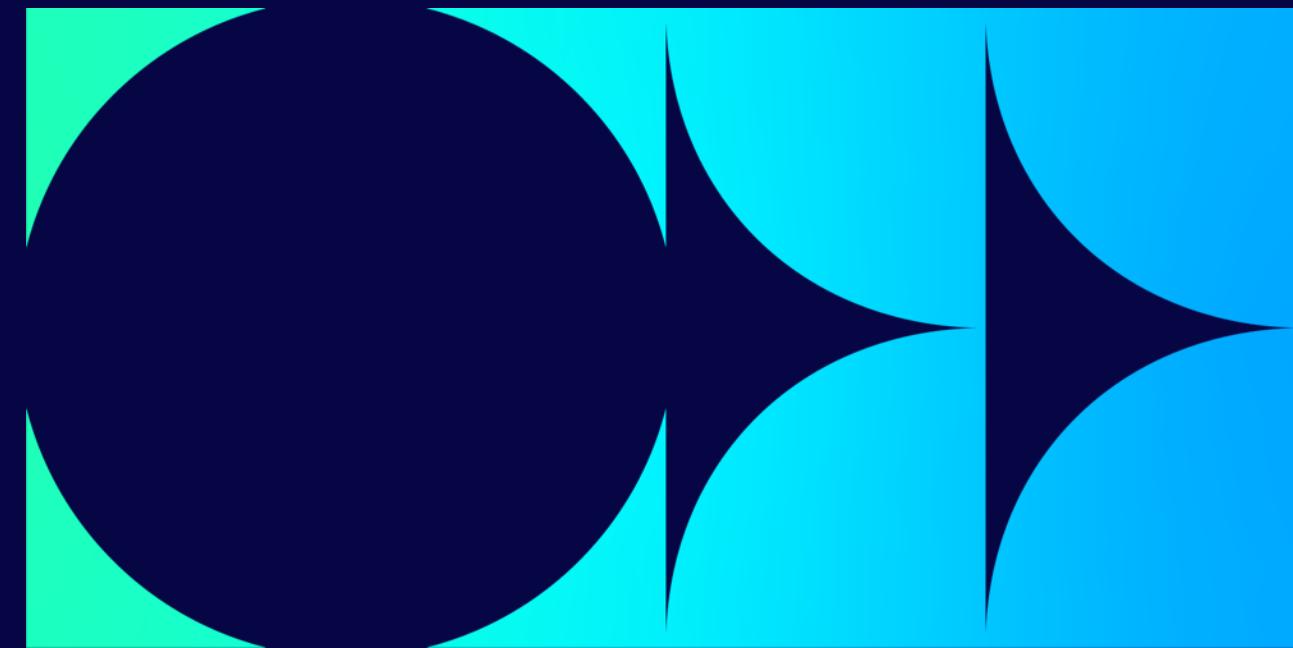
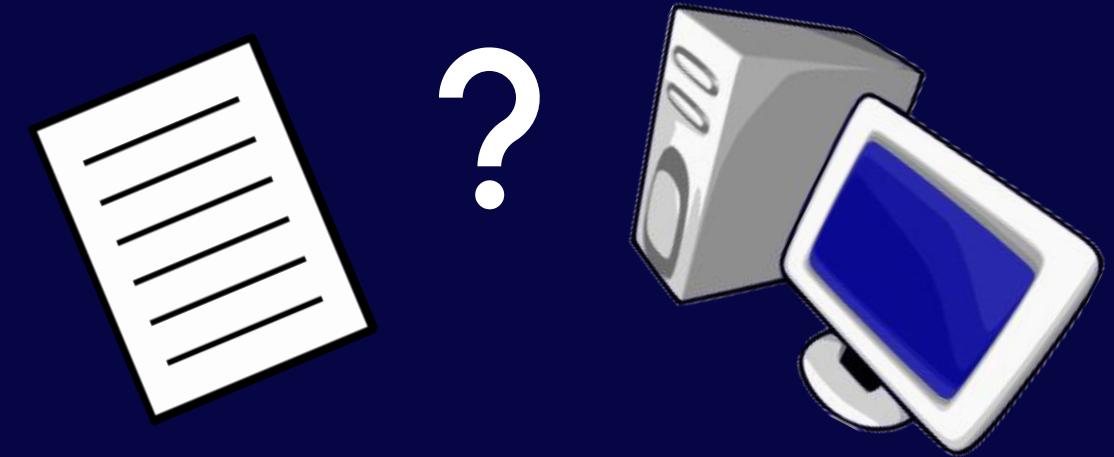


Evaluation and improvement of print pack use for Environmental Science students.

Fiona Aiken and Chris Hutton

Senior Lecturers in Environmental Science

November 2025



Overview



- **Overview of the project**
 - Background
 - Objectives
- **Methods**
- **Results and Discussion**
 - Quantitative data
 - Focus group data
 - Student questionnaire data
- **Student Voice**
- **Conclusions and Recommendations**
- **Questions.**
- Acknowledgements
- References

Introduction

Background

- 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 (demo opening of a print pack)

The screenshot shows the S112-21J course website. The top navigation bar includes links for 'S112-21J Home', 'Assessment', 'Tutorials', 'Forums', 'Resources', 'News', 'Help', a search bar, and an 'Alias' button. The main content area features a large, hand-drawn style 'Science' title on a blue background. Below the title are two buttons: 'Current weeks' and 'All weeks'. A 'Focus topics' section is displayed for weeks 27-28, spanning from 30 April to 13 May. This section includes a 'Pathway route planner' link. A note on the right states: 'Rolled forward' and 'This course has been rolled forward. If you make any significant changes to this site, you should consider making the same changes to the site for the next presentation.' The bottom of the page shows a 'S112 news' section.

Introduction

Our project

Objectives...

1. Evaluated the current use and efficacy of print packs for students and their Associate Lecturers (ALs)
2. Designed an intervention and train AL champions to improve print pack use
3. Re-evaluated use and efficacy of print packs post-intervention

Note on literature...

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

Methods

Research instruments used to evaluate print pack use and efficiency



Results and Discussion

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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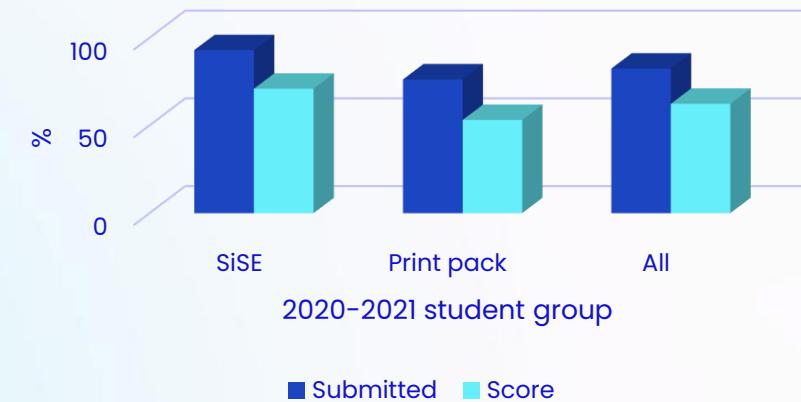


	SiSE	Print pack	All
2019-20	11	35	1536
2020-21	14	21	1731

First assignment submission rates and mean scores for 2019-2020

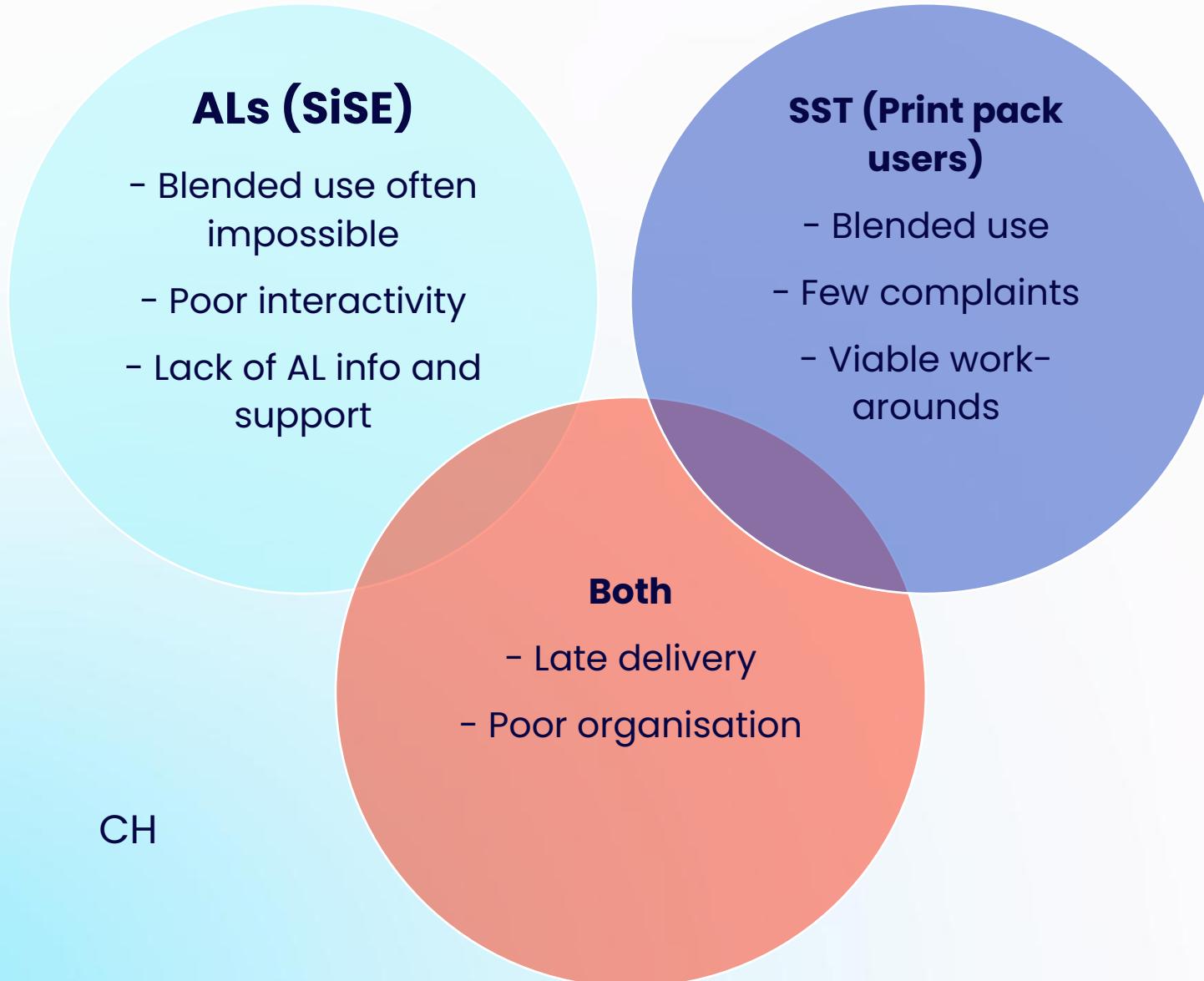


First assignment submission rates and mean scores for 2020-2021



Results and Discussion

Focus Groups



AL = Associate Lecturer

SST = Student Support Team

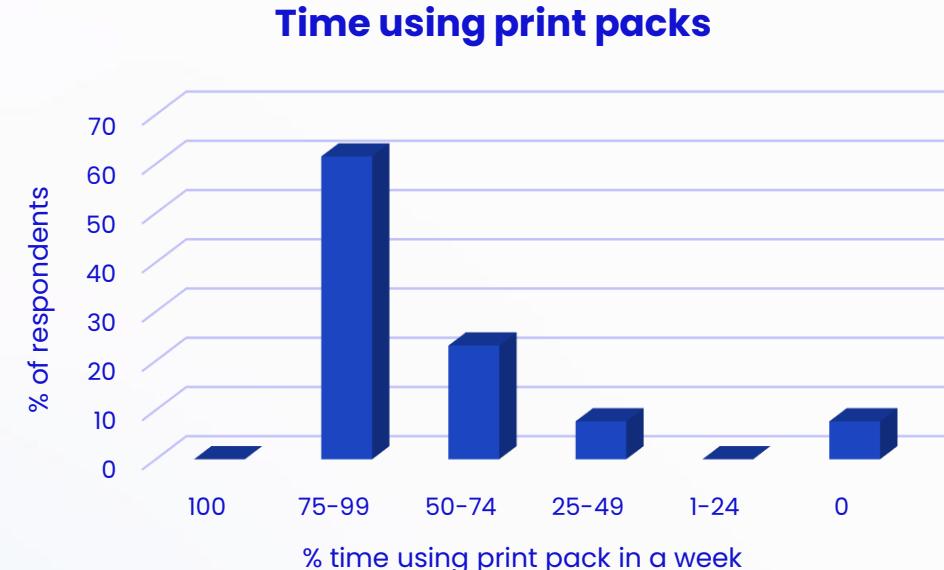
SiSE = Students in Secure Environments

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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



Advice on best use of print packs



Student Voice

Quotes from the student questionnaire

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

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

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

Findings in a pan-University context

- › A University-wide survey of students using print packs has recently been conducted ($n = 86$) by Brian Foster.
- › This study has considerable overlap with our project.
- › Though the two are not directly comparable, the study's conclusions triangulate with our principal findings:
 1. Timely delivery of print packs must be improved
 2. Organisation of print packs requires improvement
 3. Most non-SiSE students use print packs in a blended context
 4. Those who blend print packs with online content find print packs very valuable

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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



Outcomes

ALs worked as champions in 22J on S112 and S206. Scaled up to all of EEES UG curriculum 23J. In 24J school funded 2 print pack champions for EEES quals and level 1 Science.

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AL Print Pack Champions' findings...

- › Students who have access to module website are better supported by print packs than SiSE who rely entirely on print packs.
- › Sticky threads on tutor forums used to engage tutors at module start – some initial activity, then quiet
- › Tutors found access to print pack resources on SharePoint helpful on S112
- › Physical copies of print pack delivered to champions for evaluation – better organisation and introduction recommended (e.g. covering letter with advice on which documents to prioritise; explanatory titles and cross-links between resources)
- › Some ALs produce additional materials for SiSE and print pack students, when these are already provided for them but the ALs do not know where to locate them. Many do not know what print packs look like, despite their availability in electronic format to all ALs.

Phase 2 of the project results.

- Our second student survey returned similar results
- We had a year's extension to our project...
 - Print pack 2.0 is coming (StELA).
 - Two Print Pack Champions working across all EEES modules for 23J – testing scaled-up model extended to 24J and funded by the school.
 - Two sessions of AL-led staff development.
 - Focus group with ALs to capture recommendations.
 - Developed a community of SiSE ALs on S112.
 - Print pack champions mentored ALs new to supporting SiSE students.

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Thank you

Questions?

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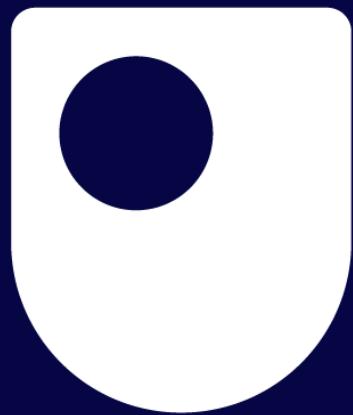
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