Working Group on Statistical Learning Seminar

Title: Developing Higher Education Student Services through the use of Data Analytics

Speaker: Emma Howard (University College Dublin)

Date: Mon 14th February 2022 at 12:00PM

Location: (See abstract)

Abstract: In recent years, there has been a substantial increase in the level and type of data collected in student support services, and in how these data are used to develop support services. This presentation will discuss establishing a national standardised database for student counselling services (Howard et al., 2021)., and using prediction modelling to improve the waiting times in the Maths Support Centre (Howard Cronin, 2021). Since 1996, the Psychological Counsellors in Higher Education in Ireland (PCHEI) association, through their annual survey collection, has collected aggregate data for the student counselling sector. However, in order for advanced statistical analysis to be conducted, a standardised non-aggregate sectoral approach to data collection is required. The Higher Education Authority funded project, called 3SET, builds on the PCHEI survey through the development of a national student counselling service (SCS) database. In this presentation, I will discuss key aspects of developing of the SCS Database including: acquiring stakeholder trust and buy-in, standardisation of the data across the sector, compliance with General Data Protection Regulation, ethics, security and storage, and future research. The main expenditure for a Maths Support Centre (MSC) is tutor wages. However, for services with non-stationary demand (drop-in services), it can be hard to ensure there is sufficient tutor coverage for busy times and no resource wastage during quieter pe-

riods. The UCD MSC electronically records the time each student enters the queue, their start time with a tutor and time spent with a tutor. In this presentation, I show how data analysis of 25,702 student visits is used to identify busy and quiet periods in the MSC. Prediction modelling is then used to estimate the waiting time for MSC visitors, which, in turn, is used to optimise the tutor timetable.

References: Howard, E., Tayer Farahani, Z., Rashleigh, C., Dooley, B. (2021). Developing a national database for higher education student counselling services: The importance of collaborations. Irish Journal of Psychological Medicine, 1–7. doi:10.1017/ipm.2021.78 Howard, E., Cronin, A. (2021). Improving service use through prediction modelling: a case study of a mathematics support centre, IMA Journal of Management Mathematics, https://doi.org/10.1093/imaman/dpab035

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The seminar will be held live in University College Dublin, room H0.12. ** ** The seminar will also be live-streamed over Zoom: https://ucd-ie.zoom.us/j/68316324831 **
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