

## IMPROVING EQUITY OF EXPERIENCE IN DISTANCE EDUCATION FOR STUDENTS WITH CHALLENGES ACCESSING ONLINE LEARNING ENVIRONMENTS

*Fiona J. Aiken, Christopher Hutton, The Open University, UK*

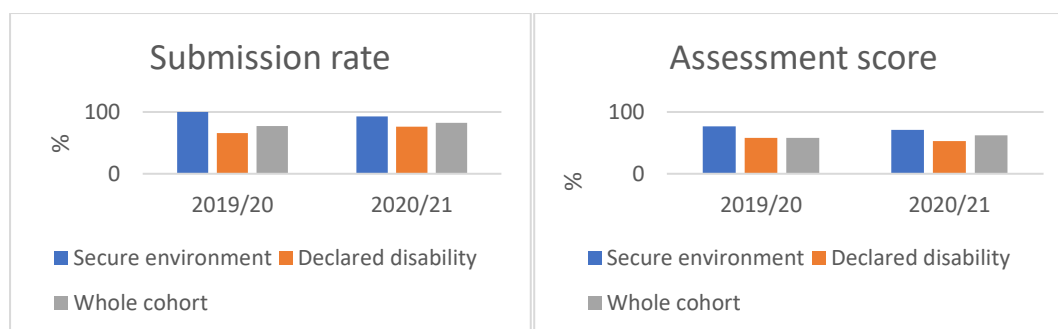
### Abstract

There is a legal requirement (Equality Act, 2010) to provide students who have declared disabilities with reasonable adjustments which address their learning needs. An Advance HE report on making reasonable adjustments (Falsinger & Bryford, 2010) recommends including 'resources available'. Reading on screen can lead to difficulties focusing, e.g., when reading through text interspersed with images and links (Habib et al., 2012). This can also mean studying takes longer, which itself can be a barrier due to the impact on workloads and can negatively affect quality of life leading to stress and anxiety (Lambert & Dryer, 2018). Accessibility can be improved for students with barriers to studying online-only materials through producing printed versions of the materials ("print packs"). Typically, print packs improve accessibility for students with a range of declared disabilities (e.g., sight conditions; chronic migraine; chronic physical pain or fatigue).

This research evaluates the use, utility, and efficacy of print packs as a reasonable adjustment to some disabled students and students in secure environments (SiSE) on Earth and Environmental Science modules. We investigated (2021/22) how students used print packs and the problems and benefits associated with them, through scrutiny of institutional data, a student survey, and focus groups with Associate Lecturers tutoring the students, and student support staff.

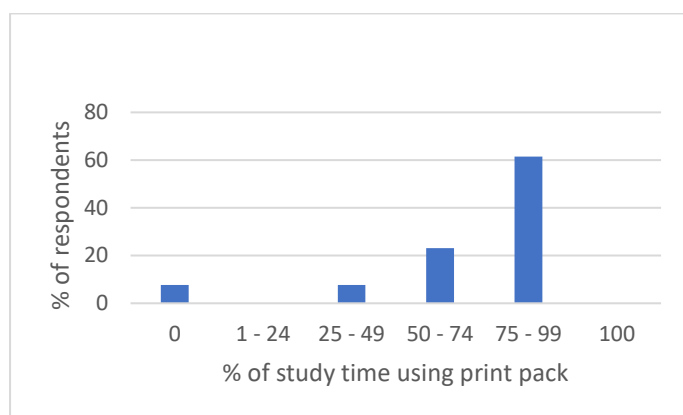
Institutional data for a large, year 1 science module over 2 presentations revealed higher submission rates and performance among SiSE using print packs compared with the whole module cohort; however, the same metrics were lower than the whole cohort for students using print packs as an adjustment for a disability (Figure 1).

Figure 1: Comparison of two years' submission rates and scores for the first assessment on a module for the whole cohort (n = 1536 for 2019/20 and 1731 for 2020/21); students in a secure environment (n = 11 and 14 resp.); and students using a print pack for a declared disability (n = 35 and 21 resp.)



An online survey of students using print packs (13 responses / 43, 30%) highlighted that the majority use them for over half their study time (Figure 2). Comments revealed students blended study of the printed materials with shorter periods of access to interactive online content and synchronous / asynchronous tuition. 23% reported having received advice on how to make best use of print packs.

Figure 2: Survey of disabled students' (n = 13/43, 30%) percentage of weekly study time using print packs.



Focus groups with Associate Lecturers working with SiSE, and advisors from the Student Support Team who advised students with disabilities, identified a number of challenges for the two distinct groups (Table 1).

Table 1: Summary of main themes from focus groups.

SiSE	Students with a disability	Both groups
<ul style="list-style-type: none"> <li>• Blended use often impossible due to no computer access</li> <li>• Poor interactivity</li> <li>• Lack support and information for Associate Lecturers</li> </ul>	<ul style="list-style-type: none"> <li>• Blended use with online materials usually effective</li> <li>• Few complaints or problems received from students</li> <li>• Adaptations usually possible where necessary</li> </ul>	<ul style="list-style-type: none"> <li>• Late postal delivery</li> <li>• Poor organisation of packs</li> </ul>

We subsequently designed an intervention for the academic year 2022/23 and will communicate our findings at the conference.

### Keywords

Disability; adjustment; online; printed resources; accessibility.

### References

- Aiken F.J., & Hutton C. (2022) Evaluating the effectiveness of printed materials as an alternative to online resources. Paper presented at the Advance HE Teaching and Learning conference, Newcastle-upon-Tyne, 5-7 July. [https://www.advance-he.ac.uk/sites/default/files/2022-07/Day%202%20-%20Teaching%20and%20Learning%20Conference%202022\\_0.pdf](https://www.advance-he.ac.uk/sites/default/files/2022-07/Day%202%20-%20Teaching%20and%20Learning%20Conference%202022_0.pdf) Equality Act (2010) Equality Act 2010. The Stationery Office, London. [www.legislation.gov.uk/ukpga/2010/15/contents](http://www.legislation.gov.uk/ukpga/2010/15/contents)
- Felsing A., & Byford K. (2010) Making reasonable adjustments in Higher Education, Advance HE report, [online] Available at [file:///C:/Users/fja2/Work%20Folders/Documents/ESTEEM/Print%20pack%20project/managing-reasonable-adjustments-in-higher-education\\_1578587125.pdf](file:///C:/Users/fja2/Work%20Folders/Documents/ESTEEM/Print%20pack%20project/managing-reasonable-adjustments-in-higher-education_1578587125.pdf) (Accessed 23/02/2023)
- Habib, L., Berget, G., Sandnes, F.E., Sanderson, N., Kahn, P. Fagernes, S. and Olcay, A. (2012). Dyslexic students in higher education and virtual learning environments: an exploratory study. *Journal of Computer Assisted Learning*, 28, 574-584. <https://doi.org/10.1111/j.1365-2729.2012.00486.x>
- Lambert, D.C. & Dryer, R. (2018). Quality of Life of Higher Education Students with Learning Disability Studying Online. *International Journal of Disability, Development and Education*, 65(4), 393-407. <https://doi.org/10.1080/1034912X.2017.1410876>