

## DOES BLENDED LEARNING WORK? USING WEEKLY ON-LINE HOMEWORK ASSIGNMENTS TO PROMOTE STUDENT ENGAGEMENT AND LEARNING IN LEVEL 1 PSYCHOLOGY STUDENTS

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## Context

- Desire for active/engaged learning
- Challenge of large first year cohorts
- Encouraging distributed learning
- Potential offered by blended learning

## Project Aim

- Many academic publishers have developed on-line resources as an incentive to adopt their texts – how effective are they?
  - Do students use these resources?
  - Do they assist their learning?
  - Do they effect achievement?
  - Are there gender differences?
- To answer these questions we wanted to find out more about who our first year students are, how they study, whether they engage with on-line resources, and learn more about their experiences of using them.

## Level 1 Psychology

- Large class – 517 (600 max.)
- Method of assessment 50% coursework/ 50% exams
- Coursework consists of
  - 1 x essay; 1 x lab report; 3 labs; 7 tutorials per semester
- Exam consists of
  - 1 essay; 80 MCQs
- Essay writing support via written guidelines; tutorial sessions (one on how to write, and one on how to write under exam conditions); PAL.
- MCQ support via one 'mock' tutorial exam – student feedback requested more support for this.
- The homework assignments were to provide additional MCQ support as well as to encourage engagement with course material throughout the semester.

## Connect

- "Connect is a web-based assignment and assessment platform."
- Allows students online access to homework assignments and for lecturers to create auto-graded tests.
- Produced by McGraw Hill publishers of the course textbook, Psychology: The Science of Mind and Behaviour
- Price £46.99 (£41.99 without Connect)
- They claim that Connect:
  - Increases student engagement
  - Improves grades
- But all available evidence is only published by McGraw Hill



- 12 Individual assignments were allocated by lecturers for 1A
- Students were told at the lectures that homework had been assigned
- Lecturers could check on class/individual student performance



### Method for assessing impact

- Class Survey:**
  - The whole class was invited to take part in an on-line survey (using survey monkey) which asked about prior experience of psychological study; study habits; and, use of the connect system
- Focus groups:**
  - Students were invited to take part in focus groups where the first year experience and use of on-line resources was discussed
- Grades:**
  - We compared final grades of students who did/not regularly use on-line resources

### Survey results

- The survey was completed by 134 students (26% of the class)
- Average age = 19 (range 17-45)
- 76% females; 24% males
- 55% UK students
- 37% English is a second language
- 62% psychology is their honours subject
- 39.2% have studied psychology before

### Study habits

Students were asked if:

- They took notes in lectures
 

82.5% Yes	17.5% No
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- They reviewed their notes after the lecture
 

30.5% Yes	51.4% Sometimes	18.1% No
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- They read relevant pages of the textbook **before** lectures
 

0.8% Yes	37% Sometimes	62.2% No
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- They read relevant pages of the textbook **after** lectures
 

35.6% Yes	44.1% Sometimes	20.3% No
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### Connect homework assignments

- 58.5% of the survey participants had used connect
- Very few completed them on a weekly basis (4.3%), the majority completed them nearer to the exam (95.7%)
  - Were the demonstrations interesting? 60% Yes
  - Did the quizzes aid learning? 83.8% Yes
  - Was the feedback useful 47.9% Yes
- Did the homework help in MCQ exam preparation
 

48% Yes	32% Sometimes	20% No
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- Did the homework assignment help with the exam essay?
 

19.7% Yes	32.4% Sometimes	47.9% No
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### Survey - Why didn't students use connect?

<b>Other Preferred Learning Strategies</b> <i>"I feel I am better at learning things and revising from books rather than online things"</i>	<b>Not Graded</b> <i>"Because it is not compulsory and I thought I have more urgent things to do"</i>
<b>IT Issues</b> <i>"I couldn't see how to register with user name."                      "It wouldn't let me sign on again without paying"</i>	<b>Saving It</b> <i>"I plan on using it as a revision tool for the exams"</i>

## Focus groups

- 8 Focus groups – 20-30 minutes duration
- General questions on first year experience and specific questions on connect (e.g. would you recommend it to a friend? Do you think it contributed to your grades?)
- 33 students participated
- 19 had psychology as honours subject choice
- 25 females/8 males

## Focus Groups – Connect responses

### Positives

- *I told everyone at the beginning about it...It's so good.. it follows the book...and also lectures...brilliant*
- *The games and the little videos and things, it's quite good..Its good fun..more people should go on..more fun than they might think*
- *Yeah some of it was quite good there was different ways of looking at things*
- *I get really into it. It makes you remember so much. Yeah I love it.*
- *I used it before I start studying so gets you a little bit in the mood...even if I didn't read the chapter, after a while some of it stayed in my head*

## Focus groups – Connect responses

### Limitations

- *I didn't have a pass key to get in. I had an old textbook*
- *Oh last year my tutor mentioned it for homework but I think I was planning to use it for revision but never got around to it*
- *I used it...but they were very simple...too simple*
- *I would use connect if I could find it*
- *I never used the connect stuff because... it was just one more set of log in details that you had to remember... and I just forgot it.*
- *its all very well and good with connect saying oh you can go do this and that but I've got other subjects to do as well ...as opposed to go online and do a homework thing if I've got a book to read for English or an article for philosophy*

## Exam grades

- Exam grades of regular Connect users were compared to non-connect users.
- Regular Connect users were identified as those students who completed at least 10 of the 12 assignments = 104
- Non-connect users were simply a random sample from the rest of the class
- Two grades were used to compare the groups:
  - The grade they achieved for the MCQ on its own
  - Their final overall grade for the course (including MCQ, Essay, Practical Reports, Exam )

## Comparing Non/Connect groups

### Average grades for the MCQ exam:

- Connect group = **B3 (14.7, SD=2.5)**
- Non-connect group = **C1 (14, SD=2.5)**
- This was approaching significance,  $t(206)=1.89$   $p=0.06$

### Average overall grades:

- Connect group = **B2 (15.5, SD=1.5)**
- Non-connect group = **B3 (14.9, SD=1.6)**
- This was significant,  $t(206)=2.76$   $p<0.01$

## Gender differences

We also compared gender differences in final overall grades.

- Connect group:
  - Males (N=23) **B3 (15.3, SD=1.7)**
  - Females (N=81) **B2 (15.6, SD=1.5)**
  - $t(102)=0.7$   $p>0.05$  (non-sig.)
- Non-connect group:
  - Males (N=28) **C1 (14.4, SD=1.9)**
  - Females (N=76) **B3 (15.2, SD=1.4)**
  - $t(102)=2.3$   $p<0.05$
- Significant gender difference in the non-connect group only

## Conclusions

- Study habits – students appear to be relying on lecture notes/podcasts to learn rather than using the textbook
- Connect assignments did not appear to encourage distributed learning but were primarily used to support exam revision
- Connect assignments were generally perceived by those who used them as positive but limited in their impact
- Better academic performance was seen in the connect group, however this difference may be due to generally better study strategies
- Gender differences appear in non-connect group

## To recommend or not....

- *I think everybody is doing a great job in teaching us about psychology (which is in no way an easy job). The rest is up to us, students!*
- Thanks to the LTDF for financial support to run this project
- Thank you for listening