

Expectations of transitioning through second year science undergraduate programs

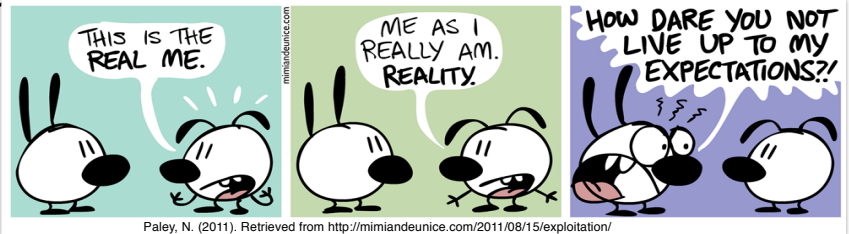
M. Sarah-Jane Gregory^a, Christopher Klopper^b, Wendy A. Loughlin^a

^aSchool of Natural Sciences, Griffith University, QLD, AUSTRALIA

^bArts, Education & Law Group, Griffith University, QLD, AUSTRALIA

The Context

To date there has been limited exploration of Australian undergraduate transitional experience through (as opposed to into and out of) degree programs. Recently, literary recommendations (Casper *et al.*, 2011; Gregory *et al.*, 2013; Heier, 2012; Loughlin *et al.*, 2013; Milsom *et al.*, 2014) have been to establish cohort and institutionally relevant data for the second year student experience. This will enable the development of appropriate, holistic transition strategies for improved student experience through undergraduate degree programs (Tetley *et al.*, 2010). In addition, understanding student expectations then allows for subsequent contextualised interpretation of lived experiences during progression through programs. The misalignment of second year student expectations has been an area of concern raised internationally as contributing to poor student experiences such as the 'sophomore slump.' (Heier, 2012; Willcoxson *et al.*, 2011).



Paley, N. (2011). Retrieved from <http://mimiandunice.com/2011/08/15/exploitation/>

Aims

- Developing our understanding of the second year experience of science undergraduate study.
- Establishing science student expectations associated with the lived experiences of these students.
- Identify emergent themes that students associate with their expectations of this year.

Methodology

Participants:

- Students enrolled in their first Bachelor's program of study who had progressed to their second year of academic work regardless of where their first year was completed. Students had successfully completed between 60-120CP or equivalent of an expected 240-360CP of program-related coursework.
- Students enrolled in bachelor degrees in the areas of Science, Biomedical Science, Medical Science and Forensic Science.

Data Collection:

- Students completed an anonymous online survey within 3 weeks of census Semester/Trimester 1 in 2015, 2016 and 2017.
- The survey comprised of Likert and open response questions. N= 30-40 representing 12-18% cohort response rates.
- Analysis included quantitative summation of Likert data and thematic analysis using NVivo11.

This project received Griffith University Human Ethics Approval EDN/B3/14/HREC.

Emergent Themes

Highlights from the thematic analysis of open response questions indicated that the second year science students in this study identified that:

- Second year experience overall may be relatively more difficult than first year.
- Self directed learning increases. "...more difficult than first year"

Whilst these findings are similar to international cohorts, our students differed in that they:

- They articulated an understanding of an expected elevation in program workload with regards to content quantity and difficulty.

"...I expect it to be a higher workload"

"I expect content/course work increase in difficulty"

"...harder, more stressful, more challenging"

- Had many competing demands for their time that they expected to be difficult to balance, including concurrent working requirements.

- In this specific study, the majority of science students primarily lived at home with their family.

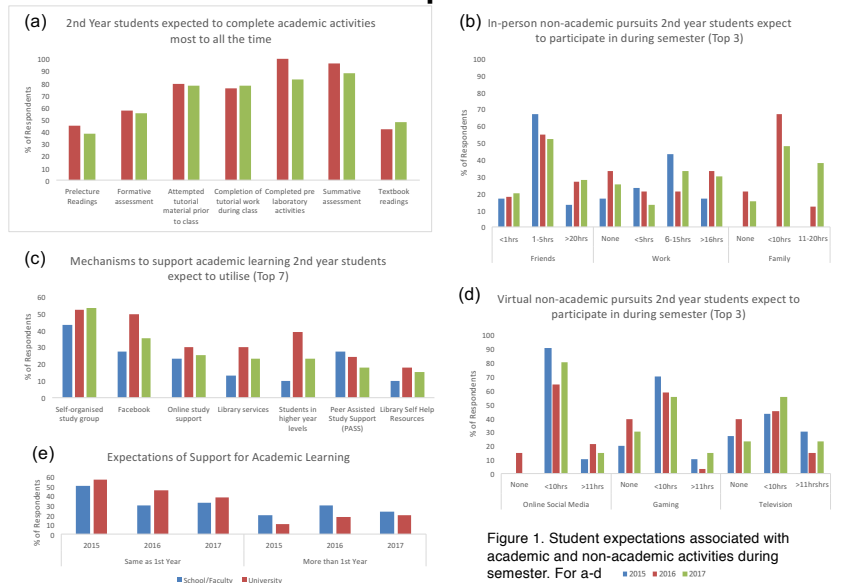
"I've hear it's the 'crucible year'"

However, some students held unrealistic expectations regarding the amount and type of academic work required of them and the level of personalised support the university would be provisioning.

Future Considerations

- Some comparisons to international cohorts can be drawn but there is a need to be contextualisation of the research findings of this study.
- Student expectations may be misaligned to a university culture of learning and are likely to impact the nature of student experiences, therefore transparency and clear articulation of these may assist in enhancing the student experience.

Student Expectations



Key Expectations

- A concerning proportion of students do not expect to undertake academic learning activities including some who do not intend to complete summative assessment (Fig. 1a).
- Mechanisms students expect to access to support their learning is diverse: both in person and online, personally sourced and university supplied opportunities (Fig. 1c).
- Students are expecting to access university provided learning support services not provided for 2nd year students (eg Peer Assisted Study Sessions; PASS) (Fig. 1c).
- A large proportion of student time is anticipated to be spent on virtual non-academic pursuits (Fig. 1d).
- A large proportion of students are disconnected from support networks of family and friends (Fig. 1b. and 1c).
- The majority of students undertake work whilst studying (Fig. 1c).
- A subset of the students in this study expected at least the equivalent of learning support provision from the university than they received in first year if not more (Fig. 1e).

References

- Casper, J. J., Khoury, A. J., Lashbaugh, K. D., & Ruesch, A. M. (2011). *The Sophomore Year Experience Final Report to Dr. Laura Coffin Koch, Associate Vice Provost for Undergraduate Education*. Retrieved from <http://www.secondyear.umn.edu/files/The%20Sophomore%20Year%20Experience%20Final%20Report%20June%202011.pdf>
- Gregory, M. S., Loughlin, W., Harrison, G., Lodge, J., McDonnell, P. A., West, J., McBurnie, J., & King, S. (2013). Australian students transitioning through the "lost year" of higher education. In *Proceedings of The Australian Conference on Science and Mathematics Education (formerly UniServe Conference): Students in Transition – The Learners' Journey* (pp.77) Canberra, Australia: Australian National University. Retrieved from <https://openjournals.library.sydney.edu.au/index.php/ISME/article/view/7038>
- Heier, M. (2012). *Understanding the sophomore year experience*. Retrieved from http://depts.washington.edu/stdntlfe/wpcontent/uploads/2012/02/SYE_SummaryReport_FINAL_12.18.12.pdf
- Loughlin, W., Gregory, S.-J., Harrison, G., & Lodge, J. (2013). Beyond the First Year Experience in Science: Identifying the Need for a Supportive Learning and Teaching Environment for Second Year Science Students. *International Journal of Innovation in Science and Mathematics Education (formerly UniServe Conference)*, 21(4), 13. Retrieved from <https://openjournals.library.sydney.edu.au/index.php/CAJ/index>
- Milsom, C., Stewart, M., Yorke, M., & Zaitseva, E. (2014). *Stepping up to the second year at university: academic, psychological and social dimensions*. London, UK: Routledge.
- Tetley, J., Tabolowsky, B. F., & Chan, E. K. (2010). Designing and implementing new initiatives for sophomores. In *Helping sophomores succeed: understanding and improving the second year experience* (1st ed pp. 217-233). San Francisco, Columbia, SC: Jossey-Bass.
- Willcoxson, L., Cotter, J., & Joy, S. (2011). Beyond the first-year experience: the impact on attrition of student experiences throughout undergraduate degree studies in six diverse universities. *Studies in Higher Education*, 36(3), 331. <http://dx.doi.org/10.1080/03075070903581533>