Project Title: Can a new OU Study App enhance the learning experience of students on S350, an online only module?

Keywords: Online, distance learning, innovations, supporting students, flexible study.

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Report submission date: 23rd April 2021

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Executive Summary

In 2019 twenty-one modules volunteered to pilot a new OU Study App (The Open University, 2019); since January 2021 all module websites are available.

The aims of the developers were to access the ever-increasing time that OU students spend daily on their mobile devices (eMarketer, 2017) for valuable study within the busy lives of OU students such as while on their daily commute or break at work. Increased numbers of OU students are studying at an intensity commensurate with full-time study, often alongside work or carer duties. This trend is expected to continue, coupled with an increase in the proportion of 18-25 year-old students (The Open University, 2021), who are also the largest demographic of mobile device users (Compton and Burke, 2018).

We investigated how students use the OU Study App alongside their use of the module website, whether it enhanced their learning experience and what improvements they wanted. We collected qualitative and quantitative data, from two focus groups and from three-week study diaries completed by nine students.

Our results found that students enjoyed using the OU Study App to enhance their studies when used in combination with the module website. They found it useful for quickly checking information, such as TMA questions and the study calendar, when they had a few spare minutes during the day. At least one student used the App for longer periods as it enabled them to study in a more comfortable setting as sitting at a desk for prolonged periods was challenging. Students reported that whilst using the App did not directly lead to deeper understanding of the materials, they felt more familiar with content and that it enabled them to easily think back over material during the day.

Some technological problems were reported, but students found them less frustrating than using the module website and accepted that this version of the App would likely be improved. A number of desirable features were suggested in terms of accessibility, forums and note-taking capabilities.

Our project had a positive effect on students' perception of the module, the role of the App in helping with their time management and their involvement in scholarship.

VLE usage statistics are regularly compiled by the OU. Over recent years there has been a significant increase in the phone use as a percentage of total VLE activity, averaging around 14 % in December 2020. Whilst much of this is directly accessing module materials online rather than using the App, there are now over 3000 daily users of the App, a growth of 100 % since the beginning of December 2020. These trends show the importance of providing recommendations on the use of the OU Study App to manage students' expectations and to achieve maximum benefit from its use within their studies.

The OU Study App project website provides further details on the App and is available at
https://learn3.open.ac.uk/course/view.php?id=301070&notifyeditingon=1

Aims and scope of project

The average person in the UK spends more than a day a week online, according to an Offcom (2018) report on the impact of the "decade of the smartphone".

Our research questions were 'How can OU students best engage with the OU Study App to optimise their study?' and 'What aspects of the App are critical to supporting the student learning journey and should be developed next/further?'

We also aimed to evaluate the impact of the OU Study App on student learning, behaviours and experience of a module, in order to make recommendations for use of the App alongside conventional delivery of online materials.

To address this, we constructed an online study diary for students to record their use of the OU Study App as well as their use of the module website. The diary was designed with a number of polling and free text questions for students to complete each day. There was also a more open free-text response reflective diary section that could be completed once a week if the students wished to give more information or reflections on the App. After completing the diaries students were invited to take part in a focus group discussion to exchange their experiences of using the App.

The results were intended to inform the OU Study App team of the user learning experience (rather than technology experience) with an aim of providing guidance to students and staff on how to gain maximum benefit from the App, how best to integrate it within their study programme and how to manage student expectations. We hoped that the Study App could be used to keep students in contact with a module, not feel isolated or overwhelmed when they have to prioritise other commitments over a particular module, so that they do not passively withdraw and remain active learners.

To the best of our knowledge, this was the first project to evaluate the impact of the OU Study App on student learning. Mobile learning outside the classroom has been explored in the context of practice of language skills (Demouy, 2009), as a tool to enable field-work (Nesaratnam and Taherzadeh, 2018) and the use of hand-held devices to access module websites (Ellis, 2017, and Alexander and Lansbury 2017). All these studies reported some benefits such as developing field studies skills and the potential to complement module materials. However, all reported functionality problems were more apparent for mobile devices than for laptops or desktops.

Our findings have been disseminated via a number of workshops and presentations at the OU and at external conferences. However, as the number of student participants was limited (n=9) we have decided not to submit our findings as a peer-reviewed article for publication at present. This small number of participants may well be due to the uncertainty in being able to commit to the study which was conducted late January 2020, immediately before the first national lockdown.

Activities
Overall approach

Our overall approach was to record student experiences of using the OU Study App on a level 3 science module, Evaluating Contemporary Science, S350.

S350 was deemed suitable for the pilot due to
(1) module content had relatively few HTML5 bespoke activities,

(2) was one of the first VLE module websites, so was already in an appropriate structure for the App.

As well as its technical suitability for the pilot, S350 was suitable for our evaluation because
(1) level 3 students are asked to reflect on skills development – so how they managed time and used different learning mediums is appropriate to our study,
(2) it comprises a relatively large student cohort from different disciplines studying at differing intensities, and often at full-time equivalent (120 credit).

We began by promoting the Study App to S350 students via a forum message explaining it availability to supplement their study, it was especially promoted to those students who identified time management as a key skill they wished to improve in TMA00. Based on discussion with eSTEeM we decided to observe current student practice of using the App by asking volunteers to complete study diaries over a set 3 weeks of the module. An example of a study diary page can be found in Appendix 1. We consulted with two student volunteers as to the suitability of the study diary to ensure that the time commitments we asked of students would not be too onerous and to check that the diary prompts were clear in their intention. They gave positive feedback and felt this project would be beneficial to both the students who took part and for students using the App in the future.

The study diary was completed over the weeks 1st – 21st February 2020 (Weeks 16 – 18). These weeks were chosen because they had a typical range of activities including study of module materials, videos, self-directed learning and did not clash with assignments on the module.

In the week commencing 28th Feb students took part in focus groups. The groups were facilitated by one of the project investigators, who was familiar with the module content but was not directly involved in tuition or marking of assignments.

Findings

Nine students volunteered to take park in the study – of these seven completed diary entries for all three weeks of the study and one other completed at least one week. All diary entries were anonymised which we hoped would encourage students to be open about their use of the App. A disadvantage of this (which only became apparent in the analysis) was that it was impossible to track individual student use across the three weeks to compare patterns of use to the imagined student personas developed by the OU Study App team. However, the reflective diary comments allowed us to feel confident that many of the students in the study used the App for short bursts of study whilst otherwise busy and that one student used the App for much longer amounts of time due to health/disability reasons which made studying at a desk for long periods challenging.

The following data is based on 21 days of diary entries.

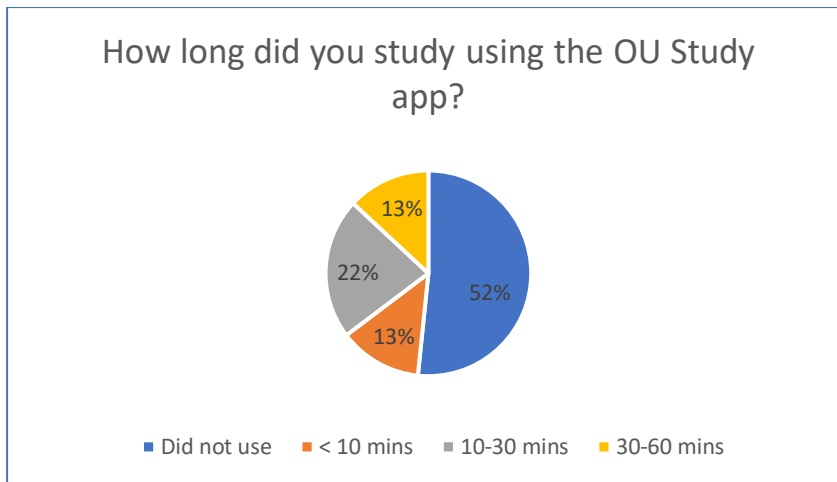We asked students how long they spent using the OU Study App.

Figure 1: percentage of responses to ' (Q1) How long did you study using the OU Study App?'

The data show that on any one day just under half the students used the App. Of those that used the App most used it for less than 30 minutes.

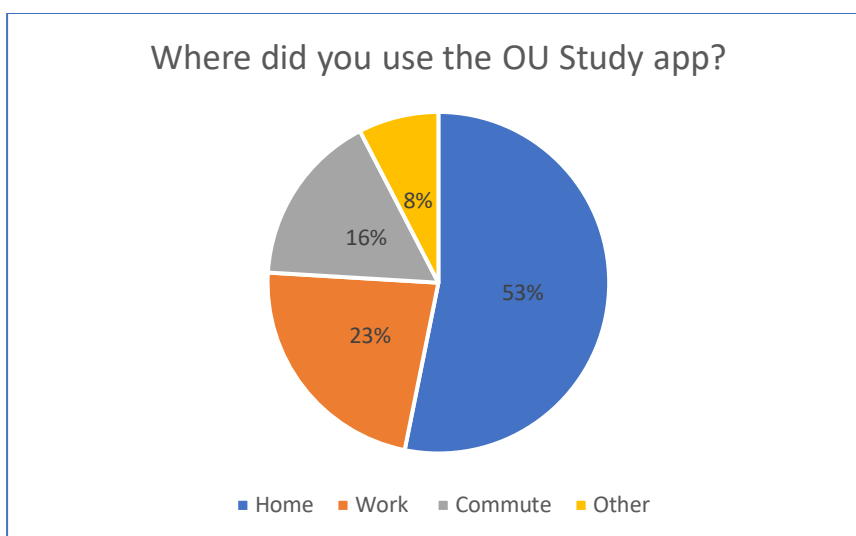The diaries also recorded where students were using the App.

Figure 2: percentage of responses to 'Where did you use the OU Study App?' (based on 21 days of diary entries amongst those who used the app that day).

'Other' includes at the gym, hairdressers and visiting someone else's house. It was notable that half of responses indicated they were using the App at home when it might also have been possible to access the VLE on a home computer. This result might indicate a preference for using the App to access small discrete items related to study and/or being unable to use a home computer at that point. The following data seems to indicate that it is the former reason, ie, that students preferred to use the App for a particular task.
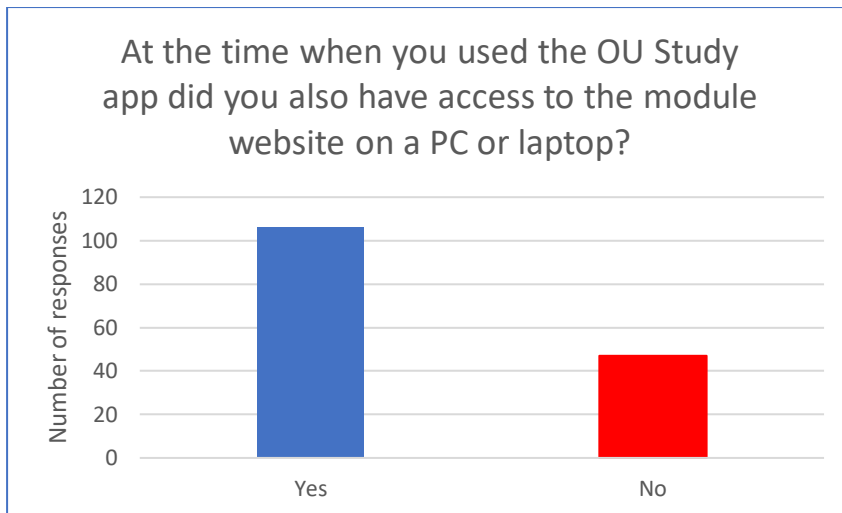
Collinson, S., McMullan. R. and Haillwell, C. (2021) Can a new OU Study App enhance the learning experience of students on S350, an online only module? eSTEeM Final Report.

Figure 3: number of responses to 'At the time when you used the OU Study app did you also have access to the module website on a PC or laptop?' Note that all students answered this question each day, including those who responded 'did not use' to Q1.

The focus groups and free text responses in diaries provided additional information on where students used the App and why that was their preference:

"yes, it allows me to study if I don't have access to laptop usually at work during the break, or when I work 'sitting nights' I access S350 via this app." (week 1)

"I have only been using the Study App on my commute to work, for this it is very useful." (week 2)
"Yes. It helps me extend my study hours by allowing me to study in bed or on the sofa." (week 3)

"No, it didn't (impact on where or when I studied) as I normally only study at home. I only use it when I don't sit in front of the computer..." (week 1).

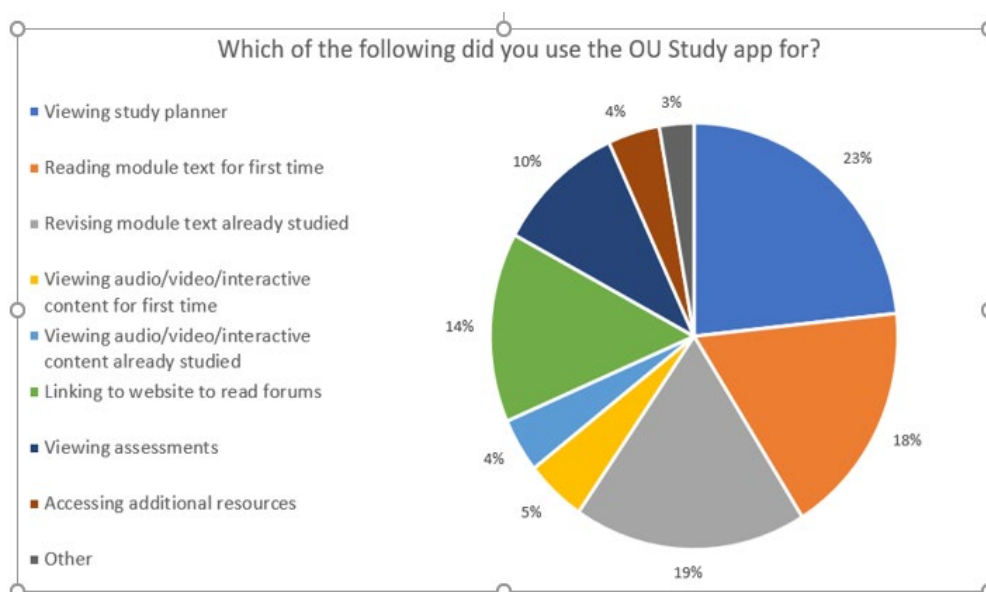We also asked students what tasks they used the App for and this is shown in Figure 4.

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Figure 4: percentage of responses to 'Which of the following did you use the OU study app for?' (based on 21 days of diary entries amongst those who used the app that day).

The data show that the most common reasons to use the App were to view the study planner (23 %), followed by revising module text already studied (19 %). A significant percentage was reading module material for the first time (18 %) and linking to the website to read forums despite this not being an optimised aspect of the App.

If the App was being used to read content for the first time and to access forums then this probably relates to the recommendations for improvement made by students.

Qualitative evaluation

We evaluated the focus group transcripts counting frequency of occurrence of the particular themes
(1) time management and time for study related phrases
(2) developing understanding
(3) learning enhancement/enjoyment
(4) improvements
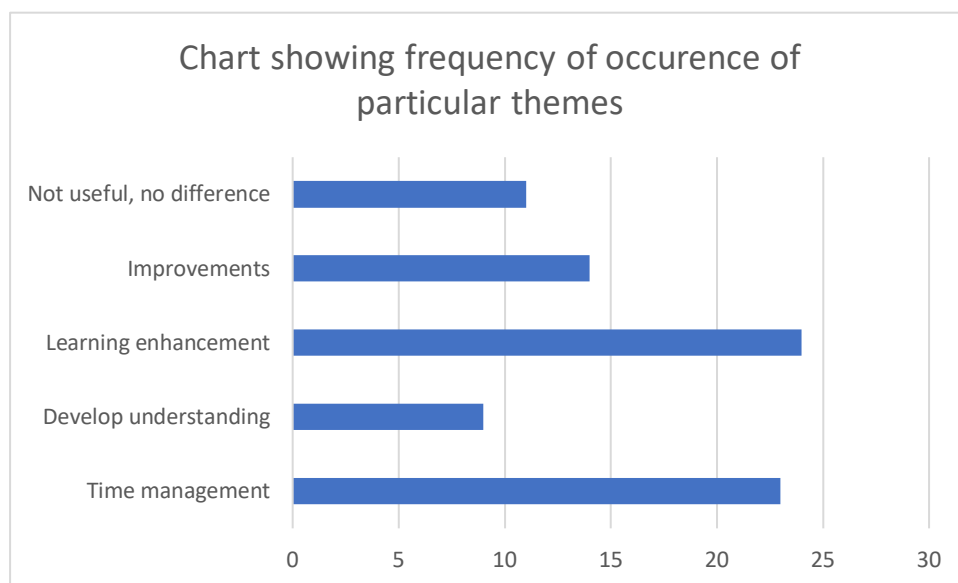(5) not useful/ no difference to study.

Figure 5. Chart showing frequency of occurrence of particular themes from analysis of two focus groups and one interview transcripts.

Frequency of occurrence was selected as appropriate for this analysis due to the limited number of participants and to triangulate data with the quantitative data of the study diaries. However, it should be noted that the online nature of the focus group might have inhibited interactions within the group so that wider views of participants might not have emerged (Cohen et al., 2000).

Over half the theme-related comments were generally very positive, emphasising the value of the Study App in managing limited time as was initially imagined as a benefit of the App. However, comments on learning enhancement were frequently made, showing student awareness and understanding of a more complex relationship between module materials, the medium of interaction/study and their own learning development.

We focused on learning enhancement rather than learning gain because within our study it would not be possible to identify any causal relationship between OU Study App use and module outcomes. This particular problem regarding the relationship of a particular technology to grade outcomes has been identified by others previously (Butcher, 2016), though a few controlled experiments have reported improved student grades when mobile learning has been combined with a traditional classroom setting (Arain et al. 2018). We chose to characterise features of learning enhancement that might be evident and plausibly related to engaging with module materials on a different device: accessibility, enjoyment, experience, control and as a separate theme developing deeper understanding.

Deeper understanding theme

The theme of deeper understanding might well relate to their final outcome for the module so we asked students if they felt there was a link between the use of the App and developing deeper understanding of any aspect of their studies. No student felt there was a direct link in their use, though a number of them felt that indirectly the additional use of the App to complement their main study of the module materials online might lead to deeper understanding.

Supportive comments:

'I was able to re-read content I had read previously to remind myself of key concepts as well as keep reading them to gain understanding.'
'yes definitely, I can check often on study material'
'Good for recap and refreshers, not preferred for intense studying and note making '
'Yes, it does feel different - it enables me to increase my available study time a bit. As I'm working close to my maximum capacity, this is particularly helpful! I don't think it helps my understanding specifically but it does help me to study a little more.'

Neutral or non-supportive comments:

'Not this week, as I was mainly looking at the assessment brief for TMA02, so I could look at this in the morning and plan my answer throughout my working day in my head'
'I think it would be hard to read papers on my phone, and to do in depth assignment writing and editing.'
'Using the app on my phone is a bit cumbersome as reading longer texts would be tiring. So, no.'

Learning enhancement regarding the module material theme

Learning enhancement was defined here as comments describing a positive relationship between the student and the module through control of interactions, increased interaction and aiding their capacity to study.

Supportive comments related to the materials feeling more accessible, informal and removing barriers to study:

'Still really enjoying using the app!'

'it's very beneficial'

'…and allows students to study whenever, wherever. As it is on my phone, I often have my phone to hand as opposed to my laptop, therefore I am able to access module materials/ assessments easily.'
'Overall, I would recommend this app and hopefully I will be able to gain access to my other modules!'

'it was less formal than logging onto the website from the computer where I could see just generally the study planer I could see and how far behind I am or how far in front.'

'it helped to just make it feel more accessible.'

'I think there is less of a barrier – just like A said, its less formal and we are more used to being just on our phones in a casual way so it is easier to get into but mainly just for variety for me'

'*because I get migraines from the reflection, but of how I can more easily position the screen I'm on a phone so that really helps me access online material I would normally have to read the printouts for'*

Neutral or non-supportive comments tended to focus on useability/technical aspects and there were no comments indicating that the App had a detrimental or negative impact on engaging with the module content:

the menus are a bit user unfriendly.'
'The app crashed once again this week. It takes a couple of minutes to reload when that happens.'
'The thing that stops me is that it's small to read on my phone and don't want to use my phone battery so I'd rather study on my laptop. But it helps me do bits of studying here and there'

Time management theme

All the students recognised the role the App could play in aiding time management, especially for those students with very limited study time, even if they did not intend to use the App themselves.

I find this app extremely helpful as I am able to study wherever, whenever which in return helps me massively with my time management. '

Some descriptions of use accorded well with the student personas envisaged by the OU Study App development team, such as using whilst commuting or on holiday, but our data also revealed that at least one student preferred to use the App for extended periods of study as they were able to study when in bed or lying done due to a chronic health condition, and others chose to use it just to quickly check details rather than log in on a laptop or personal computer.

I was able to utilise the otherwise wasted time on my commute.'

'yes, instant access to forums and study materials'

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'I fitted in more studying than usual by making better use of small study opportunities.'

'Was able to maximise time and study on my commute more'

'It's definitely good for making better use of in between times.'

Suggested improvements to the Study App

Students were consistent in their suggestions for improvements – the most requested were the ability to highlight or copy and paste text for notetaking and for searching. One suggested it would be helpful to synchronise highlighting to their highlighting on module (as they used the Mendeley App). Quick access to forums was identified along with managing tutorial booking and accessing tutorial recordings.

Other requests were for the email details of their tutor to be available on the App, better organisation of menus so there was less flicking back and forward and a dark mode to reduce eye strain. They also suggested that the careers and unity sections were of less use than some of these desired features as both of these were not likely to be needing quick access and they would be visited on the module website when a student had sufficient time to engage with them fully.

In summary, the qualitative data from the study diaries and focus groups gave additional context to the quantitative data recording use.

We have informed key stakeholders about the project and its findings including the OU Study App development team and ALs at ALSPD events.

Reflections on Methodology and Data

Following discussion with eSTEeM in the early stages of the project we adopted a study and reflective diary approach, complemented with student focus groups. The diaries were designed to take only 5 – 10 min per day to complete and had a mix of tick box style questions and very short free text optional questions.

Whilst this approach provided additional qualitative information a disadvantage was the small sample size. The student volunteers were all similar in terms of studying the same level 3 module we could not standardise and minimise extraneous variables such as study intensity due to the small sample size.

As we requested volunteers, a concern is that our sample is small and potentially not representative of the population from which it was drawn so there are limitations on the conclusions that can be drawn from both the diaries and the focus groups. For example, the student volunteers might well have been those that were well organised and had sufficient time to engage with scholarship work rather than being the most time pressurised students the OU Study App might help most.

In asking for volunteers our sampling method falls somewhere between convenience sampling (opportunistic, taking advantage of those that are closest until a suitable sample size is achieved) and purposive sampling (with the specific purpose of selecting students who were motivated to complete the given tasks and could articulate well their experiences) as described in Cohen et al. (2001).

Our research could be described as Naturalistic research – context bounded, descriptive data dependent in order to catch meaning, rather than trying to capture all student experiences of using the App. In particular the context of this module was very relevant as it focuses on skills development with time management and engaging with contemporary science through a range of media being particularly pertinent to this study.

We were able to complete our data gathering (diaries and focus groups) by the end of February 2020, so did not need to amend our plan due to lockdown. However, our findings must be considered in the context of the general stress and uncertainty many students faced in the early months of 2020.

Despite these issues our findings provide a realistic view of how students might choose to use the OU Study App as an enhancement to their studies using online module materials, with clear recommendations as to what they would wish to see developed in later versions.

However, the diaries and focus group findings can be used to add description and insight into data collected through other means.

Future implications and impact

Year on year there has been an increase in the number of students accessing VLE content via mobile phones (Figure 6). For some, this will be out of necessity, for example due to limited access for home computing, but for many this is a choice to enhance or complement their studies at a personal computer. It is notable that the daily users of the OU Study App has gradually increased as shown in Figure 7.
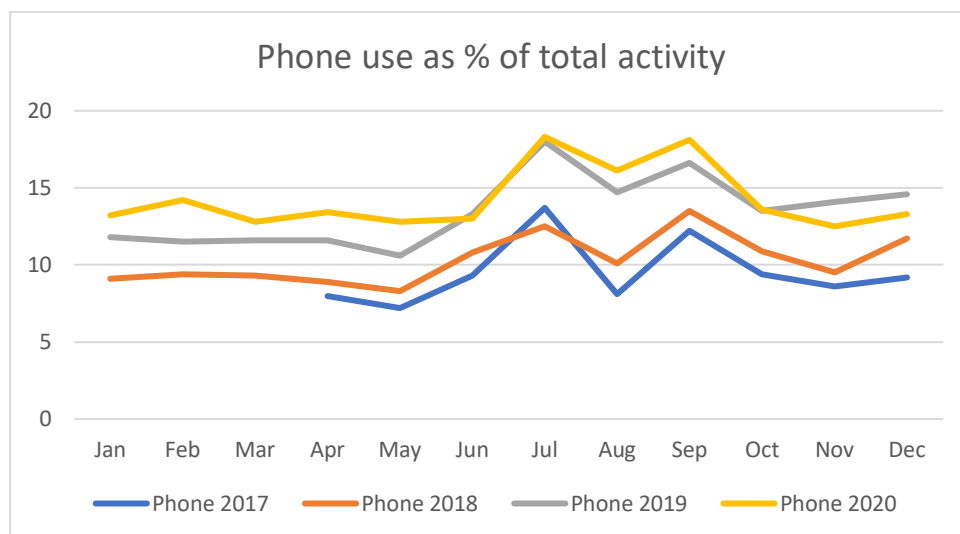

Figure 6. Data showing the percentage of total activity based on mobile phone use for the VLE. Note that from this data it is not possible to split up accessing learn 2 directly from using study app. The slight drop in late 2020 might be due to pandemic conditions with more students spending more time on computers rather than mobile devices (The Open University, 2021b).
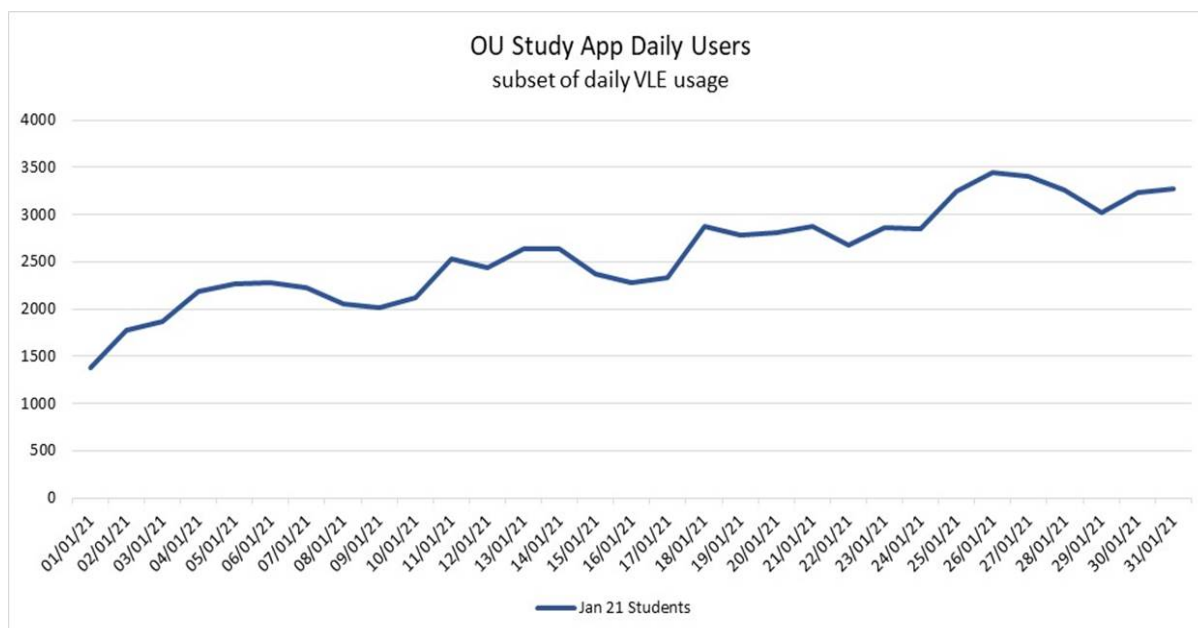
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Figure 7. OU Study App daily users – most recent data. A general upwards trend is observed and it is anticipated this will continue to increase as more modules become available on the App. (The Open University, 2021b)

Our research has shown that students valued the App to enhance their studies of a level 3 science module, using the App in different ways with different intents. For many it was a simpler and quicker means to just check details on assignments or on study calendars and 'stay in touch' with the module, but at least one student used it for significantly longer and for first reading of module content. This aspect of use, particularly for disabled students should be investigated further.

Students commented on the 'informality' of its use and this, along with taking part in scholarship led to positive sentiments towards the module, which could be considered as a greater sense of learner ownership (Dommett, E. 2018). This has been a positive impact on the student experience of the module. The students benefitted from taking part as their participation allowed them to reflect and comment on their own time management skills and provided evidence of this for their assignments.

Whilst the group of student volunteers might well be those who were most likely to succeed in completing the module, their insights can help in providing guidance to students on the best use of the App to stay engaged with a particular module, even when busy with other studies or time commitments.

As educators this research has impacted on our practice in a number of ways. Firstly, the work was widely disseminated at a number of workshops and presentations at the OU and at external conferences and met with positive feedback. Secondly, the project enabled the two ALs involved to actively engage with the development of new teaching practises at the OU and analyse the associated student behaviour. Thirdly, the project has highlighted unexpected student behaviours that the module team are keen to better understand and engage with. This eSTEeM project was highlighted in the S350 QME module review.

It should be noted that whilst writing this project report, we briefly looked at how the Study App was promoted to students in some other 20J/21B science modules and we found that from a sample of 15 modules simply searching the modules for 'Study App' showed that:

- 5 modules specifically mentioned the OU Study App (S111, S112, SDK100, S209 and S294),
- 3 modules mentioned OU Anywhere (MU123, S382, SMT359) which then linked to the Study App
- 7 modules did not mention either App (S206, S215, S283, S284, S315, S317 and S390)

Consequently, there is scope to better inform OU students about the availability of this Study App to promote better engagement. This is especially important as the number of students studying at full-time intensity seems to be increasing at the OU. Consequently, there are more full-time students who will want to maximise all study opportunities.

Outside of the OU, other universities have had to rapidly and dramatically increase their online learning provision due to the Corona Virus Pandemic (Watermeyer et al. 2021) and the OU Study App could provide a cost-effective way for them to do this. Although evidence would need to be wider ranging from the OU team itself however we have shown how it can enhance a skills-based module and the experience of the students involved.

Thinking about future impacts relating to the Study App, it should now probably be part of module teams thinking when producing a new module especially regarding accessibility issues. Although as not all students will be able to use it, for instance Students in Secure Environments, then it should be considered as a very useful add-on rather than as a core method of study.

List of deliverables
Several student generated recommendations for improvements to the Study App described earlier. These have been fed back to the OU Study App team.

A sample text for module forums that was used to introduce the Study App to students is given below and we encourage modules to adapt this to their specific module:

'Our module has the OU Study App available, which is the companion app for Open University module websites. This means that in addition to your module website, you can now access your online learning materials on the go.

Features of the OU Study app include:

· Always having your study planner to hand

· Having access to your learning materials on the go

· Being able to download your learning materials to use offline

For an overview of the app:

·Go to the OU Study app support guide

·Read the OU Study one-page overview

·Watch the OU Study introductory video

You can download the OU Study app from the Apple and Google play app stores.

A few things to note…

You are likely to find that the app takes a few minutes to load the first time you use it as your module website has a large amount of information for it to find. For this reason, we would

recommend using a Wi-Fi connection for your first use. However, the app will get quicker the more you use it, as it will have a chance to cache some of the information, so please be a little patient with it at first. If the study planner is slow to load, we'd also recommend using the single week view rather than 'All weeks'.

OU Study is a companion app for your module website, and doesn't currently allow you to complete some of the more interactive or collaborative activities in the app. However, it will point you to the relevant area of your module website, so if you have an internet connection, you can continue your studies in your mobile web browser.

As this is an early release of the app, if you are studying more than one module, it is unlikely that your other modules will be available in the app at this time. However, you will be able to get easy access to your other module and OU websites, by using the Study Links on the app home page.

Feedback and issues

If you have any feedback or would like to suggest some ideas for the app, you can get in touch by using the Feedback function within the app, available through the Settings menu. The team are keen to hear your thoughts, and have already prioritised the following requirements based on early feedback given by students who tested the app, which they hope to develop in the future such as:

· Forums in the app

· Notifications for assignments, tutorials and forum activity

· More interactive activities available in the app

· Performance improvements

Although the first release of the app has been rigorously tested, you may find some issues that the project team haven't discovered yet. If you find anything you think needs reporting, please let them know by using the Feedback function in the app, or by contacting the Computing Helpdesk.

We hope you find the new app a useful additional study tool alongside your module website, and that it helps you to study on the go. If you would like more information about the app, or would like to ask the app team a question, go to the OU Study app support guide.'

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Figures and tables

Figure 1: percentage of responses to '(Q1) How long did you study using the OU Study App?'

Figure 2: percentage of responses to 'Where did you use the OU Study App?' (based on 21 days of diary entries amongst those who used the app that day).

Figure 3: number of responses to 'At the time when you used the OU Study app did you also have access to the module website on a PC or laptop?' Note that all students answered this question each day, including those who responded 'did not use' to Q1.

Figure 4: percentage of responses to 'Which of the following did you use the OU study app for?' (based on 21 days of diary entries amongst those who used the app that day).

Figure 5. Chart showing frequency of occurrence of particular themes from analysis of two focus groups and one interview transcripts.

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Figure 7. OU Study App daily users – most recent data. A general upwards trend is observed and it is anticipated this will continue to increase as more modules become available on the App. (The Open University, 2021b)

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University approval processes

- *SRPP/SSPP – Approval from the Student Research Project Panel/Staff Survey Project Panel was obtained according to the Open University's code of practice and procedures before embarking on this project. Application number 2019-150*

- *Ethical review – An ethical review was obtained according to the Open University's code of practice and procedures before embarking on this project. Reference number HREC/3451*

- *Data Protection Impact Assessment/Compliance Check – A Data Protection Impact Assessment/Compliance Check was obtained according to the Open University's code of practice and procedures before embarking on this project. Logged 20-12-2019*

All data related to this project will be destroyed 6 months after acceptance of this final report.

Appendices

Appendix 1
Reflective diary

Appendix 1: Example practical diary to be completed daily by student volunteers

How long did you study using the OU Study app?

○ Did not use today
○ Less than 10 minutes
○ 10-30 minutes
○ 30-60 minutes
○ 60 minutes or more

Question #2

2

If you used the app today, which section of S350 did you use the OU Study app for?

```
┌─────────────────────────────────┐
│                                 │
└─────────────────────────────────┘
```
Question #3

3

Response is required

✳

Where did you use the OU Study app?

☐ Did not use it today

☐ At home

☐ At work

☐ Commuting

☐ Other travelling

☐ Other (please specify)

Question #4

4

Optional:

If you selected other please specify.

```
┌─────────────────────────────────┐
│                                 │
└─────────────────────────────────┘
```
Question #5

5

Response is required

✳

Which of the following did you use the OU Study app for?

Select all that apply.

☐ Did not use today

☐ Viewing the study planner

☐ reading text-based module material for the first time

☐ Revisiting text-based module material that you had already studied

☐ Viewing video, audio or interactive content for the first time

☐ Viewing video, audio or interactive content that you had already studied

☐ Linking out to the website to read and comment on forums

☐ Linking out to the website to access OpenStudio

☐ Linking out to the website to book, attend or watch a tutorial recording

☐ Viewing assessments

☐ Accessing additional resources

☐ Other (please specify)

Question #6

6

Optional:

If you selected other please specify.

7

Response is required
*

Did you make any notes?

○ None
○ Notes in electronic form
○ On paper
○ A mix of paper and electronic
○ Did not use OU Study App today

Question #8

8

Response is required
*

At the time when you used the OU Study app did you also have access to the module website on a PC or laptop?

Please answer yes if you could have accessed the module website via a PC or laptop even if you only used the app.

○ Yes ○ No

Question #9

9

Response is required
*

Did you use the module website on a PC or laptop at any other time on this day?

○ Yes ○ No

Question #10

10

Response is required
*

If you used a PC or laptop, which of the following activities did you use the online module website for?
Select all that apply.

☐ I did not use a PC or laptop to access the online module website
☐ Viewing the study planner
☐ Reading text-based material for the first time
☐ Revisiting text-based module material you had already studied
☐ Reading and commenting on forums
☐ Accessing OpenStudio
☐ Viewing or completing assessments
☐ Accessing additional resources
☐ Other (please specify)

Question #11

11

Optional:

If you selected other please specify.

[   ]

Question #12

12

Response is required
*

If you used the online module website on a PC or laptop on this day, did you make any notes?

○ None
○ Notes in electronic form
○ On paper
○ A mix of electronic and paper notes
○ I did not use the online module website on a PC or laptop