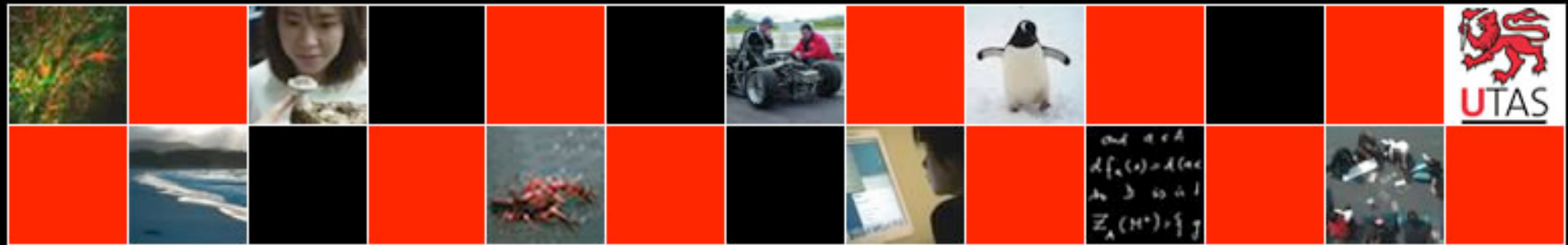


Students' engagement with the discipline: The impact of the undergraduate research journal *Nexus*

Professor Brian Yates
University of Tasmania
Friday 6 November 2009



The Initial Project Team

Dr Julian Dermoudy

Dr Jon Osborn

Richard Dearden

Kristen Karsh

Prof Sue Jones

A/Prof Dom Geraghty

Lynn Davies

Gillian Ward

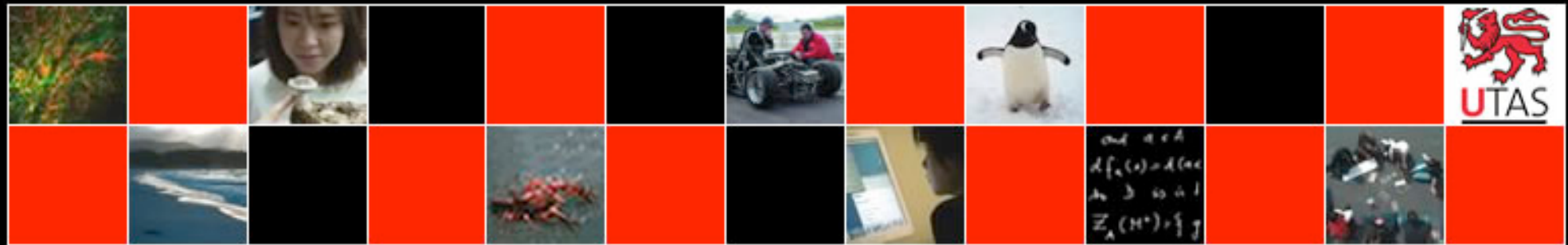


nexus

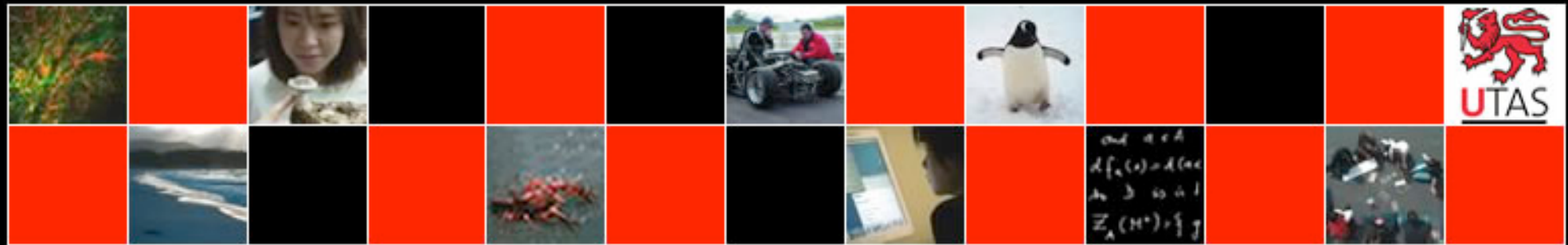
journal of undergraduate science engineering and technology

University of Tasmania
Australia





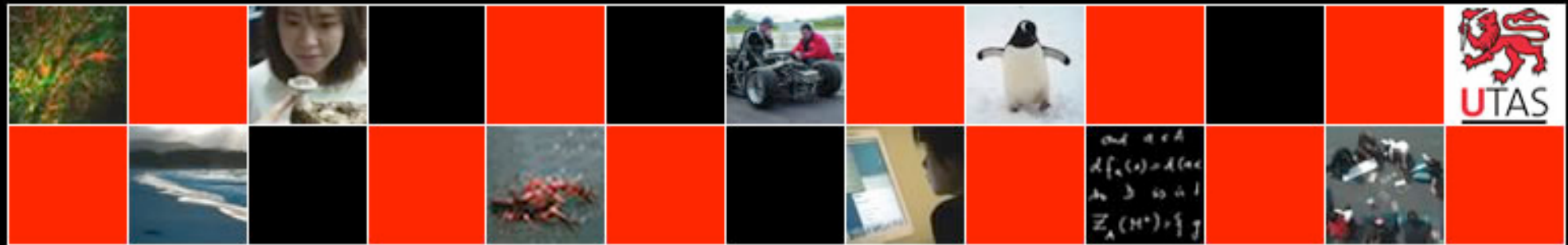
1. How the journal works
2. The impact on student performance
3. The impact on student engagement



1. How the journal works

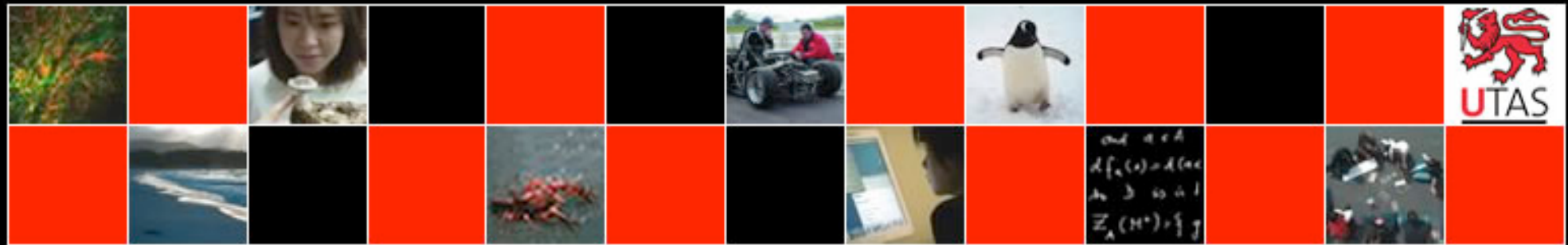
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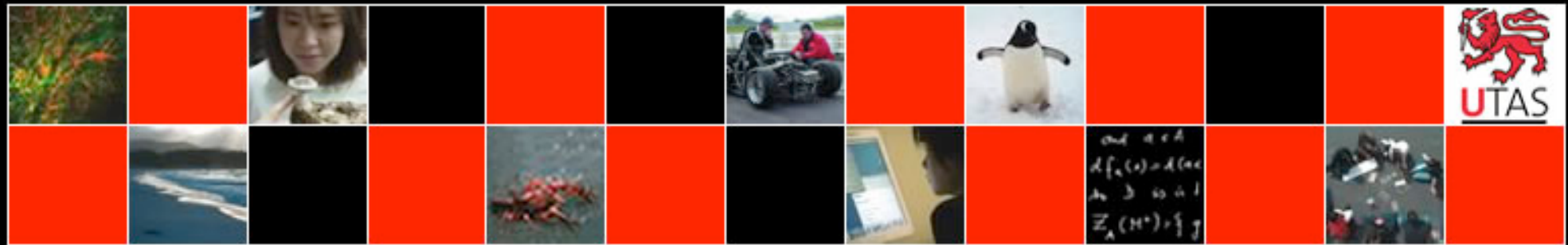
The story so far...

- In 2004 UTAS published the inaugural volume of the journal of undergraduate student work:
 - 15 articles, 18 authors, 15 disciplines, 11 degrees, 3 faculties
- Subsequent volumes published in 2005 & 2006.
- Plan to publish annually - volume 4 is in preparation.



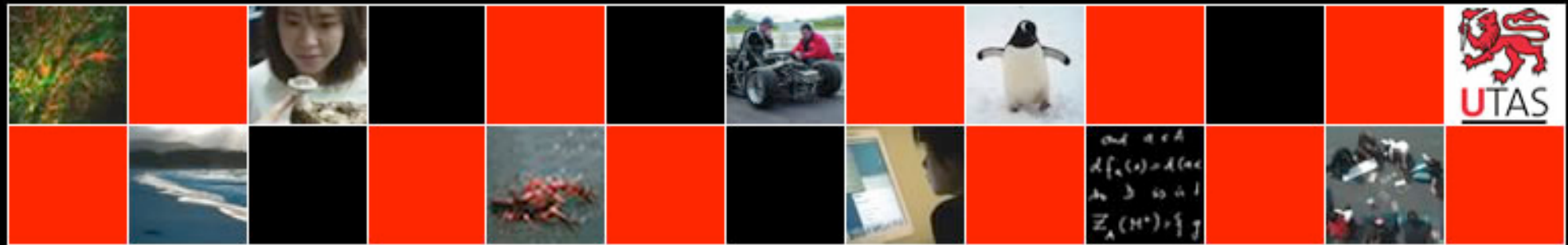
Purpose

- To incorporate research skills and activities into all undergraduate disciplines
- To illustrate the nexus between teaching and research to undergraduate students
- To better prepare students for a society requiring life-long learning skills
- To showcase the high-standard of work completed at UTAs



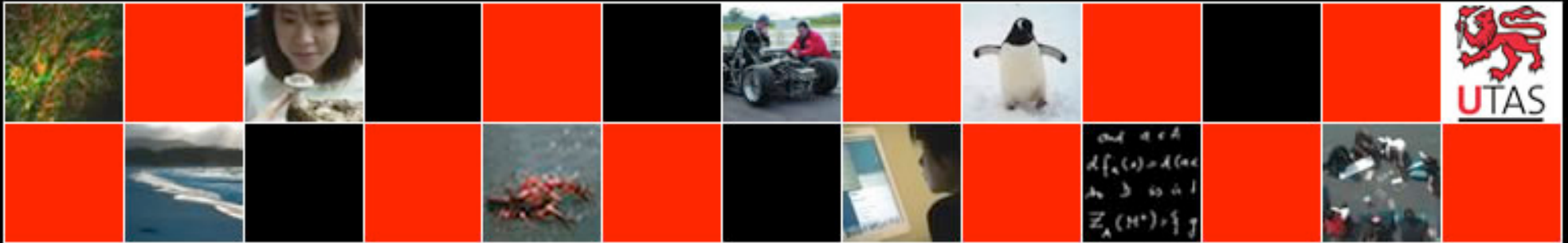
Aims

- To produce an attractive print- and web-published journal
- To establish procedures to make the journal sustainable



Budget

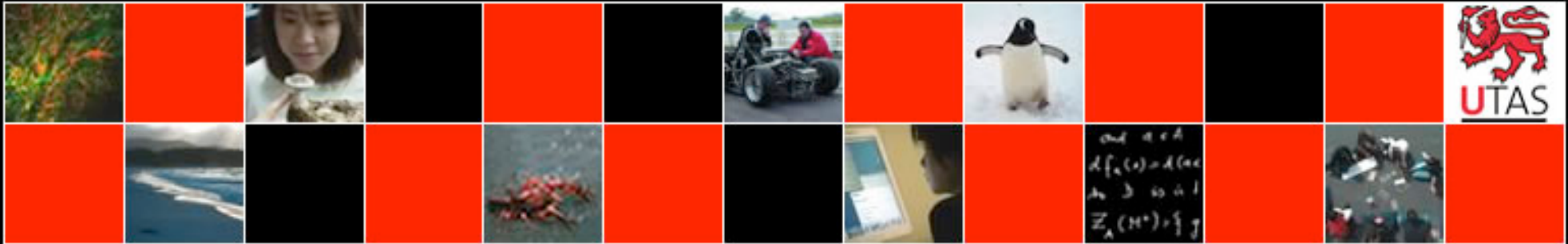
- \$15000 from PVCs' Strategic Fund
 - \$8000 for project management
 - \$2500 for graphic- and web-design
 - \$2500 for publishing
 - \$2000 for resource development and integration workshops



Involved Parties

- Students
- Mentors
- Editorial Committee
(Project Team)





Model

Nomination

Mentoring

Review

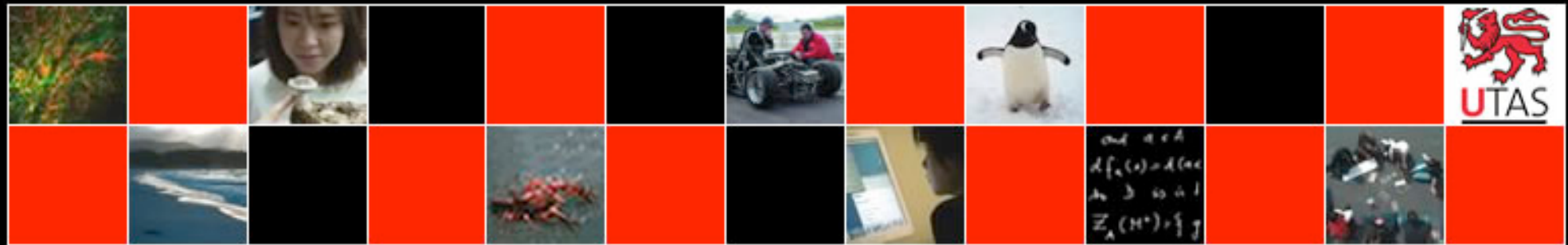
Acceptance

Publication



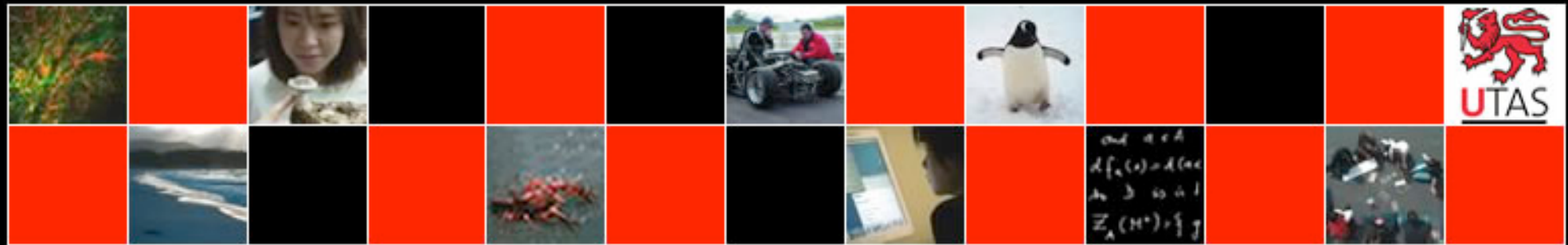
- Simplify Editorial Committee work
- Simplify Mentors' work
- Allow consistent approach
- Ensure quality assurance





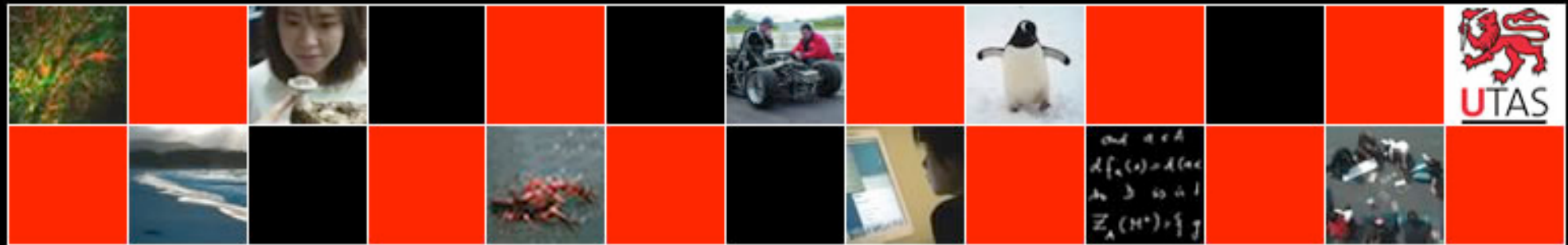
Manuscripts

- Manuscripts are submitted in three categories:
 - Research papers (1500-3000 words)
 - Review papers (1500-3000 words)
 - Short papers (500-1500 words)



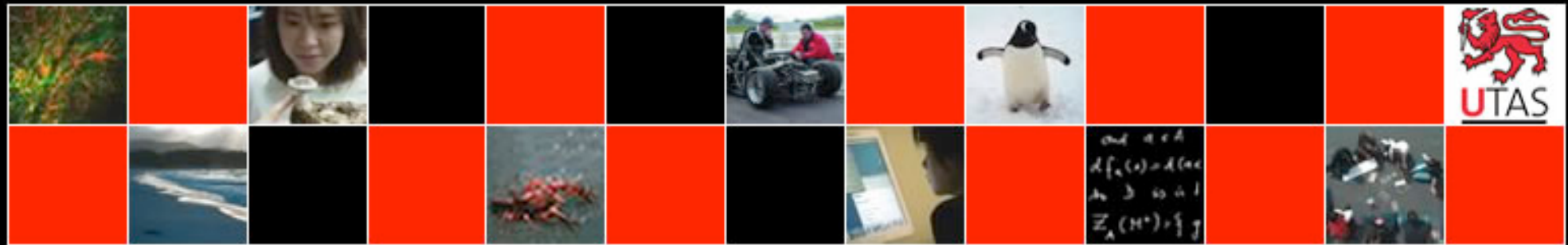
Issues (vol 1)

- Submission instructions
 - Absence of mark-up, length, structure, style, figures, nomenclature
- Different practices across disciplines
- Critical nature of mentors
- Student trepidation



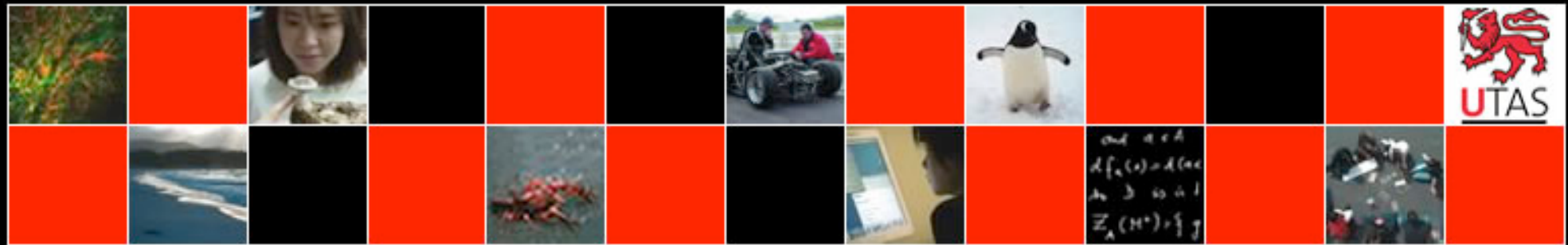
Issues (vol 1)

- Variation from assessed work
- Incorporation within units
- Informing and setting expectations



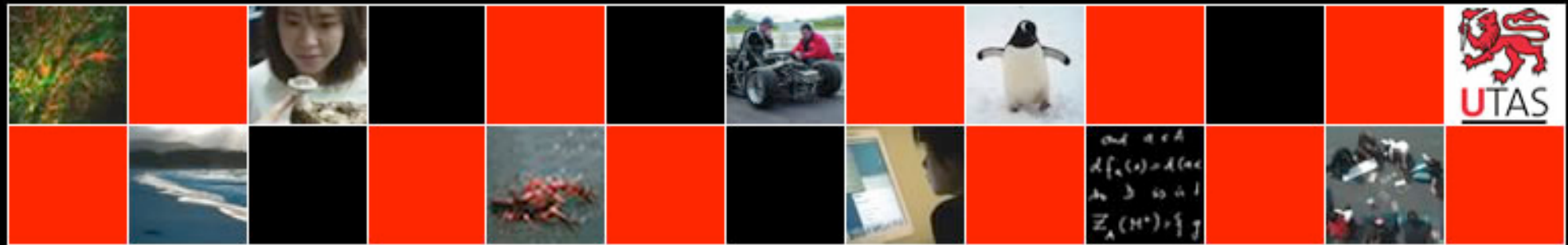
Successes

- Initial volume of the Journal produced on-time and under budget!
- Breadth of representation
- Large body of re-usable infrastructure and resources
- Enthusiasm of students and most mentors



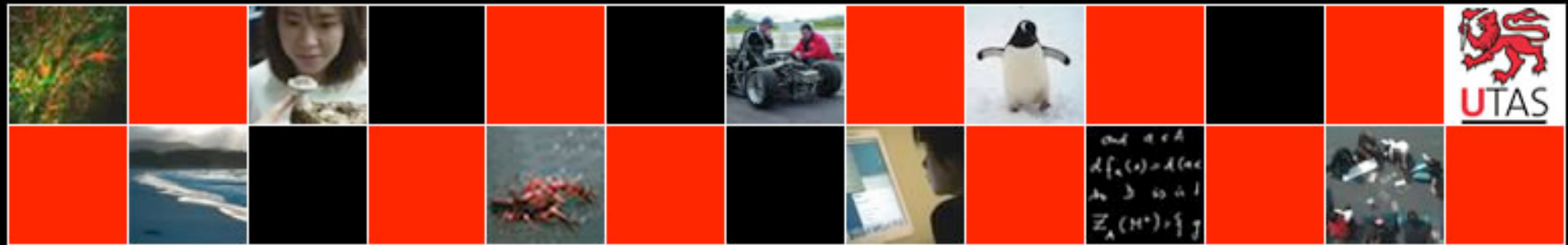
Challenges

- A 'commitment sheet' for mentors
- Discipline with (some) mentors and students regarding adherence



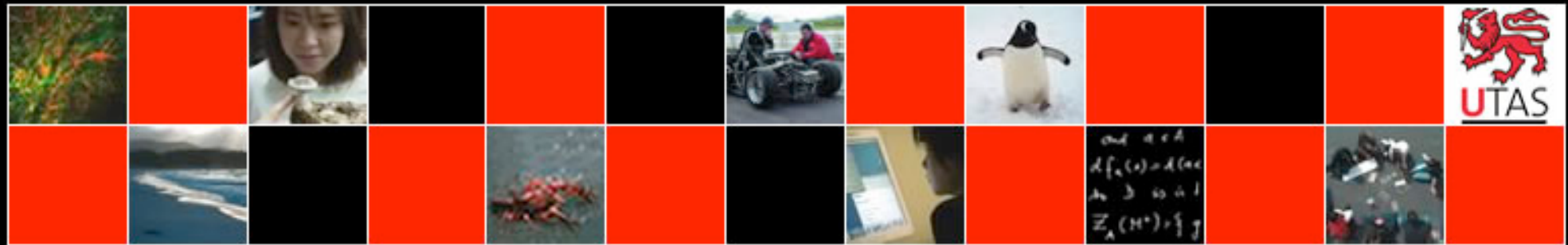
Improvements

- The provision of clear submission guidelines with template documents for pre- and post-mark-up.
- Incorporation of Nexus 'blurb' into all appropriate unit outlines



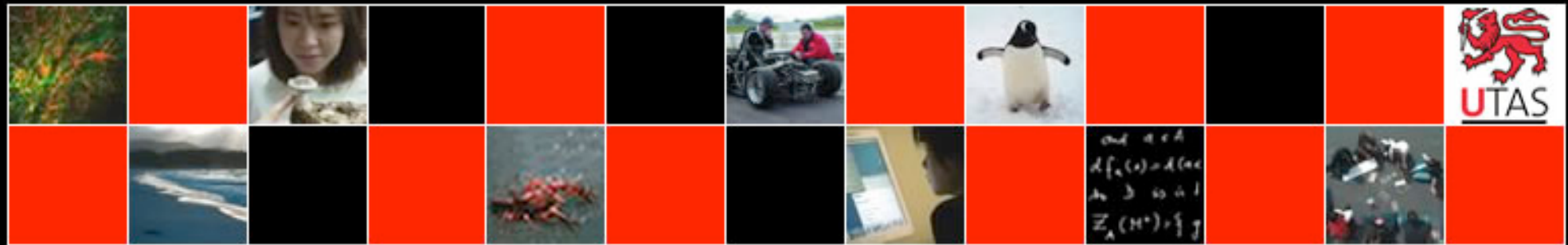
Improvements

- Some schools (e.g. School of Chemistry) now advertise the existence of the journal in all units and have adopted the journal's submission format for some student reports.



Outcomes

- Guidelines for the systematic production of undergraduate research reports (of great benefit to Research Project units)
- The Nexus paper may serve as forerunner to fully refereed external paper
- Counted towards scholarship application



Journal made possible by:

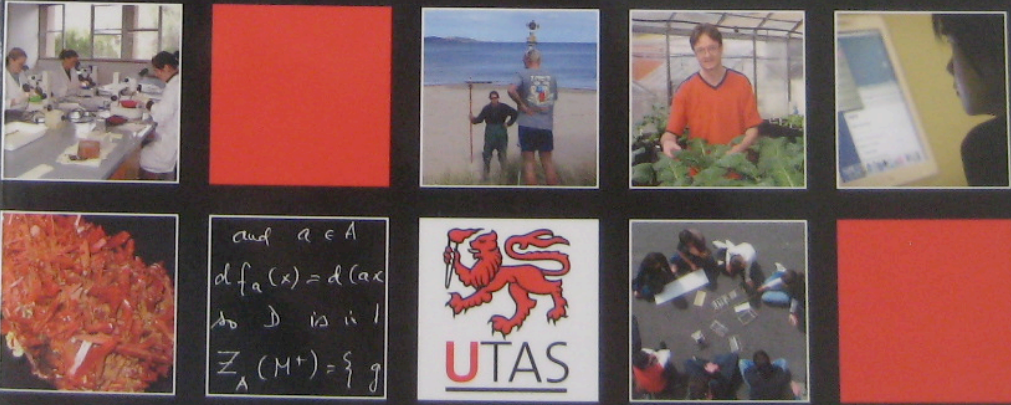
- Divisions of the Pro Vice-Chancellors
- Dean of Science, Engineering and Technology
- All students and mentors involved
- The Project Team





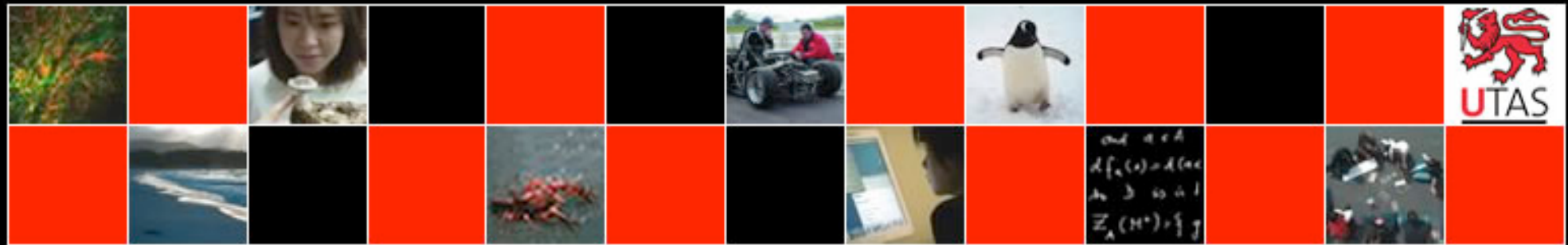
nexus

journal of undergraduate science engineering and technology
 volume 1 2004

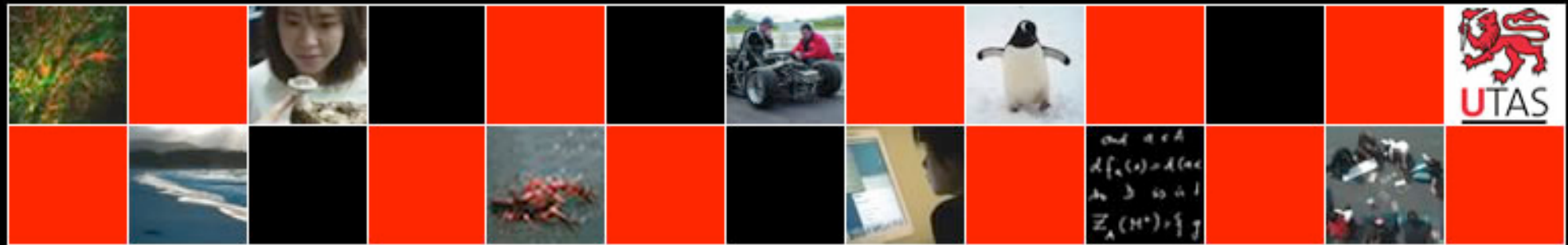


and $a \in A$
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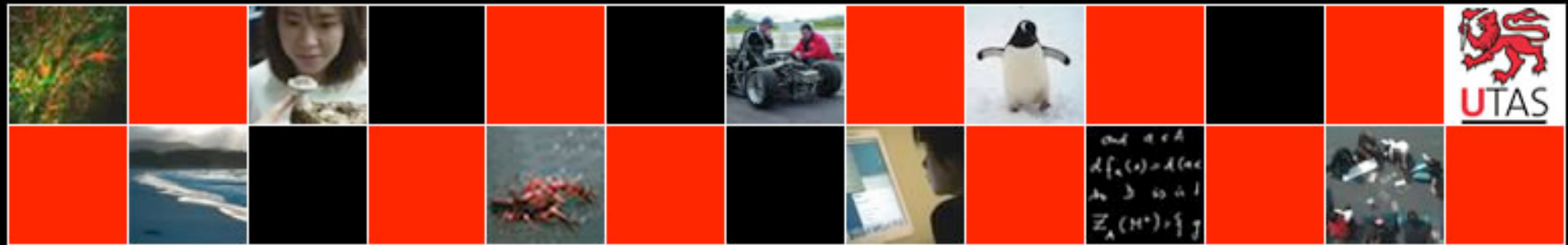




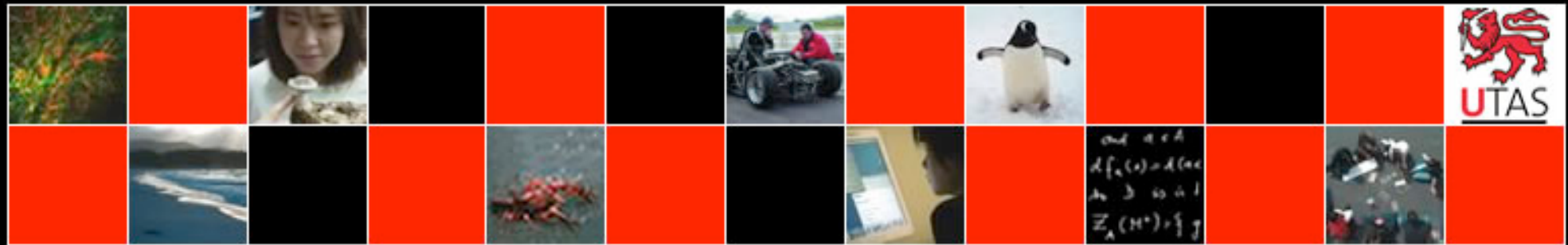
<http://www.utas.edu.au/scieng/nexus>



An author (left) with then Pro-Vice Chancellor Professor Sue Johnson and Dean Professor Jim Reid



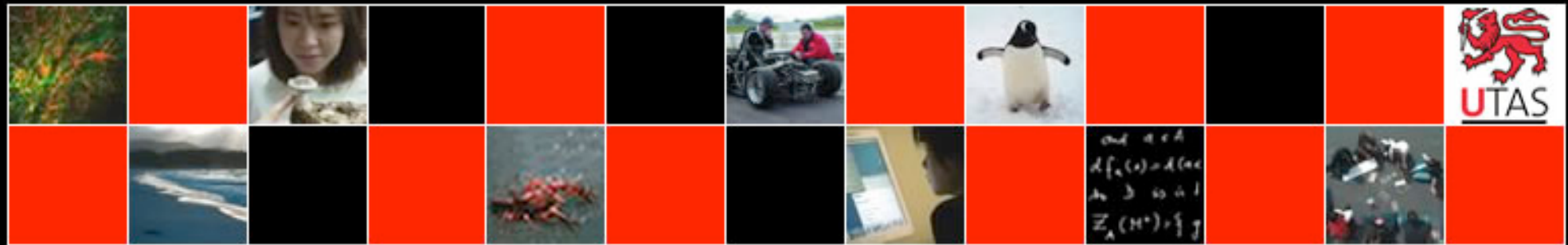
All authors and mentors from the launch of Volume 1



1. How the journal works

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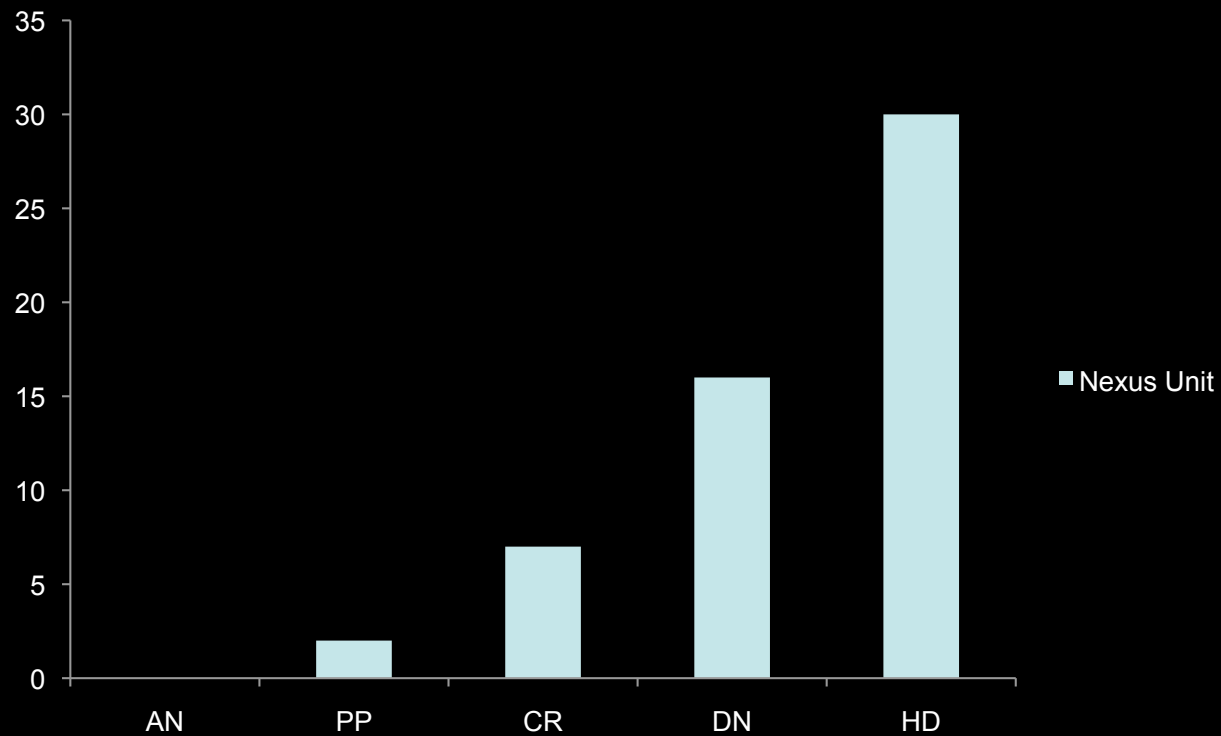


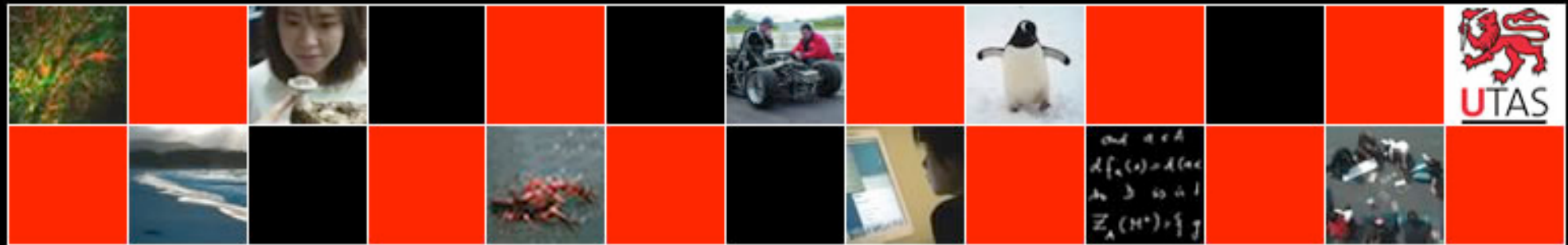
Grades vs *Nexus* participation

55 authors in total

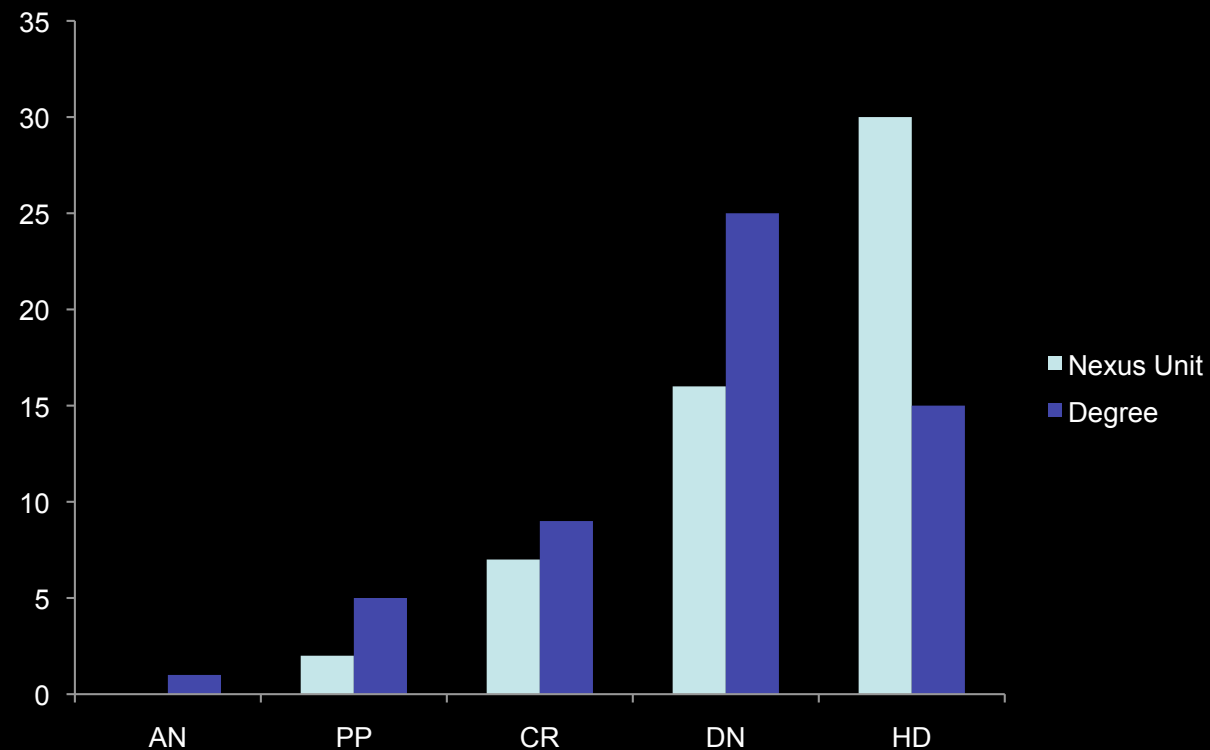


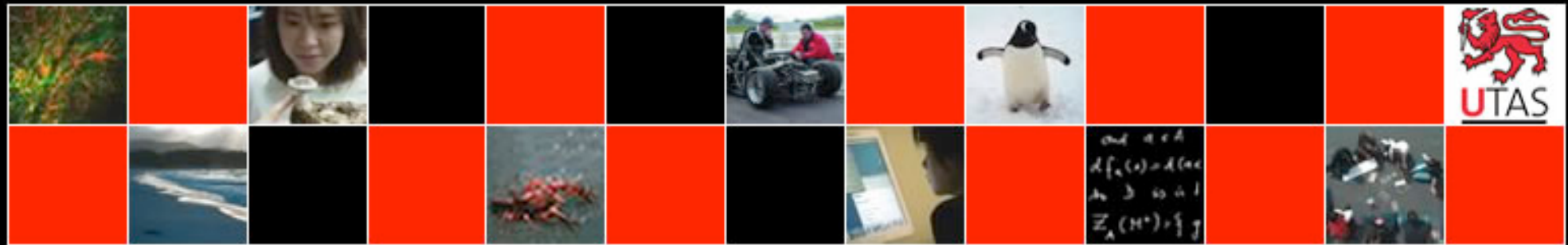
Grades vs *Nexus* participation





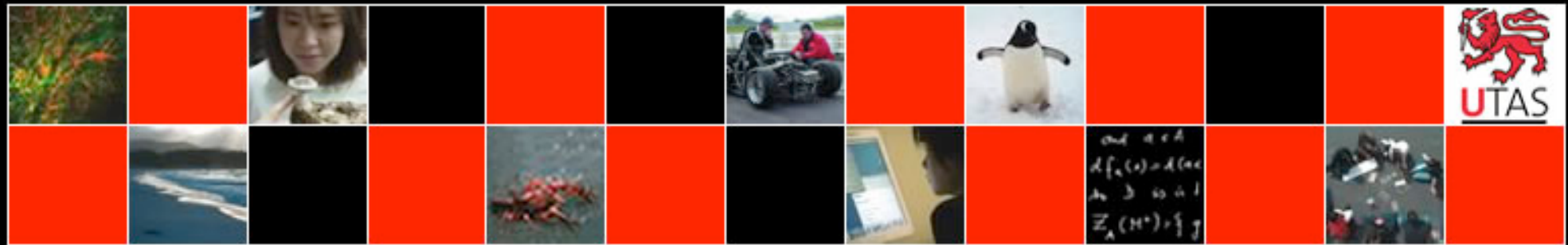
Grades vs *Nexus* participation



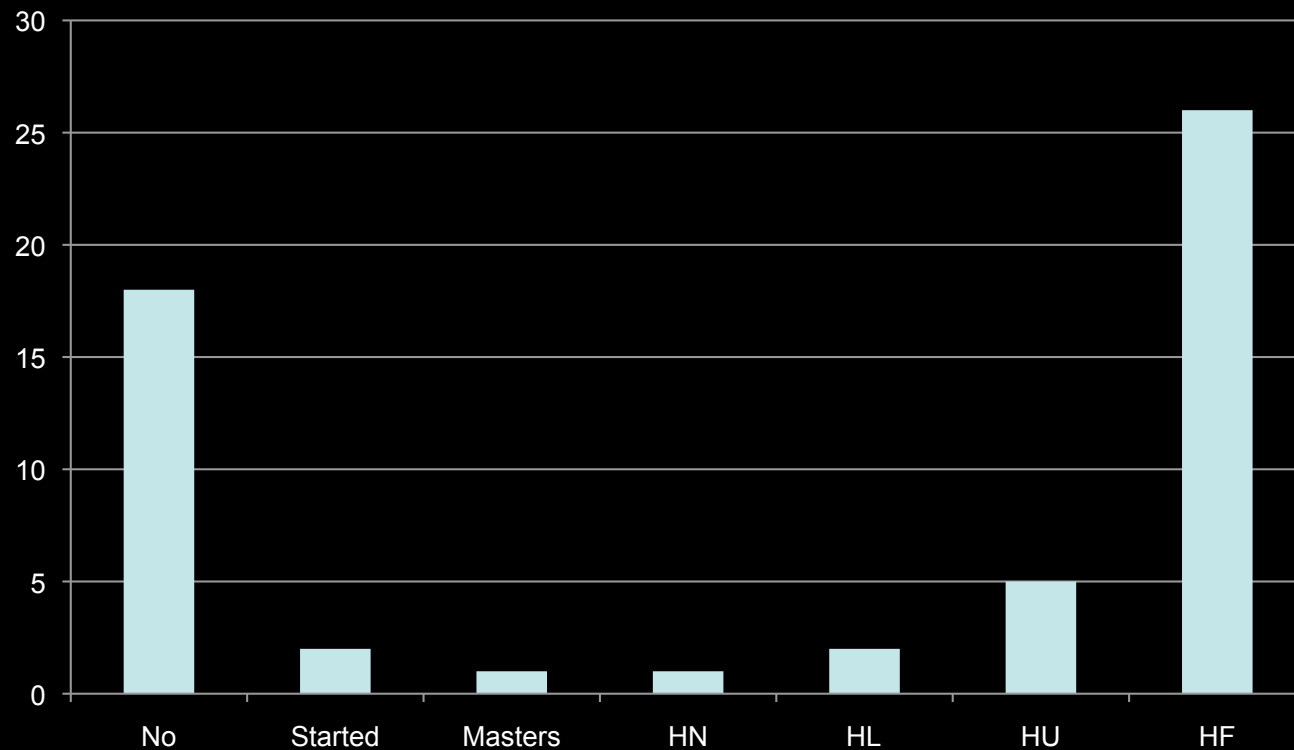


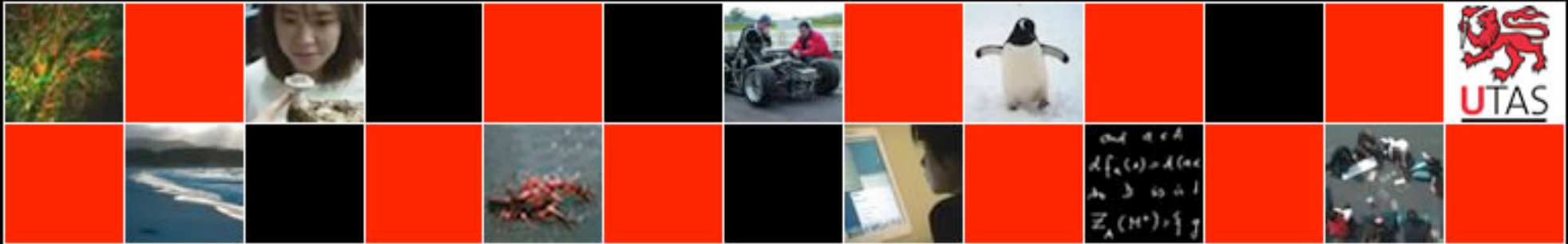
Degree major vs *Nexus* discipline

- With the exception of only two authors, the discipline of the *Nexus* paper matched the discipline of the degree major.
- Chemistry paper -> Biochemistry major
Geography paper -> Plant Science major

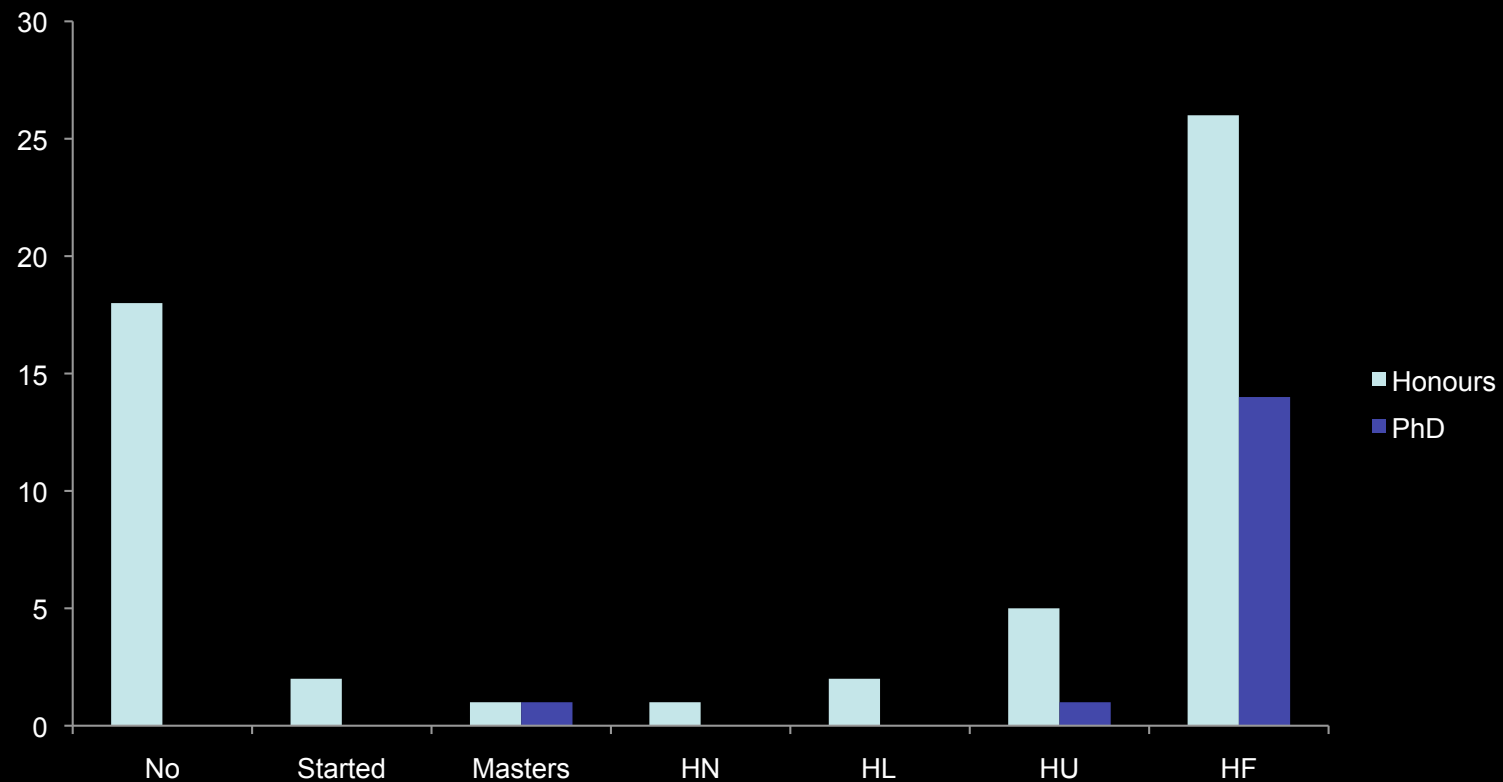


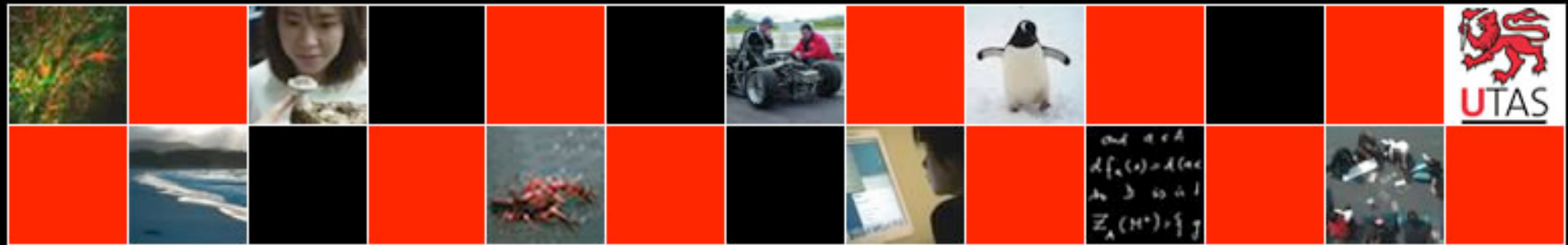
Honours vs *Nexus* participation





PhD vs *Nexus* participation



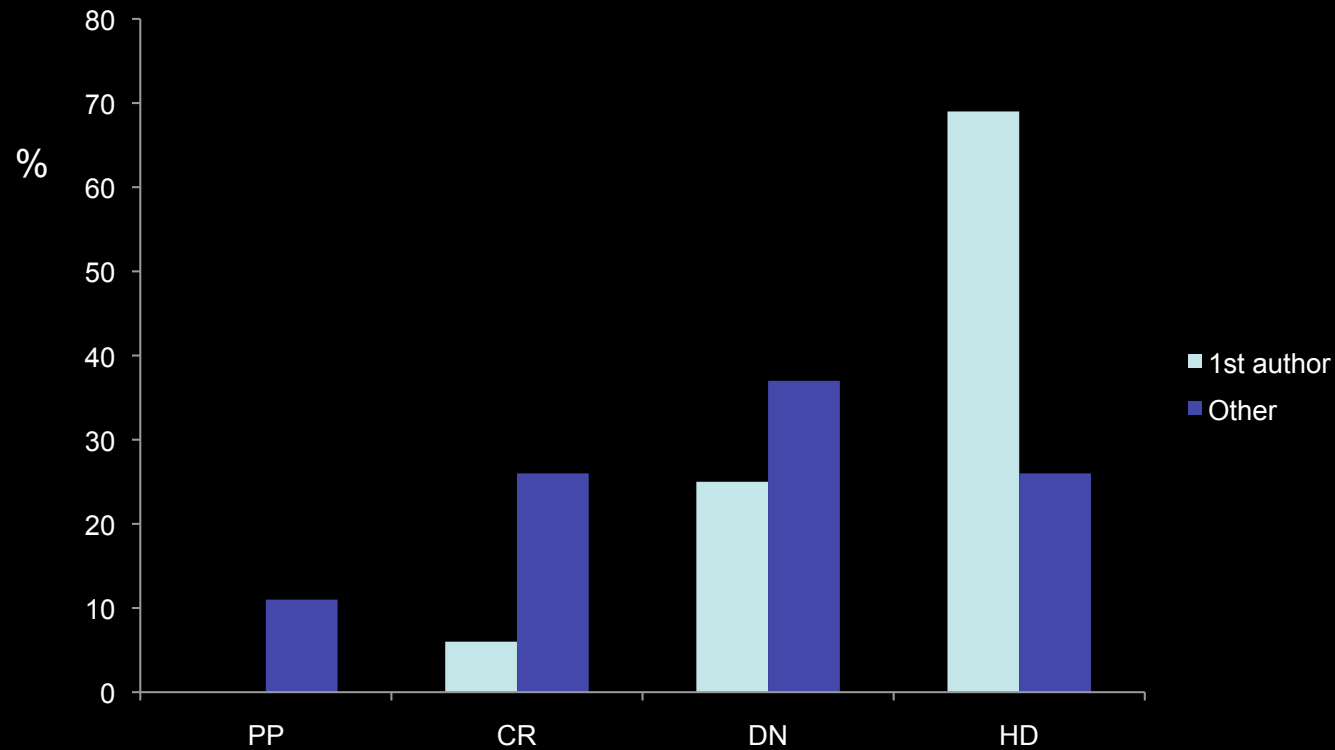


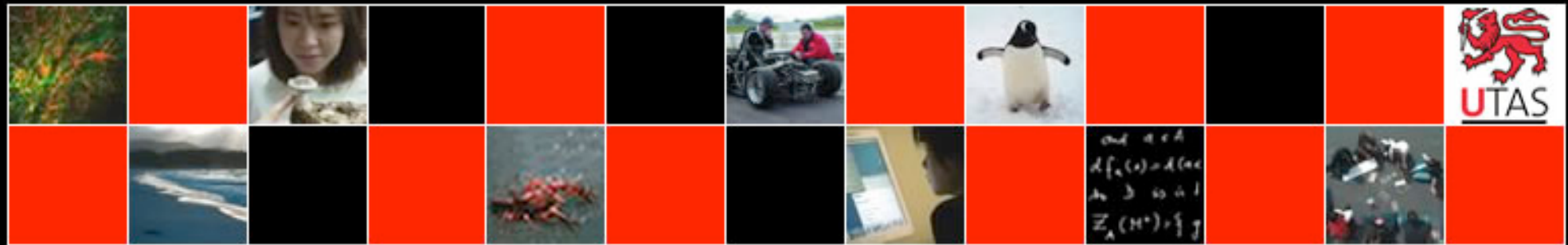
Type of manuscript

- 38 authors of research papers
12 authors of review papers
5 authors of short papers
- No correlation with grades or performance

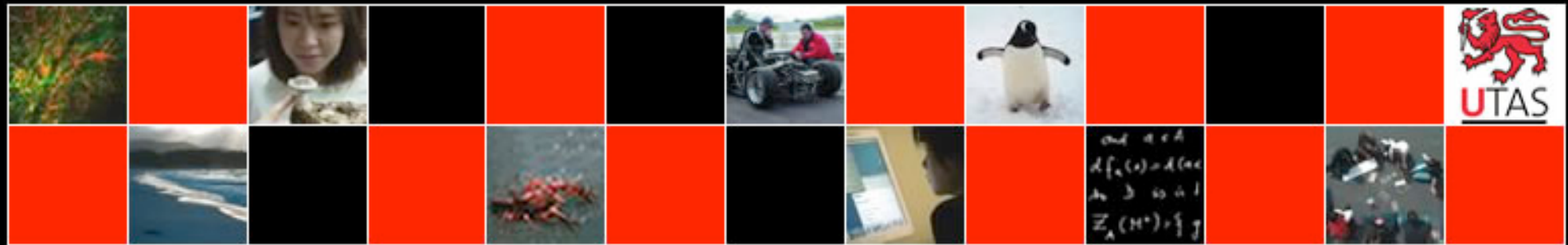


Grades vs 1st authorship



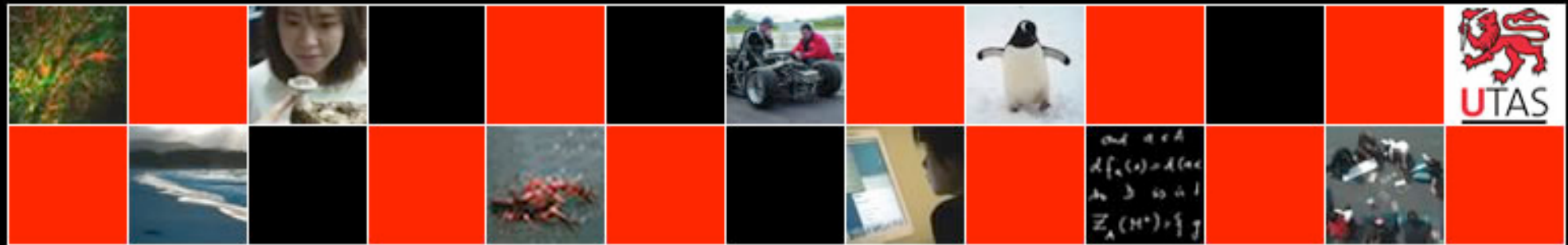


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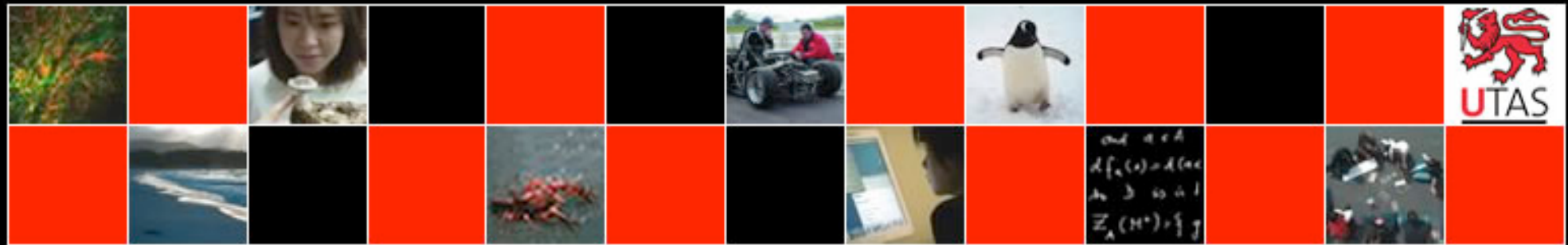
Student comments from 2004-2005

- “Extremely excited”
- “I felt very proud to be recognised for my efforts”
- “Over the moon excited”
- “Proud that my assignment was considered of high enough calibre”



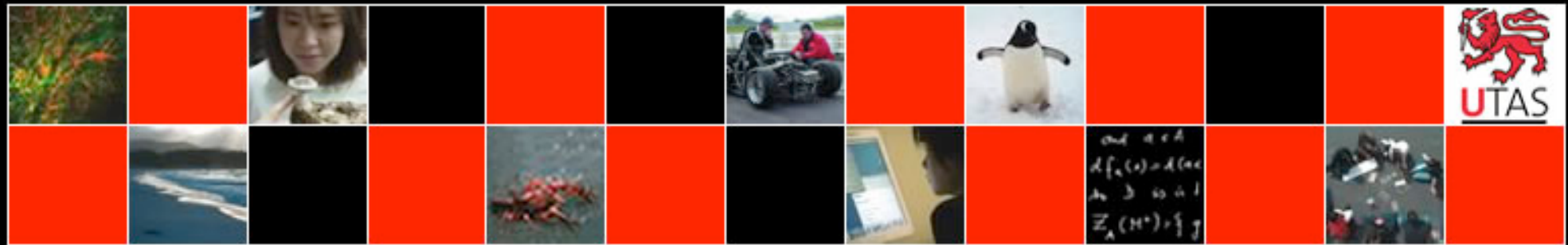
Student comments from 2004-2005

- “I developed some valuable research skills”
- “It will impress future employers — they will know I can write and present reports well”
- “It’s a great thing to have on my CV”
- “May be of benefit in any postgraduate studies I complete in the future”



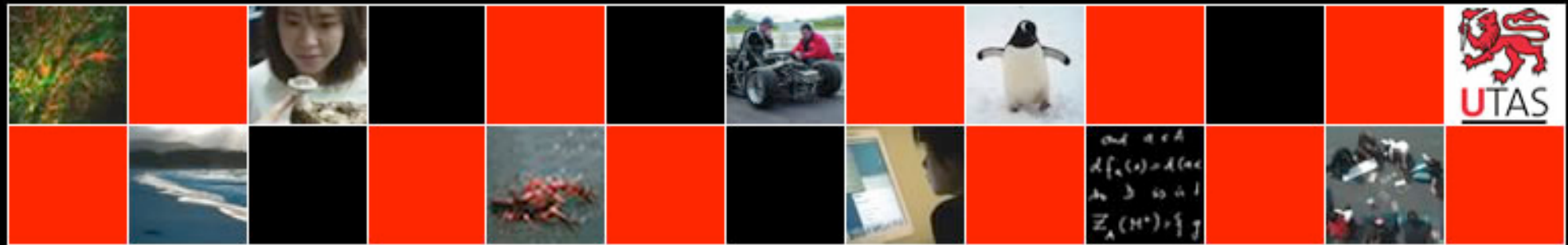
Student comments from 2009

- The benefit of writing a paper for Nexus was that "it looks good having publications on your resume"
- "It improved my scientific writing skills, in particular the skills of refining a paper and culling extraneous information. It also gave me an important addition to my CV for finding a job."



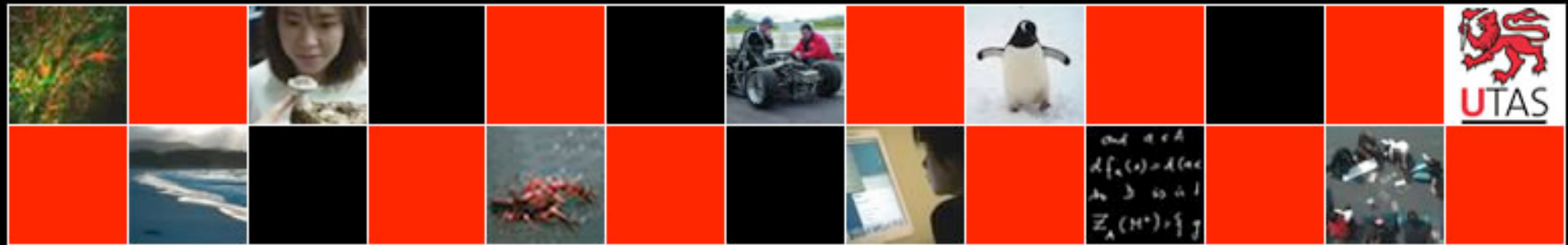
Student comments from 2009

- "It was a good experience that helped me get more of a grasp on the practical aspect of research and it's role. It was great for teamwork and literature review skills and provided a good launching pad for writing more papers as I'm trying to do now!"



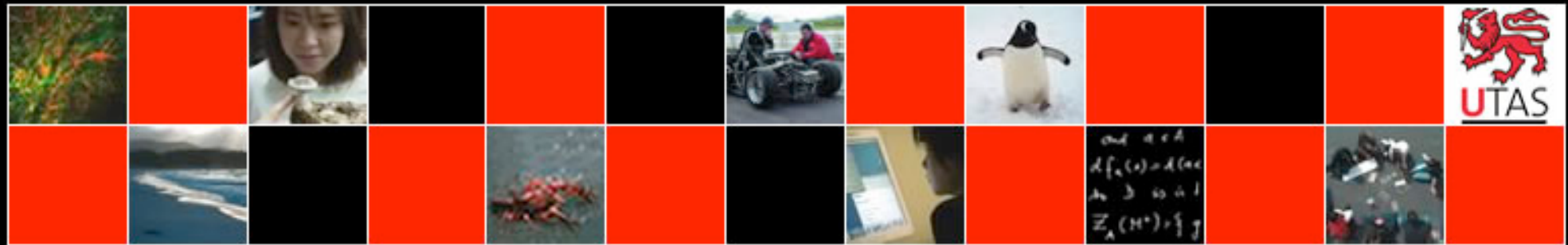
Student comments from 2009

- "The only negative aspect I can think of is the public image of the Nexus journal - it seems most students (and even some academics in other schools) at the time didn't know of it's existence! I also tried to get hold of a couple of extra copies of the journal but was told this wasn't possible, which I found a little disappointing."



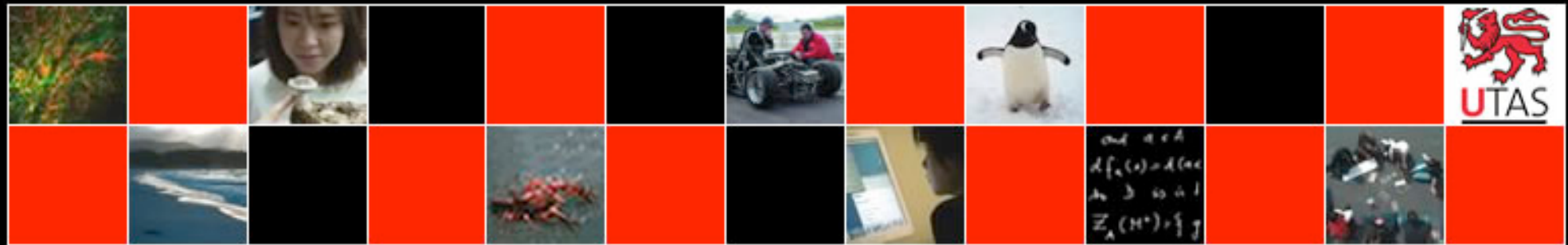
Student comments from 2009

- "I continued onto Honours where preparing a scientific paper was part of our Thesis submission, so the Nexus experience definitely helped in that regard. Another benefit was simply having a piece of work officially written with our names attached as the authors, great for our confidence and something to be proud of! Getting an actual hard copy of the journal was great too!"



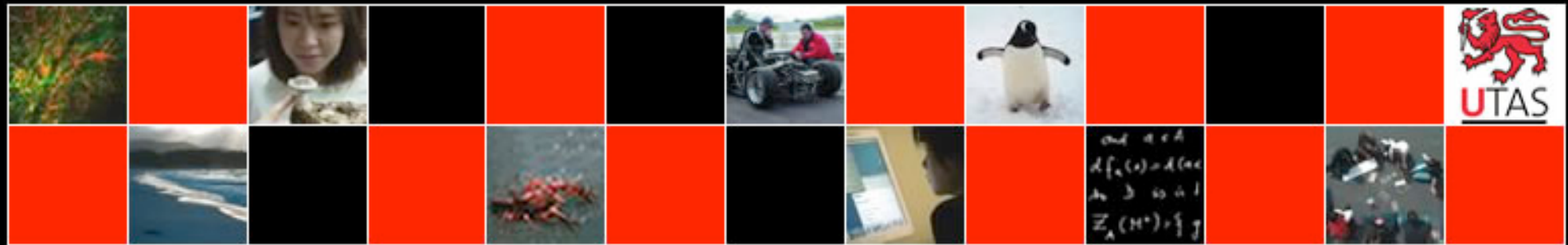
Student comments from 2009

- "Time spent with supervisor, in a focussed academic setting, learning from his personal experience. In particular techniques on writing a paper."
- "Learning to organise and work with my peers to produce a paper."



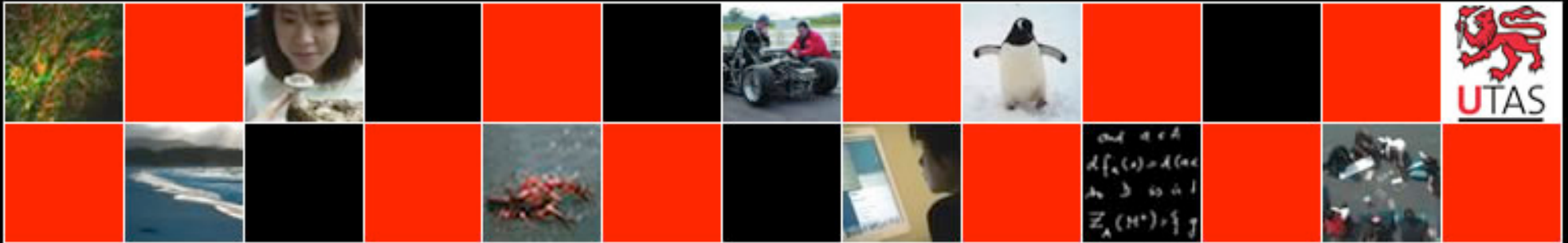
Student comments from 2009

- "Learning to produce a more academically geared paper, condensing information and getting to the point, put simply re-teaching me to write."
- "Credibility of minor publication."
- "Training for honours."



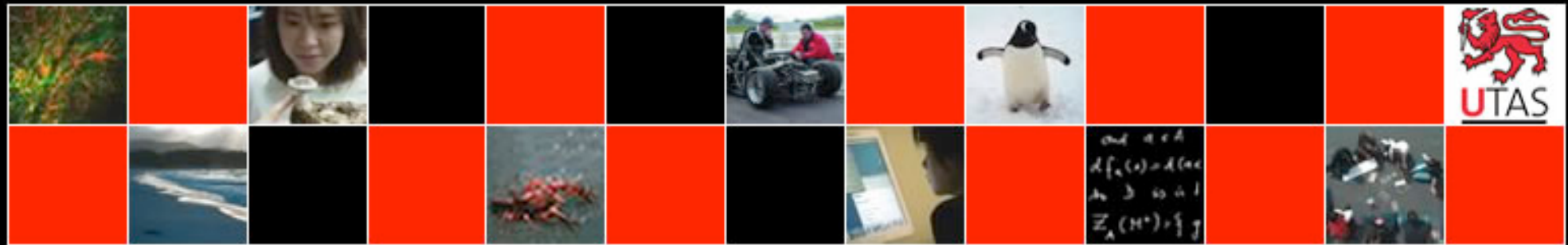
Student comments from 2009

- "Preparing the paper for Nexus did help me with understanding more about meeting the submission requirements of a journal. This probably helped me academically for my honours, which required an article to be written in the format required for a scientific journal."
- "I think publication in a journal is a great thing for a student to have on their resume."



Student comments from 2009

- "I had a positive experience writing a research paper for Nexus and would do it again if I had a similar opportunity"



1. How the journal works
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Questions



Ask Sue Jones!

<http://www.utas.edu.au/scieng/nexus>