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Good Practices in Blended Learning

Chapter Progress from FIG publication – *Enhancing Surveying Education through Blended Learning*

Chapter Contributors: William Kelly, David Mitchell, Dimo Todorovski, Charisse Griffith-Charles, Simon Hull, Michael Mayer, Craig Roberts, Vladimir Zablotskii
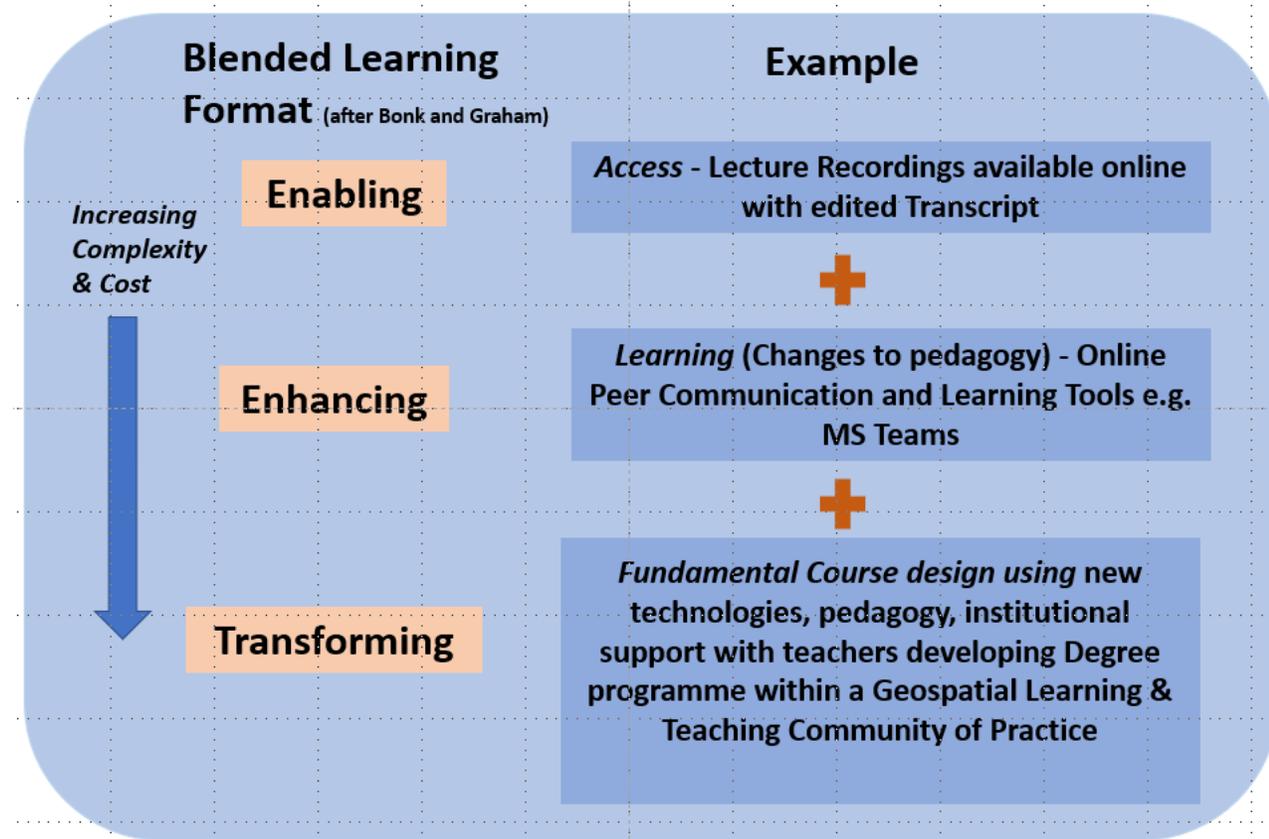
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Good Practice - Chapter Overview

- Blended Learning

- Programme Design

- Face-to-Face & Online considerations

  – *Social, Cognitive and Teaching Presence*
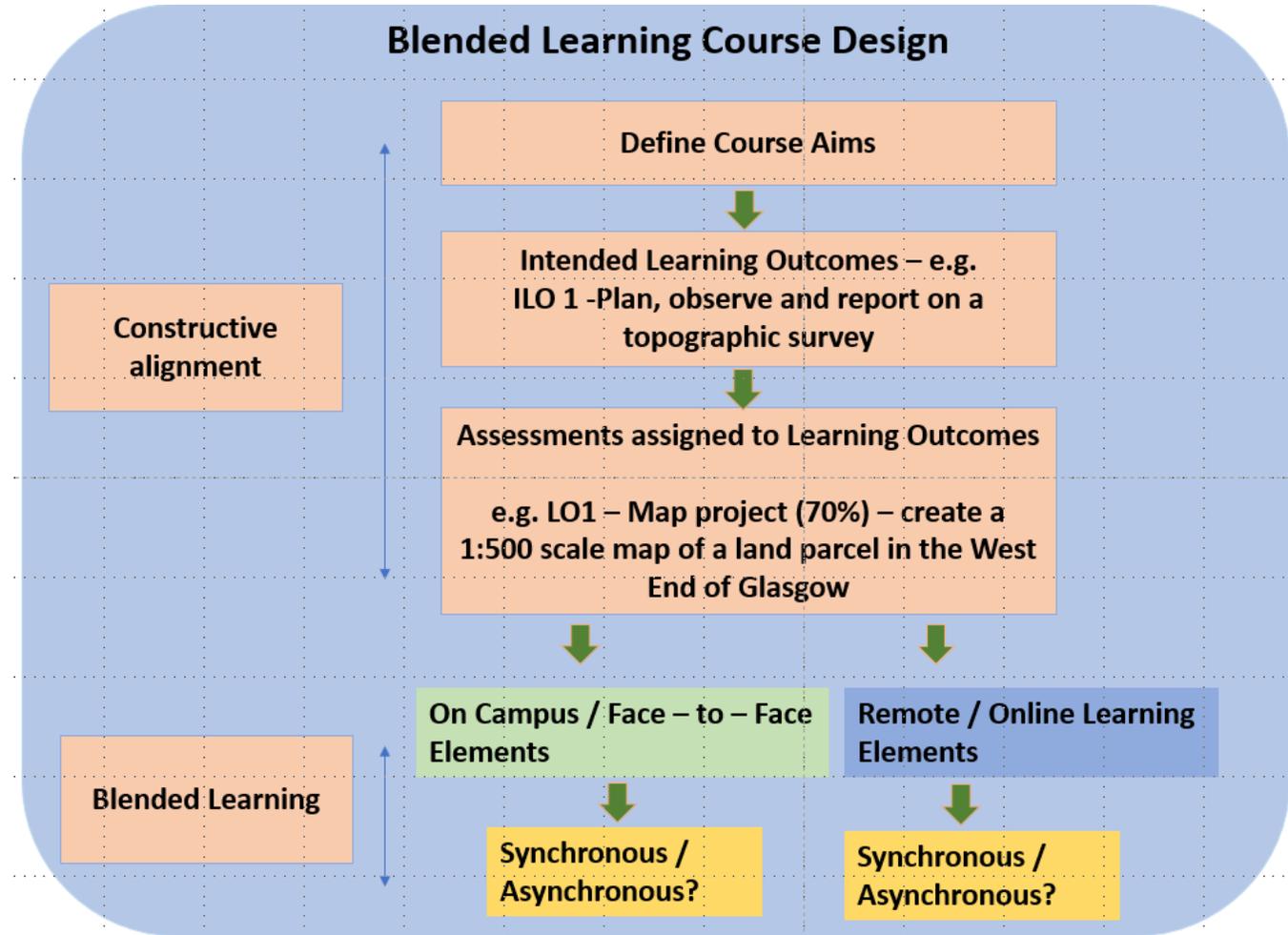
- Examples and Case Studies

Blended Learning

- *"Blended learning is the thoughtful fusion of face-to-face and online learning experiences. The basic principle is that face-to-face oral communication and online written communication are optimally integrated such that the strengths of each are blended into a unique learning experience congruent with the context and intended educational purpose" (Garrison and Vaughan, 2007)*


Adapted from Bonk & Graham, 2005

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Good Practice: Programme Design

- *Programme*
  - *Aims & Learning Outcomes*

- *Constructive Alignment (Biggs & Tang, 2011)*

- *Course / Module*

Blended Learning Course Design

Constructive alignment

Define Course Aims

Intended Learning Outcomes – e.g. ILO 1 -Plan, observe and report on a topographic survey

Assessments assigned to Learning Outcomes

e.g. LO1 – Map project (70%) – create a 1:500 scale map of a land parcel in the West End of Glasgow

Blended Learning

On Campus / Face – to – Face Elements

Remote / Online Learning Elements

Synchronous / Asynchronous?

Synchronous / Asynchronous?

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Good Practice: Programme Design

- *Considering Campus and Remote activities around Bloom's Revised Taxonomy*

- *Example Geospatial Surveying activities*
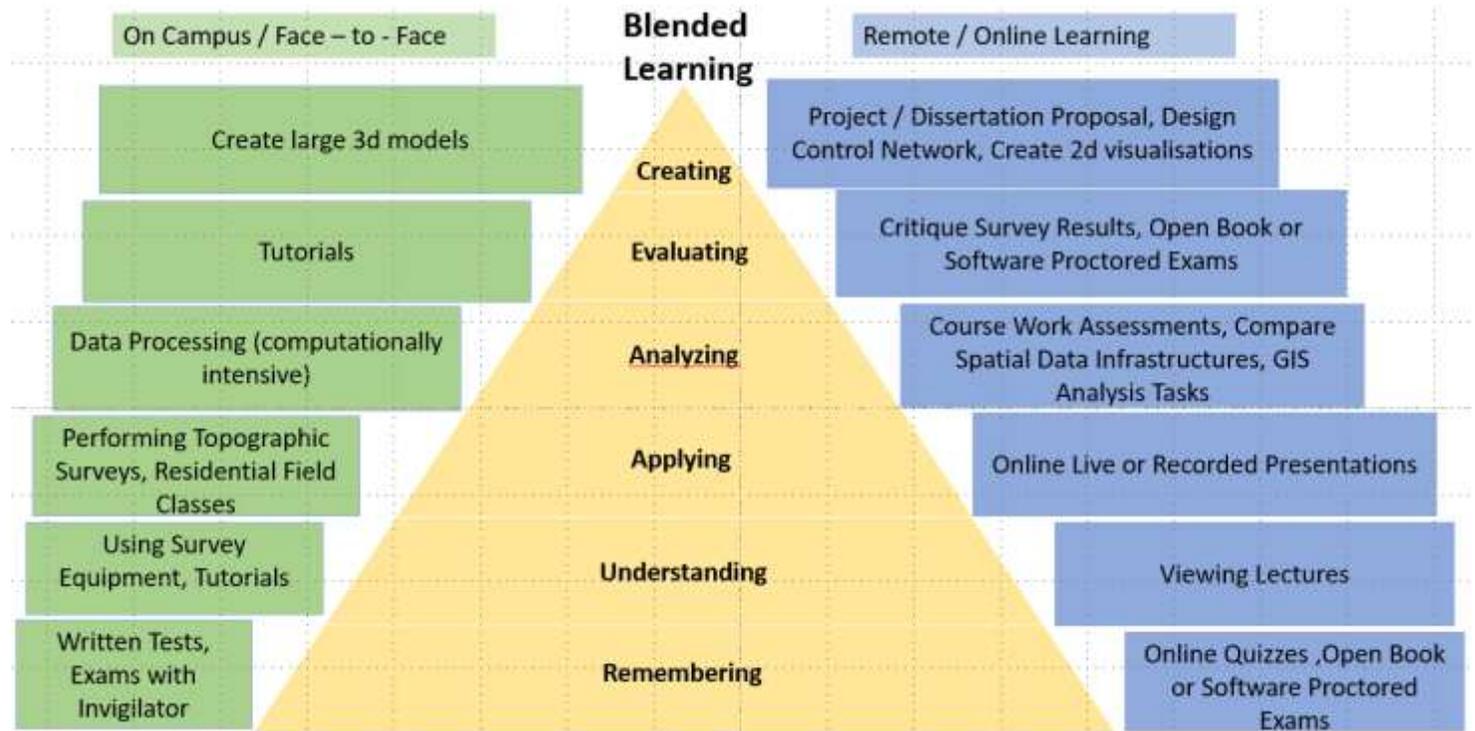
Revised Bloom's Taxonomy from Krathwohl, 2002

Good Practice: Programme Design

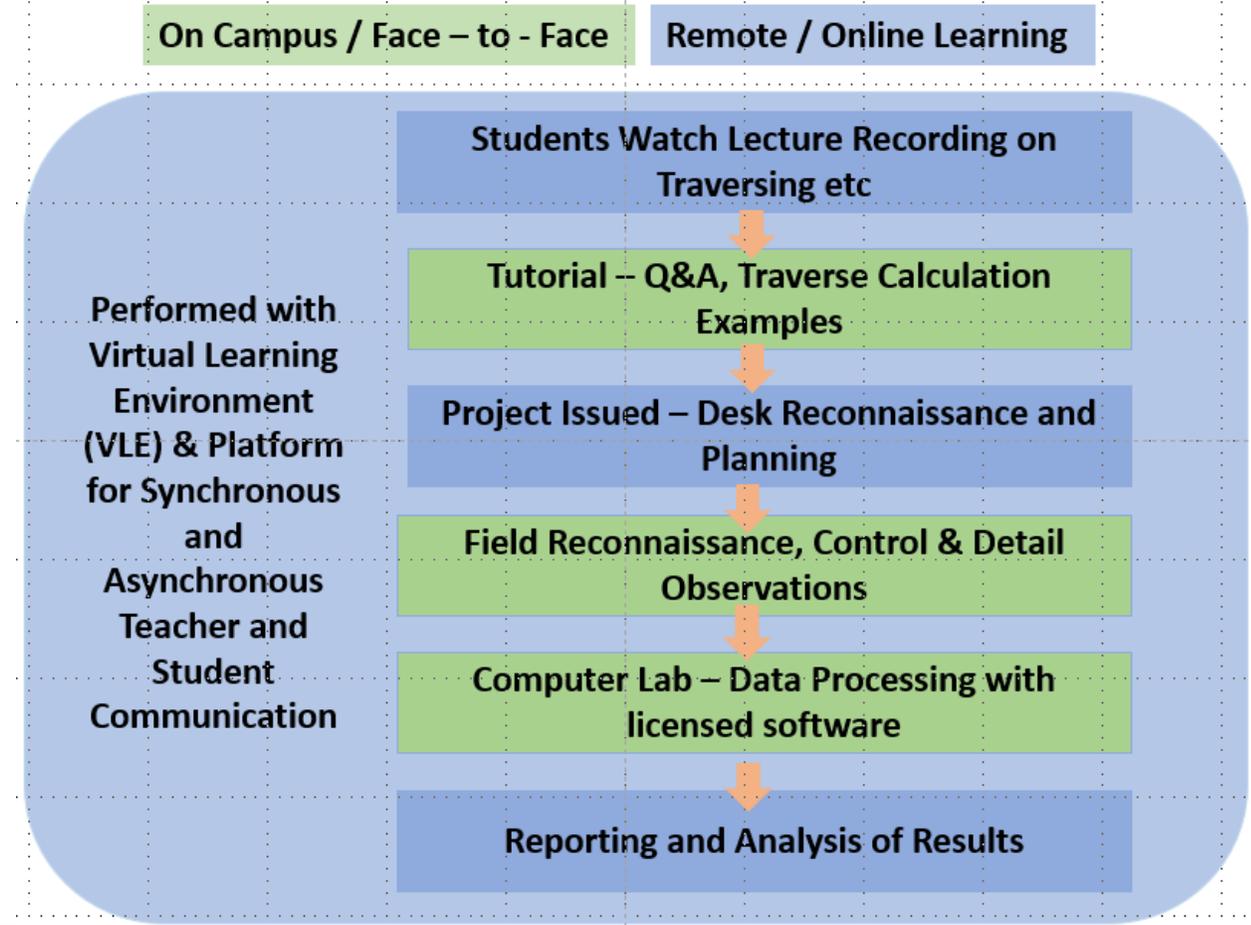- *After Location, consider Time*

- *Synchronous / Asynchronous*

Blended Learning – Synchronous / Asynchronous Activities

Synchronous – Prescribed Time Only	Asynchronous – Allowable Time Range

• Live, in-person, Campus/Field
  • Lectures
  • Tutorials
  • Outdoor Practicals
    • UAV Data Collection
  • Computer Labs
    • Photogrammetry processing
 	
• Live, online
  • Lectures
  • Tutorials
  • Computer Labs
	• Online, Remote
	  • Lectures
	    • Watch Recordings
	  • Set Tasks
	    • Online Quizzes
	  • Computer Labs
	    • Open Source GIS tasks
	
	• Campus
	  • Computer Labs
	  • Library

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Good Practice: Programme Design

- *Blended Learning*

- *Integration of activities to achieve blending learning of intended learning outcome*

Blended Learning Map Project

On Campus / Face – to - Face	Remote / Online Learning

Performed with Virtual Learning Environment (VLE) & Platform for Synchronous and Asynchronous Teacher and Student Communication

Students Watch Lecture Recording on Traversing etc

Tutorial – Q&A, Traverse Calculation Examples

Project Issued – Desk Reconnaissance and Planning

Field Reconnaissance, Control & Detail Observations

Computer Lab – Data Processing with licensed software

Reporting and Analysis of Results

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Social, Cognitive, Teaching Considerations

Community of Inquiry framework from Garrison and Vaughan.

- *Social Presence*

Establish a Community of Inquiry. Students learn in a trusted environment. Establish identity and introduction in-person, to carry on into remote elements of course.

- *Cognitive Presence*

Meaningful activities for authentic learning and reflection. In face-to-face this may include practical, field activities. Remotely, this may include reflective, non-synchronous, communication e.g. via discussion forums, groups or chat channels.

- *Teaching Presence*

Guidance of learning and assessment. Empowering students to take ownership

of their own learning. Remotely – clearly signposting online activities, due dates in VLE.

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Conclusion

- *Blended Learning*
  - *Can be difficult to achieve*
  - *Can take many forms*
  - *Requires planning, and support*

- *Remember all forms of presence*
  - *Social, Cognitive and Teaching*
    - *Our direct instruction / interventions are only part of the learning experience*

- *Good Practice Chapter of FIG Publication nearing completion*
  - *Please contact if you wish to offer comments or review*

References

Biggs, J.B., 2011. Teaching for quality learning at university: What the student does. McGraw-Hill Education (UK).

Bonk, C., Graham, C., 2005. The Handbook of Blended Learning: Global Perspectives, Local Designs | Wiley. Wiley.

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Krathwohl, D.R., 2002. A Revision of Bloom's Taxonomy: An Overview. Theory Pract. 41, 212–218. https://doi.org/10.1207/s15430421tip4104_2

Vaughan, N.D., Cleveland-Innes, M., Garrison, D.R., 2013. Teaching in Blended Learning Environments: Creating and Sustaining Communities of Inquiry. Athabasca University Press, Edmonton, CANADA.