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Student Journey Work: the contribution of academic libraries to student transition and success – a review

Scope and Introduction

This review identifies and draws on accounts of recent practice (published within the last three-four years) which describe library innovations taking place nationally and internationally. Rather than an in-depth review the article identifies and explores notable examples of projects, services, and approaches that are extending the traditional function of the academic library. Consequently reports that focus on the entire student journey that also demonstrate an understanding of the complex nature of the student experience are included, whilst more traditional working is excluded – important though this is. Taking a "research informed practice" perspective is fundamental to enhancing services (Weaver and Levy, 2008), and for accountability, (Haddow, 2010, 40), hence exemplars have been selected with this in mind. Interventions that span boundaries between professional services and pan-university for the benefit of student transition are a particular feature. The context and rationale for this approach is next outlined.

Academic Libraries are facing unprecedented demands. The changing higher education (HE) environment, technology, (social media, mobile technology, ubiquitous internet) open access and global economic uncertainty is bringing opportunities and challenges of a scale not experienced previously. (Jubb, 2010; Harper and Corrall, 2011; Deiss and Petrowski, 2009; Nicholas et al, 2010; Gwyer, 2010, Weaver, 2012). The pace of change and the rising expectations of students from their university/college education has been well documented and has resulted in many innovations and in the UK, government legislation reforming student finance in 2010 (Great Britain, Browne, 2010) has led to a heightened sense of what really makes up the modern student experience and value for money in 2013. Student tuition fees in the UK of up to £9,000 per year, position students more as customers than ever before, placing students in more control over their experience; the student voice is being heard by HE policy makers, including academic librarians, which is in turn leading to new services and engagements.

Higher education institutions (HEIs) in the UK were the subject of the influential Diamond Report published by Universities UK (the body representing all UK universities) in 2011. The report provides case studies of notable academic libraries who have used various methodologies to make efficiencies, (University of St Andrews – LEAN project), federal library services (University of London) and also made wide ranging recommendations for increasing shared services and further efficiencies in operations and services. (Universities UK, 2011). Coupled with increased internationalisation, marketisation and competition, universities and colleges are being run more like businesses than ever before with consequences and opportunities for academic library leaders. (Moropa, 2010).

These changes are cultural, complex and far reaching. Whilst the academic library literature demonstrates the extended role of the academic library in the life of students, as will be evidenced, this review can only provide a snapshot of activity. The author is seeking to show the seismic shift which is taking place between libraries and their client base, libraries and their

counterpart support services, and libraries and their institutions. These relationships underpin the rationale for the library's extended role in the retention and progression of students across the multiple transition points – referred to in the context of this article, as the student journey - the rise of which will next be examined.

Student Journey Lifecycle

From a student perspective, traditionally, academic libraries tended to focus their resources on the learning and teaching experience of students whilst "on course" and organised themselves and their work accordingly. However with the institutional drivers to attract, retain and progress students across their entire lifecycle in a cost effective manner, libraries are playing a larger role in building the reputation of the institution and in easing students into and across their programme of study. This holistic view has been advocated by librarians as being good in its own right (Jolly, 2006; Weaver, 2008, Core and Hordon, 2010); many institutions have pro-actively merged or co-located library services with other professional services such as IT services, student services, student administration, student finance (for example), so called "super-convergence".

Super-convergence" is a trend that extends the convergence of IT and library services begun in the 1980s, (Hansen, 2005) and has partly been made possible by new space configurations, (Appleton et al, 2011, Murvosh, 2012), whereby services can be provided in an integrated service environment enabled by estates improvements, shared buildings, shared campuses even, fuelled as identified by Bulpitt, by a need for organizational efficiencies and to provide seamless, integrated services support. (Bulpitt, 2012). Librarians thus need to understand a lot more about the entirety of the student experience, from a student's pre-entry into university, during their subsequent induction and first year experience, whilst on course, and beyond the award into employment, business and/or commerce, research or further study. Each stage of the journey (or transition) places differing demands on academic and administrative processes consequently this review organizes notable initiatives through the lens of the student journey lifecycle, before considering emergent themes and implications for practice.

Bringing academic library work into focus *from a student perspective* is fundamental to the case that providing holistic, student centred services which span all the stages of studentship: here presented as, pre entry, first year experience, on course, and beyond the award, are more likely to attract, retain and progress a diverse and discerning student body.

Pre entry: attracting students into higher education

In the UK, partly in response to increased competition for a more limited pool of students, (www.hefce.ac.uk/whatwedo/lt/howfund/tfundingsncnewarr/) ongoing contact with potential students is systematically being employed to reach students who intend to study at a particular institution, to build a sense of loyalty well before the course starts; the use of Customer Relationship Management Systems (CRM) is extending to the earliest of stages in the recruitment cycle, (McClure, 2012) with institutions hoping to influence a students' choice of university well before they make their final selection. These systems are enterprise-wide in some instances, in others limited to deployment in marketing/admissions departments. The influence that an academic library can have in attracting students and influencing their choice

of institution is analysed by Lombard in his study of the Library/Admissions relationship in 14 American higher education institutions (HEIs). He comments on the sparsity of articles on the influence of libraries on College choice which led to his examination of this aspect of the student journey. His findings are not encouraging for library managers arguing for the value of the library to the institution. Most students surveyed (297) did not choose their institution because of the quality of the library, however over half of the survey comments related to retention and the role of the library in keeping students on course which, Lombard argues, is the main library mission. (Lombard, 2011, 240). He further suggests that librarians can make a difference to pre-entry outcomes by working collaboratively with Admissions personnel, by strengthening the presence of the library on institutional web sites, and by continuing library outreach with feeder high schools, for example, in the area of information literacy. He concludes: "According to the survey, many prospective students would benefit if the Library factored more prominently in their college choice; more research on why it does or does not might make this a reality". (Lombard, 2011, 240). The Association of College and Research Libraries (ACRL) value study confirms that "Community college, college, and university librarians can no longer can rely on their stakeholders' belief in their importance. Rather, they must demonstrate their value". (Oakleaf, 2010, 4). Oakleaf suggests using surrogates for measuring library impact on student enrolments, such as the willingness of current students to recommend to prospective students, participating in prospective student events and assigning librarians as student advisers, or offering services that positively impact on student judgments of institutional quality". (Oakleaf, 2010, 11); whilst Reynolds, 2007 (cited in Brown and Sen, 2010), found that a perceived inadequate library was a disincentive to students, cited as one of five reasons for *not* choosing a particular institution. (The intelligent use of data to back up claims of academic library value to the student journey are examined later).

In the UK, potential pre-entry impact of the library was investigated by Brown and Sen whose unique study into the exposure of academic libraries within the undergraduate university prospectus (as seen through the eyes of sixth form students) found that in the sample set of prospectuses, the library presence was variable indicating that institutions prioritised library facilities differently. They recommend that libraries and marketing departments work synergistically to promote and profile the library using personalized approaches; further, given the students in the survey rated the library as important but not a reason on its own for choosing a particular institution, more work is needed with school librarians and careers advisers to influence student views of the HE library which are likely to vary at different stages of the application process. (Brown and Sen, 2010).

Library outreach is a major feature of some pre-entry programmes and the "on course" experience, in both the USA and the UK. Notable initiatives include roving librarians (Sharman and Walsh, 2012; Barratt, 2010), school outreach and teacher-librarians collaboration (Oakleaf, 2010), field librarians (Rudasill, 2010). Some projects have the specific aim to reach under-represented groups for example the Satellite Outreach Services (SOS) presented by Aguilar and Keating in their outreach program to engage students from diverse ethnic backgrounds, "bringing librarians direct to students" via careers information, course information and library services in multi-cultural student centres at the Zimmerman Library at the University of New Mexico. (Aguilar and Keating, 2009). The common features of these schemes are that the library staff work flexibly in a mobile fashion outside the library space – the emergence of the "pop-up" library at Liverpool Hope University in the UK is reported by Murray. (Murray, 2012) and

even the "pop-up" campus where there is no permanent campus or library (Staley and Malefont, 2010). In the USA the "Embedded Librarian" concept indicates the pro-active stance being taken by academic library staff to engage faculty and students in their learning and research - in the user's environment not the library environment - connecting with what students and researchers do daily. (Rudasill, 2010; Si et al, 2012,). As quoted by Si et al in her article on embedded librarian movement in China:

"They're getting out of the library and heading for classrooms, labs, and even tour buses. They're embedding themselves with research groups, faculty members, and courses."" *(Si et al, 2012, page 175)*

Once students enrol on their course their journey really begins, and as shall next be seen, academic librarians/support professionals are significant figures in the lives of students.

First year experience: smoothing transition into higher education

Becoming a student is a major life change well understood by librarians and other learning support professionals and perhaps underestimated by some students themselves. However until recently, well intentioned library induction, orientation and information literacy work tended to focus on providing skills development that students somehow lacked in order to be successful – for example, at induction points and the first few weeks of getting into study. Taking the student lifecycle approach frees up this thinking to include a much wider perspective of studentship. Practice is now focussing on understanding and using students' prior knowledge gained before university and acknowledging their multiple identities and affiliations which aligns with findings from eminent studies on the importance of promoting student belonging in a subject or professional context. Harris for example argues the case for supporting doctoral students (who are particularly at risk of non completion), by buddying them with academic librarians, Harris, 2011) whilst in Australia La Trobe University Library conversely measured and analysed the entry level information skills of health science students urging librarians to drop their assumptions that students unprepared for university were not information literate:

"Understanding prior knowledge has the potential to shift our perspective of first year students as having limited skills (and need to learn everything from scratch) to a perception that incoming students have a degree of information literacy which includes a range of skills that can be harnessed and extended to embrace scholarly literacy. It opens up possibilities to improve learning activities so that they are more relevant to students' existing skill set and more likely to support students in their trajectories from peripheral to more engaged participation in learning about university research. (Salisbury and Karasmanis, 2011)

They concluded that the students they studied (the results were also triangulated with a group of Canadian students) have relevant existing knowledge of information and information searching that can be harnessed for university level study, and warned that librarians risk developing uninspiring programs if they ignore prior experience. Applying games based approaches to induction activities as described by Bates et al and further discussed below, build on the experiences of students, and enable them to contribute their ideas to allay library anxiety felt by students. (Bates et al, 2012).

As students move forward on their programme HEIs focus on retaining and progressing students and this stage is next examined; in doing so it is acknowledged that for some students the stages are not co-terminous or even highly defined in students' minds. The flexibility or otherwise of the programme, mode of study (for example part time or distance) extends or inhibits each transition.

The award – on course: collaboration for student retention and progression

In the UK a comprehensive study of retention research (Jones, 2008) highlights that institutions are taking a student lifecycle approach citing various examples of UK best practice. Interestingly the library does not feature specifically although student support does; this is different in 2013. As institutions seek to maximise their investment in students and to maintain income levels retention has demanded more strategic attention by the whole organisation, including academic libraries.

Retention is complex however not least in how it is defined and measured; any gains in retention levels will be difficult to attribute to an individual area's interventions - a point made by Matthews who labels retention rates as indirect measures of learning, (Matthews, 2012, 390). It is axiomatic however that having a student centred approach and providing focussed student support services will be more likely to benefit individuals and hence improve retention. Libraries and their resources feature in the UK Higher Education Academy Higher Education Retention and Engagement project (HERE Project, 2011) as being a possible predictor of why students withdraw. The HERE model takes a three stage lifecycle approach "Pre-entry, In HE, Beyond HE" to map its recommendations against across three overlapping spheres, Academic, Social, and Services. Put simplistically the longitudinal study, 2008-2011 in three UK universities, demonstrates that students who are not confident learners (termed doubters) are more likely to leave HE than their "non doubting" counterparts, and may not have asked for sufficient help with their studies. There are many implications for academic libraries in the final report, which is well worth reading, the most relevant for libraries are: the need to:

- Provide clear and accurate information to students at pre entry
- Ensure students understand what is expected from them and how learning and teaching differs from previous experience
- Ensure students know what help and support is available to them via programme and library staff and
- "Prioritise and support the teaching of first year students particularly helping them to develop the skills, confidence and sense of identity required to become effective learners at university." (HERE, 2011, p.155).

Clearly the academic library can and does play a central role in these respects.

In Australia, Hagel et al identify five potential ways that academic libraries can contribute to student retention of under represented groups in higher education, encouraged to do so by the Australian government target that "by 2020 students of low socio-economic status (SES) backgrounds will comprise 20 per cent of undergraduate enrolments." (Hagel et al, 2012, 214). They recommend that academic libraries can contribute to retention by:

- Helping students to commit and engage academically including embedding support within courses

- Catering for diverse student groups and tackling non-use of the library and its resources
- Understanding individual differences and experiences including exposure to and use of technology and mobile access and providing suitable alternatives
- Identifying and playing an active role at trigger points for student withdrawal and students "at risk" of leaving
- Collaborating with other institutional support areas to provide integrated and seamless support. (Hagel et al, 2012)

They compared retention research projects at seven academic libraries as reported in the literature (p222), several of which demonstrated some positive correlation between library usage data and attainment (Goodall and Pattern, 2011, Mezick, 2007, Emmons and Wilkinson, 2011). Kuh and Gonyea's study reported by Hagel et al had a more wide ranging conclusion however – that is it is the challenge of the academic programme that drives library usage rather than the existence of the library's resources per se (p223). This last factor underscores and validates the large amount of time librarians spend in engaging pro-actively and creatively with faculty to embed and integrate learning outcomes relating to information literacy skills in courses.

Haddow and Joseph, at Curtin University, Australia, looked particularly at new students and whether use of the library led to continuation in study, marrying up demographic data with library management system data. Given non completion of programme and academic failure are key reasons for withdrawal (as opposed to say personal circumstances) it is significant that they highlight that early use of the library during the first few weeks of study tends to lead to better retention levels, although usage of the library physically and electronically varied between mature students and students from different socio-economic backgrounds. An implication arising from this and other studies on retention is that academic librarians need to understand their student profile more deeply, that use of the student information management system for the evidence base and data mining is essential. Matthews, provides a useful and practical insight into the use of correlation techniques and data "farming" using library data and university central data (a campus data repository) to demonstrate the library's contribution to university outcomes, for example retention. He advocates that librarians will need to become "good data jockeys" (page 395) able to conduct broad based data analysis to measure, understand and improve services, which will require evidence about what our users are *actually* doing. He argues that by building a complete picture of library services (collections, virtual services, space, and user satisfaction) combining the data from multiple sources, academic librarians will be able to better demonstrate the impact of the library. (Matthews, 2012). Whilst usage is an imperfect tool, it is likely to also mean that non-use can be estimated and perhaps understood.

Tinto's seminal work (Tinto, 1993) underscored the importance of integrating students fully into the institution, building and strengthening the relationship and connectedness of students and their higher education institution. Hagel on the other hand describes how multicultural theories challenge integration theories because the latter does not recognize the anticipatory nature of changes that institutions need to make in order to attract and retain students from multi-cultural backgrounds. (Hagel et al, p. 216). They summarise:

"…the different perspectives and theories of retention suggest that both students and institutions may need to adapt and that personal, situational and institutional factors may impact on institutional retention rates". (Hagel et al, 216)

An approach taken by many libraries is to strategically work with students as partners, involving them in the learning process, including close working with Student Unions/Associations. An emphasis on collaboration with students has been brought into prominence recently by the introduction of tuition fees, and accompanying notions of students as customers, and the disappearance of students as a captive audience (Alire, 2007), however collaboration with students and the importance of the "student voice" to service development has been a cornerstone of the information professionals' working for some time.

Brock and Tabaei describe how marketing students at Touro College, USA, contributed to the marketing of library services producing marketing plans as part of their academic programme, by creating a "real world class scenario" of value to students and to the library. The librarian became the client and this motivated the student differently in the dialogue and engagement process:

"Libraries can learn a lot from such collaborations. Light is shed on students' viewpoints: it tells us what they think of the library, what they expect from their college library, and how the library can become more appealing to their population. … This study also confirms evidence by marketing professors that real-world assignments can create enthusiasm and learning in their classes and can add to the learning experience of students." (Brock and Tabaei, 2011, 366)

Recommendations include using real-life problems and scenarios to encourage the development of information literacy skills and promoting library services in terms students can engage with. (Brock and Tabaei, 2011*)*

Hence the imperative to engage students fully in their university life and in library services across the many transition points is a recurrent theme in the literature and seemingly a challenging problem requiring attention and resources. The use of technology to involve students in decision making about their experience has spawned many innovations, leading to a more personalised student experience.

Academic libraries are using these opportunities strategically to differentiate the "student offer" in a competitive environment making personalization part of a library-wide strategy to progress and retain students. (Priestner and Tilley, 2012). They argue that with the starting premise "You matter more than our service" it is possible for staff to have a personalised mind set supported by having low levels of bureaucracy, letting staff "break the rules" for a user and having flexibility of approach, getting out where the students are (metaphorically and physically) as mentioned above and embracing patron driven development of service. A good example is patron driven book supply (either print or electronic) whereby students are in control to choose their own titles rather than rely on the library's choice. (Nixon et al, 2010, Breitback and Lambert, 2011). Promoting wellness as part of the student development cycle is a recent phenomena for libraries – being more the province of student services. An innovative approach, employed by the University of Connecticut Library, during final year examinations was to help students allay examination stress through "animal assisted activities" and the use of

therapy dogs. The "Paws To Relax" program was combined with social media to create dog fan clubs and the authors indicate that the sessions could be used for new students experiencing homesickness. (Reynolds and Rabschultz, 2011)

The role of new technology and mobile computing to student learning is prevalent in many articles in the literature and there is not space to cover this topic in depth here. However what is clear is that academic libraries are embracing social media in diverse ways to reach and retain students through engaging them online using: social media, (Dickson and Holley, 2010; Phillips, 2011), production of online tutorials (Blummer and Kritskayer, 2009) and games based approaches (Stone and Pattern, 2012, Bates et al, 2012) .

Writing about libraries and gamification, Danforth says "At its most basic definition, it is the application of gameplay mechanics in nongame settings". (Danforth, 2011, page 84), whilst Dickson and Holley state: "Virtual games allow academic libraries to move traditional library services to an entirely new platform". Page 473.-   a notion backed up by the columnist
Kirriemuir. He describes how some library back room services are now being studied to see if gamification can make them more enjoyable, and hints at the use of competitive gaming techniques to check or improve data quality, which could benefit libraries. (Kirriemuir, 2012). Bates et al also confirm the utility of using serious games to engage and involve new students in delivery of library induction experiences. Importantly they present innovations from the students themselves as part of the module, implemented at Nottingham University in the UK, and aimed at reducing library and computing anxiety. The article strongly suggests that librarians should use the creativity of students which leads to new ideas that librarians can use. (Bates et al, 2012).

At an institutional planning level in the USA Lippincott considers how libraries can re-engage using mobile technologies (Lippincott, 2010) whilst Wilson and McCarthy focus on using mobile technology to build strategic partnerships and play a leading role in student centred provision through not only the mobile enabled library but through the "mobile campus". (Wilson and McCarthy, 2010).   Incorporating mobile library services in academic libraries is not a trivial subject. Murray's seven mobiles initiative overview, whilst four years old would be a good place for libraries unused to mobile environments to start – it covers,
1. Library web sites,
2. SMS Reference
3. Mobile OPACS, and Integrated Library Systems,
4. Mobile Collections,
5. eBooks and Mobile Reading,
6. Mobile Instruction, and
7. Mobile Audio/Vide Tours

She quotes Kroski's thorough publication on the incorporation of mobile applications in library services and of particular note is that this work contains how to develop a mobile strategy; and she also acknowledges the importance of resources suggesting that solutions are available that are "scaleable and inexpensive". (Murray, 2010, 224). Since Murray's overview, more interactive ways of using technology are present in academic libraries; games based learning is being used to promote library services (see library instruction, Smale 2011; social games based learning platform, Stone and Pattern, UK, 2012; the use of QR Codes by Whitchurch 2011 and

Face book by Ayu, 2011, Malaysia, and Phillips, 2011, a content analyis of facebook from 17 USA libraries, and Canuel and Chrichton, 2011 mobile services analysis in Canadian academic libraries

Beyond the award: employability initiatives and repeat business

Some academic libraries take the partnership/engagement model one stage further and actively involve students in service delivery or design, either through formal employment opportunities in the library, volunteering, work placements or as Steuer and Brodhead describe, through "non traditional approaches to internships and practical experience". In the case of the latter, a behavioural science student was engaged as a "consultant" to advise the department about changes to increase the attentiveness of student assistants, employed in a special collections library at Western Michigan University. The student used his knowledge and research methods from his psychology course to bring about behavioural change in the library setting using fresh eyes. The authors point to the more strategic benefit for academic libraries and conclude:

"At a time when academic libraries are under significant financial stress and concerned with integrating themselves with the curriculum as well as providing information, innovative thinking about how to integrate the individual strengths and goals of the student worker into the departmental needs can enhance the instructional program of the library, create innovation in procedures and policies, and contribute to student success". (Steuer and Brodhead, 2011, p.42)

Walton confirms the importance of students as "change agents" and draws attention to the long history of libraries employing students in creative ways (Walton, 2010). What is evident from the literature is the shift over time from students as employees, to be "instructed" - paid for fairly low level duties to support their living expenses, to students as leaders, collaborators and co-creators. One good example of this is work at Emporia State University described by Akers, between 2006 and 2011 to create a recognized student organization (RSO) -(Empowered Students for University Libraries and Archives (ESULA)) that is influencing library strategy, providing opportunities for peer leaders and mentors and harnessing "student activism" to engage other students who might otherwise avoid the library. This initiative underlines the strategic approach necessary to offer students a "training ground in leadership and mentoring of fellow students". (123). Much more than a "reading club" or "friends of the library", ESULA exploits the symbiotic relationship that exists between students, libraries universities and even the wider profession. (Akers, 2011).

Heightened student expectation of employment post-award is also driving institutions (and their libraries) to re-prioritise employability initiatives and integrate more work experience into all awards. This is so for librarianship. Opportunities have been grasped by some academic departments running library and information programmes "library schools" to study student perceptions in order to plan curricular such as the student perception of course study undertaken by the University of Toronto, Their findings indicate that information studies students are concerned about how well their course prepares them for employment and they want a greater emphasis placed on the practical elements; they also uncover some interesting findings about the role of "occupational prestige" which leads them to comment on the variable opinions expressed on the perceived low status of the library profession. (Cherry, et al, 2011).

The issue of student perceptions of librarians was also the subject of a study at the University of Sheffield. The opening of the new Information Commons led to a survey into the perceptions of students of librarians and whether this influenced use of the library). In summary the broad value of perception studies to the student journey is summarised as:

- To assess how well the service is being delivered
- To evaluate quality and relevance
- To understand how new models of library provision are working including strategies for delivering support in multi-functional environments

(Bickley and Corrall, 2011)

Their conclusion:

"…our study revealed a continuing failure by students to recognise different staff functions and expertise, in particular the academic roles and affiliation of librarians, resulting in poor use of the support offered…" (also confirmed by Medeiros, 2012), leads them to emphasise the importance of reaching out via the virtual environment and being pro-active, meaningful partners with academics.

Increasingly services to alumni are also part of the academic library service profile a topic not covered by this review.

Conclusions: strategic implications for future practice

Position for impact

New partnerships are emerging because no single department has the full picture of the entire student journey, nor has the expertise to cover it all; the boundary working that is needed for successful student support should be part of the academic librarian repertoire, and at all levels. Bergman reflects on the tactics that can be employed by new library directors to connect to other senior campus administrators to build influence including, developing and understanding the cultures of other departments, meeting people to learn what they are doing, getting to know managers and staff in departments that provide core business services to the library before you need their services , addressing the priorities of other departments and the institution and using the expertise of other campus professionals. (Bergman, 2011)

These strategies are not just the province of the new service head or even only the academic library. (See Brown and Porterfield, 2008 for a student services perspective on influence). Love and Edwards (cited in Bergman, p. 163) give a more compelling reason from a student journey perspective, rather than a professional perspective, as to why collaboration in support of students is essential - expanding the definition of what an academic library "should be" in particular given our students' lives blend home, study and work in ways that challenge what a library offers, further:

"As information professionals who also have responsibilities as educators and student advocates in higher education, our expertise and services can be used and will enhance most other academic and student service organizations on campus. The key is recognizing the specific and unique needs of students, understanding the information component of these needs and seeking out collaborators to assist us in addressing those needs. (Love & Edwards, 2009, p. 24)"

Strategise student engagement
In the UK a recent research study sponsored by the Higher Education Academy (HEA) compared notable qualitative studies and highlighted the complexities of student engagement and the important role that persistence plays. (Wimpenny, 2011). Student engagement is critical to retention. How can academic libraries engage students in their learning?

If we accept that:

"There's very strong evidence to suggest that students tend to be more engaged with learning ,.. if they engage with library resources, interact with library staff, and spend time using libraries" (Australina Council for Educational Research, 2009),

…a more strategic approach and collective action is required pan-university. Therefore this means working collaboratively with a wide range of faculty and professional services colleagues. A collective approach is more likely to succeed, confirmed by Salinero and Beardsley who quote the work of Kuh:

"…any definition used for meaningful application and purpose must originate from, and be contingent upon. the collaborative efforts among students, faculty, and administration for the enrichment of student learning, achievement of lifelong learning skills, and the fulfillment of responsibilities related to higher education accountability." (Kuh, 2003, quoted in Salinero and Beardsley, 2009).

They suggest that academic librarians should lead and initiate the conversation about defining student engagement plans in their own institutions. Academic libraries could also usefully consider the UK model outlined previously via the HERE What works? Retention Programme using the tool kit developed for this purpose.

Measure and improve the student journey
Increasingly there is a requirement for librarians to understand their student profile much more thoroughly, for example in Thailand Siriprasoetsin et al, urges librarians to more fully utilise Customer Relationship Management (CRM) practices (Siriprasoetsin et al, 2011), Over several years various toolkits have been produced to assist academic libraries in performance management (SCONUL, http://vamp.diglib.shrivenham.cranfield.ac.uk/ and in the USA, the Association of College and Research Libraries, (ACRL, 2010: www.ala.org/acrl/proftools/toolkits). Recently in the UK, the AMOSSHE Toolkit on measuring the value and impact of services that support students draws together a number of evidence bases such as literature from the USA, SCONUL impact evaluation of academic library services and also from the perspective of 'social return on investment' (see http://www.sroi-uk.org). The toolkit could become an essential component of any holistic evaluation of the library's impact beyond the library. (AMOSSHE, 2010)

Additionally, end to end business process reviews are taking place alongside library reforms to maximise the impact of delivery and to be efficient. Matthews' assessment plan (which in the UK would be described as an evaluation plan) (Matthews, 2012, page 400) provides a good overview of data constructs and ways to map student activity across systems, whilst preserving anonymity to measure impact. In the UK Huddersfield University Library (Stone and Ramsden,

2013; Stone and Pattern, 2012) is leading the field on library impact analysis using data. They found that the project's hypothesis "Is there is a statistically significant correlation across a number of universities between library activity data and student attainment?" was positively significant in two indicators – that of use of library electronic resources and book loans (Stone and Ramsden, 2013, "Thus, the more a book or e-resource is utilised; the more likely a student is to have attained a higher level degree result" and this was true across all eight partners. Further by comparing usage against student withdrawal data their key message to students is that you are 7.19 times more likely to drop out if you don't use the library. The Joint Information Systems Committee (JISC) in the UK have spearheaded many institutional projects on data and indicated the potential importance of activity data to institutions; in December 2012 they published an overview report summarising projects that strategized data architecture and particularly those that then enabled learning analytics. The exemplars in the study indicate the strategic importance of data governance, activating data collection, mining data across systems, and the need to include activity data in systems requirements. Without doubt, Librarians will need to strengthen their skills in business analysis and statistical application in order to harvest and interpret the massive potential intelligence that exists in enterprise systems and maximise the value to their organisations.

Further develop the Leadership, attributes and skills for student journey work

As this review has shown, academic librarians are constantly refreshing and re-visiting their assumptions about higher education including re-envisioning the role of the academic library in the 21st century, influencing the library culture and the wider culture within their institutions and professionally. Jantz provides the rationale for seizing the opportunity to innovate:

"Given the growing uncertainty about the role of the academic library in the university, it becomes increasingly important to understand innovation and how library leaders are creating an innovative environment in their institutions". Jantz, 2012, p.4)

Jantz examined the perceptions and practice amongst six American University Librarians. From the research results, Jantz concludes that in order to encourage and lead innovation (which is complex and difficult) library leaders will need to create:

- Strategies that support traditional and exploratory services (page11) and dual structures (page 9)
- Different business models, for example more resource generation (page 11) and new services that counter those of commercial oganizations offering similar services (page 9)
- More business-like measures of performance (see above)
- Morale-boosting initiatives that mitigate conflict and stress that staff may feel when faced with rapid and radical changes to process and structure (page 9)

This requires leadership and an appetite for risk; that is, given that incremental change is not going to be sufficient to deliver effectively in a turbulent educational environment, major change is what leaders should be aiming for. (Jantz, 2012, quoting work of Tushman and Nadler, p.4),

In creating the environment for innovation and sustainability resilience will be needed to experiment and adapt, especially where competing priorities vie for more limited resources. Weaver suggests that a positive self concept is an important attribute to cultivate:

"The potency of self belief is most affected by short term success in tasks and the feedback of others; in reverse failure easily reverses the feedback of others and is less sustainable than a positive self concept that seems to carry one through as a longer term persistence. The latter will need to be part of the successful Information Professional's armoury in the future." Weaver, 2010)

Roberts and Esson emphasize leadership skills needed for collaboration – a way of working fundamental to student journey work. They quote Burton and Dalley's leadership model:

"that puts the leader personally at the centre of any collaboration …[arguing that] influencing is deeply personal, stemming from 'who you are and what you stand for' which in itself creates authenticity and congruence (what you see on the outside reflects what is on the inside). The model then connects the personal with empathy for others, the basis for building rapport, which is developed through highly effective communication." (Roberts and Esson, 2012, 94)

Goulding, Walton, and Stephens, on the other hand studied the political and sensitivity skills needed for leadership of modern academic libraries by comparing the perceptions of early career librarians, public librarians, established library leaders and library students.   The relevant point of the research for this paper is that, drawing on the views of library leaders, they concluded that being able to build strategic alliances across and outside the university was a key political skill, and of "upmost importance" particularly in turbulent economic times - to win resources and influence. They allude to what the author of this article calls the collaboration paradox (Weaver, 2012, 73) however that is impacting on library leaders' willingness to enter into joint relationships, and postulate that the economic climate is perhaps leading to increased competitiveness, which itself means new skills are needed. (Goulding et al, 2012, 114)

Finally an African paper written by Moropa 2010, suggests that to cope with tough times and to prevent the library from being marginalized, academic librarians should examine why private organizations fail, learning from the mistakes of their leaders. Caution is needed with this approach in that there is no blueprint for avoiding future failure based only on past experience, more it is how you respond to setbacks that counts and how you recover using your internal cognitive reserves. (Boss and Sims, 2008, Weaver 2010). Nonetheless, Moropa highlights the singular challenges African academic libraries are facing and gives a useful insight into the negative leadership attributes to avoid such as arrogance, complacency, denial, and provides an example of how positive use of the library strategic plan to demonstrate contribution to the university's goals at the University of Pretoria led to a mix of tactical and strategic working to enable sustainability. (Moropa, 2010)

Areas for Future Research.

This review has sketched out the significant boundary working that is taking place in many library institutions across the world, attempting to define the particular contribution of

academic libraries to the total student experience in higher education. Rich seams of further research potential exist and this is particularly needed in the UK; with notable exceptions, mentioned in this article, there is a dearth of explicit literature on the impact of the library on student success across the transitions. Areas for further research might include strategic partnering with schools libraries as suggested by (Matthews, 2012, page 394), use and evaluation of the HERE: students' experiences of learning support (doubters and non doubters) toolkit by librarians, social networking to engage students (Dickson and Holley, page 477), leadership, emotion and self regulation, (Weaver, 2010), design of Innovation metrics appropriate to the academic library answering the question how do academic libraries contribute to the innovativeness of the parent institution? (Jantz, 2012) student perceptions of academic librarians' educational backgrounds and perceived appeal of enquiry services. (Bickley and Corrall 2011, p.240) and value of the library in college/university choice (Lombard, 2012 page 240). Services provided to alumni and engagement would also be a fruitful area of investigation.

It seems appropriate to give the last word to one of the students in Lombard's study on institutional value to recruitment ability – in the current economic climate arguably the bottom line for many currently and one of the key transition points of the student journey:

"If I knew then, as a high school senior, what I know now as an adult, I might have held the library's facilities in higher esteem when making my college choice. But then again libraries have changed drastically since the time of my undergraduate studies. Today it is vital that libraries be as current as possible with technology and trends. Our students will expect it". (Lombard, 2012, p. 239).

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