

Communicating academic library impact through visualisation

Masami Yamaguchi

Librarian

Debi Howarth

Library Services Manager (Arts, Education and Law)



About Griffith University

Griffith at a glance



Ranked in the top 3% of universities globally



50,000 students



5 campuses



200 degrees



200,000 alumni across 130 nationalities



38 research centres and institutes



Rated 5 stars for graduate employability



4,000 staff

About us

- Debi Howarth Library Services Manager (Arts, Education & Law)
- Masami Yamaguchi (Librarian in Sciences)

Outline

- The importance of libraries
- Visualising impact of our work
- Case Study 1
- Case Study 2
- Case Study 3
- Discussion / Outcome
- Conclusion and what's next

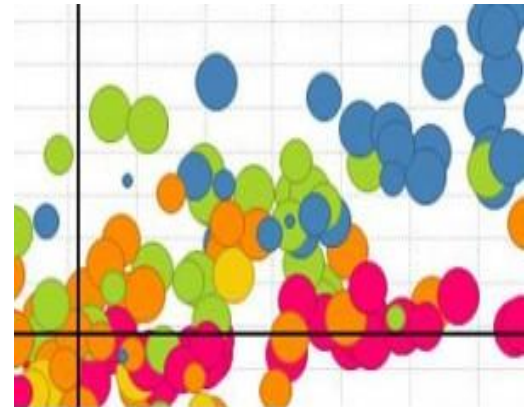
Introduction

The higher education environment changes have prompted academic libraries to demonstrate evidence of their value and impact to stakeholders.



Introduction

- Demonstrating our impact and values to student success and possibly retention
- Visualising data is an effective way to deliver important messages



Responding

- 2014-2015 - collected a variety of client feedback data
- Visualised - clients' perception of library value
- Principles of visualising reflected in case studies

Impact and value of the academic library

- The *heart* of the university (Leupp, 1924)
- Contributes to student success & retention
(Brown & Malenfant, 2016; Oakleaf, 2010; Soria, Fransent, & Nackerud, 2013)
- Can be a transformational experience in the lives of its clients (Kuh & Gonyea, 2003)
- GU Library & Learning Services (LLS);
awareness raising; influence decision making
through collection of comprehensive and
strong evidence

A picture paints a thousand words



“
Analysis of the data suggests first-time, first-year undergraduate students who use the library have a higher GPA for their first semester and higher retention from (1st to 2nd semester) than non-library users.”

— Krista, S., Fransen, J., & Nackerud, S. (2013).
Library use and undergraduate student outcomes:
new evidence for students' retention and academic
success. *Libraries and the Academy*, 13(2), 147–64.

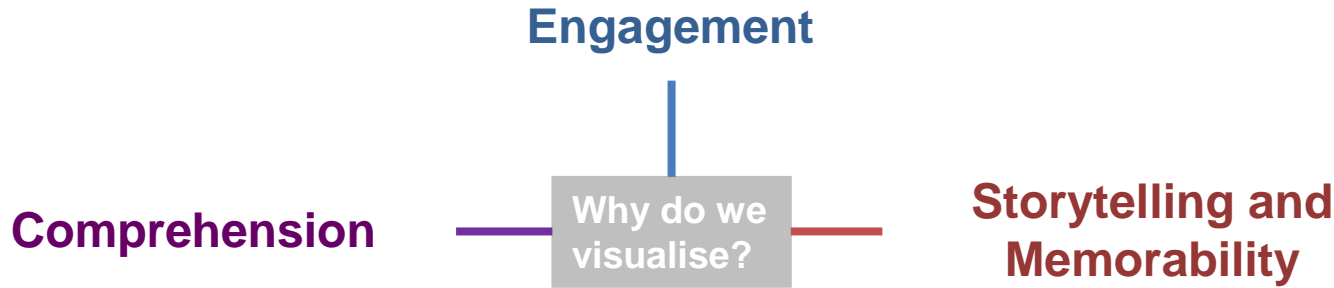
- Numbers, and masses of qualitative text, “...*have no way of speaking for themselves. We speak for them. We imbue them with meaning.*” (Silver, 2012, p. 9)
- Visuals promote engagement with large data sets (Ware, 2004) and enhance ability to grapple with number complexity (Few, 2009)
- Can contribute to decision making only if data is skilfully selected and analysed

Choosing data to represent impact

- Effect and influence.....need to understand data *choice* & design principles (Brown & Malenfant, 2016; Dunlap & Lowenthal, in press)
- Process is complex
- Account for limitations e.g. causality (Azzam, Evergreen, Germuth, and Kistler, 2013)



Information visualisation



Information visualisation

Visualized information acts as a 'hook' drawing the viewers' attention

Engagement

Why do we visualise?

Visualised data engages viewers more effectively than numbers

Comparisons will engage the individuals / a community in a more effective way

Lead to action, behavioural change

Hullman, J., & Diakopoulos, N. (2011). Visualization rhetoric: Framing effects in narrative visualization. *IEEE transactions on visualization and computer graphics*, 17(12).

Smith, A. (2013). Data visualization and beyond: A multi-disciplinary approach to promote user engagement with official statistics. *Statistical Journal of the IAOS*, 29. doi:10.3233/SJI-130783

Arcia, A., Suero-Tejeda, N., Bales, M. E., Merrill, J. A., Yoon, S., Woollen, J., & Bakken, S. (2016). Sometimes more is more: iterative participatory design of infographics for engagement of community members with varying levels of health literacy. *Journal of the American Medical Informatics Association*, 23(1), 174-183. doi:10.1093/jamia/ocv079

Information visualisation

Visualised data
enhance memorability
through connecting
facts with stories

Visual stories are easy to
remember and
compelling

Why do we
visualise?

—
Storytelling and
Memorability

Strong engagement

Information visualisation

“Help the viewer gain insight from the data”

Comprehension

Why do we visualise?

Allows complex ideas to be communicated with “clarity, precision and efficiency”

Comprehend large data sets in a short period of time

Potential to contribute to good decision making

Methodology



- Assessing impact, clarifying client expectation, visualising information - influence service improvement
- Utilised exploratory research and case study
- Collection was via a short feedback survey; provided scope for the respondent to rate services, including workshop instruction (quantitative), and to write short response answers (qualitative)
- Thematic analysis applied to improvement processes (Braun & Clarke, 2006)



LOVE**MY**LIBRARY



The use of digital resources provided by the library shows a positive impact on student learning. There is a positive relationship between grade point average (GPA) and access to e-resources.”

– Kelly, N., Montenegro, M., Gongalez, C., Jara, M., Saurina, E., and Cano, F. (2014).

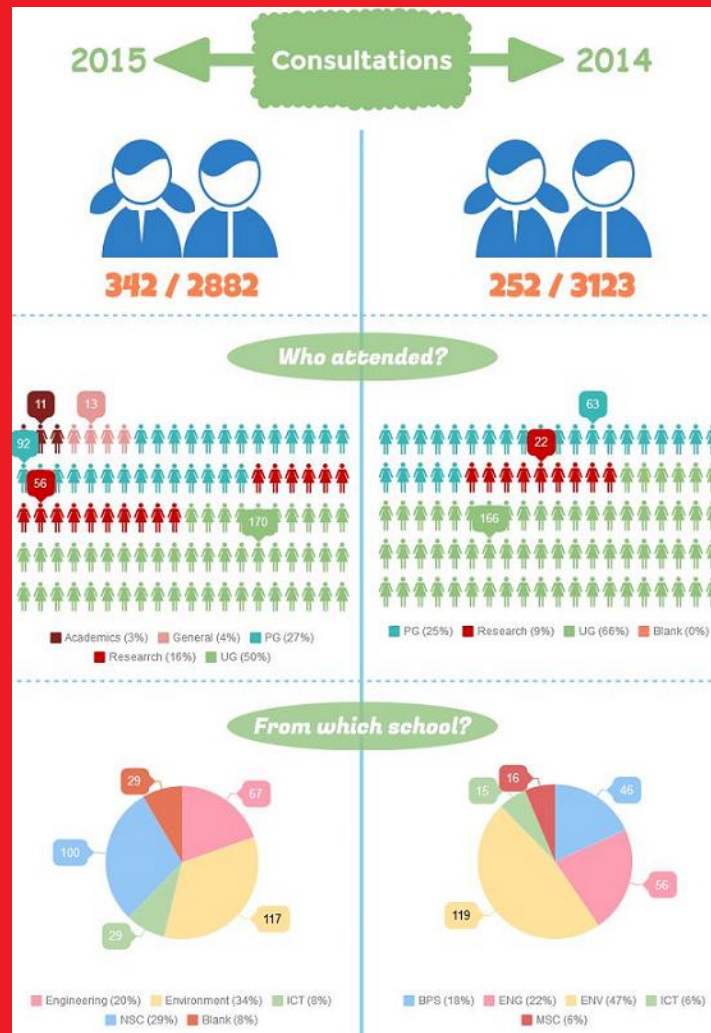
Case
Study 1

Visuals

- Included posters, carry bags, postcards, coasters, and booklets
- narrative structure - authentic student voice (quotations)
- Individualisation increases engagement when the data has meaning for the viewer (Hullman & Diakopoulos, 2011)

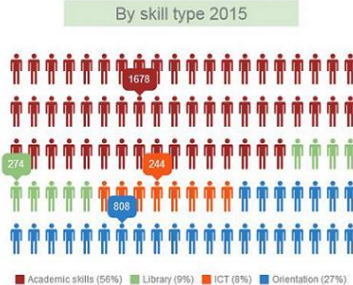
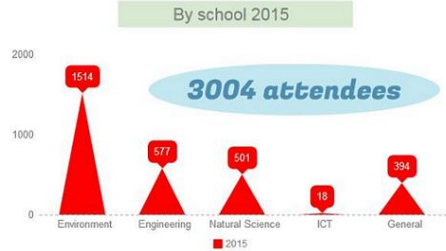


Case Study 2



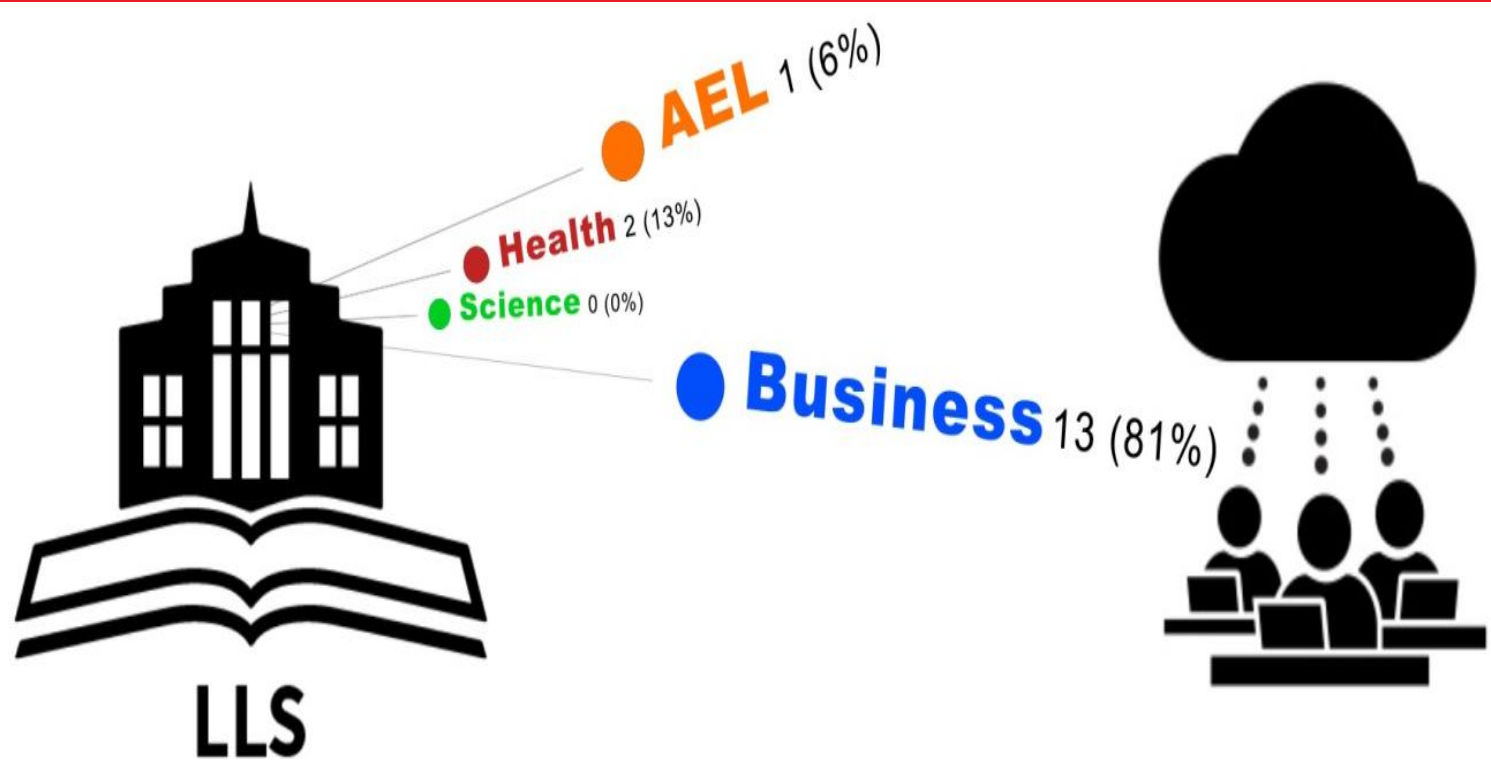
Case Study 2

Workshops



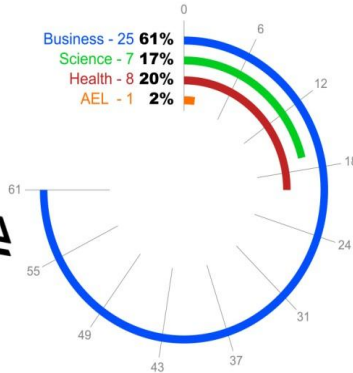
- Presenting the engagement of LLS with students in Griffith Sciences included:
 - Workshop and consultation attendance in Semester 1, 2014 and Semester 1, 2015.
 - Participants' information (affiliations, academic schools, LLS services and skill types accessed)

Case Study 3



Case Study 3

Individual Sessions (LLS)
2013 Postgraduate cohort

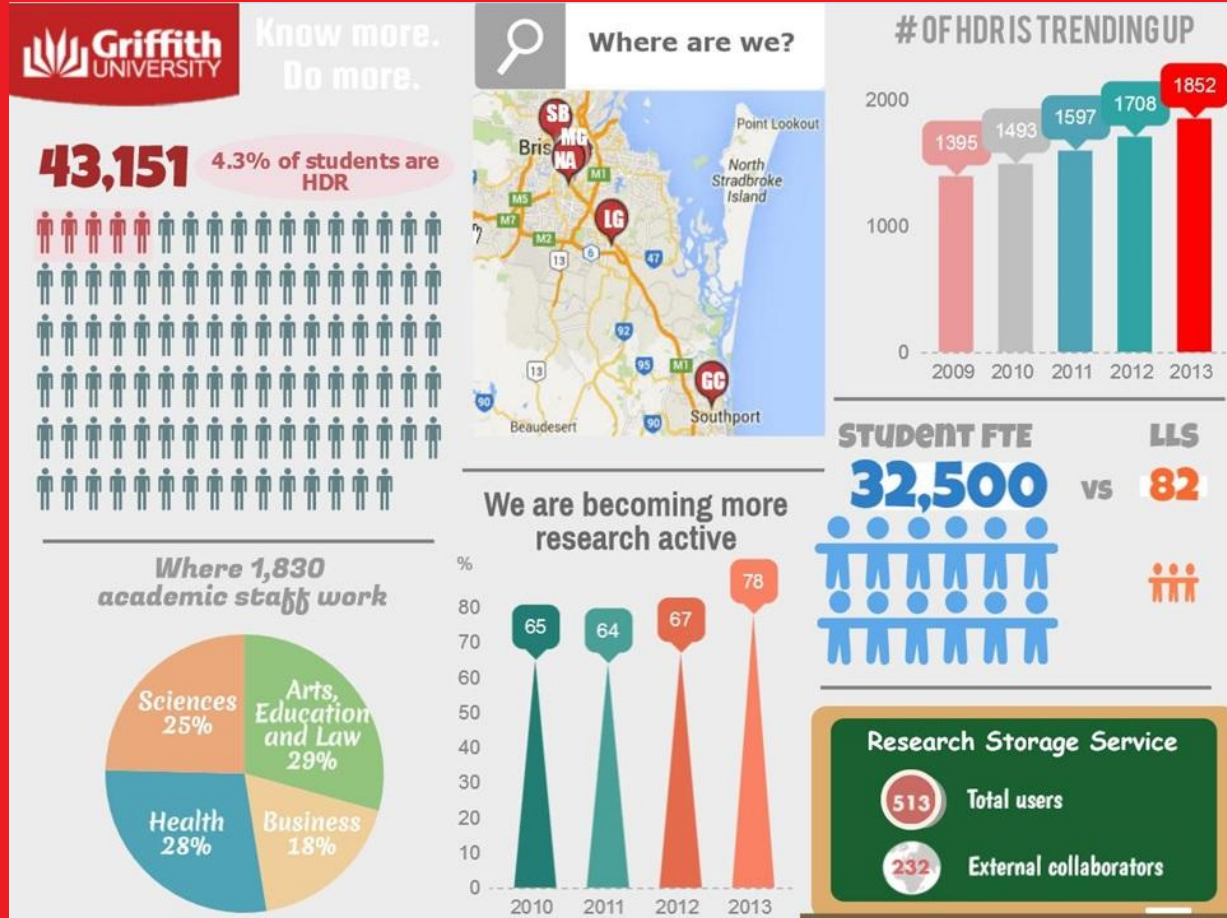


- PVC commissioned a series of visualised reports ...*broken down by Academic Group/cohort* :

Included:

- Overall reach of LLS
- Reach involving digital learning objects and or digitally enabled approaches
- Impact data illustrating the correlation of LLS, normalised by entry score, to
 - GPA (success); and
 - Retention

Other examples of visualisations



Student Life with Griffith INS*



I want to study at
Griffith!

Griffith Student number
Ready within **24 hrs**
after receiving application

Yes, I have been
accepted!

Enrolment



Face-to face Skills consultations
4,692 sessions



Face-to-face Support at Library front desk
63,995 transactions



Generic Workshops
303 Workshops
2,199 Participants



Libraries
2 million+ visits



Borrowing books
243,004 check out



PCs
460 available



Laptop
106 available
335,924 check out



E-resources
7.77 million downloads



Griffith App
3.33 million times application run



IT Support Centre
10,751 questions from students



Lecture capture
40,641 recordings
1.38 million downloads



Wireless
95% of students are using



Graduation
Yay!



Griffith Email
For life



Communication and Alumni
Keep in touch!

Other examples of visualisations

Discussion Case Studies 1-3

- Large volumes of data visually represented
- Visualisation made information more palatable (Mayer, 2001)
- Varied representation reached sophisticated & casual audiences
- Visual messages influenced practice & prompted success in technology bid
- Case study 3 unexpected outcome of Case studies 1 & 2
- PVC (INS) “Awesome!”

Conclusion

- Visualised representations have been received positively.
- Visualisation works as an engagement and communication tool
 - LLS team members
 - Schools
 - PVC
- Next step for us is to examine the actual extent of audience engagement with visual representation