

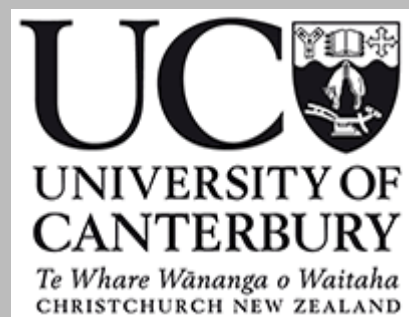
Considering place as a means to link discrete exposures within roadside geology field trips

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Research objectives and methods

- Compare place attachment/student experience between two different field modules (same students, n=25)
- Pre-post questionnaires on each
- Non-participant observations
- Student interviews during (n=5)
- Instructor interviews after (different instructors, n=6)



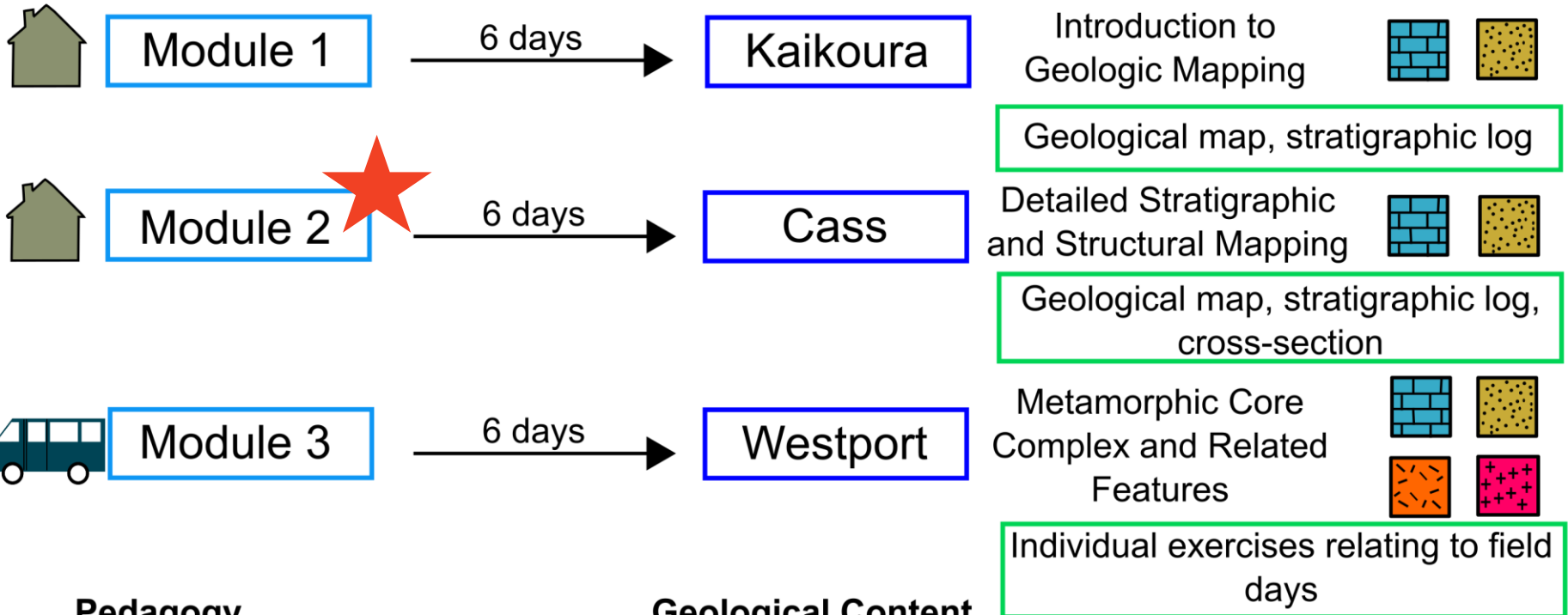
Study population

- 6-week study abroad field camp in New Zealand
- From variety of US colleges
- Apply to and pay for the program
 - More intrinsically motivated, less extrinsically motivated, higher task value than average US college student (compared to Pintrich et al., 1991: MSLQ)



Study setting: field camp

Frontiers Abroad: Geology of New Zealand Modules 1-3 (of total 5 modules, 6 weeks)



Pedagogy



Situated-Style Trip



Roadside-Style Trip

Geological Content



Sedimentary:
Clastic



Sedimentary:
Biochemical



Igneous:
Plutonic



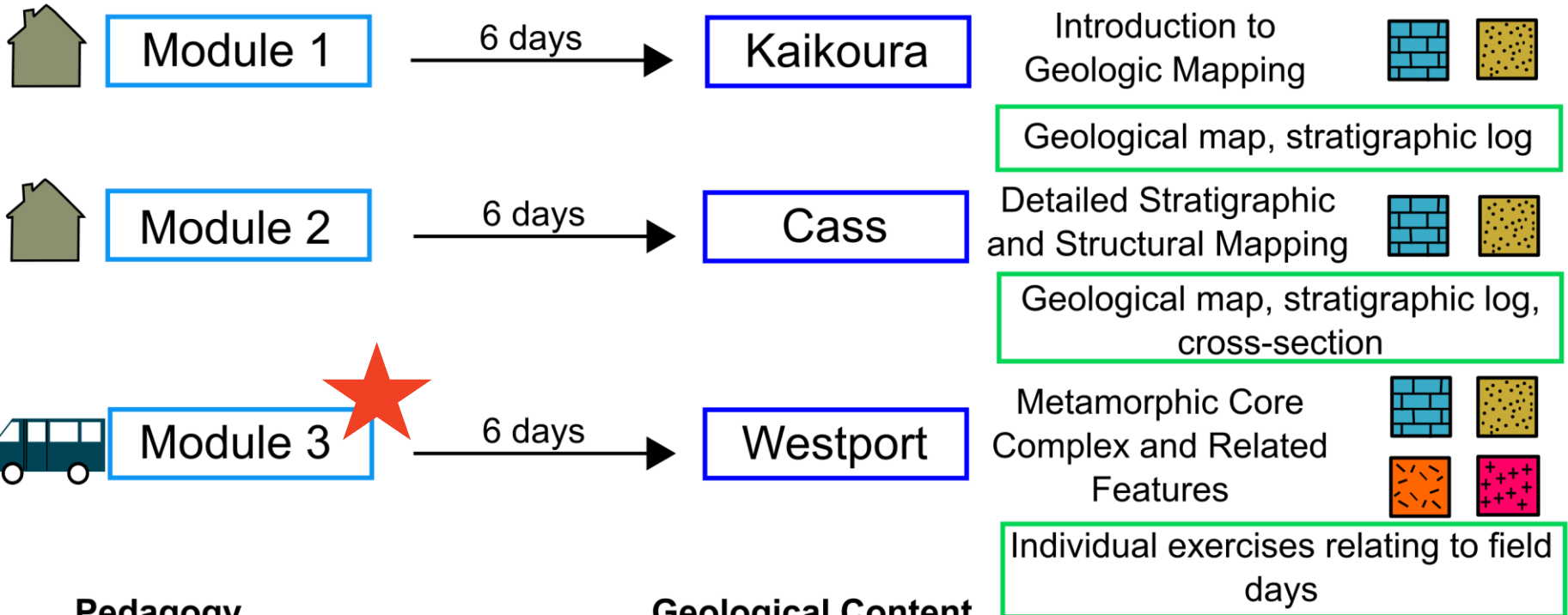
Metamorphic:
Any

Study setting: field camp



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Frontiers Abroad: Geology of New Zealand Modules 1-3 (of total 5 modules, 6 weeks)



Pedagogy



Situated-Style Trip



Roadside-Style Trip

Geological Content



Sedimentary: Clastic



Sedimentary: Biochemical



Igneous: Plutonic



Metamorphic: Any

Study setting: field camp



Results: place attachment

Trip type	n	Pre	Post	Shift
Situated	23	32.39 (6.59)	39.70 (7.00)	7.30 (5.26)*
Roadside	25	30.32 (6.80)	31.80 (6.76)	1.48 (6.61)

* $p < 0.0001$



Results: situated module

1. Students: ownership of mapping area, made decisions, explored autonomously
 2. Peers: forged interpersonal connections (groups of 3-4)
 3. Instructors: limited interactions, opportunistic
 4. Landscape: immersed in landscape, even when at field station
- Intended learning outcomes built towards large assessment and independent interpretations



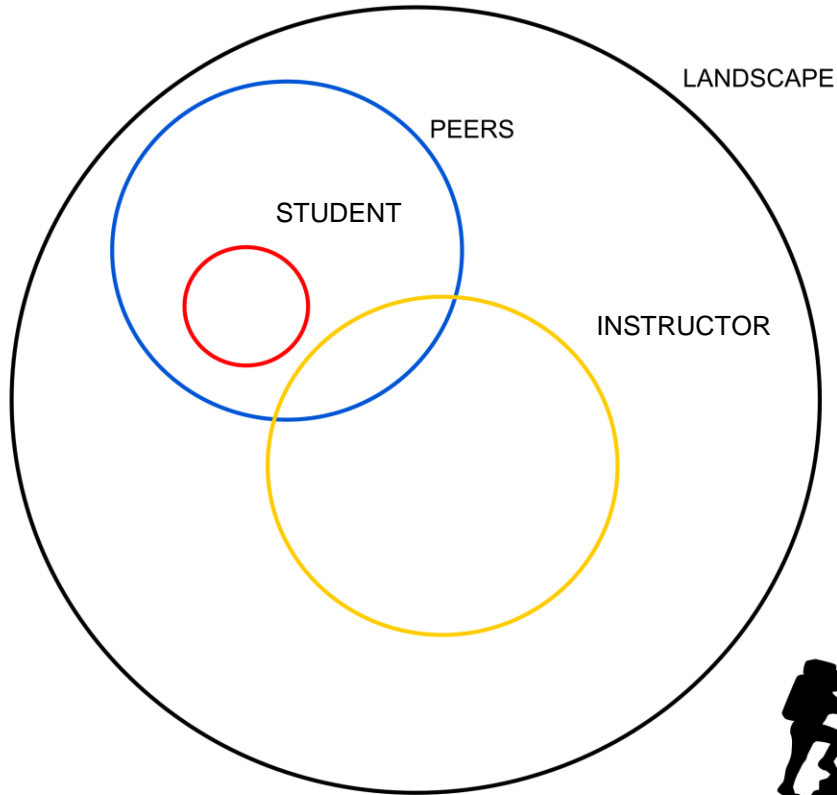
Results: roadside module



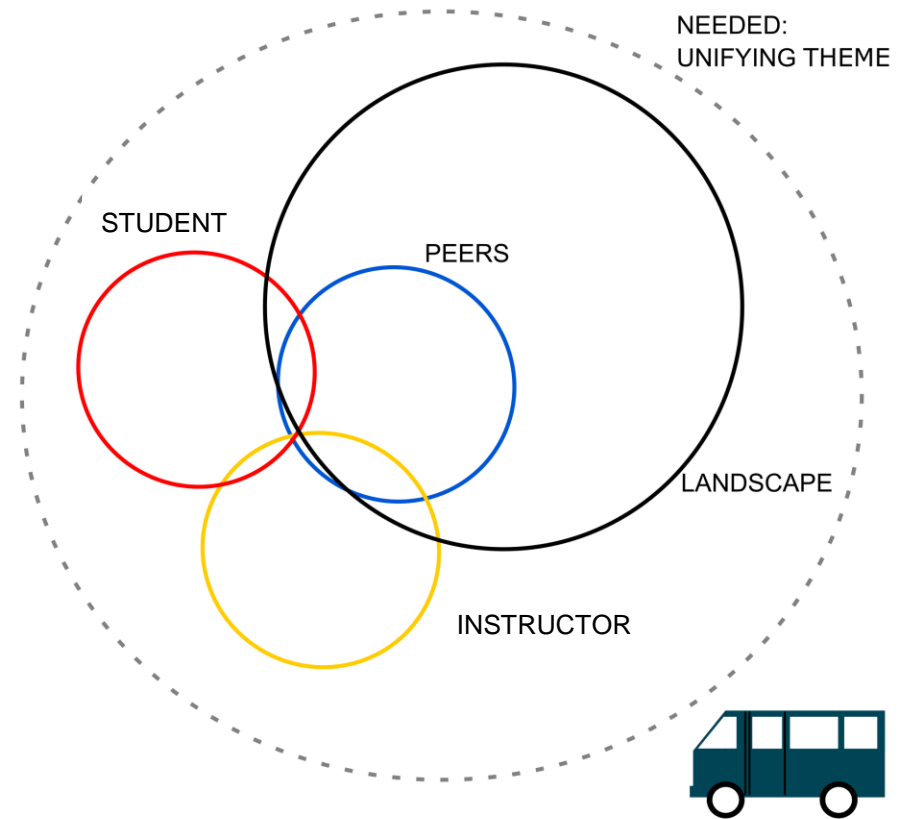
1. Students: unique geology but spatially disoriented (sometimes 2 hours/day driving), unsure of goals
 2. Peers: largely independent (groups either 13 or 26)
 3. Instructors: hands-on, decision makers
 4. Landscape: moved in and out, detached when at field station
- Intended learning outcomes of teaching regional geologic history and developing interpretation skills (through smaller assessments)

Implications: field trip design

Situated Field Trip



Roadside Field Trip



Summary

- Situated trips readily foster place attachment and engagement
 - Particularly when students given considerable autonomy
- Roadside trips struggle to build a connection with the place and this may be disengaging
 - Keep students spatially aware
 - Have a unifying goal or theme, such as place
 - Make students aware of this and how each site relates to it
 - Assessment may help strengthen this

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