Evaluating PAL schemes for stability and sustainability: How effective is your PAL programme?

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Where is Bristol?

- Capital of the south-west of England.
- Vibrant multi-cultural city, with a large student population.
- Well-off city, with a rich cultural heritage and good employment prospects.
- Major industries: aerospace, IT, finance, education.
- London 1½ hours away.
‘The Matthew’ - vessel famously used by John Cabot for his voyage from Bristol to the ‘new world’ 500 years ago
Bristol is the UK’s main centre for hot-air ballooning – the annual festival takes place each summer
The home of Concorde
31,000 students  600 Programmes

Bristol Business School
Creative Arts
Environment and Technology
Health and Life Sciences
Social Sciences and Humanities
Frenchay Campus, and surrounding industry
PAL in Bristol

- Pilot in 2003, 15 leaders
- 2008/9 with 121 leaders
- 2009/10 → 140 PAL leaders
- 2012, 250+ PAL leaders
How PAL operates

- PAL leaders are trained
- PAL leaders are supported both centrally and by a member of the module teaching team
- Embedded: PAL sessions are timetabled
- Academic focus: supports social learning through small group discussions
- Supplemental to teaching: content is drawn from existing course materials (lecture notes, workbooks, textbooks etc.)
PAL models

- Target ‘difficult’ modules
- Offer Programme support
- One-to-one support
  - Maths Support
  - Academic Skills
Stability and Sustainability

‘if the innovation is not embedded in the institution, then it will be open to changes in priorities in that institution and may disappear when those involved in introducing them move on or in time, leave the institution’ (Ashwin, 2002).
One size fits all?

- Develop the innovation in response to the quality of its fit with the environment in which it is implemented.
- Change the scheme in response to its shortcomings at the end of and during the year.
- 3-D strategy.
Gaining Institutional Support: what information was required?

- Take a few minutes to talk in groups to think about what information the LTA committee wanted before it could consider its decision to continue funding the PAL scheme.
Summary of responses

- How much does it cost?
- Does it work?
- How many holes will it plug?
- Number of students
- Number of Departments
- Evidence
- What happens elsewhere? (Russell Group)
- Retention rates
- Aims & objectives
Financial implications

- How many students does PAL have to retain to be cost-effective?
- What happens to the retained income if other expenditure (rooms, academic time...) is included?
Benefits beyond retention income

- Faster mainstreaming of students from
  - differing ethnic backgrounds
  - minority groups
  - international students
  - helping with learning disabilities
- Higher progression rates
- Increased final degree classification rates
- Improved National Student Survey rates
- Affective connection to the institution
- Reduction in recruitment costs?
There is little quantifiable evidence about the academic benefits of mentoring in terms of improving grades.

A US study found ‘improvements in the aspirations of economically disadvantaged students as a result of mentoring‘ (Lee and Crammond quoted in Hall 2002).

At London Guildhall University it was ’found that students who attended a peer support session obtained average grades that were higher than for those who did not’ (NAO 2002).

At the University of Western Sydney mentors noted gains in ‘leadership, improved communication skills, improved job interview skills, stronger and more assertive, seeing how others study, refreshing the work, exchange of ideas’ (Carmichael 2003).

Impact of PASS on BL1521 results (genes and evolution)

![Bar chart showing impact of PASS on BL1521 results](image)

- Mean mark %:
  - n=158, PASS not offered: 42
  - n=178, PASS <4: 45
  - n=54, PASS >=4: 53

- % of students with mark <40% (fail):
  - n=158, PASS not offered: 47
  - n=178, PASS <4: 42
  - n=54, PASS >=4: 22

- % of students with mark >=70%:
  - n=158, PASS not offered: 6
  - n=178, PASS <4: 7
  - n=54, PASS >=4: 22

HEA Centre for Bioscience – Science Learning & Teaching Conference 2007
http://www.sltc.heacademy.ac.uk/proceedings.htm

Impact of PASS on BL1521 mark distribution (genes and evolution)

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Evaluation Methods

- **Qualitative**
  - Surveys, Questionnaires
  - Informal discussions in focus groups
  - Formal semi-structured interviews
  - Academic surveys

- **Quantitative**
  - Descriptive statistics
  - Inferential statistics
  - Behavioural techniques
    - ANNs, GAs, Fuzzy logic

Towards empathy in humanoids
www.brl.uwe.ac.uk
Descriptive statistics

- Mean and Median marks
- Number and percentage of students in mark category
- Improvement over previous test marks
- End-of-semester report
- Mean marks related to attendance to PAL and non-PAL sessions
Inferential statistics

- Chi-square of grade by PAL vs. non-PAL
  - a measure of strength of relationship between PAL participation and final mark

- Independent t-tests
  - test for self-selection bias

- Dependent variables
  - semester mean mark, mark in PAL module, marks in individual module components etc…

- Independent variables
  - student attends PAL or not, number of times of attendance in PAL sessions, pre-entry marks, gender, age, race…..
Deficiencies in Existing Research: less obvious variables

- Academic ability in the university environment
- Interest in the module in relation to other modules
- Personality type (introvert/extrovert scale) in group work
- Flair for the course
Multivariate Regression Model

- **dependent variable**
  - final module mark

- **three independent variables**
  - number of PAL sessions attended
  - academic ability in the university environment (aggregate mark of other modules in the curriculum)
  - level of preparedness
Executive FAQs

- How much does it cost?
- Does it work?

How much would it cost if we didn’t do it?
And a final thought

- Not everything that can be counted counts......not everything that counts can be counted...
  - Albert Einstein