# How do academic libraries work with their users to co-create value for service innovation?: A qualitative survey

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**Abstract:** Libraries today face continual challenges from rising costs and shrinking budgets to demand for new types of services. If libraries are to meet these challenges and to successfully innovate, they must not only provide value to the user unidirectionally, but must work together with the user for service innovation. However, co-creation and innovation studies are rare in libraries. Islam, Agarwal and Ikeda (2015a) proposed a value co-creation framework for service innovation in academic libraries. In this study, we empirically test the framework. Open-ended web-based questions were sent by email to heads of libraries and other librarians. 21 respondents answered the questions based on their perceptions on value co-creation and service innovation practices in their libraries. Findings show that academic libraries work with users to co-create value in areas such as project management, makerspaces, information literacy, design of library websites, etc. Despite some concerns, most respondents saw value co-creation as critical to the innovation of new services and the continuing success of their library. The study sheds light on the importance of value co-creation for service innovation in academic libraries, and contributes to literature in this emerging research area of service science.

**Keywords:** value co-creation, service innovation, academic libraries, qualitative survey

## 1. Introduction

For the last few decades, academic libraries are facing a number of challenges. These include changes in service pattern from traditional to digital services, rising journal and serials costs, the fast changing needs and behaviour of patrons, decreasing usage, and increased demands for new types of services (Johnson and Lilly, 2012). With access to mobile search and countless mobile apps on their fingertips, library users today have more choices to avail services than ever before. To address these challenges, academic libraries must redesign their role in the digital environment, leverage their strengths, reform their

services (Jantz, 2012b), and innovate to create responsive and convenient services (Li, 2006). However, innovation requires focusing on user involvement (Patricio and Fisk, 2011) and closing the gap between user expectations and the library's ability to meet them. Here, involving the user means not only providing value to the user unidirectionally, but working together with the user in co-creating value for service innovation. While value co-creation has been exploited in the marketing sphere (e.g. Prahalad and Ramaswamy, 2004a), academic libraries are yet to take advantage of it. Most literature connecting both value co-creation and service innovation relates to business firms and is outside the library context. For the first time in this context, Islam, Agarwal and Ikeda (2015a) came up with a conceptual framework of value co-creation for service innovation in academic libraries. As per the framework, library actors need to maintain the co-creation cycle. This cycle is made of the library sphere, the user sphere, and the joint sphere. It is in the joint sphere between the library and the user that interaction, co-creation and innovation of services takes place. However, Islam, Agarwal and Ikeda's framework is conceptual and has not been empirically tested. The present study will test the framework by gathering perceptions of heads of libraries and other librarians on adopting the framework.

The following research questions guide the study:

*RQ1. What services does the library provide that it believes is of value to its users? How does the library gather knowledge about its users, knowledge for its users, and knowledge from its users?*

*RQ2. How does the library work with their users in jointly creating value? How does it ensure user-library dialogue? What does it think are the risks and benefits of co-creation?*

*RQ3. What do they think is the role of the user involvement and co-creation in the innovation of library services?*

## 2. Literature Review
### 2.1. Service innovation in academic libraries

Development and implementation of something new is the common feature of service innovation. Service innovation is defined as 'an offering not previously available to customers that results from the addition of offerings, radical changes in the service delivery process, or incremental improvements to existing service' (Johnson *et.al.*, 2000, p.2). It is essentially about change and renewal (de Jong and Vermeulen, 2003). Toivonen and Tuominen (2009) suggest that service innovation involves changes in practice and offers better value to the provider. It 'creates value for customers, employees, business owners, alliance partners, and communities through new and/or improved service offerings, service processes, and service business models' (Ostrom *et al.*, 2010, p.5). Authors like Heskett (1986), Miles (1993), Cook, *et.al.* (1999) and Hertog (2000) stress that innovation in services can be related to changes in various

dimensions such as the service concept, the client interface, the delivery system, and technological options.

Studies on service innovation in academic libraries have included how the organizational structure affects the degree of innovation (Howard, 1977), key issues related to innovation in academic libraries (Drake, 1979), and the analysis of academic digital reference services using the diffusion of innovation theory (White, 2001). Martins, Martins and Terblanche (2004) investigate the steps needed to stimulate creativity and innovation in the university library. They suggest involving employees in decision making, setting standards for work performance and giving regular feedback. In a more recent study, Scupola and Nicolajsen (2010) investigate whether academic libraries involve users in library service innovations and what these user roles are. Avdeeva (2010) discusses how innovative services are provided in Russian State Library by offering digital dissertation services and virtual reading rooms. Jantz (2012a) presents a process model and propositions on the ways by which the research library might innovate. Jantz (2012b) investigates the characteristics of innovation as understood by university librarians, and found leadership, management, organizational factors such as size and complexity, the individual, and environmental factors such as the norms of the library profession to be important for innovation. de Jong (2014) conceptualize service design (SD) approaches to building customer service systems for libraries, and posit that libraries that do not focus on the SD approach, may began to suffer patron dissatisfaction.

### 2.2. User knowledge

Customer knowledge and customer participation are both treated as the source of value for companies. In the context of libraries, the customer would be the user or the patron. We replace the term *customer* used in the studies below with *user*. Davenport and Jarvenpaa (2003) argue that if knowledge is power, user knowledge is high-octane power. Smith and McKeen (2005) identify four different dimensions of user knowledge (knowledge for, of, from user, and knowledge co-creation) and show how companies use them in innovative ways to add value for their users. Yang and Chen (2008) suggest that firms need to identify which user knowledge is required and consider the appropriate level of integration. Lyu, Yang and Chen (2009) posit that leveraging knowledge held by users can lead to higher profitability (which isn't a core concern for libraries), growth and further value for both the organization and the users. Andreu, Sánchez and Mele (2010) examine a value co-creation framework that integrates the process view, the user's view and user knowledge. They identify that user knowledge and experience work as the basis of value-creation process. As a service organization, academic libraries need to integrate user knowledge which will lead to value co-creation and offering of innovative services to user communities.

### 2.3. Value co-creation in libraries

Value co-creation and service innovation are important parts of the emerging interdisciplinary field of service science 'that focuses on fundamental science, models, theories, and applications to drive service innovation, competition, and well-being through cocreation of value' (Ostrom *et.al.*, 2010, p.5). Value co-creation brings different parties together to jointly produce a mutual value through new forms of interaction, service and learning mechanisms (Prahalad and Ramaswamy, 2004b). It combines efforts of firms, employees, users, stakeholders, government agencies, and other entities related to any given exchange, but is always determined by the beneficiary (i.e. user) (Vargo, Maglio and Akaka, 2008). In general, it is a bidirectional interaction between the service provider and the user in service dominant (S-D) logic, which is the root concept of value co-creation (Vargo and Lusch, 2004). Well known examples of companies engaging their users in value co-creation include Nike (Ramaswamy, 2008), Coca-Cola's FreeStyle machine (Thomas and Wind, 2013), etc. Most literature on value co-creation is outside of libraries. Based on Prahalad and Ramaswamy (2004b), we define value co-creation in libraries as the joint, collaborative creation of value between the library and the user, where a dialogical, personalized user-library interaction plays a major role. While value creation is unidirectional (initiated by the library), value co-creation is bidirectional (created jointly by the library and the user). Value co-creation can have a profound impact on innovation of new services in the library. Kay (2013) cites an example of patron-driven acquisition models of Arizona University libraries where users help identify 'significant use' of e-books that triggers purchase by the library. Siddike, Umemoto and Kohda (2014) show how public libraries are transforming to multipurpose community learning centers and working as co-creator of economic and social values. Islam, Agarwal and Ikeda (2015a) conceptualized that library OPAC could integrate star ratings on a particular book based on feedback. The way users comment on a particular book in WorldCat, LibraryThing, GoodReads or Amazon, library can apply the same technique on their web OPAC. Apart from application in book search and acquisitions, Islam, Agarwal and Ikeda (2015a) also provide other examples of the use of value co-creation in libraries – in areas of website design/development, research and reference, and blogging and social media.

### 2.4. Theoretical lens: co-creating value and service innovation

User communities are important sources of innovation and contribute to improving the quality of innovation. Thus, user ideas and feedback are important for service providers. They need to work with users in the ideating phase in brainstorming the kinds of services that should be designed for them and with them (Kaasinen, *et.al.*, 2010; Kristensson, Gustafsson and Archer, 2004; Vargo and Lusch, 2004). Islam, Agarwal and Ikeda (2015a) conceptualize the business concept of value co-creation in an academic library setting, and propose a value co-creation framework that supports the development of new and innovative library services. The framework is composed of three parts – 1) library sphere (library value creating process), 2) the user sphere (user value creating process), and 3) the joint sphere (encounter

process, which resides in between the first two parts). This joint value co-creation between the library and the user creates the conditions for service innovation in the library.
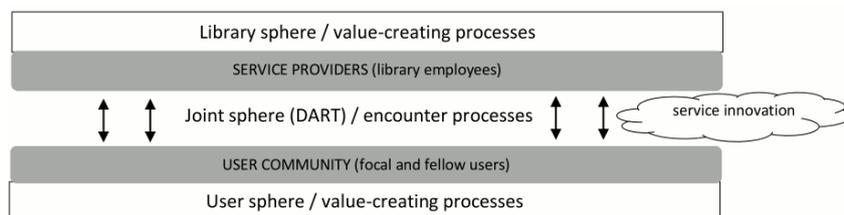


**Figure 1 Islam, Agarwal and Ikeda (2015a)'s simplified value co-creation framework for service innovation in academic libraries**

### 3. Methodology

Since the study seeks to get the perceptions of librarians, we relied upon the qualitative survey method for collecting data, with open-ended questions sent to librarians via e-mail. The questionnaire and study design were approved by the (anonymized) Institutional Review Board. A web-based version of the instrument was created using Google form. In total, ten open-ended questions were designed. Paragraphs explaining value co-creation with example in the context of libraries were included in the questionnaire. There was a mix of self-developed questions and ones adapted from prior studies such as Ramaswamy (2008); Scupola and Nicolajsen (2010); Jantz (2012a, 2012b) and Islam, Agarwal and Ikeda (2015a, 2015b).

#### 3.1. Study population and sample

The study population was academic libraries and we compiled the e-mail addresses of librarians in the UK, USA, Canada, Australia and in other countries (Bangladesh, India, Singapore, Ghana, Nigeria, Egypt, Serbia and Chile) where universities were found using web search. Sixty-seven personalized individual e-mails with a link to a web-based questionnaire (including informed consent) were sent out to university librarians inviting them to participate in this study. We mostly reached out to head librarians (as they might be better equipped to answer questions on strategic decisions such as value co-creation and service innovation), but other librarians in senior or other positions were also included in some cases. A mail was also sent out the IFLA mailing list ifla-l@infoserv.inist.fr that reaches out to library practitioners. The purpose here was to reach out to a wide pool of academic librarians from different countries. The method of sampling was purposive.

#### 3.2. Data collection

In total, twenty five librarians filled out the survey. Four responses were mostly incomplete so had to be discarded. Of the remaining twenty one, two questionnaires were partially filled out. We decided to retain them as part of the sample, in order to use the data for those questions that they filled out. Thus, our sample size is 21. Counting IFLA mailing list as one email, the response rate was 21/68 = 30.88%. Data were gathered in February, 2015.

## 3.3. Analysis

All the data gathered through the Google form was downloaded as a spreadsheet, with answered organized as per each question. Three kinds of coding were carried out (Corbin and Strauss, 1990). Open coding included an initial pass through the data to come up with candidate concepts for categories. For each answer, we came up candidate categories to synthesize the findings. After an initial level of analysis, categories were combined into major categories (axial coding). Finally, the focus shifted to core categories (selective coding). Categories were reconciled for inter-rater reliability.

## 4. Findings

**The demographic data is summarized in Table 1 below.**

Table 1 Demographics

| *No. of employees in library* | *Library Location* | *Work role / Designation* | *No. of years in the library field* | *Gender* | *Age* | *Education* |
|---|---|---|---|---|---|---|
| 1-19: 3 (14.29%) | Canada 5 (23.81%) | Head / Chief Librarian / Director 11 (52.38%) | Min 8 years | Female 14 (66.67%) | Min 19 years | Masters 16 (76.19%) |
| 20-49: 2 (9.52%) | USA 4 (19.05%) | Senior Librarian 5 (23.81%) | Max 38 years | Male 7 (33.33%) | Max 48 years | PhD 2 (9.52%) |
| 50-100: 8 (38.10%) | India, Singapore 2 (9.52% each) | Librarian 5 (23.81%) | Average 21.05 years | | Average 32.05 years | Bachelors 2 (9.52%) |
| 101-500: 4 (19.05%) | Australia, Chile, Egypt, Ghana, Nigeria, Serbia, UK, unspecified 1 (4.76% each) | | | | | Diploma 1 (4.76%) |
| > 500: 4 (19.05%) | | | | | | |

The quality findings for the ten interview questions are discussed in the sections below. For the answer to each question, the categories developed are listed on the left side. Selected responses (in *italics*) are included on the right.

### Q1. What services does your library provide that you believe is of value to your users?

The numbers below correspond to the number of times a particular response was chosen by a respondent. Most respondents gave more than one option, which were coded into separate categories, leading to 76 coded responses by the 21 respondents. The numbers within brackets indicate the sum total for all responses in that category.

| | |
|---|---|
| Access to resources (physical, online, e-books) (20) | *resources of print, digital and web archives/ collection development policy/cataloguing (7)*<br>*web OPAC /access / discovery-level search mechanism / information retrieval knowledge (6)*<br>*periodicals / e-Journals /  e-books / electronic resources/databases (5)*<br>*knowledge repository service / institutional repository (2)* |
| Helping answer questions / instruction / recommendation (in person, virtually) (18) | *reference services / virtual reference service / ask-a-librarian /enquiry services / bibliographic service (9)*<br>*instructional services / consultation (4)*<br>*user education/Information literacy/lifelong learning (2)*<br>*prompt expert support service (1)*<br>*reader services (1)*<br>*research support: institutional and for heritage (1)* |
| User awareness / disseminating information (12) | *new arrival alerts / current awareness service / current content services / media alert (5)*<br>*library website (3)*<br>*social networking services / library blogs (3)*<br>*user orientation service (1)* |
| Ease of loaning items (books, technology gadgets) (9) | *inter-library loan (3)*<br>*document delivery service (2)*<br>*self-automated circulation / circulation (1)*<br>*RFID security system (1)*<br>*on-line reservation service / online services (1)*<br>*laptop check out (1)* |
| Evaluation / understanding and responding to user needs (5) | *user-centric library design (2)*<br>*patron driven acquisition (2)*<br>*measuring impact analysis services (1)*<br>*"We have a user services librarian who regularly conducts focus groups or meets one on one with students to conduct user feedback regarding the discoverability of our resources and services"* |

| Printing / scanning (5) | *photo-copying / printing and scanning (4)* *active learning technologies e.g. 3D printing (1)* |
|---|---|
| Specialized services / helping manage research data (4) | *statistical data services (1)* *data management (1)* *publication management / publishing services (1)* *copyright (1)* |
| Provision of physical space / environment (3) | *space facilities / provision of private/group study spaces (1)* *zero-decibel study enclosure (1)* *multimedia library lab (1)* |

### Q2. How does your library learn about the user (both current and potential users) and his/her needs?

There were 21 coded responses – 1 for each respondent.

| Face-to-face / social media / survey (14) | **Face-to-face interaction/direct contact/user assessment (7).** *"Know your library programme, interaction in classroom, ROI, user survey, ask-a-librarian, statistics obtained from circulation desk etc"*; *"Interactions with faculty, students research attendance at conferences"; "Individual, in-person discussions, email, phone calls and inquires that come in through ask-a-librarian."; "Direct contact (user requests)"; "Day to day interaction, sharing among colleagues and periodic surveys"; "Reader/user assessment program, one-one encounter with users, reader's club."* **Social media (4).** *"Social media, library orientation"; "Social media, direct contact"; "Through social media and Opac"* **Survey (3).** *"With need's surveys, talk[ing] with them, reviews of information by email according [to] the[ir] profile, best practices with the opac and its modifications, etc."; "Service interactions, surveys, focus groups, polls, research on user data."* |
|---|---|
| Getting user feedback / application form (6) | **Feedback/meeting/suggestion box/usability testing (5).** *"Through suggestion boxes, by sending catalogues to the different departments and Faculties of the University so that they can indicate their collection development needs."; "Usability testing, teaching in the classroom provides good feedback regarding students' experience with our services and resources, the reference desk is another opportunity to interact with students and our resources."; "User feedback through questions they ask and user engagement through subject librarian."; "Academic Outreach services , e.g. Feedback systems (Library and University systems), surveys participation in University committees, working groups,* |

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| | *focus groups."*<br>**Structured application (1).** *"In our Library, particularly, we use a structured application form where provisions are made to include (a) Areas of Interests and (b) at least 2 very relevant references. These two factors enlighten us to understand about the users' needs. Besides, for in house users, (c) we often study the publications list of individual scientists/researchers. By this way, we can understand about their priorities. Significantly, the last item becomes more concrete for researchers dealing in science subjects."* |
| No idea (1) | *"I don't know"* |

## Q3. What mechanisms does the library employ to disseminate relevant information to its users?

This was coded with 1 response for each of the 21 respondents.

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| Social media / online tools (12) | *"Library Portal, Utilization of Social Media (e.g. Facebook, YouTube, Blogger etc.), Email Service."; "... digital displays, brochures, in-person presentations."; "Library catalog… other online tools."; "Instruction sessions, library newsletter to the faculty twice a year. Twitter, Instagram…"; "...TV screens posted in the library, announcements when teaching."; "...current awareness services."* |
| User profiles / /workshops/ asynchronous communication (9) | *"The Library maintains "profiles" for its users. Searching the database with the key/text words collected from such profiles help us a lot to select books/periodicals (specially new entrants). It often happens that users gradually develop a rapport with the Library and as they take up new projects, they inform the Library about their potential requirement. E-mails, Blogs and even Phone Calls or Text Messaging in Mobiles are common ways of communication."; "Library instructional workshops, websites and blogs, research Assistance and service desk."; "News" column on web-site, Twitter, Exhibitions."; "Corporate email"; "Museum website, emails, listservs, in-person one-on-one discussions and small group tours. Workshops focused on library collection material."; "Blog, email, newsletters."; "liaison librarians, social media, website, email, on site posters, displays."* |

## Q4. How does your library make use of the knowledge that your users possess?

18 of 21 respondents answered this question.

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| Tailoring services to user needs (8) | *"Inviting feedback, prompting students in improving library services, collaborative assignments through faculty."; "Incorporate student feedback into website and search design."; "Try to keep up with changing needs and continuing programs and providing resources needed for our community."; "To improve user services/needs."* |
| Acquisition of library collection (5) | *"Implements and purchases the requested items required by library clientelle."; "The library make use of the knowledge that our user possess by acquiring relevant materials suggested by the users, making use of the knowledge provided by user to benefit other users by sharing the knowledge through social media."; "Primarily used to develop collection."* |
| Technology support (2) | "Employ as student peers to deliver technology support services to other students Guide improvements in publication and publishing services (scholars and researchers)." ; *"We draw upon the work of users for describing our collections."* |
| Not sure (3) | *"I don't think that we do."; "I'm not sure what this question means."; "I don't know how to answer this question."* |

No response (3)

### Q5. How do you ensure user-library interaction? What are the mechanisms by which you engage your users in a two-way dialogue? What strategies do you employ to foster a sense of community among your users?

20 of 21 respondents answered this question.

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| Meeting/discussion /consultation /collaboration and library events/online/e-mail/environment/ library form/bulletin/servic e interaction (17) | **Meeting/discusison/consultations (4).** *"We do organise users meeting but the response is usually not very good unfortunately.";"Discussion"*; *"Research consultations."*<br><br>**Collaboration and library events (4).** "*Library hosts events - film screenings, lectures, exhibitions.*"; *"We also run promotional events at least twice a year, and all our users are encouraged to join in."; "Working with our students and faculty. Working with advisory committees. Have a Friends of the Library group who works with us promoting the library. Development and outreach to alumni. Liaising with faculty members and departments."*<br><br>**Online/e-mail (3).** *"Online services, fast answer for all requirements (no more of 4 minutes to answer as standard), additional services (non professional searches, confidential information destruction or* |

backup."; *"Library orientation progarmme, user feedback system ...live chat."*

**Good environment (3).** *"...the users gradually develop a rapport with the Library. They often refer their peers to the Library or ask the Library certain services for their peers. such "informal" procedures opens the channel for a two--way dialogue."*

**Evaluation form/library bulletin (2).** *"Use of library bulletin to inform user of activities in the library and also engage user in interactive session and seminars."*

**Service interaction (1).** *"Day-to-day service-based interactions, focus groups, social media, outreach efforts, student employment."*

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| **Voluntary services / coffee** (3) | *"One-on-one conversations, greeting each person that enters the reference room, prompt replies to emails and AskaLibrarian questions, introducing scholars with related research interests to one another; library coffee bar with free tea and coffee and dessert treats.";* *"Develop community of Practice"* |

*Q6. Are there areas in which your library works jointly with your users to co-create value or to design services and offerings? Please elaborate.*
**19 of 21 respondents answered this question.**

| | |
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| Makerspaces/ Projects/3D Printing (6) | **Makerspaces (3).** *"We've embedded the Maker Lab in the library, in collaboration with the University's IT and Engineering depts.";* *"Collaboration with student teams to organise and hold exhibitions in library spaces."* <br> **Project Management (2).** *"Yes. For instance while we were preparing for a Research Project on history of Commercial Advertisements, the Library collected literature, handbills, artifacts (like old match box, labels, Calenders, etc.) The Researchers helped us to identify the calligraphic styles, spelling, nature of illustrations used etc. etc. they enriched our knowledge to prepare the catalogues and indexes in a more viable way."* <br> **3D printing (1).** *"A new 3D printing service will be launched this year. Our intent is to identify students to provide peer supported learning and in turn, use this experience to contribute co-curricula recognition."* |
| User feedback/ information literacy (4) | **User feedback (3).** *"We work with Student Advisory Groups"; "We work through liaison services"; "Feedback from Users"* <br> **Information literacy (1).** *"These include: discussing ideas with our users at student/staff panels; working with academics on the planning and delivery of our information* |

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| | *literacy teaching; representing the library at committee meetings; etc.”* |
| Website design / social media (3) | **Website (2).** *“Website design through the use of focus groups. Overall, this is an area that we are very weak at.”;* *“Website and search design is probably the area where we gather the most feedback from students.”* <br> **Social Media (1).** *The library work jointly with users to co-create value by using social media and also the use of the media resource center.* |
| Collection development (3) | **Collection development (2).** *“Develop the print collection around user needs and requests for titles”* <br> **E-books (1).** *“We are always trying to work with our faculty and students. One example is that we have worked with various units to create online OJS journals or e-books to meet needs in scholarly publishing.”* <br> **Donate-a-book (1).** *“We sometimes have a donate a book programme for our users.”* |
| No work (3) | **No work (3).** *“No”; “I don't think so.”; “Not that I am aware of”* |

### Q7. What do you think are the risks of users participating with the library in value co-creation?

19 of 21 respondents answered this question.

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|---|---|
| Difficult user expectations /lack of interest and knowledge/ lowering of standards (9) | **Difficult to handle user expectations (4).** *“Unrealistic expectations from users; lack of understanding, e.g. regarding financial restrictions or boundaries of job roles; needs of an individual being mistaken for needs of a group of users, so that the wrong solution is chosen.”; “Difficult to manage user expectations.”; “Users demands may not be realistic in relation to the institutions mandate.”; “Spreading resources too thin.”* <br> **Lack of interest and knowledge (3).** **“***Often can't articulate their needs, lack of knowledge of library capacity and capability.”; “Difficult to source for willing users. Only able to engage a particular type of user who are more forthcoming.”* <br> **Lowering of standards (2).** *“Concerns of de-professionalization by librarians; poor data creation in the case of catalogue interactions.”* |

| No risk in user participation (7) | *"I think there no risk about the use of co-creation, all are active actors."; "Involvement of users in value co-creation is not a risk at all. Users suggestions/participation should be strongly encourage in libraries to enhance quality services. I do not thing any risk associated of users participation."; "There are no risks."; "There are no risks in value co-creation, it strengthens the library weaknesses."; "Have not identified any risks to date"; "None"; "No risk, but it's more like users are busy too--they have no time to create value with library."; "There is no risk at all."* |
|---|---|
| No idea (3) | *"I have no idea."; "None that I can think of at the moment."; "I'm not sure. "* |

## Q8. What do you think are the benefits? Do you think involving the user in value co-creation helps in the innovation of new services in the library?

19 of 21 respondents answered this question. All of these 19 felt that involving the user helps in creation of new services.

| Addressing user needs (13) | **Addressing user needs (8).** *"It is not the only way to design services but helps us to focus on user needs as expressed by students."; "Yes. It is important to be delivering the services that the users want/need."; We gain the benefit of their expertise and contacts."; "Yes, it is useful as the services are what are needed."; "Able to get feedback at an early stage. To some extent it helps. It is often nice to say that a certain service was created together with users. This creates a general perception among people the Library is close to its community."; "Yes. If you analysis the feedback of users, you will able to locate where the gap, and this gap will lead you to be more innovative and creative to provide best services to the end users.*"<br><br>**User engagement (5).** *"Makes the library a valuable part of the community."; "The user will learn more and gain more knowledge.";; "User engagement, sense of belonging and ownership, more targeted service development."; "Certainly. To make a long story short, It is often observed that the knowledge of users start, where the wisdom of a Librarian ends!! the use of search terms most appropriate and most used in academic community are often made known to us by the academicians themselves."* |
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| Gathering user feedback and ideas (6) | **User feedback (3).** *"Yes. It makes sense to get feedback from users."; "Sometimes and students should (must) be part of the conversation. But, librarians as professionals and experts should be providing leadership and overall direction for service innovation. Student feedback has its limits - students' experience with library resources and services is often limited and co-opted by Google."* <br> **Exchange ideas and identify gap (3).** *"New ideas and weaknesses of the library are identified."; Major benefits are the exchange of ideas and the ability for both parties to share information on new topics and research."; "Yes can provide relevant ideas that will enable the institution to use more innovative and new services in the library."* |

### Q9. How are you bringing about innovation in your library? Which services are the most innovative in your library?
All 21 respondents answered this question.

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|---|---|
| Pilot/ suggestion / follow others/ collaboration / feedback/ ICT(10) | **Pilot/suggestions/follow others (6).** *"Methods include: inviting suggestions and ideas from users; looking for examples of good practice in other libraries, either within the University or outside it; making use of the skills, knowledge and aptitudes of individual members of staff, e.g. an aptitude for library promotion/publicity or social media skills; thinking outside the box."; "Looking to what works at other institutions."; "Trying to pay attention to what other libraries are doing. Encourage staff to try new things. Encourage sabbaticals and research to bring about innovation. Go to library conferences and take in what is happening there with other libraries and vendors. Bring in library school students to do interesting and innovative intern projects."* <br> **Collaboration and user feedback (3).** *"Keeping an open mind about librarian's job scopes which are ever-evolving. Taking the initiative and courage to keep asking users for feedback and inviting potential collaborations when possible."; "1. Maintenance of "profiles" they are users' profiles, experts' profiles and even geographical profiles. 2. Bringing the formally unpublished materials (like working papers; seminar talks, project reports, etc. etc) to the notice of the users. 3. Handy subject bibliographies on various topics of materials available in the library."* <br> **Using ICT (1).** *"Application of Information and Communication tools in the library."* |
| OPAC/ information | **OPAC/information literacy (3).** *"Most innovative services include: specific tailoring of information literacy teaching* |

| literacy/ reference/ user-centred design/ scholarly communication (7) | *sessions to user needs; writing regular "library columns" in student newsletters; etc."; "Opac services, social media services and circulation services."* **Reference services and others (2).** *"Reference services and the use of electronic resources."; "3 key strategies drive innovation: transform engagement with information; open, 24/7; augment student and research success, examples include: 3D printing services; collection digitisation initiatives; learning co-op (pilot); exhibitions (inc. virtual exhibitions)";* **User-centred design/ (1).** *"User centered design is probably our most innovative service. We've had some challenges with senior leadership. At the moment we have a returning acting Dean of Libraries and it feels like we've stepped back 5 years. The challenge with many senior library administrative positions is that they are not practitioners. In many cases it has been years, if not decades, since they have actually interacted with students. They are often detached from the day to day reality, and indeed best practices and technology trends."* **Scholarly communication (1).** *"Scholarly communication services is the most innovative now."* |
|---|---|
| General services / not innovative / unsure  (4) | *"I think that we have normal services using in all libraries. Not innovative."; "There are none in my library branch. Special Collections is doing interesting projects to bring in students to use primary resources, but I am not at all involved in Special Collections."; "I do not know."; "I don't think it's something that can be done by one person. I don't think I have very innovative services that I have contributed."* |

**Q10. What do you think is the role or contribution of users in designing the services you mention above?**
16 of 21 respondents answered this question.

| Tailoring services to needs/ suggestions on designing services/ service improvement (13) | **Tailoring user needs (6).** *"Critical. We involved users, with disabilities, at every step of piloting this new accessible content e-portal."; "The clientelle is the king so by listening to their views the librarian creates a user friendy environment for their users."; Their familiarity with these systems elsewhere helps."; "We need to keep them involved, so they are a part of it where possible and they feel the library is meeting their needs. It is difficult at times with some faculty who do not want change or innovations, because they don't want to learn new things, tools or ways to do things. Other faculty do, so it is a balancing act.";* |
|---|---|

> *"Users are aware of themselves as users, that is, the Library exists for them. If they do not continue to use or support the Library, our level of service will decline or become non-existent one day."*
> **Suggestions and design (5).** *"100% importance in the designing."; "Providing ideas and suggestions; evaluating ideas and suggestions of library staff."; "The role of the users in designing the services is to create relationship among users and library workers and also provide avenue for interaction."*
> **Service improvement (2).** "*3D printing - monitor user behaviour to drive expansion and ongoing improvement of services; respond to and address digital literacies requirements; advocacy."; "Providing regular feedback."*

Not important (3)  *"Low"; "None"; "Little to none."*

Let us now discuss the findings based on the three research questions for the study.

## 5. Discussion

### RQ1. What services does the library provide that it believes is of value to its users? How does the library gather knowledge about its users, knowledge for its users, and knowledge from its users?

The first four interview questions were related to the library sphere from Islam, Agarwal and Ikeda (2015a) framework. Librarians perceived that the important services that they provide (order based on the most frequent services cited) are access to resources, reference & instruction, user awareness, ease of loaning items, evaluation / understanding user needs, printing/scanning, data management and provision of physical space. As we see, there is a big focus on access to library resources. The study respondents believe that providing access to resources is of most value to users. As Levine-Clark (2014) and MacWhinnie (2003) have noted, increasing use of new technology and shift towards digital resources have brought changes in the way students use academic libraries and library resources. Providing access to the resources in both the print and electronic formats is important.

Smith and McKeen (2005) identified three important aspects of customer (or user) knowledge that are important in the process of co-creating knowledge along with users. These are the knowledge of users, knowledge for users and knowledge from users. The library uses face-to-face meeting, survey and social media as the most common methods to learn about the needs of its current and potential users (knowledge of/about users). Finding out what the user needs is crucial before a library can devise ways to address them. Prior studies such as Cullen (2001) and Dicson and Holley (2010) have alluded to the importance of surveys and social networking activities as yet not fully explored ways for

involving users in improving library services. The other ways to reach out that librarians identified are feedback, meetings, suggestion box, usability testing and application forms.

Social media and other online tools are identified as the best way to disseminate relevant information to academic library users (knowledge for users). This is likely because social media works as an invaluable tool to disseminate and communicate with users the information across a wide audience. The present finding relates with Collins and Quan Haase (2012)'s finding which indicates that interest of social media in academic libraries is increasing. Other ways of disseminating relevant information to the library users are through preparing user profiles, arranging workshops and through asynchronous communication such as email, listserv, etc.

The librarians in our study indicated that the library uses the knowledge from its users to tailor its services to user needs, in areas such as acquisition and collection development. Identifying and acquiring user knowledge helps to understand their needs and expectations, which has a bearing on user satisfaction (Yang and Chen, 2008). Thus, academic libraries must continuously seek to understand users' behavioural needs, their overall attitudes and their perceptions on services by acquiring user knowledge.

### RQ2. How does the library work with their users in jointly creating value? How does it ensure user-library dialogue? What does it think are the risks and benefits of co-creation?

Questions 5-8 in our study were related to the joint sphere (between the library and the users) in Islam, Agarwal and Ikeda (2015a) framework. Q6 specially focused on the joint sphere. This sphere includes the components from Prahalad and Ramaswamy (2004a)'s DART (dialogue, access, risk-return and transparency) model. In our study, we decided to focus on two of these 4 components – dialogue (Q5) and risk-return (Q7-8).

Meetings, discussions and consultations, collaboration and library events, through online mechanisms such as e-mail and live chat, interaction in the process of day-to-day services, focus groups, evaluation forms, surveys, events, social media, orientation about the library, and friends-of-the-libraries groupings were  identified as the ways in academic libraries interact with their user communities. These tools ensure user-library dialogue and engagement, which is an important requirement for value co-creation, as per the DART model. The more the user feels wanted and valued, and the more the user's needs are met, the more s/he would want to remain engaged (Islam, Agarwal and Ikeda, 2015a). Here, user needs include the user's need for information, and library services, but also his/her other emotional needs. Effective engagement leads to fostering a sense of community among the library users. The respondents identified various mechanisms for achieving this, including greetings with

coffee, guided tours of the library and asking users to provide voluntary services in some library operations.

Makespaces and collaborative workspaces emerged as primary areas where libraries are working with users to jointly co-create value. These areas help users to interact with each other, and also with library staff. They provide excellent means to foster dialogue - an important requirement for co-creation (Prahalad and Ramaswamy, 2004a). Other areas of co-creation include collection development, design of information literacy curriculum and website design. A respondent also identified peer-supporting learning of new services such as 3D printing as an area for value co-creation.

The user's lack of interest, lack of knowledge about the working of the library, unrealistic user expectations and librarians' concerns about lowering of standards were identified as some of the risks of the library working with users to co-create value. Of the 19 of 21 respondents who answered the question, 7 said that there is no risk in involving the users for value co-creation. This is significant finding and points to the increasing role and acceptance of value co-creation practices in academic libraries. These respondents expressed that inviting users in value co-creation enhances the quality of library services, strengthens areas of library weaknesses, and allows the users to be active actors in services, which leads to increased user satisfaction.

Getting user feedback and identifying gaps were identified as the benefits of value co-creation in academic libraries. It would allow the users to take greater charge of their needs, and working with the library to meet them, rather than simply waiting for the library to provide the services.

When the library engages in a process where the library and the user interacts, the user can suggest new ideas that the library has not thought about. The identification of gaps brings forth new ideas, and potential areas for creativity and innovation (Vargo and  Lusch, 2004). Most respondents felt that value co-creation would be extremely helpful for the innovation of new services in academic libraries.

### RQ3. What do they think is the role of user involvement and co-creation in the innovation of library services?

The last two interview questions (Q9 and Q10) helped address this research question. It relates to the outcome of value co-creation in Islam, Agarwal and Ikeda (2015a)'s framework, which leads to service innovation.

Through committee work and pilot undertakings, taking suggestions from users, and following the best practices of other academic libraries were identified as ways in which academic libraries were bringing about innovation. Other ways included collaborative work, getting user feedback and using ICT tools in the library.  OPAC/information literacy services, reference and user-centered design

services appeared as the most innovative library services. As Magnusson (2003) identified, the service innovations suggested by the users are often more creative and useful than those suggested by professionals. Nowadays, web and mobile apps are offering libraries a new world of opportunities to engage patrons.

By encouraging and inviting students, staff and faculty for active participation in library processes, an academic library can tailor and design its services to meet user needs, and achieve its organizational mission and goals. 13 of the 16 respondents who answered Q10 (62% of the total sample) saw the user's role as critical and important in the design of new library services. They valued the suggestions in the design of new services that users bring, the improvement of existing services, and the way this allows them to tailor library services to meet user needs. Only 3 of the 21 respondents (14.3%) saw the user's role as little or unimportant for innovation in library services. This large support for user involvement has important implications for value co-creation and service innovation in the current libraries, and their working in the near future.

## 6.   Conclusions and future work

The study set out to test the conceptual framework presented by Islam, Agarwal and Ikeda (2015a). The responses brought forth an array of findings related to the framework. The framework is to be seen from the top to the bottom. In the library sphere, academic librarians perceived that providing access to the library resources is of value to its users. In the value creating process, academic libraries use the knowledge of and from users, and also provide knowledge for users. By applying different methods e.g. face-to-face meeting, survey, social media, etc., the libraries gather user needs, and then tailors their services to address the identified needs. In this way, they seek to manage their user knowledge. Continuously gathering the knowledge of user needs, and being responsive to those needs is important for value co-creation in academic libraries.

The joint sphere or encounter process is the mid-part of the framework which focuses on the library-user interaction to jointly create value. Value co-creation requires dialogue with users. Our findings identified that by arranging meetings, discussions and consultations, carrying out collaborative activities and library events, and reaching out to users both face-to-face and online, including through social media are the ways in which academic libraries create dialogue opportunities with their user communities.  Makerspaces and collaborative workspaces emerged as big areas where libraries are working with users to jointly co-create value. The library-user dialogue is a key component of the joint sphere of value co-creation. Most of the academic librarians also identified some areas of risk in working with users to co-create value. Getting continuous user feedback and identification of gaps were identified as the benefits of value co-creation to academic libraries. An identification of these gaps will lead to areas and ideas for innovation in library services.

The results of the study indicate that Islam, Agarwal and Ikeda (2015a)'s framework is supported in an academic library setting. Thus, this study provides empirical validity to the conceptual framework.

However, the study has a few limitations as well. First, it did not test the user sphere (the bottom part) in Islam, Agarwal and Ikeda (2015a)'s framework. Also, it focused only on the dialogue (D) and risk-return (R) parts from Prahalad and Ramaswamy (2004a)'s DART model (which forms part of the joint sphere in Islam, Agarwal and Ikeda's framework). The interview questions of the study did not cover the access (A) and transparency (T) components from the DART model. Second, the sample size was not adequate for a qualitative study and was quite low. A bigger sample would gather more data which will overcome the limits of the transferability of findings. Future work should supplement this with more questions on the other parts of the framework in the context of academic libraries. While this study was qualitative, a survey study with a larger sample would be a good follow-up to this study. While this study did support and validate Islam, Agarwal and Ikeda (2015a)'s framework, it does need to be tested more and validated against further empirical studies.

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