

Digital Technologies

Things to be mindful of:

- The procurement/cost of acquiring apps/digital technology.
- If you use an app, ask does everyone have a smartphone? Don't make assumptions.
- Think about liability, i.e. if a student were to drop their phone in a bog, who is liable?
- When using smartphones as an educational/learning tool, you need to ensure students see it this way.
 - Consider that students might want to keep their phone as a social device and not use it for learning purposes.
- Consider whether there are any implications in terms of the university being able to support a particular technology (e.g. the PC/Mac IT support debate).
- Digital technology is about offering choice/multiple-means of access rather than necessarily a replacement. DO you want to use the FSC field guide or an app? Notebook or phone? It's choice.
- Keep it simple. Use technology that students and staff are familiar with, e.g. Google Forms, but use that in a different environment/way.
- Don't assume that technology is always the best approach for people who are neurodiverse, i.e. for students who are diagnosed with ADHD, technology can be a distraction rather than supporting the learning process.
- Think about the pedagogical aspects of using these technologies.
 - What is the purpose of the technology you employ?
 - Is it style over substance? i.e. it's all singing, all dancing, but what does it add to the learning process?
 - What is the teaching/learning behind using the technology?
 - What do you want the students to do with the technology?
 - Don't use the technology just because it is a fancy piece of soft/hardware, but consider what the role of the technology is in the exercise/assessment.
 - It is easy to get caught up in the trend without thinking about the learning behind these approaches.
- Digital poverty is a real issue. It might not be about the technology but the broadband connection or data plan they have.
- Don't assume everyone can engage with the platform in the same way.
 - Not every student can do something on the screen.
 - Provide opportunities for students to explore what technologies work for them before they go into professional environments.

- Ensure that if you enable students to record their notes in a different way that your assessment reflect that.
 - Use notes to support an assessment rather than the notes forming the assessment themselves.
- Encourage students to share their favourite apps, co-create learning opportunities.
- Use digital technology before, during, and after field-based teaching.
- It can be difficult for students to replicate observations and/or data collection with virtual fieldtrip alternatives.
 - Thinking about the process of e.g. species identification. What are they observing, how are they discounting some aspects?
 - Think about what kind of notes should students make during a virtual fieldtrip that might not seem relevant at the time, but become relevant when subsequently looking at the dataset.
 - Also adding in that level of uncertainty – there is not always a definite answer but you can make possible connections about what is in the environment and what is going on here.
- A virtual field trip deployed pre an in-person visit can be useful for students wanting to explore the site (i.e. ease anxiety worries), and enable them to learn something of the history/background to the area they will be visiting (esp. when data collection is involved).
- It is difficult to replicate touch and smell in a virtual field trip, but you can add soundscapes.
 - Sound can support/enhance virtual fieldtrips. You can download free sound files (.wav files) from the BBC Sound Effects archive or other free online resources to help create a feeling (become immersed within) of being physically at the environment.
- Where possible, incorporate group working elements to virtual trips, i.e. breakout groups within Collaborate or TEAMS.
- If you can produce the same learning outcomes for students via digital resources as you would an in-person visit, there is a sustainability argument for using virtual field trips.
- Digital resources need to be good quality and well produced.
 - Student will use them if they like them. If they are poor-quality students are less likely to engage.
 - Think about producing a call-sheet and a script for the virtual fieldtrip.
 - Don't underestimate the time it will take to create, film, edit and produce the final version of your virtual field trip or digital resource. Getting creative/doing innovative teaching takes time.
- Consider whether you have/need the additional technical or pedagogic skills to engage with digital technologies/resources. Find out what support your university has in place.

- Talk to/work with your digital education support team.
- Don't get ahead of yourself; manage your own expectations!
- There is not always access to a lot of resources (i.e. people, tech, finance) but often things can be achieved on a shoestring budget!
- Technology moves on quickly and soon becomes redundant, don't invest huge amounts of time and money in one approach that may be old hat in a year's time.
- Digital technologies can help students record information from a virtual site, but what are the learning outcomes for the virtual trip? Being able to measure/record a feature or is it something more fundamental?
 - Learning outcomes should drive the digital approach, rather than the digital driving the activity.
 - Think about how you create innovative assessments and the different ways you need to engage with students when using digital technologies/resources.
- Manage student expectations.
 - Explain the benefits to the students using these digital approaches at the outset.
 - Some students perceive blended approaches as being more work, whereas it is time they should be putting in anyway.
 - Give students the opportunity to innovate, i.e. download data that they find/want to use.