

Digital poverty as a barrier to access

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Abstract Over the last 18 months, media coverage has revealed a concern that the increasing proliferation of digital learning at all universities (amplified by COVID-19 lockdowns) has compounded access and participation barriers for students impoverished by socio-economic challenges. This reflects the importance of digital capital as an aspect of learner disadvantage (Park, 2017) and increased understanding of intersectional disadvantage (Nichols and Stahl, 2019), through which digital disadvantage may add to pre-existing inequalities. The Quality Assurance Agency (2020) report how institutional action against digital poverty correlates with greater student satisfaction and higher levels of attainment.

This article synthesises data from the authors' scholarship into digital barriers facing adult students returning to education. Challenges in relation to disposable income often compound challenges intersecting with other aspects of disadvantage (Butcher and Rose-Adams, 2015), and a lack of confidence and inadequate digital readiness amongst learners from disadvantaged backgrounds seeking an Access entry route has been identified (Curry and Butcher, 2020; Fowle and Butcher, 2019; Butcher and Fowle, 2018).

Recommendations are made to promote greater inclusion amongst students from poor socio-economic backgrounds and to support the progression of a more diverse (and representative) adult learner cohort.

Key words Digital poverty; access; widening participation

Introduction

In the last two years, universities across the United Kingdom (UK) have, as a result of the COVID-19 pandemic, been forced to shift to blended modes of learning and to greatly increase their digital delivery. As an indirect result, awareness has grown in the sector around the impact of digital poverty on students from the most disadvantaged backgrounds. It is noteworthy that across UK households:

- 12% do not own a PC or tablet
- 6% are not connected to the internet

- 6% struggle to pay for fixed home broadband
- 5% struggle to pay mobile phone bills

(Alsop, 2020).

Recent rises in the cost of living in the UK (Goodwin, 2022) have further exacerbated financial barriers to online learning for the most impoverished students.

The UK Open University (OU), a distance education provider with an open access policy and a mission to be 'open to all', has been gradually shifting from 'conventional' print-based and face-to-face teaching to digital online teaching for the last 20 years. This research note reports initial findings from a pilot scoping study for an institutional research project, designed to explore the impact of the digital barriers faced by our most disadvantaged students.

Access students in the UK (often adult learners with low prior qualifications seeking to return to education) are more likely than other students to come from disadvantaged backgrounds. The OU has presented a UK-wide Access programme (assessed at preparatory Level – Level 0 – sitting just below the first year of undergraduate level) since 2013, registering around 35,000 students in that time. The OU Access programme is designed to attract the most disadvantaged students in the sector – those lacking in confidence, those with low prior qualifications and those out of formal education for years. The Access programme (uniquely in the OU) offers a full fee waiver for students on a low (£25,000 per year) income; and for those who do pay, the tuition fee is subsidised by the university at 50% of the standard fee for 30 credits (30 weeks/300 hours of part-time study).

Our research focused on the experiences of students on the Social Sciences Access module ('Y032 People, work and society'), successful students from which progress to undergraduate qualifications in Education, Health, Psychology, Social science, Law and Business. Y032 attracts the most economically vulnerable demographic of the three Access modules, and its proportion of disadvantaged learners is significantly higher than the university average. For example, up to 70% of the 2500 students per year on Y032 qualify for a full fee waiver based on their low income.

The OU Access programme offers a useful lens through which to explore digital participation, since the modules deliberately commence with a printed block of course material, and only introduce online study into the final two blocks – a structure designed to support students to orientate themselves to online learning. This structure was deliberately designed with the assumption that not all students will have either the appropriate equipment or the digital skills to learn online at the outset of the module. Students with specific accessibility needs and those unable to access online resources (for example, those studying in prison) are provided with alternative formats of the online materials.

This research builds on insights generated through previous institutional scholarship. Three years ago, a significant bequest from a former OU tutor was used to target Access students in receipt of a full fee waiver with a one-off bursary to support digital needs (whether to purchase a laptop or utilise reliable broadband). Data from the evaluation of the impact of the bequest demonstrated that students in receipt of the additional bursary were more likely to persist in their studies and more likely to progress – but that digital poverty was a significant barrier to persistence. Insurmountable obstacles in terms of the digital divide were reported as: inadequate IT equipment (many poorer students relied solely on a mobile phone to study); unreliable connectivity (insufficient spare resources for access to robust Wi-Fi); insufficient mobile data (needing to be affordable and incurring no additional cost to students); the need to share devices with family members; and the lack of secure study spaces (for poorer learners, competing with overcrowded housing and family needs around home-schooling/partners working from home).

Therefore, this study sought better understanding of the impact on students of the 'hidden' hardware and broadband costs associated with online learning, partly prompted by our anecdotal insight from Access discussion forums that increasing numbers of Y032 learners were attempting to engage with the module's Virtual Learning Environment (VLE) and submit assignments online entirely via their mobile phones as that device was all they could afford. In addition, we sought to better understand the impact of inadequate, unreliable and costly broadband coverage across the UK. Our underpinning research question was to better understand the extent to which digital teaching is economically and practically

accessible for all, in alignment with the OU mission to be open to all.

Literature

There is a plethora of Widening Participation literature (Jury et al., 2015; Burke, 2012; Quinn et al., 2005) identifying the challenges faced by students from the poorest backgrounds seeking to engage with higher education. Such challenges have increased for part-time and adult learners since tuition fees tripled in England in 2012/13 (Chowdry et al., 2013; Callender, 2015). These challenges include three key barriers identified in Gorard et al. (2006):

Situational: adults from the poorest backgrounds are time-poor and debt-averse (with very limited availability/potential for flexible deployment of 'spare' financial resources) – in this setting, digital learning may not always be accessible, given the cost.

Institutional: universities adhere to inflexible systems which are obstacles to the participation of the poorest adult learners (as exemplified by COVID-related assumptions that all learners have adequate broadband with which to access VLEs for blended and online learning).

Dispositional: the above compound the poorest students' low confidence in relation to overcoming educational barriers – exemplified by the digital skills gap.

This framework can be identified in research around the impact of social class (Reay, 2013), which we apply to digital poverty, and the impact of high fees on adult learners who can only study part time (Butcher, 2015, 2020; Butcher and Rose-Adams, 2015).

Over the last 18 months, COVID-related media coverage has revealed a concern (UNESCO, 2020; Doherty and Cullinane, 2020; Scott, 2020) that the increasing proliferation of digital learning at all universities (amplified by lockdowns) has compounded access and participation barriers for students impoverished by socio-economic challenges. This reflects the importance of digital capital as an aspect of learner disadvantage (Park, 2017) and increased understanding of intersectional disadvantage (Nichols and Stahl, 2019) through which digital disadvantage may add to pre-existing

inequalities based on class, income, disability, gender and prior education.

Previous institutional scholarship (Curry and Butcher, 2021; Fowle and Butcher, 2019; Butcher and Fowle, 2018) identified lack of confidence and inadequate digital readiness amongst learners from disadvantaged backgrounds seeking an Access entry route. Findings from these earlier scholarship projects demonstrated it was possible to support tentative and techno-averse learners to become more confident and competent online learners. However, our prior research focused on pedagogic models and embedded study support, rather than engaging with digital poverty issues.

Internal context

In a typical presentation of an OU Access module, around 68% of students visit the module website. A typical pass rate is around 64%. Although it is impossible to correlate whether the students who passed the module were all in the group that visited the module website, we do have data showing that those who did not visit the website at all did not pass. In addition, the numbers of times a student was able to visit a website had a bearing on whether they were able to complete all the assignments. Using data from our October 2019 presentation, we can see that of the 289 students who visited the module website fewer than 20 times, only 7 managed to submit their final assessment piece. In contrast 342 of the 356 who visited over 100 times submitted their final assessment.

- At the OU during the COVID-19 lockdowns, the Access team were regularly made aware (by tutors and advisory staff in the Access Student Support Team) that many students were struggling to engage with digital learning. Examples aligned with issues identified in the literature above, including: the situational barrier of cost for part-time adult learners forced to juggle the rising cost of living for their families; the sudden COVID-induced institutional leap into fully-online learning resulting in part-time adult students with limited resources struggling to access limited IT equipment when the whole family were at home (and children were trying to learn from home); and the dispositional barrier of the underdeveloped and

unconfident digital skills required to cope with the lockdown world.

As part of their training, tutors on the Access modules were encouraged to make students aware that the OU currently offers support for study-related costs to students on low incomes/benefits, including:

- £200 off new PC/tablet
- £50 off printer,
- £50 off printer ink
- £20 per month towards cost of broadband.

Like all students with an OU ID, Access learners are offered a free download of Microsoft (MS) Office and relevant apps.

However, students have to apply for this financial support (a process described in a survey response as a 'nightmare' by some), and the process takes many weeks (thereby pressuring tutor support). Tutors have made us aware that there is a misconception that it is necessary to buy the equipment up front and then provide a purchase receipt – a challenge for already poor students, some of whom are forced to buy (potentially expensively) from catalogues offering credit terms.

The (often hidden) costs associated with online learning are important and under-researched barriers to widening participation. The OU has no data on potential Access students who are put off registering by digital poverty (or indeed recoil from the technical language of the published OU computing requirements). Tutors are also unlikely to be aware if disadvantaged students passively withdraw from their Access module due to digital poverty.

Methodology

For this exploratory scoping study, an expression of interest was issued to all tutors on Y032 (170 in total) with an invitation to participate based on willingness to share perceptions and examples of their students' descriptions of digital poverty. Based on a small amount of initial 'kick-start' funding, three tutors were selected and paid to submit a report with evidence against ten prompt questions generated by the authors (see Appendix). The research project team analysed these reports and generated the following themes as key findings:

Student experiences reported to tutors:

- As the literature suggests, many Access students attempt to study on their **smartphone** (relying on it as their only digital device). Support and module information is accessible but writing the four assignments is very challenging due to unstable font size and justification, difficulty providing a word count, accessing a spellcheck or inserting headers. As poorer students cannot afford mobile contracts (or may be excluded from them due to their financial circumstance) most rely on 'pay-as-you-go' deals which are expensive. Studying on a screen/accessing the internet by phone is regarded as 'alien' by some students.
- The OU (and its tutors) rely on **email** for communicating with students – but disadvantaged students are not natural email users, rather relying on WhatsApp and other platforms for communication. As a result, important communication messages are missed by those students who might most need them.
- Tutor and peer support is provided in online forums, but poorer students appear less likely to engage with **forums** and so miss out on the support intended to help them in their study journey.
- Tutor advice has been to use a **public** library, community centre or workplace to access a PC and the internet. However, this is not helpful if IT is needed at antisocial hours (for example, writing an assignment after work). Public access opportunities to IT have further been stymied by reductions in local council-run facilities, and their opening hours have been reduced due to austerity measures and COVID-19 lockdowns.
- Many Access students (exacerbated by COVID/lockdowns) had to **share** a single piece of hardware for which up to four household members had priority, and which may have been situated in someone else's room. It is not uncommon that disadvantaged adult students rely on their children's devices (demonstrating parental willingness to sacrifice their own needs to those of their children 'keeping up' with their

peers). Further challenges have come from the pressure (with schools intermittently closed) to home-school children or to afford IT equipment and associated costs when students had their employment hours reduced as a result of COVID-19 (75% of OU students are in employment).

- Access students in **rural** areas in the UK are likely to have poor broadband provision, and provision that may be expensive. Poorer students may not have access to broadband at home and a basic package has been reported as expensive and, at specific times, unreliable (for example, screens freezing or an inability to enter remote teaching sessions online).
- Some Access students have low confidence as well as **poor IT literacy** – combining as a ‘poverty of spirit’ in which life is enough of a challenge without the additional problem of logging on. This compounds the learning barrier and can lead to passive withdrawal.
- Studying online with a **disability/chronic health condition** (30% of Access students declare a disability) can be tiring, and some students need access to printed copies of comb-bound materials to keep studying.
- Access students from the most disadvantaged backgrounds may never have **owned** a computer, or, indeed, turned a computer on before starting their studies. This is reported as contributing to early disengagement/attrition, especially as such students may be unwilling to declare their learning gaps or to seek support. A second critical point occurs as the Access teaching moves from a hard-copy book resource to online (around 9 weeks into the 30-week module) when the reality of online learning becomes unavoidable.
- Tutors report intensive **support** can mitigate this (but such support goes beyond a tutor’s current workload allocation). Proactive and trusted support needs to be proactive and ‘on tap’ to support students facing a range of ‘invisible’ digital barriers. These can be taken for granted in the university, whether navigating the complexity of the OU website to find support, meeting the requirement to produce a word document for an assignment or submitting an assignment through the online submission system. Some students (for

example, taxi drivers) who had to study 'on the go' feared loss or damage to a precious laptop and resorted to excessive printing of online material.

Conclusion

Obstacles to successful engagement with the Access modules at the OU can be the result of interactions between the unaffordability of the cost of digital learning and under-recognition of the skills associated with digital learning.

In specific Access tutor groups (usually containing 17 students), in which additional face-to-face support is offered in the community, tutors reported that those who began with some IT skills and were able to access MS Teams for the additional support offered were likely to persist and pass. Students with very limited digital literacy skills at the outset were less likely to persist.

However, cost remains the unacknowledged barrier. Students on limited incomes (for example, single mothers) have no spare income, and a laptop or tablet is therefore a big financial commitment, especially for module presentations commencing in October with money already set aside for Christmas.

Recommendations

1. The prohibitive **cost** of IT hardware/software (a situational barrier) could be mitigated by a more proactive institutional offer of targeted bursary support – but such a system needs to acknowledge and remove bureaucratic barriers and address unintended consequences of upfront costs which are reported as a disincentive (an institutional barrier).
2. The lack of competence and confidence in **digital skills** (a dispositional barrier) needs to be recognised as a significant obstacle for poor students who initially have to overcome the challenge of feeling excluded more broadly from both higher education and digital connection. Professional development is needed to enable Access tutors to recognise digital poverty and to be knowledgeable about advice and informed about resources to address this. In the UK, this is an unacknowledged (and under-researched) access, participation and student success issue.

In both cases, better pre-registration **advice** is needed to ensure students from the most disadvantaged backgrounds are fully aware of digital learning requirements. Currently, some students are reported as being unaware.

Issues identified at the intersection of digital costs and digital skills will be investigated in a larger follow-up piece of research (Stage 2) involving a survey of 170 Access tutors on Y032 and a series of interviews with a sample of economically disadvantaged Y032 Access students, identified as in receipt of a fee waiver. We hope to publish findings from this as a fuller research article.

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Appendix

Y032 Scholarship: Exploring digital poverty as barrier to learning at Level 0

Scoping the issues

Please reflect on your experiences as a Y032 tutor (historic as well as recent) and write up your thoughts/observations as a report (about 1000 words). You may shape your response under the following loose headings (please adapt to suit), either as a thematic narrative or a series of bullet points.

1. If your students have contacted you with concerns about persisting in their Y032 studies, what sort of barriers/obstacles might be categorised as resulting from 'digital exclusion'?
2. To what extent are issues of '**connectivity**' mentioned (e.g., poor rural broadband speeds, necessity to share devices)?

3. To what extent are issues related to **cost** mentioned (e.g., affordability of digital packages, reliance on mobile phone for learning as opposed to a laptop)?
4. To what extent are **accessibility** issues mentioned (e.g., reliance on workplace/library/coffee bar for Wi-Fi or hardware)?
5. Have issues in relation to connectivity, cost and accessibility been exacerbated as a result of COVID/lockdowns?
6. If affected, do students struggle to access forums, or submit through the eTMA system?
7. Roughly how rare/common are concerns about digital access in a standard tutor group of 17 students?
8. Do we lose students as a result? Has lockdown exacerbated withdrawal given the OU reliance on teaching through its VLE?
9. What could the OU do to mitigate digital inequality for students commencing their studies with Access? Increase value of the fee waiver? Target bursaries for digital support? What might the Access team do more? Are Associate Lecturers (ALs) aware of what support might be available? Is staff development needed?
10. Any other thoughts on the digital challenges facing Access students?

Many thanks. Please return your report by end June 2021.