“AUSSIE ATTRITION”
The down under experience of *Sophomore Slump* in the Health Sciences.

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AUSTRALIA
AUSTRALIAN CONTEXT

- 21 million people: 4.8 million² miles
- High tertiary participation rate
- 38 Universities (35 public: 3 private)
- Led by Go8
- Majority do Research & Teaching
- Funding Basis (1/3 Gov’t, 1/3 Student Fees (hecs), 1/3 other)
- Since 2005 T&L Performance Fund ($83M in 2007 to 23 uni’s) based on retention, student satisfaction, employment %
- New $6B Higher Ed Endowment Fund
GRIFFITH CONTEXT

- Established 1975
- 5 Campus University (GC Largest)
  - Research and Teaching
- 4 Groups (Health, Science & Eng, Business, Arts/Ed/Law)
- 35,000 students
  - 14,000 commencing / year
  - 75% Bachelors : 25% RHD
- 77% Domestic : 23% International
  - 59% Female, 1% Indigenous
- 3,500 staff (1,400 academic)
  - 300 teaching only : 300 research only
MEAN SUNNY DAYS = 300/year
MEAN TEMP 1000-1500 = 22.3°C (72°F)
SPECIFIC CONTEXT

- Griffith Health Group on Gold Coast Campus
- Schools: MSC/PES/NRS/PHM/DOH/MED(PostGrad)/PSY/PBH/HS
- Student Diversity: School leavers - Mature Age - International
- First Year: 8x10 Credit Point Courses (A&P, Chem, Psych, Cell B, Maths)
- Convenor of First-Second Year Physiology Stream

<table>
<thead>
<tr>
<th>Principles of Physiology</th>
<th>Physiological Science I</th>
<th>Physiological Science II</th>
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<td>FEB-JUN</td>
<td>JUL-NOV</td>
<td>FEB-JUN</td>
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FIRST YEAR
- ~300-500 students / course
- Student groups: Ex Sci / Physio / Med Sci / Biomed / Pharmacy / Oral Health
- Up to 25 programs of study
- OP / SAT (Entry Score) range from 1 – 16

SECOND YEAR

MIND THE GAP
FOCUS ON FIRST YEAR

• “First year experience” well researched and improving (Krause 2005)
• First year performance now linked to funding via retention / attrition
• models of student attrition link student commitment to an institution to first year integration and interaction with the academic and social environments (Tinto, Chickering).

FY Schemes in Play:
• Secondary School Links
• Enrolment
• Orientation Week Activities
• Mentoring, PASS
• Learning Support / Assist
• First Year Advisors
• “Front-ending” best teachers
• Work Profiles, reward!!
AND THEN... 2nd YEAR

- Second year attrition rates (~15%/yr) through to graduation can be just as high and receive little attention.
- Improving retention in the second year may preferentially improve graduation rates over retaining first years (Karp 2003).
- Second year represents a unique set of academic and personal challenges to students that adversely affects their performance (Feldman & Newcomb 1994).

Student Grades 1st-2nd Year
Physiology 2002-2006

PILOT DATA SHOWED..
significant decline in student performance, attitude and program satisfaction in the Health Sciences area across 1st-2nd year

identified through direct examination of overall course grades and assessment board discussions between convenors

reinforced by numerous personal communications with students in formal and informal settings and also course evaluation surveys

not failure rates per se or ↓ class means, rather fall in #s of HD/D from 1st to 2nd year and increased “at risk” multi-course fails

decline appeared independent of program of study, although more pronounced in generic (health/exercise science) versus professional degree students (pharmacy/dentistry/physiotherapy)
WAS THIS SLUMP?

• related to a period of developmental confusion for students, who struggle with personal identity, self confidence, autonomy, purpose and academic competence (Lemons & Richmond 1985, Margolis 1976)

• Loss of “educational capital” towards end of first year (the fog) (Marchese 1972)

• Student self reporting of *sophomore slump* include:

  - Burnout
  - Feel invisible
  - A lot tougher
  - Nothing new
  - Think you know it all
  - GPA drops
  - Excitement over
  - Used to the routine
  - A dead zone
  - Caught between directions
  - begin to slack off

**Not all support the slump:**

• Shivpuri et al 2006 studied academic growth patterns over time showed no decline (zero slope) in student growth trajectory over the first two years.

• Terenzini and colleagues 1984 showed annual academic skill development cumulative progress over the first three years of college.
FACTORS INVOLVED?

- Increase in course content and difficulty
- First interaction and selection of majors
- Reduction in grades and grade satisfaction
- Career choices
- Faculty interaction/expectations
- Class timetabling

ACADEMIC

SOCIAL

- Maintaining peer and parental relationships
- Financial commitments
- Absenteeism and social behaviours

- Feelings of stress
- Personal health, weight, sleep
- Time management

SELF
PROJECT AIMS

investigate undergraduate health group student performance, attitude and persistence during the transition from 1st to 2nd year

Specific aims of the project:
- Impact of three month summer holiday
- Student learning styles / habits
- Impact of 2nd year content quantity/difficulty
- Staff-student expectations and interactions
- University support service availability and usage
- Program identity (generic vs professional)
- Career choice awareness and satisfaction

Not Examining:
- current physiology course content
- assessment modality differences
- absolute attrition / retention rates
- equity groups (other than gender)
- curriculum design
- specific faculty faculty style or skills
- high school transition issues
- first year experience strategies
Specific Hypotheses to be tested:

1. there is a disproportional reduction in distinction / high distinction grades versus pass/fail grades in physiology across the 1st to 2nd year gap, independent of program of study

2. higher academic achieving students are at greater risk than lower academic achievers to experience significant decline in attitudes during their second year at university

3. that profession program orientated students maintain higher performance and attitudes during transition than do generic program students and this is independent of GPA/physiology grades
METHODOLOGY

Stage One: Statistical Analysis.

All physiology students 2002-2006 coded by gender, program of study, with grades studied in a repeated measures model. Sample size ~1200 students.

Stage Two: Quantitative/Qualitative Surveys.

Semester two first year students invited to complete a “Second Year Impressions Survey”. Demographics: (a) program of study, (b) gender, (c) student history, (d) current GPA, (e) work hours. The survey re-administered mid second year will small adjustments to the questions asking for student reflection on their second year experiences.

Stage Three: Interview/focus groups.

Student subsets from Stage two above representing all demographics where possible, directly recruited to participate in semi-structured focus group interviews at the end of 1st year and middle of 2nd year. Transcript data will be summarised and patterned for common themes between and amongst student groups.
LIMITATIONS

- primary researcher is present as academic convenor during the second series of surveys/interviews, creating conflict as a position of power.

- potential exists for drop out (lower response rate) in second survey/interview groups, especially for lower achievers

- survey has not been externally validated

- does the current cohort of student represents a “typical” sample as compared to five previous years?
STAGE ONE
HISTORICAL ANALYSIS

- Did we have *slump*?
- or second year *decliners* and *maintainers* (Wilder 1993)
THE SLUMP APPEARS...

ALL STUDENTS (n=1200)
2002-2006

Absolute Physiology Grades (%)

Yr 1 Sem I  Yr 1 Sem II  Yr 2 Sem I

Semester of Study

70.2  67.5  61.8*

5.6%
GENDER

Absolute Physiology Grades (%)

FEMALE

5.0%

MALE

6.9*%
ANNUAL VARIATION
2002-2006 SLUMP % BY YEAR

% Decline 1st - 2nd Year

Transition Year of Study

2002 2003 2004 2005 2006
WHO SLUMPS

2002-2006 SLUMP % BY PROGRAM OF STUDY

% Decline 1st-2nd Year

Program of Study

HSC  BIOMED  PES  PHM  DOH  PHYSIO  PES DD

Avg
GENERIC VS PROFESSIONAL

GENERIC

• Health Science
• Biomedical Science
• Exercise Science

PROFESSIONAL

• Physiotherapy
• Pharmacy
• Oral Health (Dentistry)
NOT EVERYONE SLUMPS!!!

LATE BLOOMERS
(>5%↓ → >5.6%↑) (n=34)

IMPROVERS (>5.6%↑) (n=35)

NOT EVERYONE SLUMPS!!!
BUT MANY DO…

HIGH DECLINERS
(+80% + >5.6%↓) (n=110)

LOW (AT RISK) DECLINERS
(Sub 55% + >5.6%↓) (n=37)

Absolute Physiology Grade (%)
MANY QUITE BADLY..
OVERALL, 49% OF TOTAL DECLINE

ALL DECLINERS (>5.6%↓)
(n=591)

Absolute Physiology Grade (%)

Yr 1 Sem II      Yr 2 Sem I

Semester of Study
# PHASE TWO SURVEYS

## SURVEY 1 (IMPRESSIONS)


Response Rate: 274 (59% of 459 possible)

Gender: 155 F, 116 M

Program of Study: 34 Oral Health
90 Exercise Science/Physio
29 Pharmacy
103 Health Science/Biomed

Student History: 14 International
46 Mature Age
171 School Leavers

Stated GPA: AVERAGE = 5.39
53P / 102C / 89D / 27HD

Paid Work / Week: 9-11HRS

## SURVEY 2 (EXPERIENCES)

Week 13 Semester II Second Year

Response Rate: 262 (66% of 397)

Gender: 131 F, 127M

Program of Study: 39 Oral Health
74 Exercise Science/Physio
49 Pharmacy
70 Health Science / Biomed

Student History: 13 International
43 Mature Age
159 School Leavers

Stated GPA: AVERAGE = 5.12
64P / 115C / 61D / 13HD

Paid Work / Week: 9-11HRS
STUDENTS KNOW WHATS COMING!!

SURVEY RESPONSES

- IMPRESSION OF 2nd YEAR
- EXPERIENCE OF 2nd YEAR

** SURVEY QUESTIONS **

- Course Difficulty
- Contact Hours
- Convener Expectations
- Personal Grades
- Lecture Attendance
- Private Study Time
- Group Work Time
- Resource Sharing
- Library (INS) Use
- Paid Work

- Increase Significantly
- Increase Slightly
- Did Not Change
- Decrease Slightly
- Decrease Significantly
WOULD STUDENTS LIKE SOME HELP??

Refresher Idea??

- Very Useful
- Useful
- Unsure
- Of Little Use
- No Use at All

![Bar chart showing impressions and experiences of refresher courses and maximum willingness to pay.](chart.png)
## OPEN ENDED QUESTIONS

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<tr>
<th>QUESTION</th>
<th>THEMES EXPRESSED</th>
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<tr>
<td>What do you see as the <strong>major challenges</strong> to you achieving higher grades in 2007.</td>
<td><strong>Time management</strong>, motivation, procrastination/complacency, workload, paid work vs study time, contact hours, course/content difficulty, teaching staff quality, social commitments, listening in lectures</td>
</tr>
<tr>
<td>What <strong>types of learning assistance</strong> have you found most beneficial (eg: study groups, IT courses, learning services, private tutoring)</td>
<td><strong>Study groups predominant 45%</strong>&lt;br&gt;<strong>27%</strong> used none</td>
</tr>
<tr>
<td>If you were told that 1&lt;sup&gt;st&lt;/sup&gt; semester 2&lt;sup&gt;nd&lt;/sup&gt; Year is often very challenging, <strong>how would you respond</strong>…</td>
<td><strong>Surprised, scared, worried</strong>&lt;br&gt;<strong>Not surprised, expect, agree</strong>&lt;br&gt;<strong>Study harder, increase effort</strong></td>
</tr>
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FOCUS GROUPS

- Two groups of 8 students
- Representative of class (M:F, Mat.Age:SL, High:Low Achievers)
- 90 minutes guided focus group
- Met at end of 1st Year and Mid 2nd Year
- Discussion topics across Academic, Social, Self + areas of concern

IMPRESSIONS SESSION
- Teaching quality major factor
- Program transfer common
- Moderating effort (“Ps get Degrees”)
- MASs (Mature Age Student)
- Clear “awareness” of 2nd Year

EXPERIENCES SESSION
- 1st year like high school
- 2nd year a shock (unprepared)
- Academic challenges predominate
- Poor study / exams skills evident
CONCLUSIONS & IMPLICATIONS

- Phenomenon is “real” historically 2002-2006, little change in staff and curriculum
- Importance of the 1st to 2nd year transition in health group student learning spectrum
- Implications for 2008 as Health group launches “common first year” program
- Issues of program and career identity
- Personal teaching direction and professional development
- Potential to improve practice / retention at group / institutional level
WHAT NEXT??

LOCAL

- Refreshers (Bridging) Program (Griffith)
- 2-3 day program in Orientation Week 2008
- Incorporates: mentors, academic writing, time management / motivation, social interaction, content revision, study/exam skills, careers.

AUSTRALIA

- Blogs and Chats
- Mentoring, 3rd years into 2nd year lectures
- 2nd year summit

USA

- Sophomore Programs

How do we get support?
QUESTIONS

THANKS TO MY COLLABORATORS / SUPERVISORS

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Deputy Director: CALT.
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