

## **U10 Denbigh 1 Friday 7 December 11.15-11.45**

### ***The impact of Technology Enhanced Learning on students with Specific Learning Difficulties (0263)***

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Background: Higher education institutions (HEIs) are experiencing a radical uptake of technology enhanced learning (TEL) practices (Gordon, 2014; Henderson, Selwyn, & Aston, 2017), including Virtual Learning Environments (VLEs), online forums, student response systems (such as clickers and text response via mobile phone apps), and the integration of social media platforms such as Facebook and Twitter (Hamid, Waycott, Kurnia, & Chang, 2015). In addition, the student body is now more socially and culturally diverse than ever before, and there is an increasing commitment to widening participation by addressing access, success and progression for students from under-represented groups. Despite these developments, there is a lack of robust research exploring how the changing landscape of HEI teaching impacts students, particularly students who have specific learning difficulties (SpLD), such as dyslexia, dyspraxia, and attention deficit disorder. Without a better understanding of how students with SpLDs use and experience TEL, it is challenging to develop inclusive teaching practices that provide all students with an equal opportunity to engage with their learning at HEIs. By exploring the experiences of these students, in their own words, it is possible to better appraise current TEL practices, providing insight and guidance for integrating TEL with traditional teaching methods in HEIs. This qualitative study forms the first stage in four-part research initiative to develop inclusive guidelines to improve the provision of TEL for all students in HEIs.

Methods: Individual, semi-structured interviews were conducted with undergraduate students at one university in the East of England. A total of nine students with SpLDs were interviewed. Demographic data such as gender, age, and field of study, was not collected. Interviews were all conducted in a quiet and confidential space by one member of the research team with experience conducting qualitative research. The interview schedule was designed following a scoping review of the literature, and in discussion between members of the research team. Questions within the schedule were open-ended, with various prompts provided to encourage participants to talk freely about their experiences of using TEL. Interview questions included topics such as “what digital technologies do you use in your studies”, “does your specific learning difficulty affect your use of digital technologies for learning” and “do you find digital technology in your learning useful, and why”. The interviews were audio-recorded and transcribed for analysis, with the identity of participants kept confidential. Thematic analysis, as defined by Braun & Clarke (2006) was used to analyse the data. As prior research in this area is limited, this approach allowed for analysis to be primarily inductive, reflecting the lived experiences of participants.

Findings: Following analysis, a number of key themes and related sub-themes were developed, highlighting areas of significant convergence and divergence in participants’ experiences of using TEL. All participants accepted TEL as part of HEI teaching, but expressed that it wasn’t always fully integrated or sensitive to students’ learning needs. Some participants expressed a preference for traditional learning methods, stating that they found TEL challenging to use. Others felt that teaching staff used TEL in a way which was not appropriate to SpLD students, and this negatively impacted their learning experience. However, several of the participants discussed the benefits of social media platforms and cloud-storage as practical ways to facilitate peer support and collaborative working in group projects. All participants were able to identify ways in which current TEL practice could be improved. Two participants stated explicitly that they found the increasing use of TEL was a

significant barrier to their successful engagement with the learning materials, and found TEL challenging rather than beneficial.

Discussion & Conclusions: Despite the recent, radical uptake of TEL in HEI teaching, these findings suggest that this approach is not necessarily the best approach for all students. Although some of the participants in this study saw clear and significant benefits in using TEL to facilitate their engagement with study at HEIs, this was not the case for all. Some participants expressed a preference for traditional methods of learning (printed materials and face-to-face discussion), and stated they found TEL hard to engage with. With the increasing ubiquity of TEL practices, it's important for educators to carefully consider how best to scaffold these -to enable students' engagement and understanding. Participants also described instances where TEL had been adopted by teaching staff, but not appropriately integrated; this was felt to be more detrimental to the learning experience than not including TEL practices in the first place, echoing findings from Manca & Ranieri (2016). This is particularly true for students with SpLDs, who may require alternative teaching methods to facilitate their learning (Balakrishnan & Gan, 2016). This research highlights the need for educators to continue to employ a broad range of integrated teaching methods, which support the broad and varied needs of all students.

The findings from this research will be used to inform the design of subsequent stages of the research project, including the design of a questionnaire to be disseminated to all students at the host university. It is anticipated that the overall findings from the research project will be of great benefit to students and educators alike. All students at HEI in the UK are likely to be exposed to TEL, and the findings from this research will enable the development of informed, evidence-based guidance for optimising integrated and inclusive teaching practices.

## References

- Balakrishnan, V., & Gan, C. L. (2016). Students' learning styles and their effects on the use of social media technology for learning. *Telematics and Informatics*, 33(3), 808–821. <http://doi.org/10.1016/j.tele.2015.12.004>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <http://doi.org/10.1191/1478088706qp063oa>
- Gordon, N. (2014). Flexible Pedagogies: technology-enhanced learning. *Flexible Pedagogies: Preparing for the Future*, (January), 25. <http://doi.org/10.13140/2.1.2052.5760>
- Hamid, S., Waycott, J., Kurnia, S., & Chang, S. (2015). Understanding students' perceptions of the benefits of online social networking use for teaching and learning. *Internet and Higher Education*, 26, 1–9. <http://doi.org/10.1016/j.iheduc.2015.02.004>
- Henderson, M., Selwyn, N., & Aston, R. (2017). What works and why? Student perceptions of 'useful' digital technology in university teaching and learning. *Studies in Higher Education*, 42(8), 1567–1579. <http://doi.org/10.1080/03075079.2015.1007946>
- Manca, S., & Ranieri, M. (2016). Facebook and the others. Potentials and obstacles of Social Media for teaching in higher education. *Computers and Education*, 95, 216–230. <http://doi.org/10.1016/j.compedu.2016.01.012>