Evaluating the effectiveness of printed materials as an alternative to online resources

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Background information

• Teaching materials for Environmental and Earth science are delivered online
  • No textbooks

• Online materials may present accessibility barriers
  • Additional requirements
  • Secure Environments
  • Limited / poor internet access

• In these cases, a printed version of the online materials is provided
Our project

Objectives…

1. Evaluate the current use and efficacy of print packs for students and their Associate Lecturers (ALs)

2. Design an intervention and train AL champions to improve print pack use

3. Re-evaluate use and efficacy of print packs post-intervention

This presentation summarises findings of objective 1

Note on literature…

- Strong focus on disability
- Very little on print as an accessible alternative to online materials
The literature

• The Open University is the largest HE provider for students with disabilities (36,400 declared a disability in 2020/2021 (The Open University, 2021a).

• There is a large amount of literature on disability in relation to HE in general. e.g. Seale (2014), Moriña (2017)

• Collins et al (2019) focuses on inclusion and links to employability: there is a move away from ‘reasonable adjustments’ to inclusive education for all’ but there remains a focus on adjustments for individual students.

• Online formats, particularly asynchronous, give greater flexibility to disabled students having more difficulty concentrating / staying on task (Terras et al., 2015)

• Studying online means students can engage with peers and academics regardless of difficulties e.g. with vision or mobility (Seale, 2014).

• The OU strives to make online modules as accessible as possible but recognises that some elements might not be fully accessible, e.g. online experiments / interactive activities (The Open University, 2021b).

• Adjustments provided as standard include figure descriptions, audio / video transcripts and closed caption subtitles (Slater et al., 2015).

• Students in Secure Environments (SiSE) and members of armed forces on operational duty have no or limited internet access, so may not be able to study online.
Research instruments used to evaluate print pack use and efficiency

METHODS

Associate Lecturer Focus Group (SiSE theme)
Student Support Team Focus Group (Non-SiSE theme)
Quantitative Data (OU data)
Student survey (Non-SiSE)

Literature review

All University ethical approvals obtained prior to starting.

SiSE = Students in Secure Environments
Quantitative data - baseline

- S112 - Science: concepts and practice
- Comparison of previous two years’ data
- Focus on first assignment submission and score
  - Least affected by pandemic
- SiSE perform better than whole cohort
- Print pack users lower than whole cohort
  - Many have complex additional needs

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<th>Year</th>
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<th>Print pack</th>
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Focus Groups

ALs (SiSE)
- Blended use often impossible
- Poor interactivity
- Lack of AL info and support

SST (Print pack users)
- Blended use
- Few complaints
- Viable work-arounds

Both
- Late delivery
- Poor organisation

AL = Associate Lecturer
SST = Student Support Team
SiSE = Students in Secure Environments
RESULTS AND DISCUSSION

Student questionnaire – initial highlights

• Sample of eligible print-pack users (not SiSE)
  • Response rate of 30 % (n = 13)

• Most rely heavily on print packs as an adjustment for disability

• Most blend with online resources
  • Interactive content
  • Media
  • Tutorials

• **Main advantage**: improving accessibility (e.g. visually impaired, difficulty sitting at desk)

• **Improvements**: timely delivery, better organisation / format
Quotes from student questionnaire...

Being disabled I struggle to sit at a desk for long periods due to chronic pain so I use the printed packs to study whilst lying down.

...ensuring they arrive slightly earlier than the study weeks they cover (rather than later!)

Cannot use a screen for reading large amounts of text so would be unable to sufficiently complete the modules without the printed materials.

Being disabled I struggle to sit at a desk for long periods due to chronic pain so I use the printed packs to study whilst lying down.
INTERIM CONCLUSIONS AND RECOMMENDATIONS

Positives

Very valuable in blended context
Enable study when no online access

Improvements / recommendations

Timely delivery / better organisation
More support for students & ALs
Better interactive adaptations

Next steps

Design of intervention for 2022-23
Training of AL champions
Post-intervention evaluation
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REFERENCES


ANY QUESTIONS?

THANK YOU

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