Asynchronous Online Mathematics Learning Support: An exploration of interaction data to inform future provision



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Background & Motivation

- Importance of successful mathematics learning support (MLS) provision
- Potential of asynchronous online mathematics learning support (OMLS) provision is relatively underexplored
- Research on student engagement with, and best practice in, OMLS provision is scarce



OMLS Provision in MTU Cork: Maths Online

- **Platform:** Hosted as a standalone resource through Virtual Learning Environment (VLE), Canvas
- **Audience:** 1st/2nd year non-specialist Mathematics students, MTU Cork
- **Content:** Exercises, Solutions, Quizzes, Links to useful Mathematical Websites, Mathematical software downloads
- **Features:** Announcements , Discussion, Book online mathematics support sessions
- **Recent Enhancements:** Video solutions to a past exam paper, Practice exercises in a variety of topics using Numbas

Results & Key Insights

Student Behaviour



72% accessed Maths Online



73% accessed content on more than one day

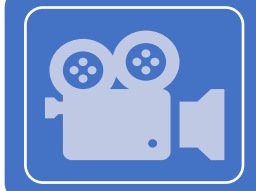


83% used Maths Online for 30 minutes or less

Content Usage



Home page design is crucial



Video solutions to a past exam paper appeared popular



Discussions could be leveraged to make the resource more interactive



Numbas exercises were being used but maybe not as effectively as anticipated



Canvas Module Navigation Menu needed streamlining

Conclusion

Engagement Levels with Maths Online appear quite high

Time spent using Maths Online can be quite low

Significant number of students fail to return after their initial engagement

"You never get a second chance to make a first impression"

Suggested Enhancements to Maths Online

Structure - redesign of the Home Page, streamlining the Navigation Menu, clear signposting to important features

Content – student engagement is more likely with targeted tailor-made content rather than generic content

Collaboration/ Interaction Opportunities - enhancement of the use of the discussion forum feature

Opportunities for Self Assessment with Timely Feedback/Advice – are important to students but need signposting