

The effect of **mobile technology** during **rural fieldwork** on **perceived knowledge gain**

By Paula Barnard



Introduction



- 4th year occupational therapy students
- 3 week rural fieldwork placement
- **Problem Based Learning (PBL)** curriculum with **Blended Learning (BL)**





Blended Learning

- **Connectivism: (Siemens, 2005)**
 - Educational theory based on social-constructivism
 - A “learning theory for a digital era”
 - Networked knowledge
- **Mobile Learning**





Aim

Investigate the relationship between use of mobile technology and the students perceived knowledge gain in the rural fieldwork.





Method

- Quazi-experimental quantitative pre-test:post-test survey design
- 5 Likert scale - rate perceived knowledge
 - 48 learning objectives (15 for rural fieldwork)
 - Pre-test: Start of the year
 - Post-test: After 6 months



Participants



- 23 full time students – 20 gave consent
 - 13 Experimental group
 - 7 Control group
- Group assignment was based on the fieldwork timetable
- Experimental group – 1 tablet computer:2-3 students



Data analysis



- Data were analysed descriptively and for effect size
- Benchmarking the anticipated effect size is vital when interpreting intervention effect in education research (Hill et al 2008)
 - The experimental groups Other Objectives as well as both sets of objectives for the control group provided the benchmark.





Results

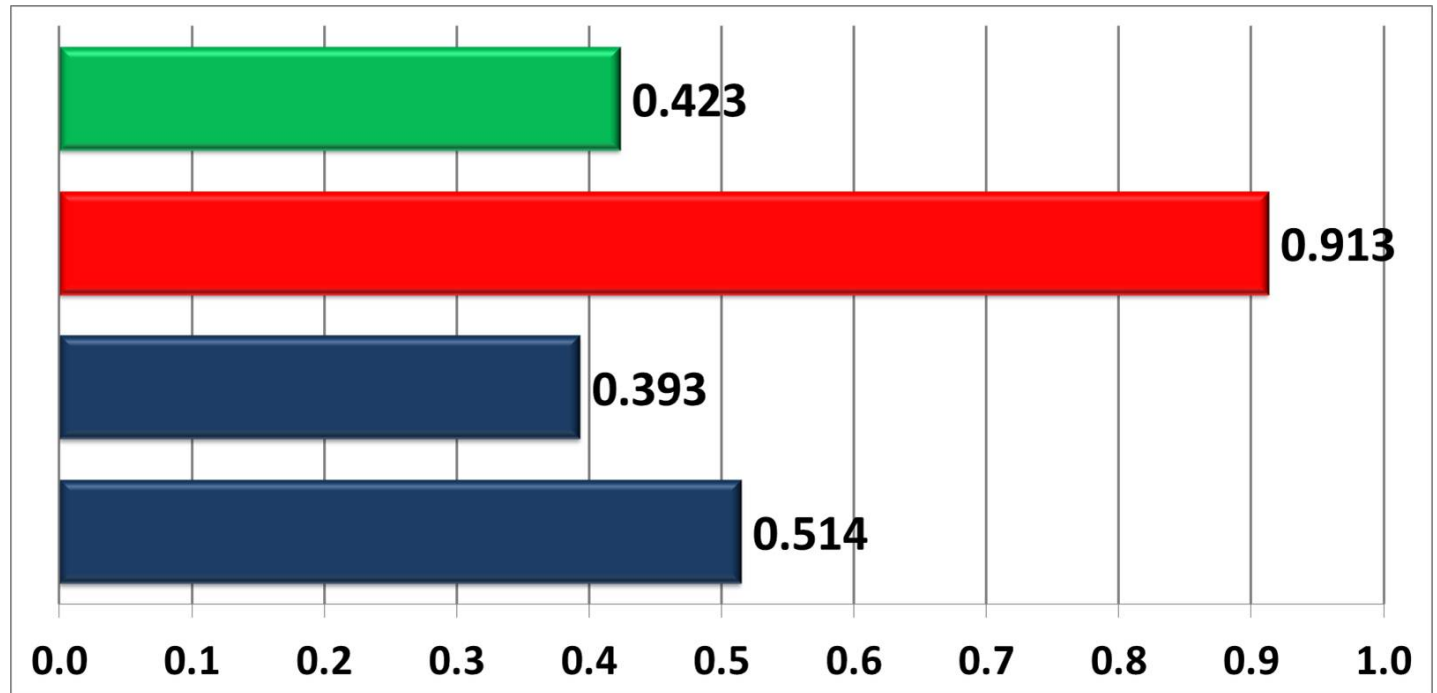
Perceived knowledge gain of learning objectives

Experimental OO

Experimental RO

Control OO

Control RO



OO= Other objectives
RO= Rural Objectives

Average difference of pre-post rating





Results

Effect size of change: pre-test to post-test

	Other Objectives	Rural Objectives
Experimental Group	d= 1.33	d= 2.00
Control Group	d= 1.24	d= 1.10

Cohen D = d

d= 0 : no effect

d= 0.3 : small effect

d= 0.5-0.7 : medium effect

d= 0.8-1.0 : large effect

(Cohen 1992)





Results

Effect size of difference between group means
(perceived knowledge gain)

Other Objectives Exp. vs cont.	Rural Objectives Exp. vs cont.
d= 0.08	d= 0.74

Cohen D = d

d= 0 : no effect

d= 0.3 : small effect

d= 0.5-0.7 : medium effect

d= 0.8-1.0 : large effect

Cohen, 1992)



Conclusion



- This study shows that when benchmarked against a control group as well as their on rating on other fieldwork objectives, the students who took tablet computers on the rural fieldwork placement had a larger **perceived** knowledge gain.
- Possible influence is the sense of remaining tethered.





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References

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