make fewer mistakes?

- Would they feel more confident in handling digital evidence?

We learn by doing. Our world is an ever-changing, practical world that we can only know through action.

- John Dewey

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Experiential Learning

- Experiential learning immerses students in hands-on activities that enable them to apply theoretical knowledge in real-world situations.

Transition (Setting Up the Experiment)

PLANNING
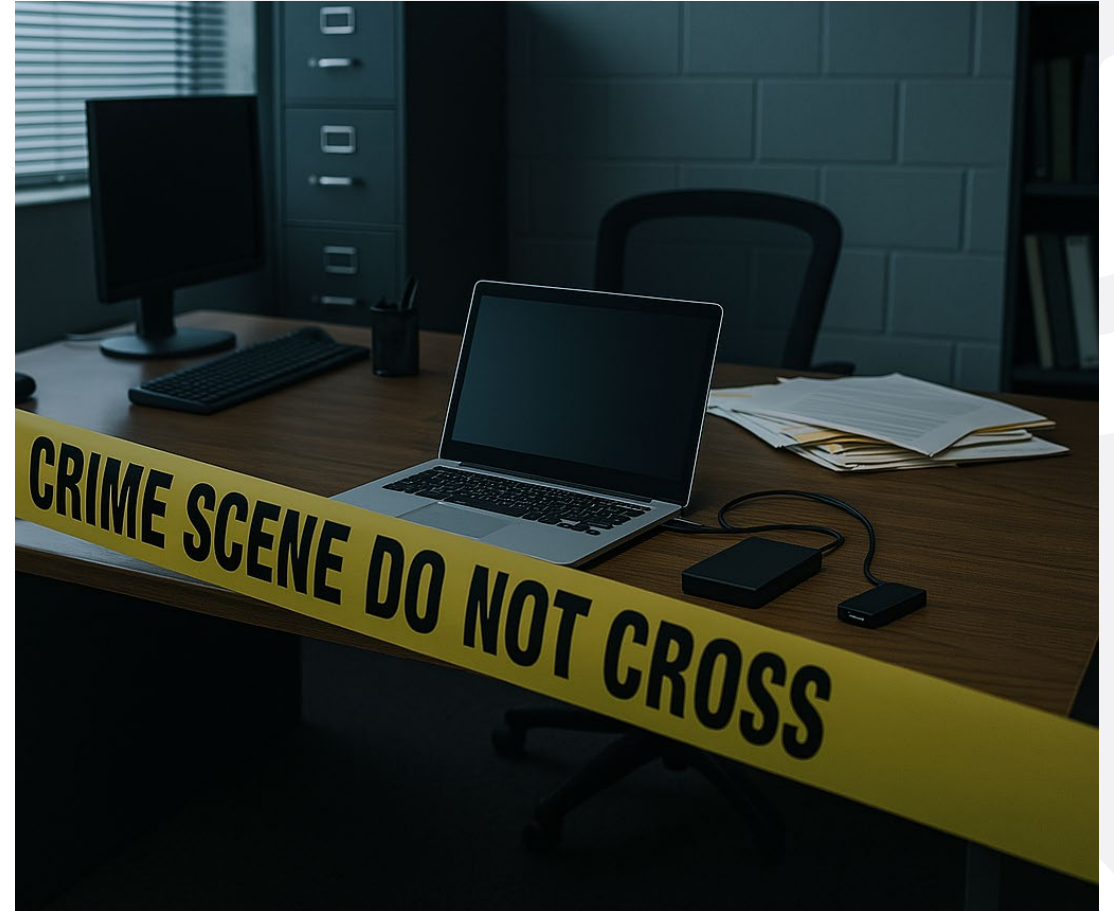
ACTING

OBSERVING

REFLECTING

Data Collection
- Pre-assessment surveys to determine baseline knowledge.
- Observational assessments during the simulation.
- Post-simulation interviews for detailed feedback

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The Crime Scene Simulation

- Crime scene was an office of an employee suspected to be distributing illegal images.

- Students were split into two groups and given a search warrant of evidence Items to collect.

- Students followed good evidence collection practice, i.e Association of Chief Police Officers(ACPO) and ISO27037
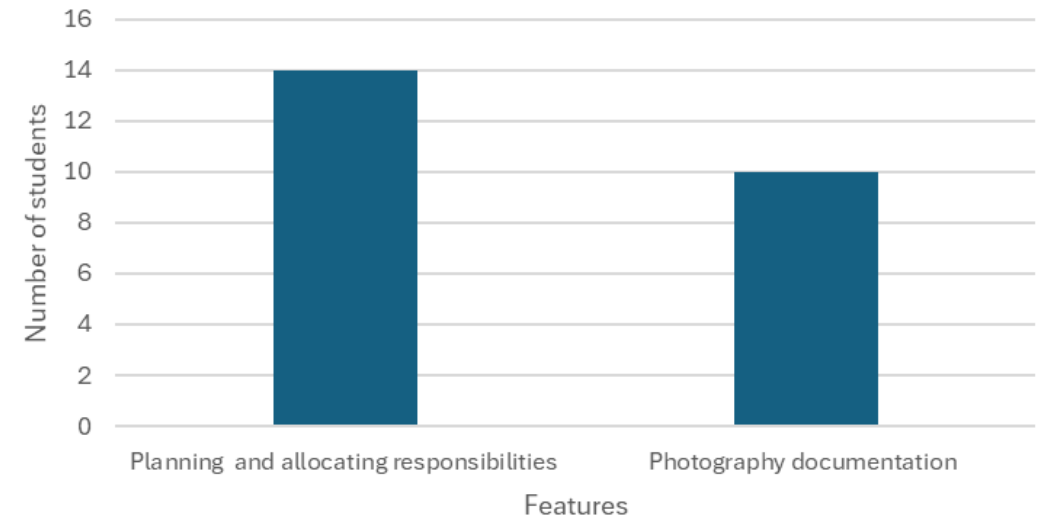

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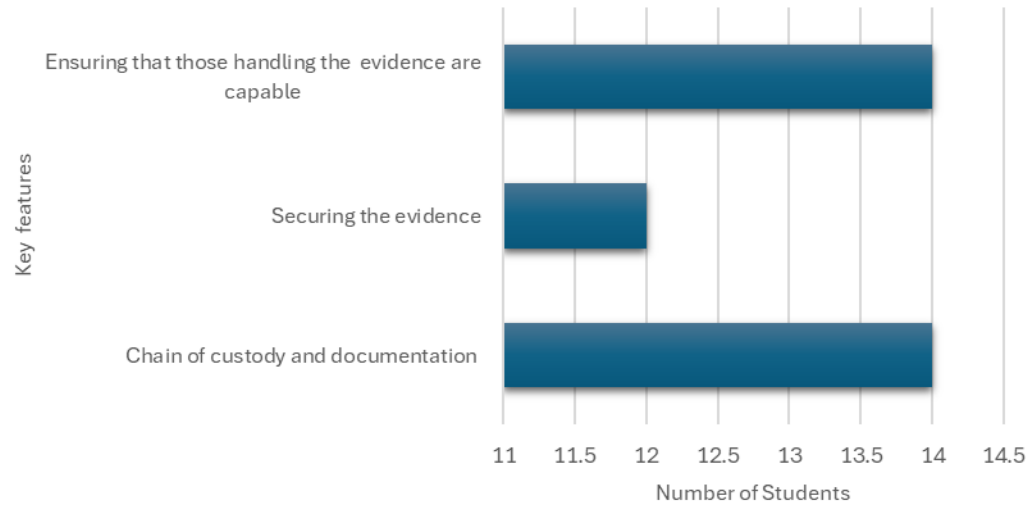
Results

Results

Interesting Activity

Good practise for real world scenario

More Simulations to enhance our skills

Relevant to Career goals

Very engaging activity

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Results

Student Engagement:

Active participation in the simulation, applying theoretical knowledge and collaborating effectively.

Reflecting on the experience to enhance practical skills in evidence collection.

Improved Understanding:

Hands-on experience led to a noticeable improvement in evidence handling accuracy and adherence to legal and procedural protocols.

Missed Steps:

Critical tasks such as proper planning and crime scene documentation (e.g., photography) were overlooked.

Student Feedback:

The simulation boosted student confidence and preparedness for handling digital evidence in real-world scenarios."

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What Did We Learn?

☑ Simulations bridge the gap between theory and practice.

☑ Students develop procedural knowledge and confidence.

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What Did We Learn?

- Documentation techniques need further reinforcement.

- Challenges remain in simulating real-world complexities.

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Key Takeaways

- By actively participating in simulations, students hone critical thinking, problem-solving, and decision-making skills, preparing them to tackle the dynamic challenges of cybercrime and evidence management

- Future work will explore incorporating VR/AR to create more immersive and interactive simulations.

  - Design complex crime scenes and incorporate advanced digital devices, i.e IoT devices, for more realistic and challenging scenarios

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Thank you for listening! Questions?

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•Connect & Collaborate

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