

# Can student engagement be enhanced using an immersion room for simulated learning?

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# INTRODUCTION

I am quite new to academia and this piece of research was inspired by how uncomfortable I am in silence.

I would rather the classroom be as a bustling marketplace, where ideas are exchanged. Without questions and discussion, it would close down.

My mission was to find how I can create a vibrant hub of activity where learning and collaboration thrive.



# STUDENT ENGAGEMENT



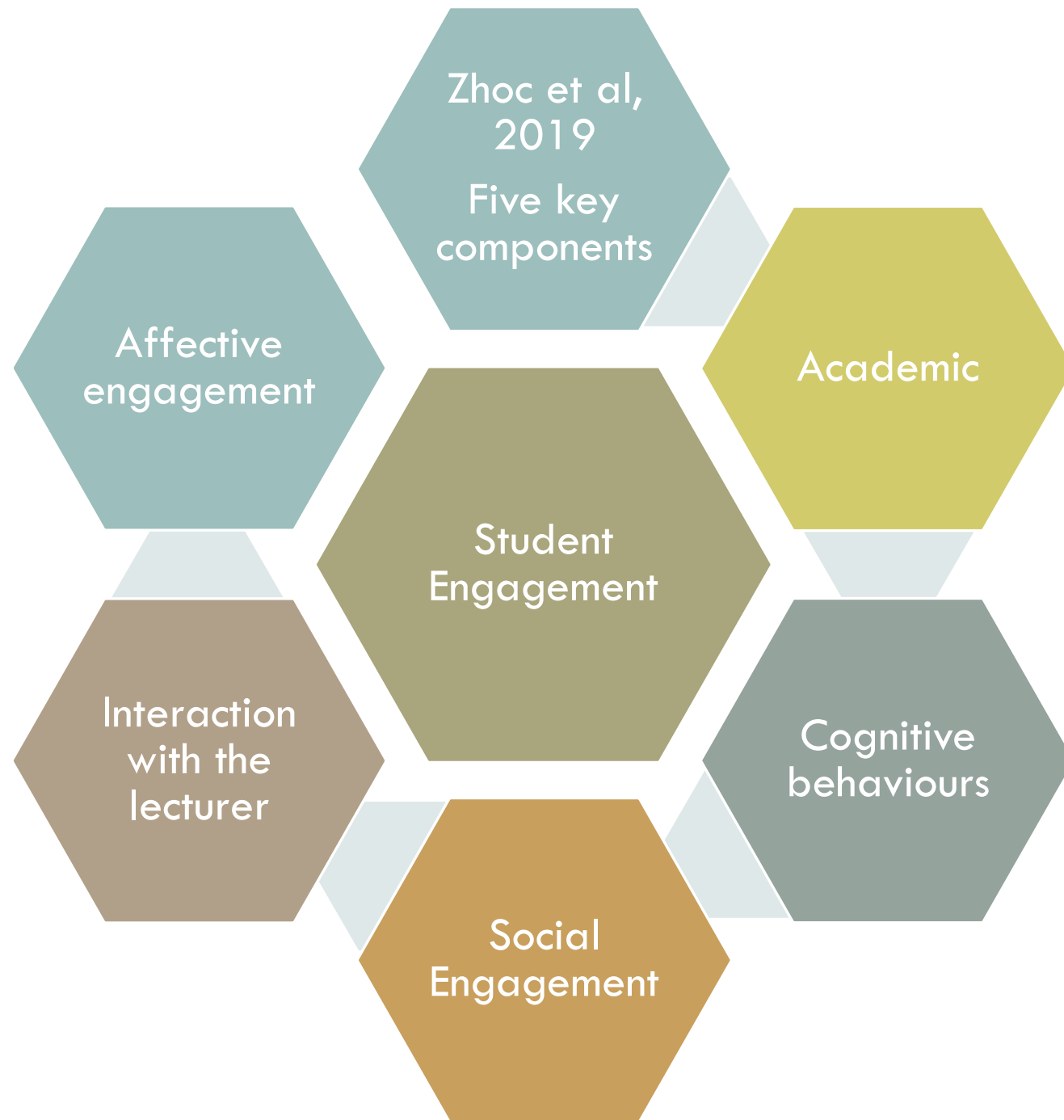
I started by investigating the key concepts of student engagement



Prioritising enhancing student engagement to improve student outcomes.



Impacts Higher education institutions- Student retainment, Attainment, Student surveys



# ACTIVE LEARNING



The traditional method of delivery of knowledge by a lecturer using a PowerPoint presentation may not be the preferred method of learning for some students (Weigel and Bonica, 2014).



As evidenced by Scott et al (2018) a more inclusive learning environment can be created by integrating active learning methods and introducing relevant learning scenarios using available resources



Flipped classroom approach-

In-session time can be used to relate to clinical case studies, discussions and group work.

If the pre-read is not completed then it's a waste of time (Groccia, 2018)

# TECHNOLOGY AND GAMIFICATION



Technology has made active learning resources and simulated learning possible.



Gamification uses game-like elements to motivate and engage students



Online interactive quizzes can test pre and post knowledge



Introduction to the immersion room.

I was in my 'safe space' back in clinical practice  
Linking previous learning

“If students are to learn to think, they must be placed in situations where they have to do so.” (Bligh 2000, p10)

# RESEARCH

## **Objective of Research-**

- Investigate the potential of immersion rooms and new technologies to enhance student engagement.

## **Research Methodology**

### **•Approach:**

- Action Research Methodology (McNiff, 2017).

### **•Implementation:**

- Interactive learning session for second-year BSc Diagnostic Radiography students.
- Features: Immersion room experience + group-based active learning activities.

### **•Data Collection:**

- Mixed quantitative and qualitative feedback via post-hoc questionnaire using Jisc.
- Response rate: 48% (29 out of 60 students).





# THE IMMERSION ROOM

The immersion room is an interactive space.

The session I created for this action research project was for the 2<sup>nd</sup> years undergraduate Anatomy and Pathophysiology module.

The immersion room 'scenes' simulated a patient pathway through the CT department for a CT virtual colonoscopy

The student group was set to a maximum of eight so they could participate and interact with the room.

To ensure learning outcomes had been met I finished the session with a quiz.

# ANALYSIS



Questionnaire- Using Likert scales



Qualitative- thematic analysis



I limited the qualitative questions in an attempt to increase the response rate.



I analysed the responses for common themes

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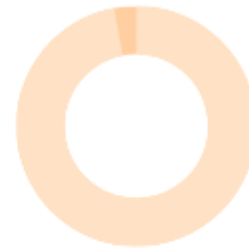
## Quantitative Findings

I received a 48% responsive rate, with positive outcomes



**97%**

Enjoyed the immersion room



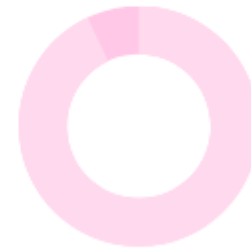
**97%**

Found the knowledge gained transferrable to practice



**96%**

Felt comfortable asking questions



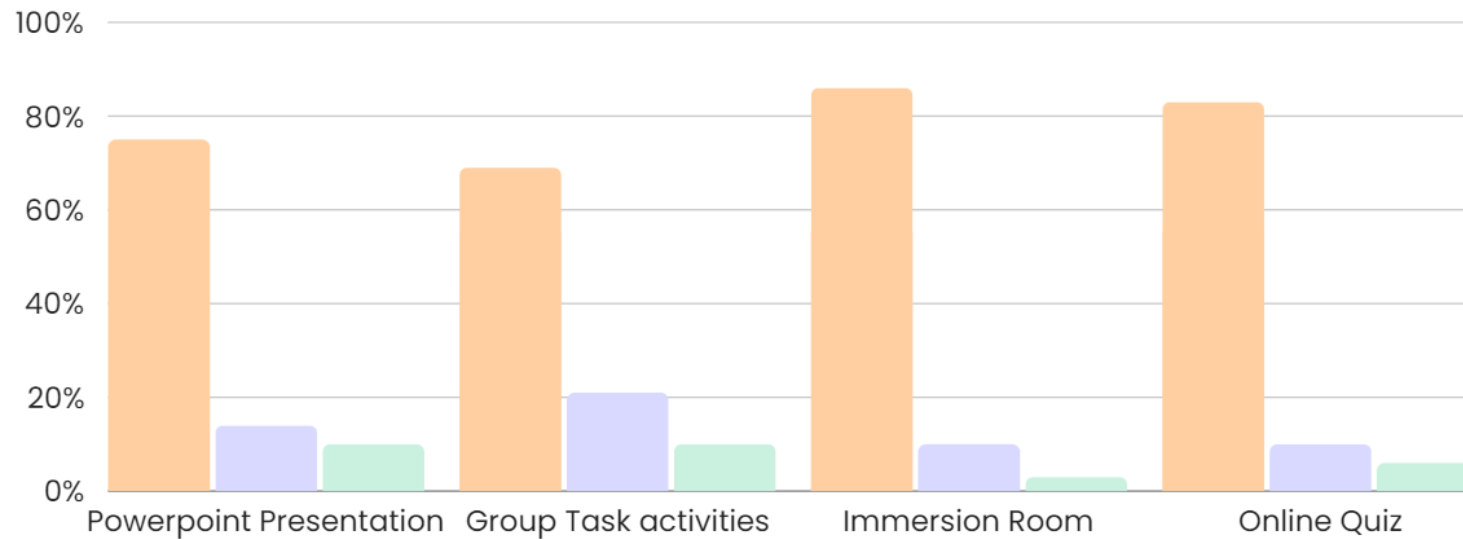
**93%**

Enjoyed working in smaller groups

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## Quantitative Findings

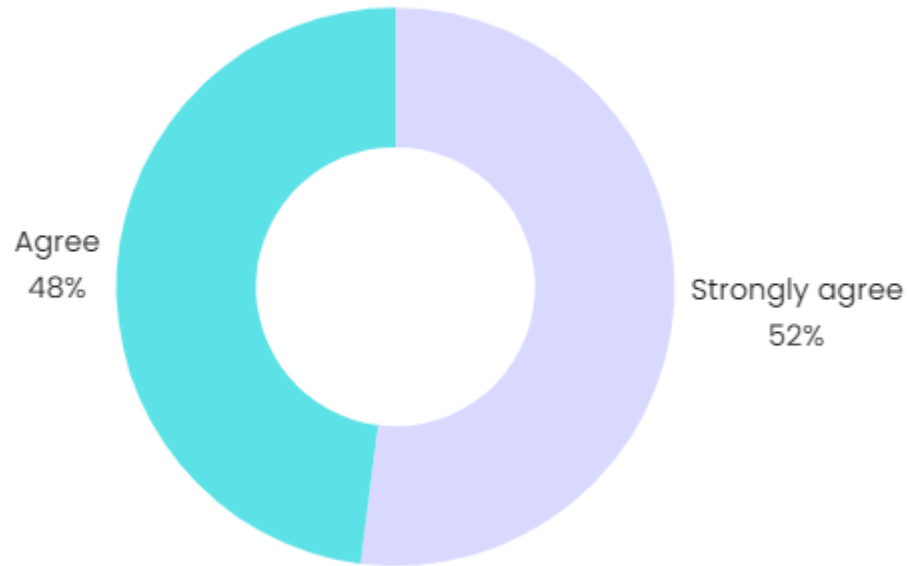
### Rate the Effectiveness of their learning



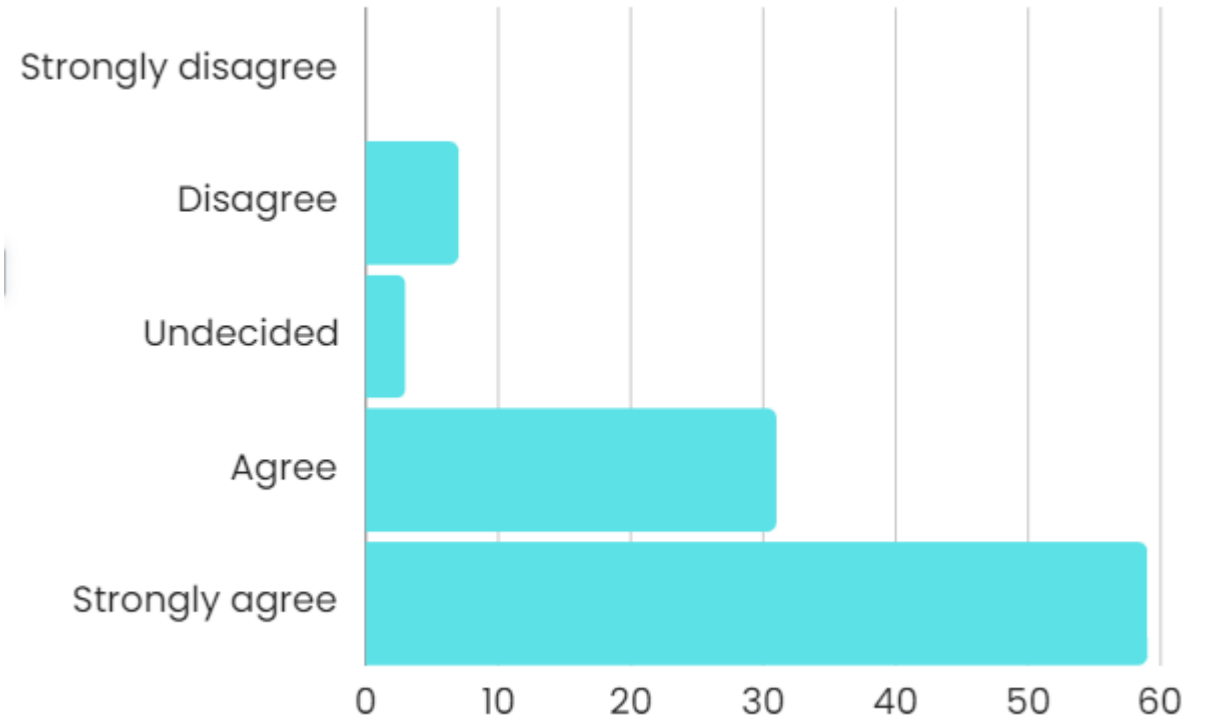
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## Quantitative Findings

**The learning outcomes for the immersion room matched those for module and assessment**



**An online quiz helps to consolidate learning**



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## Qualitative Findings

### Emotional responses

'I really enjoyed it'

'It was good. Little awkward to begin with but the more we went into it, the more relaxed everyone became.'



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## Qualitative Findings

### Reponses linked to Visual Learning

‘Very good in the sense that visual learners learn very well. Similar to real life examples’

‘The immersion room was very good, and the use of visual learning helped me to retain information a lot better’

‘The immersion room was very helpful for proper visitation of anatomy that is being explained. It helps to actually see it rather than reading from a PowerPoint’



A server room with rows of server racks and blue lighting. The racks are filled with server units, and the floor is highly reflective. The lighting is a cool blue, creating a futuristic and high-tech atmosphere.

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## **Qualitative Findings**

### **Technology and Engagement**

‘A unique way to learn and stay engaged with the help of modern technology’

This a single study, using one set of students. The number that participated in the survey was reasonably small

It was the first time the students had experienced the immersion room

The new experience and emotional response could have influenced their engagement.

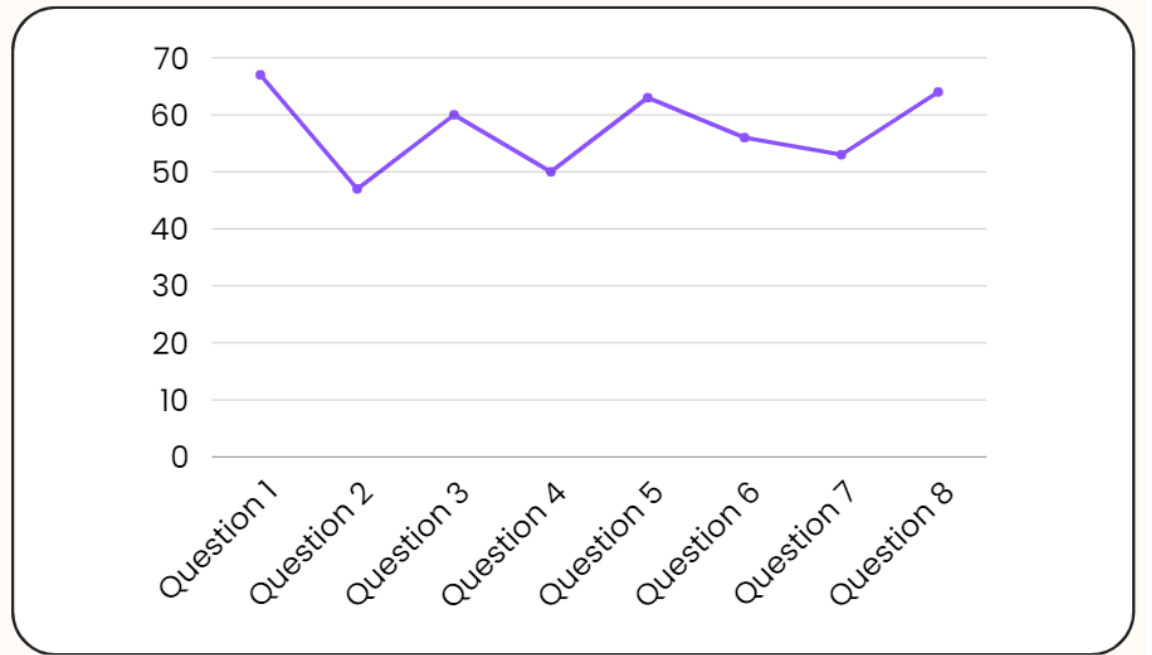
However....

## LIMITATIONS

# LEARNING OUTCOMES

Question 1 in the assessment OSE was related to immersion room learning.

This achieved the highest average score in the exam



# CONCLUSIONS

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## **Key Findings:**

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Immersion rooms and active learning techniques enhance student engagement.

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Positive feedback on the comfort of asking questions and the practical utility in clinical settings.

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Affective and emotional response was positive.

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## **Future Implementation:**

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Incorporation of simulated learning and active learning techniques into undergraduate modules.

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Aim: To create a captivating and inclusive learning experience

# IMPLICATIONS FOR PRACTICE

## **For Educators:**

- Emphasize the integration of new technologies and active learning strategies.

## **For Institutions:**

- Support for resources and infrastructure to implement immersive learning environments
- Additional staffing to monitor other activities for large cohorts



# FURTHER RESEARCH

## **Potential Areas for Further Study:**

- Long-term impact of immersion room experiences on learning outcomes.
- Comparative studies with other active learning methods.
- Increasing motivation with the introduction of gamification.

## **Suggestions for Enhancement:**

- Explore additional technologies and methods to further improve student engagement

## **The Student voice:**

Inclusive Inquiry

**ANY QUESTIONS?**



# THANK YOU

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## Acknowledgements

Sarah Davies