

Wiki-connections: creating synergies within an academic library's virtual health hub

Majella Pugh
Acting Senior Manager, Health Sciences Libraries
The University of Queensland
m.pugh@library.uq.edu.au
www.library.uq.edu.au

Abstract:

Wikis are still considered new technology in an emerging and evolving trend (Web 2.0). In recent years, wikis have been implemented in multi-branch services and standalone libraries. This paper reports on the support a wiki provides a virtual hub of health branches within a university library service. Six of the university's fourteen branch libraries regularly populate a wiki space with health content, reinforcing synergistic relationships strengthened through a 2008 changed service model. One year later, targeted feedback and a Keepad (clicker) session indicate that health library staff find the space more integral to their daily work than usage statistics imply.

Introduction

This paper will present a brief background on wikis, and a commentary on wiki journal literature. It will describe the development of the virtual health sciences hub (the hub) at The University of Queensland Library (UQL). An outline of the creation of the health sciences space in the UQL wiki (LibNet) will precede discussion of its first year. Results of the interactive Keepad session held with hub staff reflecting on that year will be given, along with feedback from discussions. Lessons learned and future engineering will be noted. A conclusion will then be drawn regarding the opportunities provided by wiki software for synergistic collaboration within a virtual academic health library hub.

What is a wiki?

According to today's best-known instantiation, Wikipedia (2009), a wiki is:

a website that allows the easy creation and editing of any number of interlinked web pages via a web browser using a simplified markup language or a WYSIWYG [What You See Is What You Get] text editor.

The software was developed by Ward Cunningham in 1994, and was implemented the following year.

The wiki's *raison d'être* is to facilitate trusting collaboration and discussion between communities of authors, editors and readers. Members may wear all three hats simultaneously. Content is a dynamic work in progress, with wikis designed to be low-barrier, incremental knowledge management repositories. They can be accessed from web browsers anywhere in the world – unless restricted by their administrators. Wikis enable tapping into collective wisdom and the publication of peer-reviewed, bottom-up content, in a time-saving manner. Depending on context, they can be used by teams and/or strangers, situated remotely or co-located.

Technologically, wikis differ from traditional static websites in a number of key ways. For example, by:

- allowing asynchronous, multiple authoring
- providing 'sandboxes' (practice and experimentation areas)
- permitting the restoration of archived page versions
- emphasising a flat, hyperlinked structure, not hierarchies
- facilitating many-to-many communication
- possessing a simple interface and a fraction of the functions – opening technology up to users with low technical aptitude (eg. no HTML skills)
- enabling the addition of comments to pages
- automatically updating all relevant links when pages are edited (including page names).

Common fears raised about wikis surround their de-centralised control. Specifically, these include the trustworthiness of information, and fear of vandalism/edit wars. However, in practice, communities appear to self-monitor and correct errors (Hasan, 2007) in short periods of time (Cobb, 2009).

Wikis in the literature

I undertook a literature review at the end of July 2009, searching a variety of databases and the Web. One resource was Scopus, Elsevier's largest multidisciplinary abstract and citation database of research literature and web sources, covering 1966 onwards. It displays information on the number of publications per year, per search. This enables a quick and dirty snapshot of the wiki-in-the-literature state of play:

Year of publication	No. containing 'wiki'*	No. containing 'wiki AND library'*
2009	32	6
2008	96	13
2007	74	15
2006	52	11
2005	20	5
2004	5	0
2003	3	0
2002	1	0
	283	50

* *Scopus automatically pluralises terms - "Singular Term Finds Plurals"*

Table 1: Scopus search results, 2002 to 30 July 2009

The following observations can be made from Table 1 and the ranked (by occurrence) serial title information that accompanied it (not shown):

- Scopus did not index any wiki articles before 2002, though wiki technology was first implemented in 1995
- of the 283 wiki-only results, four of the top five publications are computer science proceedings containing 20% (58) of the articles. The other is Nature, third highest with nine articles
- a long tail stretches out from sixth position, with subsequent publications containing four or less articles each
- the first library title (Computers in Libraries) appears as number 14 in the list, with two citations

As evidenced by Table 1 and the accompanying observations, wikis are still an emerging technology in the originating field of IT, and in libraries. This is reinforced in the literature by library and IT authors, including Bejune (2007), Connor (2007), Hasan (2007), Hester (2008) and Suvinen (2008).

Focusing on 2007-2009, recent literature shows world-wide wiki use in a variety of contexts: corporations (Arazy, 2009), nursing education (Kardong-Edgren, 2009), emergency services (White, 2008), IT Help Desks (Kein, 2008), life science research (Hoffmann, 2008), law firms (Chu, 2009) - as well as libraries (Glogowski, 2008). Authors relevant to my paper come from the USA, Canada, Hong Kong, and Finland.

In the library-based literature, wikis are being used as/for:

- collaboration among – libraries; library staff; library staff/patrons; and patrons (Bejune, 2007)
- a reference guide; training manual; committee meeting/planning ground; price quote storage; and entertaining work-related content (Glogowski, 2008)
- staff scheduling; training; and knowledge management (Clark, 2008)
- developing and maintaining policies and procedures; and building subject guides and pathfinders for specific disciplines (Connor, 2007)
- planning large scale projects (Black, 2008)
- grant writing; strategic planning; departmental documentation; and committee work (Lombardo, 2008)
- a medical weblink collection clearinghouse (Robertson, 2008)
- managing instruction programs (Allan, 2007), and
- an interlibrary loans knowledge bank (Kopchok, 2007).

The local context

UQL has 14 branches, with 'joint' libraries in three of Brisbane's major teaching hospitals. The latter support hospital staff and the University's Health Sciences Faculty staff and students. Three other branches also serve Faculty staff and students, and there is a service to the Rural Clinical School (RCS) – provided for students in the South West and Central Queensland region.

Though e-resources in the three University-run hospital libraries are jointly funded, vendor licences are signed on behalf of The University. In January 2008, it was definitively established that library members could only access these e-resources remotely if they were in The University system as a staff member or student.

Hospital staff without a University role could access e-resources as walk-in (to the library) clients if licensing permitted – home or hospital desktop access was not allowed. Hospital patrons without University roles requiring remote access were directed to Queensland Health's portal, Clinicians Knowledge Network (CKN). This shift contributed to a review of the jointly funded service model, and coincided with The University's move to hub and spoke modelling. Figure 1 shows an early conceptualisation of how the health libraries could operate within this new model.

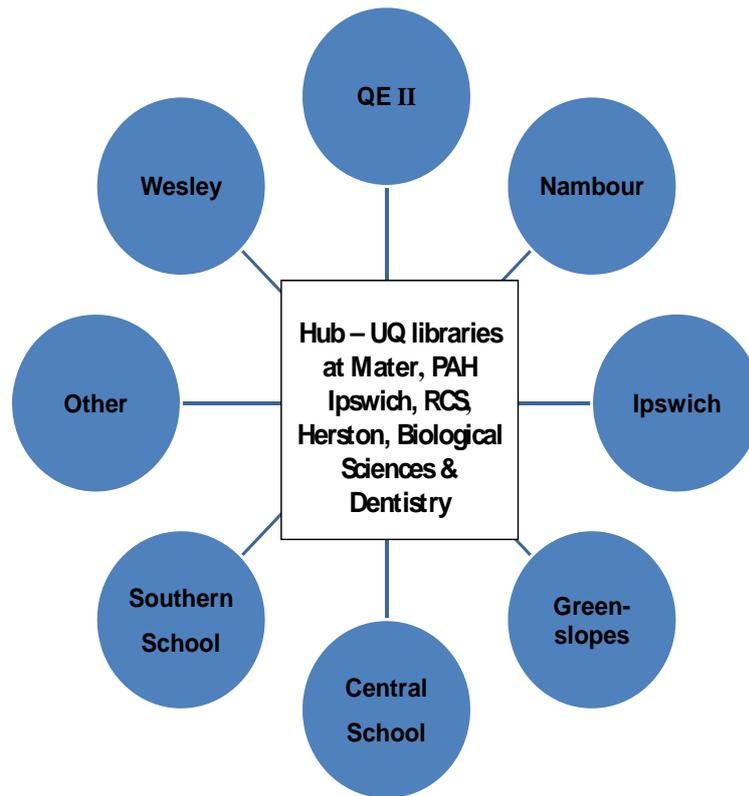


Figure 1: Possible Hub & Spoke model for the UQ health libraries

In response to these two changes, health libraries' staff leveraged UQL's newly purchased wiki to establish a virtual health libraries' community. This enabled the libraries to transform some challenges into strengths during the paradigm shift. Workloads could be shared, synergies created and knowledge stored in a single place.

The wiki's health space was initially named the 'Health Sciences Libraries' Commons'. This was soon changed to 'Hub' to reflect an emphasis on the increasingly synergistic relationship between the health libraries through The University's adoption of hub and spoke modelling. The wiki is only accessible to UQL staff – not patrons.

Development of UQL's wiki and the health sciences space: year 1 Timeline

When I commenced at The University in January 2008, UQL was replacing its library staff-use MediaWiki platform with a robust enterprise wiki, Confluence by Atlassian. This had been selected by the University's Wiki Community Reference Group, and was branded as LibNet.

The timeline:

- October 2007: the Reference Group first met.

- April 2008: I joined at meeting number 12 as the hospital libraries' champion. A home page was required for each of the 14 UQL branches and three support services (Corporate, Information Access, and Library Technology). Figure 2 shows an example of the template used by the branches, which I developed following discussions with another Reference Group member.



Figure 2: Example of the template adopted by the 14 branch libraries, as used by UQ/Mater McAuley Library

- July 2008: I created the LibNet health sciences home page, in consultation with the Senior Manager, Health Sciences Libraries. The home page was then discussed as a strategic tool at the health sciences libraries' planning day eleven days later.
- September 2008: training for all library staff occurred during the first weeks. Finer detail on the health sciences home page was workshopped at a health hub and spoke half-day meeting. Following the wiki's roll-out and training, library staff from the health branches began adding content. All UQL branches were invited to share health-related knowledge to the health space.
- October 2008: Reference Group meetings continued fortnightly until the end of the month.

Content

Health sciences content has grown from a pre-planning day idea to share monthly display themes between hospital library staff.

Figure 3 shows it now includes pages for connecting staff with key knowledge (inter alia) on:

- collection development

- search strategies
- resource evaluations
- lesson plans
- professional development
- evidence based practice
- policy and procedure issues, such as the endowment of academic titles to hospital staff teaching UQ students, and the rights of Visiting Medical Officers
- latest news on facility developments such as the Pharmacy Australia Centre for Excellence (at Princess Alexandra Hospital), The Queensland Children's Hospital (at Mater Health Services), and the Queensland Oral Health Centre (at the Royal Brisbane & Women's Hospital)

The health sciences space is unique on LibNet, as it draws together content from all health supporting libraries regardless of which executive library service stream the branch falls under (Engineering & Sciences Library Service, or the Social Sciences & Humanities Library Service). Common health content is not divided by branch. Instead, site-specific information for the five most health-focused branches can be found via links at the bottom of the health sciences home page.

All branch and service home pages may be found via the drop down menus on the upper navigation bar, under their organisational parent. In keeping with the wiki's collaborative spirit, the Senior Manager, Health Libraries, endeavoured to minimise the siloing of knowledge by encouraging branches to place common information on the health sciences home page (eg. on Academic Title), rather than replicate generic information on branch pages.

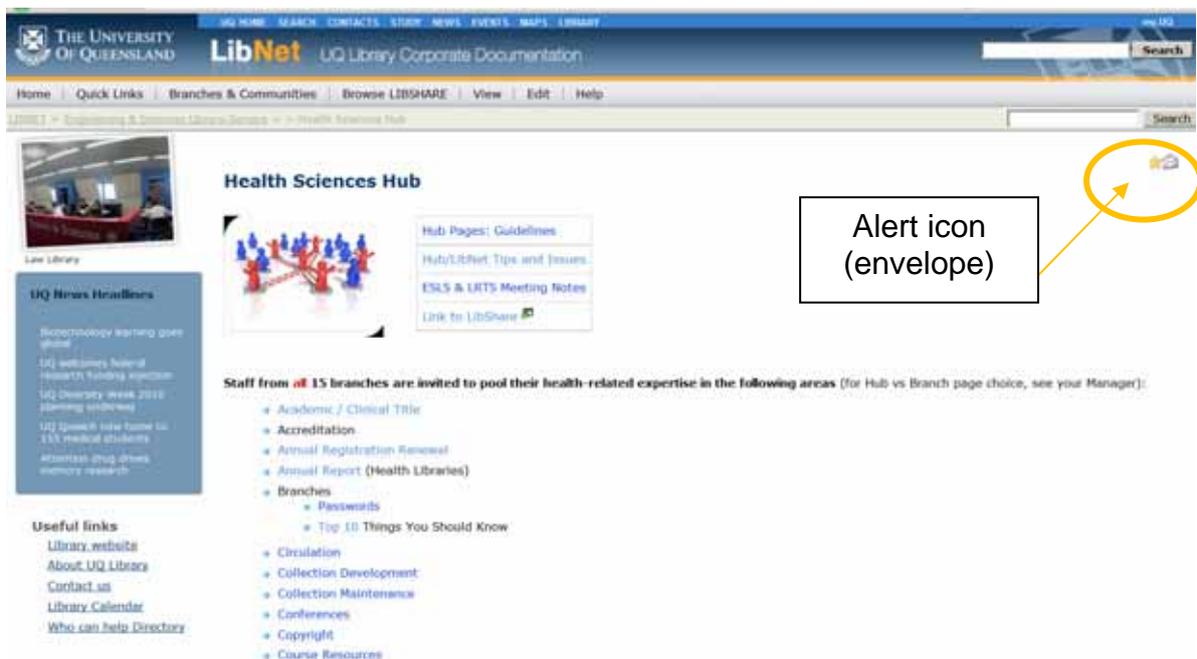


Figure 3: The health sciences home page

By July 2009, the health sciences space contained 57 expertise areas, denoted by headings on its home page, with 48 emanating child (subordinate) pages and a larger number of grandchild pages linking out from them.

New forms of conversation

The health sciences space has been integral in enabling the development of new forms of conversation in our geographically-dispersed health library community. For example, wiki-managing the first shared health libraries annual report enabled six managers to contribute content to the draft (Figure 4). In previous years, individual branch reports were written. A combined report for the health libraries was seen to reinforce the collaborative and integrated nature of the new hub model.

Additionally, there has been discussion around managing the new weekly book bulk-ordering rostered service via the health sciences space. At present, this is managed by a spreadsheet on the shared drive. On a collegiate level, the wiki space enabled streamlining of the 2008 health libraries' Christmas preparations, including menu choices.



Figure 4: PDF view of the first joint UQ Health Sciences Libraries' annual report, 2008



Figure 5: 10th ICML 2009's wiki page of VIP photos, to aid official photographer

Recently, the health sciences space was used as a key management tool for the tenth International Congress on Medical Librarianship, held in Brisbane between August 31st and September 4th 2009. From it, the convenors, their assistant and the official photographer kept track of registrations, continuing education events, running sheets, et al. Figure 5 shows one of the photographer's aide memoires.

To raise awareness of the wiki health sciences space, I have issued synthesised weekly emails to all health-supporting library staff since September 2008 (Figure 6). These are created from the automatic alerts set on health sciences pages, activated by clicking the envelope icon circled in Figure 3. It is hoped that this will encourage health library staff to habituate accessing the wiki space to answer their queries. I also act as a 'gardener' (quality controller), ensuring that page names and labels conform to agreed Wiki Community Reference Group conventions.

Subject: FW: [hithlib] LibNet: recent weeks' changes to ESLS pages

Dear Colleagues,

The following changes were made during the past week.

	Action	Section	Page Title & Link	Additional Information
1	Added	ESLS	Educause 2009	Notes from the conference attended by LK
2	New	Hub	Health Sciences Branches Relieving Procedures	Work in progress
3	New	Hub	HS Resource Evaluations	Health Care Applications for iPods and iPhones
4	Added	Hub	HS Top 10 Branch Things *	Herston's (work in progress)
5	Updated	Hub	HS MBBS LL Activities Calendar	
6	Updated	ESLS	ESLS Managers Committees	2010 dates & December minutes added for ESLS & Health
7	Updated	Hub	HS Annual Report	PAH adding detail

* Some motivation?: Mater staff found the Dentistry Top Ten Branch Things very useful during recent relief provided.

Visit the new [Tips & Issues](#) page. Please add yours.

Visit the [Guidelines](#) page.

Use the [Sandbox](#) (test page) to experiment without fear.

You can place your own "watch" on other pages. Click on the [envelope](#) on top right of the page of interest. Go to the View menu, cli HTML format. Save. You will receive an email each time a change is made to that page (by anyone).

Regards,
Majella

Figure 6: Weekly wiki e-alert

Usage

In LibNet's first six months, hub staff were early adopters of the new technology. The health sciences home page was the 5th to 9th most popular wiki page, averaging 285 hits per month. This limited information can be collated from the off-the-shelf Space Activity report; however, we are unable to extract more comprehensive statistics to attach context, such as the total number of pages comprising the wiki. There were 211 versions of the health sciences home page to the end of July 2009, which indicates a gratifying level of input to the space one year on, without a formal marketing campaign.

Usage targets and benchmarks were not established. Monitoring wiki usage statistics during the first six months showed that whilst populating the health sciences space was done by a small number of staff, its pages were well visited. This was better than hoped for, as the previous UQL wiki was not a key tool for health sciences library staff.

Ad hoc feedback and observation suggest that the wiki space did support the hub vision, and reinforced a sense of community. However, statistics following the Christmas break saw a downturn in page access and content creation activity, along with an increase in LibNet activity in other UQL branches and services (Figure 7). Similar post-honeymoon effects are described by Ravas (2008) and Clark (2008).

Given this, my expectation of support for the health sciences space, which was to be assessed during the feedback session in October, was low.

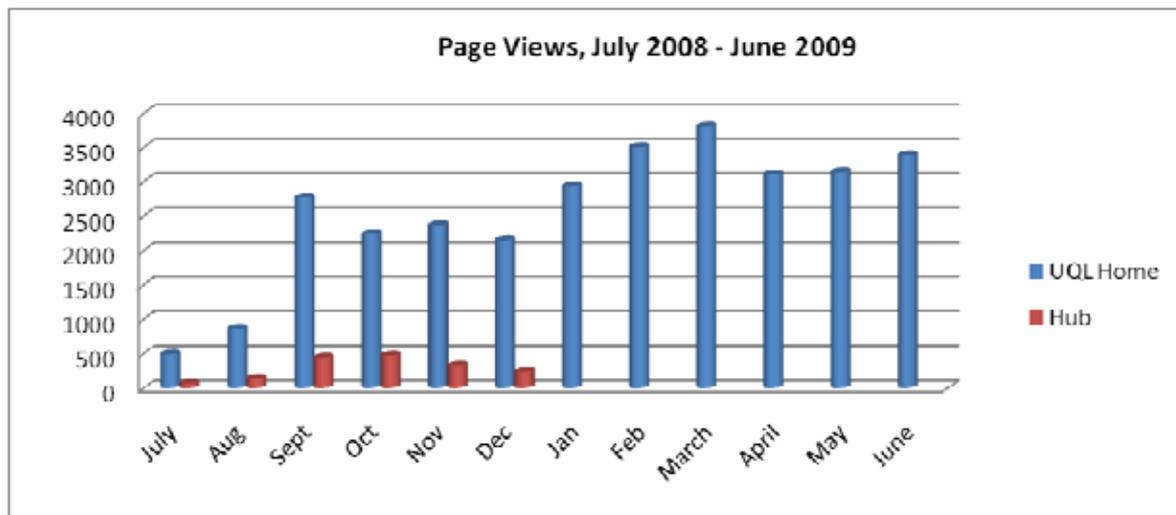


Figure 7: Wiki use of two spaces: LibNet Home and the health sciences space home page (“Hub”), July 2008 to June 2009

Barriers

Suvinen’s 2008 study of user psychology deals with wikis’ inherent interaction problems. It highlights user disquiet, which may lead to abandonment of the technology. As the health sciences space use increased, unfavourable features were identified at the Wiki Community Reference Group meetings and at staff training. Some stemmed from organisational culture issues (resistance to change, big brother suspicions, lack of peer trust), others from purely technical reasons:

- copying and pasting from MS Office applications like Word and Outlook contains more complex formatting than the wiki’s, requiring extra pre or post insertion editing (shown in Figure 8 as alternating pink and white lines) – also noted by Doyle (2008) and Lombardo (2008)

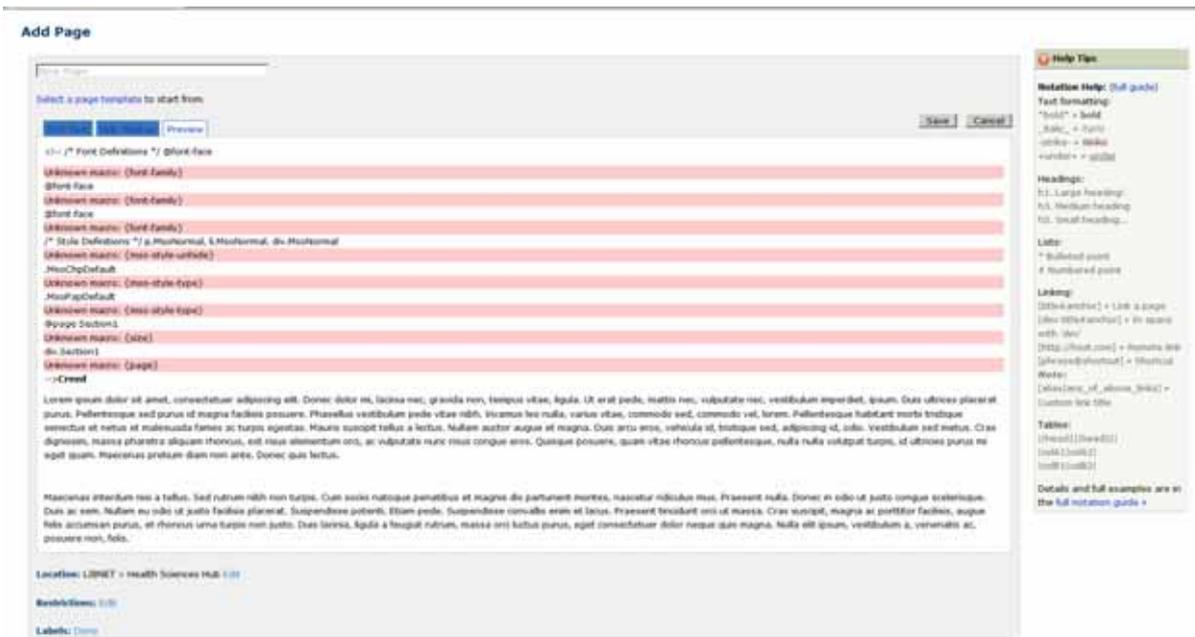


Figure 8: White/pink lines: wiki rejects complex formatting. Direct paste from a MS Word document

- inability to work on attached files – need to download, edit, then upload using a different filename. Early on, there was a loss of trust in LibNet when health sciences staff working on a committees' page believed they were saving their work, only to find they were not. Content/attachment guidelines were developed and placed on the wiki in March 2009 (Figure 9). Together, these issues led to the original vision of LibNet as UQL's sole repository and substitute for its shared drive not achieving staff buy-in. This jeopardised plans for the wiki as a key support of the newly created health sciences hub.

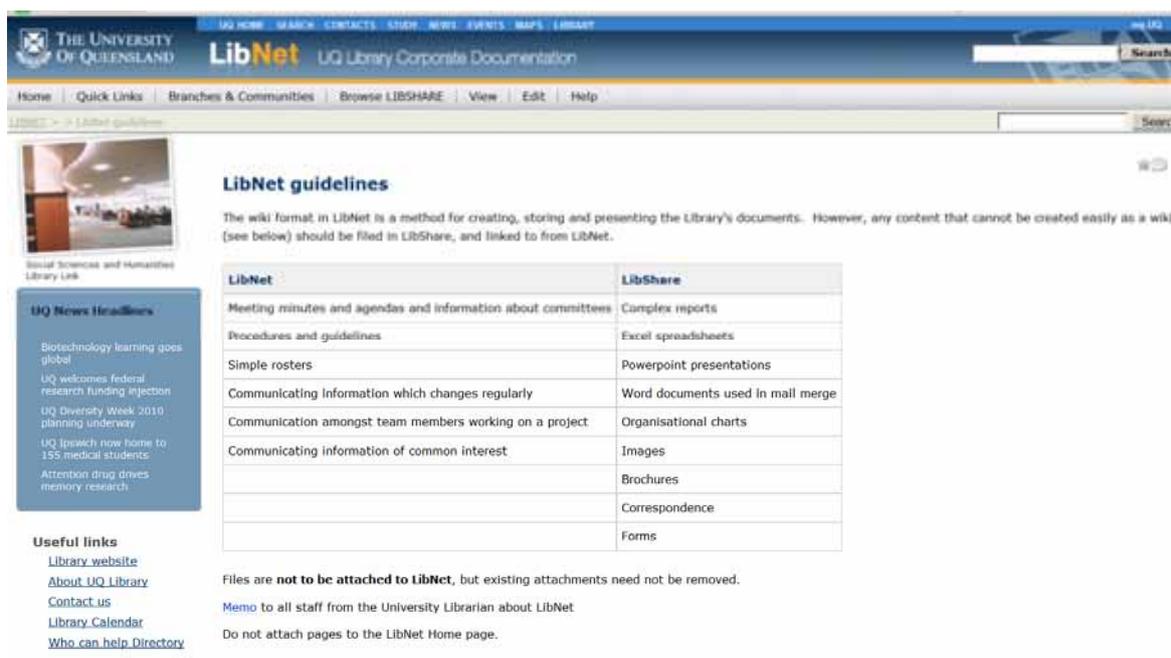


Figure 9: LibNet guidelines: a response to staff confusion regarding object attachment versus page creation

- emergence of error messages regarding non-saving of a previous version of the wiki page, together with confusing delineation as to which was the previous version
- lack of visual appeal due to simple formatting available (also Kardong-Edgren, 2009)
- clunkiness of graphics insertion – need to upload image first, then embed in page
- lack of user friendly help – particularly to correct formatting issues viewed as being easily solved by MS Office products

Finally, there were concerns about orphaned content ownership and stale documentation (also Serakiotou, 2008). Some users had trouble with the mental model shift to using the wiki's search function to locate desired content, from more familiar hierarchical navigation browsing.

The health sciences space: year 1 in review

In October 2009, library managers and a library assistants' representative from the main UQ health libraries met for the second annual hub and spoke planning half day. The agenda included discussion on the health sciences space, and data presented was collected by two means. Firstly, library assistants' (LAs') feedback to six questions was sought prior to the session (see Appendix C), and secondly, the twelve attendees used audience response clickers with TurningPoint Keepad technology (Figures 10 and 11). The latter is linked to MS PowerPoint, and enables the audience to submit responses to interactive questions.

TurningPoint provides templates for commonly used kinds of questions, such as Yes/No, True/False, Likert Scale, Generic and Ice Breakers. A chart is inserted onto the slide (vertical, horizontal, 3D pie, distributed pie, offset, or doughnut), and immediately shows the results of the audience's choices for each answer. The benefits of clicker sessions are that they enable quick and easy delivery / results, are novel technology, prevent survey fatigue, and allow anonymous responses.

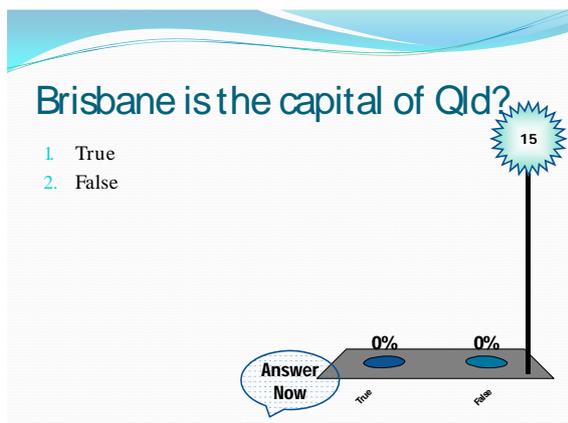


Figure 10: Example of a TurningPoint question slide



Figure 11: A TurningPoint Keepad clicker

Fifteen questions focusing on the health sciences space were asked over a 10-minute period, and appear as Appendix A. Session organisers wished to learn if:

- staff used the health sciences space, and the frequency
- staff contributed content, or used the health sciences space as a reference tool
- the health sciences space was perceived as useful and up to date
- the health sciences space created synergies and connections
- training had been adequate, and if more was required
- populating the health sciences space was perceived as easy, and
- weekly alerts were worthwhile.

Hub and spoke planning day results

Given the varied experiences reported in the literature and the trailing health sciences space usage statistics, results from both the clicker session and the LAs' feedback exercises were unexpectedly positive.

From the clicker session, we learned (see Appendix B):

- 82% login to the space daily or weekly
- 42% add or edit the space monthly
- 50% go to the space first to answer local queries
- 67% always derive benefit from accessing the space
- 91% felt the space made them feel more connected to the virtual community
- 92% believed the space created synergies
- 91% thought the space was up to date

Of the weekly alerts:

- 100% receive them
- 91% read them
- 83% find them useful

On training:

- 42% had received enough to function, however,
- 91% could receive more

Other results:

- 58% primarily consult the space, whilst 42% visit *and* edit
- 91% find the results of their editing 'variable'

- 45% consult the (health sciences) space more than other LibNet pages

From the information collected over eleven days, from 20 health-involved LAs,, responses fell into three categories: problems, suggestions and other feedback. The assistants added feedback to a health sciences space page, or emailed their representative for added anonymity.

Problems:

- locating content via browsing and searching – information was perceived as being hidden, with too many pages retrieved via search
- duplication of content
- not knowing how to add content

Suggestions:

- encourage health sciences space use by inviting participation and ownership – assign responsibility via attachment of initials, as per one branch library
- add information on how to upload material to Course Reserve
- create a password protected area for each branch, for sensitive information
- keep health sciences space for health sciences information – provide links to global information, and add branch-specific information to branch pages
- leverage space to share workloads, eg, uploading course reserve material; perhaps using a roster
- add links to the health sciences space from the non-core, but health serving, branches
- form a working party review to fine tune the whole of LibNet, not just the health sciences space
- create a page that links to forms – always hard to find, and often not named helpfully so are also hard to search (eg. donations / gifts)

Other feedback:

- problems with LibNet were perceived as being greater than the health sciences space
- the potential of the health sciences space had been demonstrated, now was the time to overhaul its organisation – however, be judicious in spring cleaning, as some branch-specific information was vital for, and particular to, that branch
- previous wiki was better structured – it had a team of dedicated writers
- LAs used the wiki differently to the managers – as a reference tool for current procedural information on circulation / document delivery etc and for new facility developments (LAs), versus collaboration (managers)
- LAs used the wiki as another tool in their suite, along with the UQ website, colleagues, the catalogue etc – but would ask colleagues first about global

procedural queries, and would go to their branch pages before the health sciences space

Attendees retired to pre-assigned groups to discuss fresh ideas for the virtual hub, and the wiki space. Additional health sciences space suggestions included:

- creating an issues page, as available at a non-health branch
- create a tips & tricks page, and/or cheat-sheets on (eg.) how to add pages, and create tables
- create a '23 ½ Things' program specifically for LibNet
- ensure LibNet is included in new staff inductions
- add a 'Top 10 Things You Should Know About This Branch' page, to assist staff rotations or temporary relieving sessions
- add a health sciences space calendar to advise of rotations, leave, events etc

Lessons learned

The UQL health sciences community appears to have fewer lessons to learn than others venturing down the wiki path (eg, Clark, 2008 and Glogowski, 2008). This I believe is due to the months of preparation by the UQ Wiki Community Reference Group, the training rolled-out by the Library's IT section and the cultivation of champions. However, while the journey has not been without bumps, it is resulting in the development of a robust repository and collaboration tool.

If others were to repeat the process in an environment similar to our virtual hub, I would suggest the following:

- once training was rolled out, hold follow up workshops for hub members
- training be repeated periodically to capture new hub staff, to reinforce rusty skills and tackle new issues
- basic information be available following training on how to create and link wiki pages, the best way to use the search function, how to create tables and insert graphics
- a page be available for hub staff to list issues, and suggest changes or new expertise area pages
- a health sciences space guidelines page be established that set out naming conventions, and other decisions made by the Wiki Community Reference Group, as well as what content should go on the health sciences space vs branch pages
- the assignment of staff responsibility for pages
- include the health sciences space on managers' and LAs' meeting agendas as a standing item
- participate in a wiki-wide review, and conduct regular reviews of the health sciences space pages

- repeat the feedback process at six monthly intervals, and with all health sciences community members
- add links to cheat-sheets / tips & tricks pages to weekly alerts, to be sent to all hub members
- think about access to off-site corporate records: do you have any which could be made more accessible through scanning and attaching to a wiki – though this was not identified as an issue for our health hub

Future engineering of the health sciences space

Though there is no silver bullet for success, Web 2.0 approaches must be embraced by 21st century library staff to avoid falling exponentially behind other professions and our patrons (Wilson in Connor, 2007). As the hub's goal is for its wiki space to be a thriving multi-user environment, forward planning of the health sciences space should take into account broader information architecture constructs. These include an awareness of interactions and comfort levels within the Web 2.0 ecosystem between content, tools, context and users. A starting point is Bejune's 2007 article, Wikis in Libraries, which focuses on the application of computer supported cooperative work (CSCW) theory.

In order to fully exploit the health sciences space as a ubiquitous tool for tacit knowledge management (Hasa, 2007), hub leaders must continue to encourage a strong sense of community and common purpose to our staff (Glogowski, 2008). We must engage them by involving three key elements: heads (for knowledge capture), hearts (shift in attitude), and hands (maximize skills). The hub's culture must underscore health sciences space use, and encourage openness. Momentum and interest levels must be kept high (Black, 2008). Ravas' (2007) music library example serves as a warning where disuse followed an initial flood of contributions - except where updating was a required part of staff duties.

Most importantly however, we must address the issues raised at the hub and spoke planning day. This will be critical in reinforcing hub leaders' commitment to the wiki space, and to their staff. Some have already been actioned; others escalated to higher levels, and others written into the hub's 2010 operational plan. There are some who believe that other participatory platforms such as MS Sharepoint may be more intuitive to use; however, this was considered and rejected by the UQL Wiki Community Reference Group prior to my joining.

In sum, the wiki space has provided more opportunities for synergies and collaboration within our health libraries hub than I imagined at the start of this journey. Given our auspicious first year, it would be a hugely lost opportunity if momentum slackened, and tumbleweed was allowed to blow through the health sciences space.

Conclusion

In this paper, I have outlined the successful implementation of a wiki space which supports a university's virtual health hub following a changed service model. I have presented a brief background on wikis, and a commentary on wiki journal literature. I have described the development of the hub at UQL, and outlined the creation of the health sciences space on the new UQL wiki, LibNet. I discussed the health sciences space's first year, including results of targeted feedback obtained and from the interactive Keepad session held with hub staff reflecting on that year. Finally, lessons learned and future engineering were noted, before the statement was made that the health sciences space has indeed created synergies within this academic library's virtual health hub.

References

- Allan, C. (2007) Using a wiki to manage a library instruction program: Sharing knowledge to better serve patrons. *College and Research Libraries News*, 68, 242-244.
- Arazy, O., Gellatly, I., Jang, S. & Patterson, R. (2009) Wiki deployment in corporate settings. *IEEE Technology and Society Magazine*, 28, 57-64.
- Bejune, M. M. (2007) Wikis in libraries. *Information Technology and Libraries*, 26, 26-35.
- Black, E. & Kilzer, R. (2008) Web 2.0 tools ease renovation service disruptions at the Ohio State University Libraries. *Public Services Quarterly*, 4, 93-109.
- Chu, K-W S. (2009) Using wikis in academic libraries. *Journal of Academic Librarianship*, 35, 170-176.
- Clark, C. J. & Mason, E. B. (2008) A wiki way of working. *Internet Reference Services Quarterly*, 13, 113-132.
- Cobb, L (2009) Study of vandalism survival times, *The Wikipedia Signpost*, 22 June, viewed 16 September 2009,
<http://en.wikipedia.org/wiki/Wikipedia:Wikipedia_Signpost/2009-06-22/Vandalism>
- Connor, E. (2007) Medical Librarian 2.0. *Medical Reference Services Quarterly*, 26, 1-15.
- Doyle, B. (2008) Wikiful thinking. *EContent*, 31, 37.
- Glogowski, J. & Steiner, S. (2008) The life of a wiki: How Georgia State University library's wiki enhances content currency and employee collaboration. *Internet Reference Services Quarterly*, 13, 87-98.
- Hasan, H., Meloche, J. A., Pfaff, C. C. & Willis, D. (2007) Beyond ubiquity: Co-creating corporate knowledge with a Wiki. *Proceedings - International Conference on Mobile Ubiquitous Computing, Systems, Services and Technologies, UBICOMM 2007*.
- Hester, A. J. & Scott, J. E. (2008) A conceptual model of wiki technology diffusion. *Proceedings of the Annual Hawaii International Conference on System Sciences*.
- Hoffmann, R. (2008) A wiki for the life sciences where authorship matters. *Nature Genetics*, 40, 1047-1051.
- Kardong-Edgren, S. E., Oermann, M. H., Ha, Y., Tennant, M. N., Snelson, C., Hallmark, E., Rogers, N. & Hurd, D. (2009) Using a Wiki in nursing education and research. *International Journal of Nursing Education Scholarship*, 6.
- Klein, R. & Smith, M. (2008) Pursuing the peak of excellence: Wiki as a knowledge base. *Proceedings ACM SIGUCCS User Services Conference*.

Kopchok, K. (2008) Interlibrary loan the wiki way. *Journal of Interlibrary Loan, Document Delivery and Electronic Reserve*, 18, 67-77.

Lombardo, N. T., Mower, A. & McFarland, M. M. (2008) Putting wikis to work in libraries. *Medical Reference Services Quarterly*, 27, 129-145.

Ravas, T. (2008) Not just a policies and procedures manual anymore: The university of Houston music library manual Wiki. *Notes*, 65, 38-52.

Robertson, J., Burnham, J., LI, J. & Sayed, E. (2008) The medical matters wiki. *Medical Reference Services Quarterly*, 27, 21-32.

Serakiotou, N., Diaw, A., Bui, T., Roberts, R. & White, C. (2008) (Wiki + ResTechs) = (Fresh documentation + Organic knowledge management + Training materials + Good, cheap technical writers). *Proceedings ACM SIGUCCS User Services Conference*.

Suvinen, H. & Saariluoma, P. (2008) User psychological problems in a wiki-based knowledge sharing portal. *Proceedings - 3rd International Conference on Internet and Web Applications and Services, ICIW 2008*.

White, C., Plotnick, L., Addams-Moring, R., Turoff, M. & Hiltz, S. R. (2008) Leveraging a wiki to enhance virtual collaboration in the emergency domain. *Proceedings of the Annual Hawaii International Conference on System Sciences*.

Wiki (2009) *Wikipedia, The Free Encyclopedia*, viewed 8 January 2010, <<http://en.wikipedia.org/wiki/Wiki>>

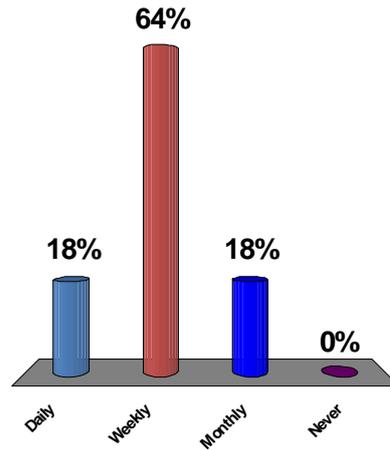
Appendix A: TurningPoint Keepad clicker questions

1. How often do you login to the Health Sciences Hub (The Hub) on LibNet?
Daily / Weekly / Monthly / Never
2. How often do you edit or add to The Hub?
Daily / Weekly / Monthly / Never
3. Which do you do more: read or edit The Hub?
Read / Edit / Neither
4. To answer a local (health libraries) question, would you go first to...
The Hub / A Colleague / UQ Website / Other?
5. Does The Hub benefit your work?
Always / Sometimes / No / Depends
6. Does The Hub make you feel more connected to other UQ health-supporting libraries?
Yes / No
7. Do you think The Hub creates synergies amongst the UQ health libraries, leading to better results?
Yes / No
8. Is Hub information up to date?
Yes / No
9. Have you received enough training to edit/author LibNet?
Yes / No
10. Would you like more training?
Yes / No
11. Do you find editing / authoring LibNet...
Easy / Variable / Difficult
12. Do you access other pages on LibNet more than you access Hub pages? (eg. IAS, LTS)
Yes / No
13. Do you receive the regular alerts sent by Majella?
Yes / No
14. Do you read the alerts sent by Majella?
Yes / No
15. Do you find the alerts useful?
Yes / No

Appendix B: Results of the Keepad (clicker) session

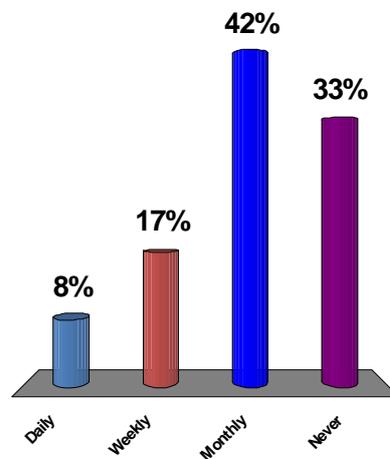
How often do you login to the Health Sciences Hub (The Hub) on LibNet?

1. Daily
2. Weekly
3. Monthly
4. Never



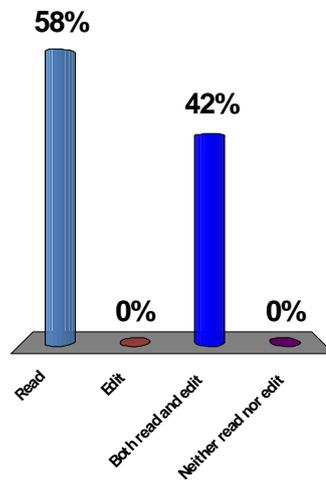
How often do you edit or add to The Hub?

1. Daily
2. Weekly
3. Monthly
4. Never



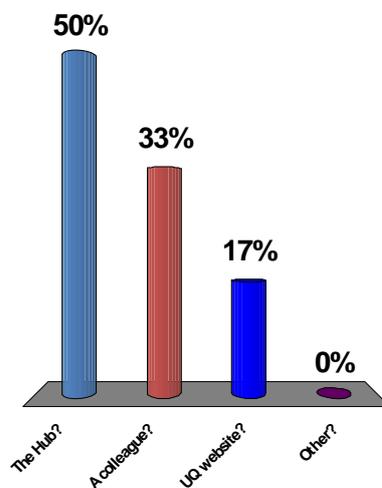
Which do you do more: read or edit The Hub?

1. Read
2. Edit
3. Both read and edit
4. Neither read nor edit



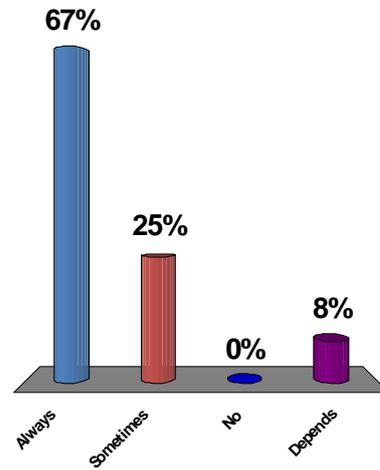
To answer a local (health libraries) question, would you go first to...

1. The Hub?
2. A colleague?
3. UQ website?
4. Other?



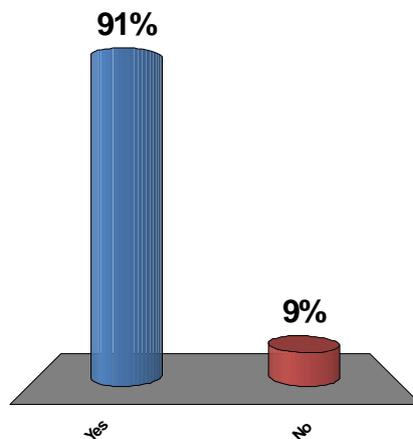
Does The Hub benefit your work?

1. Always
2. Sometimes
3. No
4. Depends



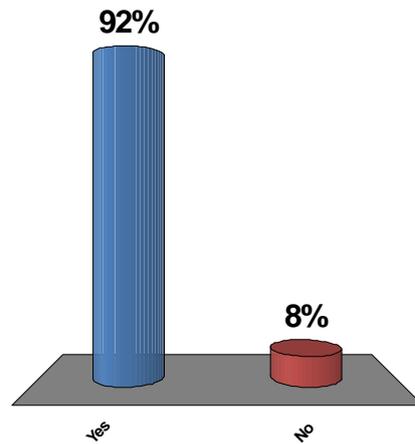
Does The Hub make you feel more connected to other UQ health-supporting libraries?

1. Yes
2. No



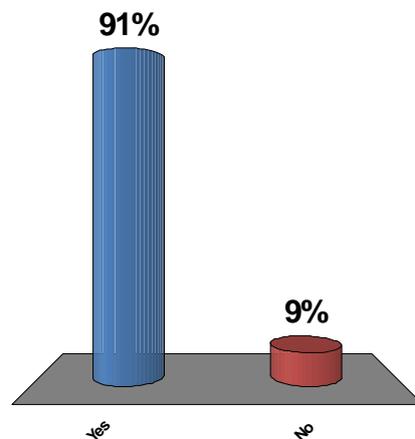
Do you think The Hub creates synergies amongst the UQ health libraries, leading to better results?

1. Yes
2. No



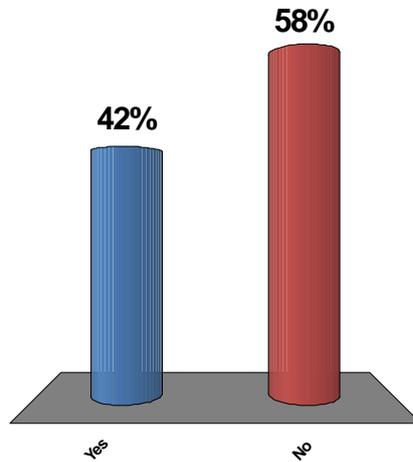
Is The Hub information up to date?

1. Yes
2. No



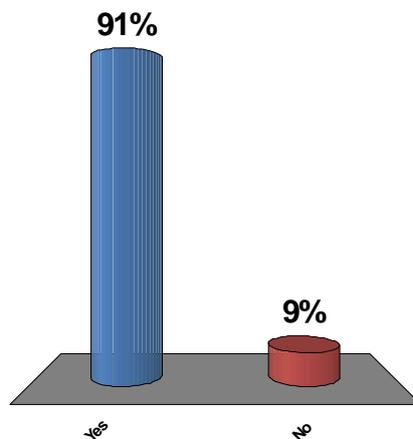
Have you received enough training to edit / author LibNet?

1. Yes
2. No



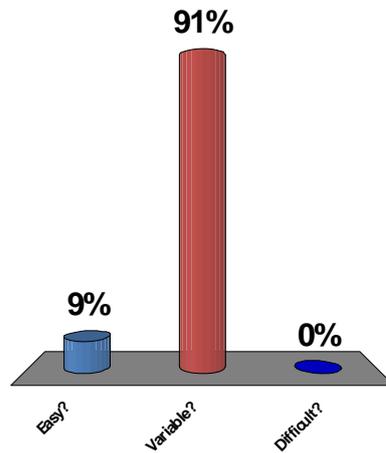
Would you like more training?

1. Yes
2. No



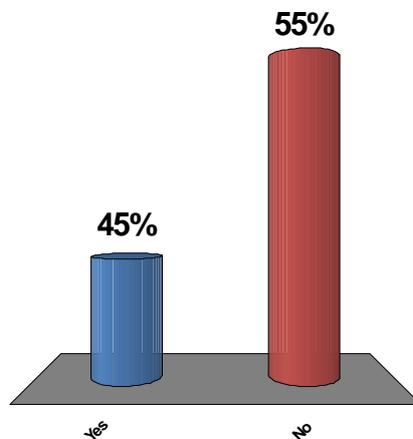
Do you find editing / authoring LibNet...

1. Easy?
2. Variable?
3. Difficult?



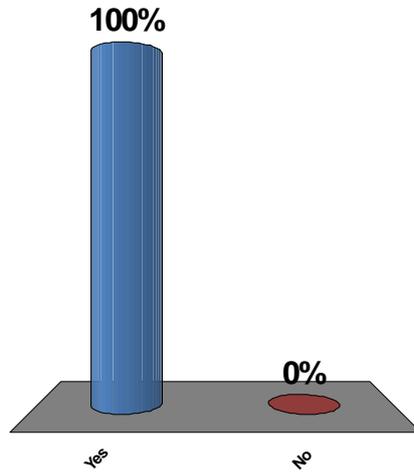
Do you access other pages on LibNet (eg IAS, LTS) more than you access The Hub pages?

1. Yes
2. No



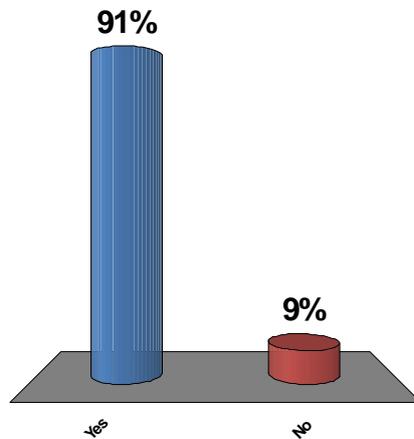
Do you receive the regular alerts sent by Majella?

1. Yes
2. No



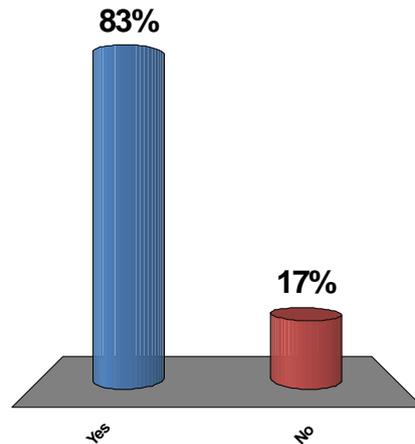
Do you read the alerts sent by Majella?

1. Yes
2. No



Do you find the alerts useful?

1. Yes
2. No



Appendix C: Pre-meeting questions to the Library Assistants

1. What sources do you access to find procedures and why eg. for Circulation, Document Delivery or Course Reserve?
2. If you don't use the Health Sciences Hub as your first source, what do you use it for?
3. What problems do you have using it? eg. finding information; knowing if the information is current...
4. What do the Health Sciences Hub pages not provide that you would like to find there?
5. How could the pages be better organized to support your work needs i.e. to make them more user friendly?
6. Any other comments/observations?