How To Guide:

# Blended Learning

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## Context

Description:
This is a process which combines and integrates physical in classroom experiences with online eLearning and digital tools to create a hybrid and flexible learner experience. The physical classroom time may be used in a traditional way to impart knowledge with the eLearning used to explore, apply and discuss the theory in more depth; or vice versa where this is 'flipped' so the learner accesses content/ theory via eLearning in advance the physical classroom time is used for the deeper exploration activities.

Relevance of method to climate change design teaching integration:
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Drawing on the context for the Arch4change project in general, in particular the contextual literature review and survey findings, using a mixed method teaching approach that has potential for use of digital tools which support evaluation of climate change design is linked with successful integration of climate change curriculum and sustainability integration.

## Practical Considerations

Class Size:
This method is best suited to mid-range or smaller class sizes, up to 20 people in a group/session due to the need to facilitate online learning/class sessions which can become unwieldy beyond 20.

Where engagement digital tools are being used, the class size need not be limited.

Learning Stage (Year Group):
Applicable to all learning stages, but particularly useful for Foundation level where a mixed method approach can assist with embedding foundational or first principles knowledge and encourage engagement of novice learners.

Educator Resourcing/skills

Educators will need to operate in a coach or subject expert role in relation to the use of digital tools, and a facilitator role for any in person on online collaboration learning activities. Educators will need to have sufficient technical/digital knowledge regarding the tools being used
Educators should plan for additional upfront workload in the preparatory phase.

Available teaching space & resources (tech etc)
Both students and educators need access to computers and internet connection. They may also use their mobile phones or tablets for interaction. The use of QR codes for quick access to quizzes and whiteboards is Recommended.
The physical learning environment must be equipped with appropriate technology to facilitate hybrid learning, and organised so attendees can view and hear all participants

## Teaching & Learning Considerations

Themes:
This approach can be used within any of the ARCH4CHANGE curriculum themes, but may be most suited for those that have digital tools, calculations or simulation methods associated with them.

Learning Outcomes/Objectives

- Chance for students to interact with technology and improve technology skills
- Interactive features like quizzes, polls, digital whiteboards improve student engagement and motivation
- Facilitates remote learning and allows for flexibility of attendance modes
- Allows 'less exposed' student input and engagement to session where digital tools allow contribution without speaking necessarily
- Allows students to be more involved and engaged in their own learning
- Provides for improved accessibility and access to a wider range of learner types

Course Context (alignment with other subjects/modules)
Blended learning can support integration of interdisciplinary working, where students or educators, or both may be in different locations or time zones.

Timeframe (length of learning activity):
Blended learning activities may be substantial where flipped learning for theory or software tutorials are used, in which students have to allocate a number of hours to view content outside the contact time teaching activity.
Where other engagement tools are used (either online or in person) these can form short 5-10 minute exercises to start or end a session, or to reflect on particular content within a session.

Methods

Some example types of blended learning activities are given here.

- Use of  flipped learning (see separate how to guide) which focuses on e-learning modules/ theory content delivery
- Collaborative brainstorming using whiteboards (eg. Miro)- either in person, online or hybrid
- Digital worksheets for individuals or groups
- Software tutorials viewed in advance of a software demonstration
- Use of quizzes within in person or online teaching activities to evaluate content or to provide opportunities for reflective exercises
- Use of upvoting software to prioritise content, questions to respond to first
- Use of gamification techniques which incorporate elements of games to teaching and learning activities.
- Use of remote tests, multiple choice tests

Deliverables

*From educator perspective:* : Resources to facilitate the reflective exercise.

*From students perspective: Participation and contribution to exercises. Completion of worksheets, tutorials, viewing of content where applicable.  Unlikely to form part of any assessment.*

Feedback

Use of digital polls, whiteboards, quizzes etc will deliver instantaneous formative feedback

Assessment:

Short in session digital exercises should not be assessed summatively.
However longer format exercises which involve worksheets, multiple choice tests or software use can be both formatively and summatively assessed.

## Recommendations

Student Reflection

Blended learning tools can be used to facilitate student reflection exercises.

Potential Pitfalls/challenges

- Lack of motivation or engagement by students where quizzes/polls/ whiteboards are not responded to or facilitated by educators
- Can be time-consuming to design
- Encourage use by all learners not just keen ones
- Unable to check if student has completed worksheet/deliverable themselves (where relevant)
- Possibility of technical failure
- Perception blended learning is not as effective as fully in person learning

## References


- https://resources.depaul.edu/teaching-commons/teaching-guides/feedback-grading/Pages/assessing-reflection.aspx
- https://www.ed.ac.uk/reflection/reflectors-toolkit/reflecting-on-experience/gibbs-reflective-cycle.