



University
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Who uses online educational resources and do they help students learn?

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Blended Learning: Online resources

- * Blended learning integrates traditional face-to-face teaching with online resources
- * Popular in HE because it can efficiently meet the demands of large classes and can enhance and extend teaching delivery (De George-Walker & Keefe, 2010)
- * Popular with students because it permits greater flexibility in when students learn (Cooner, 2010)

Project Aims: Who uses online resources?

- * Use of online resources are popular with students
- * Bohan & Stack (2013) reported that 20% of the class regularly engaged with the materials
- * Why do some people engage with these materials and others don't?

Level 1 Psychology

- * Large class – 550
- * Method of assessment 50% coursework/ 50% exams
- * Coursework consists of
 - * 1 x essay; 1 x lab report; 3 labs; 6 tutorials per semester
- * Exam consists of
 - * 1 essay; 80 MCQs

Homework

- * Optional homework assignments supporting 6 lecture modules
- * Assignments were available for 1 week after each module and then re-opened 1 week prior to the Degree Exam

Learn Smart & Connect

- * Learn Smart & Connect are web-based assignment and assessment platforms
- * Produced by McGraw Hill publishers of the course textbook, *Psychology: The Science of Mind and Behaviour*
- * They claim that they:
 - * Increases student engagement
 - * Improves grades

Learn Smart

Caregivers who talk to their child in a high-pitched intonation are demonstrating

Click the correct answer.

physiological speech.

child-directed speech.

top-down processing.

developmental speech.

Do you know the answer?

I KNOW IT

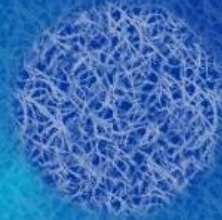
THINK SO

UNSURE

NO IDEA

Connect

Structure of Neurons



What is the basic anatomy of a neuron?
How does a neuron send a signal?
How do neurons communicate with each other?

This activity will help you answer these questions.

BEGIN

[references](#)

[ebook & resources](#)

1.

value:
10.00 points

The protective fatty coating that encases the axon and increases the speed of the electrical signal as it travels within a neuron is the



- myelin sheath.
- terminal button.
- cell body.
- synapse.

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Methods for assessing impact

1. **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

2. **Scales**

- * Learner Autonomy Scale (Macaskill & Taylor, 2010)
- * Academic Self Concept Scale (Liu & Wang, 2005)

3. **Grades:**

- * We compared final grades of students who did/not regularly use on-line resources

Learner Autonomy

- * Learner Autonomy - being able to take responsibility for own learning, maintain motivation, and effective planning (Macaskill & Taylor, 2010) and is related to academic achievement (Basten et al., 2014)
- * We predict that students who regularly use online resources will score higher on learner autonomy

Academic Self Concept

- * Academic Self Concept (ASC) is a student's self-perception of their own academic ability (Rosen, 2010)
- * Individuals with high ASC are more likely to engage in achievement related behaviours and earn higher grades (Pullman & Allik, 2008; Rosen, 2010)
- * We predict that students who regularly engage with online resources will score higher on ASC

Survey Results – Student Info

141 completed the survey

- * 111=female, 30=male
- * Average age=20.6
- * 60% (85)= UK students
- * 67% (93)= English first language
- * 56% (79)= Studied psychology previously
- * 82% (116) = Potential honours students
- * 34% (48) = Part-time work

Survey Results – Homework

- * 94% (132) completed the homework:
 - * **17% (24)=weekly**
 - * 21% (30)=monthly
 - * 16% (23)=rarely
 - * **39% (55)=before exam**
 - * 6% (9)=never
- * 118 believed it helped their learning
 - * 77% (91)= Student perception was that the homework specifically supported only the MCQ exam paper

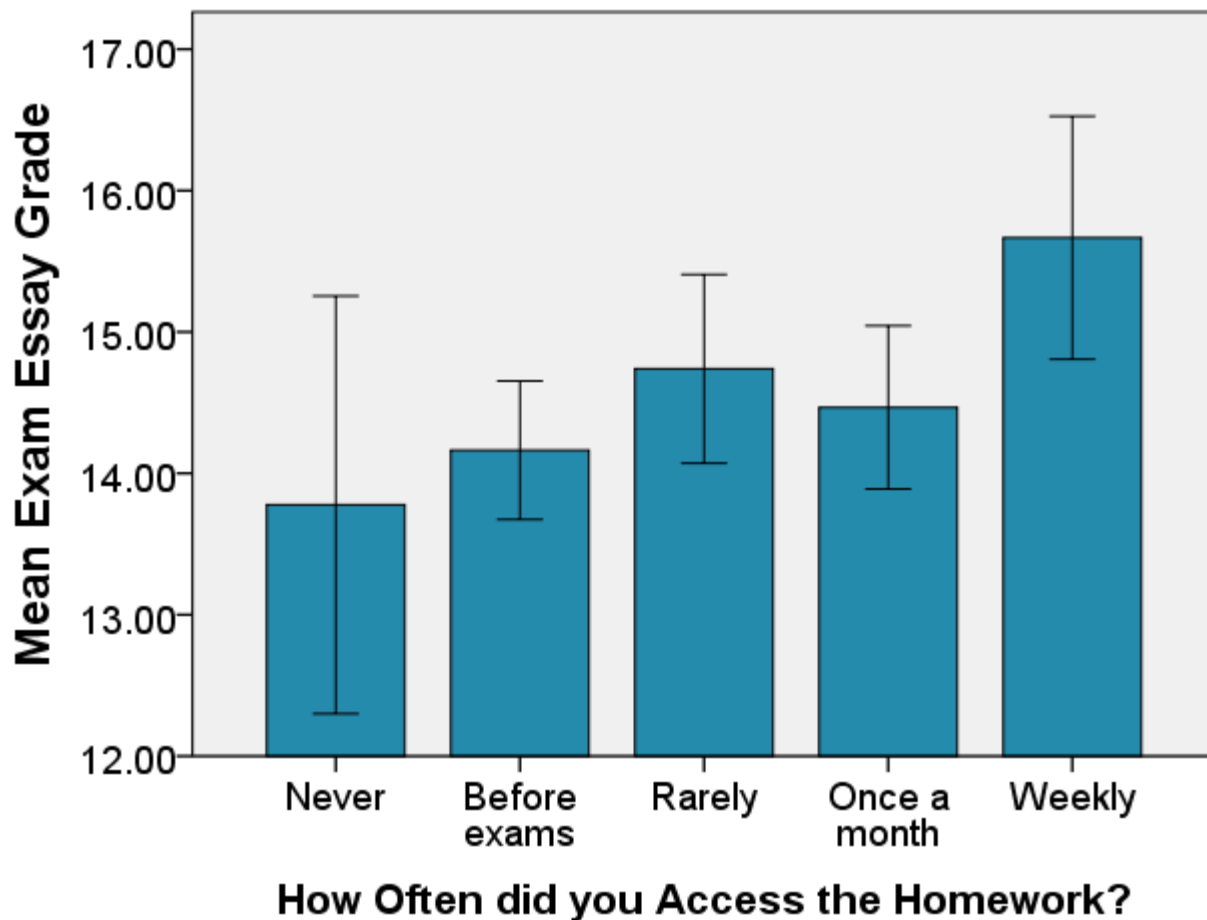
People who did homework regularly were different

- * Multivariate Analysis of Variance (MANOVA) showed a multivariate effect of how often students accessed the homework [Wilks' $\lambda = .284$, $F(40, 483.46) = 4.07$, $p < .001$, $\eta_p^2 = .294$].
- * Further univariate analysis revealed significant differences in Overall Grades, Exam Essay grades, Academic Self-Concept, Autonomous Learning scale, and overall level of Course Engagement.

What impact did regular homework use have?

- * One-way ANOVA comparing homework engagement (weekly, monthly, rarely, before exam, never) on:
- * **MCQ** – Non-sig
- * **Overall Grade** - $F(4, 136)=7.78, p<.05, \eta_p^2 =.08$
- * **Academic Self Concept** - $F(4,136)= 3.02 p<0.05$
 - * Post hoc comparison weekly vs. before exam 3.8 vs 3.5 ($p<0.05$)
- * **Learner Autonomy** - $F(4,136)= 3.2 p<0.05$
 - * Post hoc comparison weekly vs. before exam 4.1 vs 3.7 ($p<0.01$)

Homework and exam essay grades



Univariate Analysis of Variance showed a significant effect of doing homework on exam overall grade Performance $F(4,136)=3.6$ $p<0.01$, $\eta_p^2=.95$ with postdoc tests showing one significant difference: Weekly compared to 'cramming' before the exams: **15.7 (B2) vs 14.1 (C1) ($p<0.01$)**

What did students think?

“I found the multiple choice style assignments were a great **warm up** to thorough revision. These were often a lot easier than independent study, so I used them as a way to ease myself into studying, where the most resilient barrier wasn't really the subject in itself, but **knowing where to start.**”

Why didn't students complete them?

“Didn't have time”

“Forgot”

Study habits and engagement

- * We also surveyed the class in respect of their study habits on:
 - * Note taking in lectures
 - * Use of the course textbook whilst revising
 - * Hours spent studying each week

Survey Results – Study Habits

- * 89% (126) reported that they took notes in lectures and revised them:
 - * 3% (4)=same day
 - * 27% (37)=weekly
 - * 62% (85)=before the exam
 - * 8% (12)=never
- * Similar trend to the homework completion rates

Survey Results – Study Habits

- * 94% (133) reported reading the course textbook whilst revising
 - * 44% (61)=all relevant chapters
 - * 32% (45)=most
 - * 19% (27)=some
 - * 5% (7)=I know I should but don't
- * Most students are reading beyond lecture notes

Survey Results – Study Habits

- * Hours spent studying each week (not in lectures, labs, tutorials, working on coursework)
 - * 30% (41)= 0-2 hours
 - * 40% (56)= 2-4 hours
 - * 22% (30)= 4-6 hours
 - * 6% (9)= 6-10hours
 - * 2% (3)= 10+ hours
- * Consistent pattern of 30% (approx) engaging in distributed learning

Student Engagement

- * We calculated a Student Engagement measure by combining scores for:
 - * Note taking in lectures
 - * Use of the course textbook whilst revising
 - * Hours spent studying each week
- * We correlated this measure with:
 - * Academic Self concept $r(139)=0.26, p<0.01$
 - * Autonomous Learning $r(139)=0.24, p<0.01$
 - * Regular Homework use $r(139)=0.63, p<0.001$

What Predicted Overall Grade?

- * Multiple regression model with DV=overall course grade, and predictors:
 - * Academic self-concept; doing the homework; engagement; autonomous learning, demographic details (age, sex, previous learning etc.)
- * Academic self-concept; doing the homework, autonomous learning were significant predictors
[$R^2=.29$, $F(12, 128)=5.73$, $p<.001$]

Conclusions

- * High engagement with *optional* homework activities
- * Do online resources help students learn?
 - * Yes, but
 - * Student expectation was that it would support MCQ exam grades, but impact was seen on essay and overall grades
- * Who uses these resources?
 - * Engaged students
 - * Students with higher academic self-concept and learning autonomy scores