Re-thinking the Teaching of Mathematics Post-COVID-19

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Aim of research

The aim of this research is to explore how mathematics lecturers in a post-secondary setting embraced the change in teaching brought on by the COVID-19 pandemic, with all the constraints, struggles and opportunities. Further to this, the research will explore the vision of mathematics lecturers for the post COVID-19 period with regards to the teaching of mathematics.

Research Approach

Use of a qualitative descriptive design.

- Presents rich data rather than aiming for replicability or generalisability
- Aims for an illuminating description of a situation that has internal validity.
- Findings to be used a working hypothesis to produce valuable insights into other situations

Project Overview

The COVID-19 pandemic has brought on drastic shifts in teaching, forcing a rapid transition from face-to-face to online learning spaces, with schools adopting new modes of pedagogy and assessment. With a focus on the teaching of mathematics at post-secondary level, this research project explores the emerging pedagogical realities within mathematics classrooms as lecturers adjusted their teaching practices, relearning ways of teaching and reimagining possibilities for teaching within the constraints and struggles imposed by the pandemic.

The research project also explores the pedagogical lessons learnt by mathematics lecturers during this period, and the way forward in the teaching of mathematics post-pandemic. Lecturers have amassed experience, knowledge and skills that cannot be shelved. Indeed, we should capitalise on these experiences to inform policy and practice, thus enhancing the teaching and learning experiences for students.

Methodology

Themes

- Identifying common themes in empirical research.
- Use of MAXQDA.

Interviews

- Semi-structured interviews with a sample of mathematics lecturers

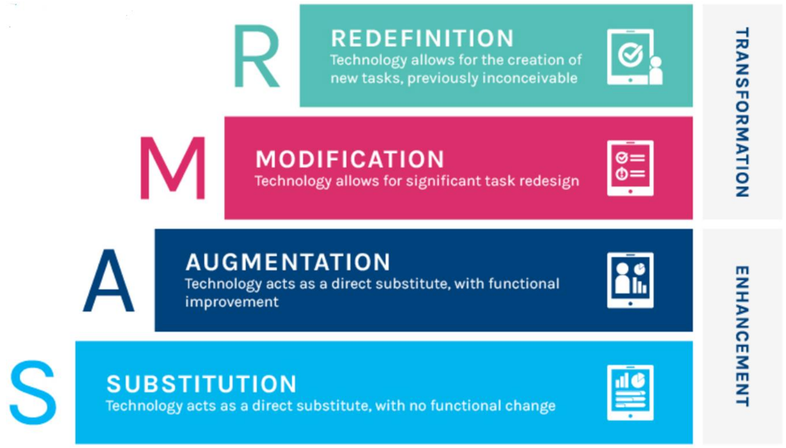
Data analysis

- Thematic analysis of interview data using MAXQDA.
- Insights into the way forward in mathematics teaching in a post-secondary institution post-pandemic.

Research Questions

- How did mathematics lecturers embrace the change in teaching brought on by the COVID-19 pandemic?
- What pedagogical lessons have been learnt?
- What aspects of online teaching do the lecturers want to retain after the pandemic?

Key Figures



The Substitution, Augmentation, Modification and Redefinition (SAMR) framework, developed by Puentedura (2010), was designed to classify tasks which integrate technology in the classroom. In this research it is being used as a tool for interpreting pedagogical approaches. To what extent were lecturers teaching during the COVID-19 pandemic using technology to boost their online practice? Or was technology simply replacing face-to-face teaching practice?

References

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