SLA AGC 2017 Session Paper: Managing user queries using cloud services: KAUST library experience
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Introduction
Reference Services in academic and higher tertiary institutions’ libraries have been greatly influenced by the ever changing advances in information technology as well as the emergence of social media tools. One such service that have been impacted is the provision of answers to users’ questions in a timely and relevant manner. This service have seen significant changes from the traditional personal face to face reference interviews to the present day virtual chat and instant messaging services.

Users’ questions can range from the simple and directional ones such as information on library facilities and services to complex questions such as finding information on a particular topic. It is imperative that users are shown the relevant information resources that would provide the needed information. Additional support such as providing a quick one to one consultation with relevant subject specialists may also be conducted.

The provision of such reference services have brought challenges to libraries. They include:

• Capturing and storing of the questions
• Answering the questions
• Monitoring and tracking the responses to the questions
• Generating statistics
• Communicating these statistics to internal library staff and other stakeholders
• Sharing the answers with other library staff

This paper describes KAUST library initiative in implementing LibAnswers to assist the library in capturing, tracking, monitoring and managing all inquiries. It will also highlight the challenges faced by the library as well as the triumphs.

Background
KAUST (King Abdullah University of Science and Technology) is a graduate research university located along the shores of the Red Sea. The university was inaugurated in September 2009. The main areas of study are: Mathematics and Computer Science, Physical Sciences and Life Sciences. The university library is situated at the heart of the campus. It is a digitally born library with collections comprising of print and electronic resources. Some of its collections include:

• 310,000 e-book titles with perpetual access from all major scientific and commercial publishers in science and technology.
• Over 50,000 e-journal titles from all major scientific and commercial publishers in science and technology
• Over 30 scientific databases
• About 3,500 print titles
Library staff comes from different nationalities. Presently, we have more than 20 staff divided across 3 main sections: Administration (Admin), Collection and Information Services (CIS) and Systems and Digital Services (SDS). Administration takes care of the building operations, equipment, facilities and related matters, CIS looks after the collection development, reference services, library trainings, electronic resources management, acquisitions among others while SDS covers areas on Information Technology pertaining to the library domain.

Reference Services: The Early Days
Since the inauguration and opening of the university library, the Information Desk has been the focal point in the provision of reference services. The Info Desk duties are shared among the 3 library sections. Library staff is rostered to ‘sit’ at the Info Desk and answer to users’ queries during business hours (8 am – 5 pm). During the academic term, the Info Desk operation hours is extended for 3 hours in the evenings.

Apart from the physical presence of library staff at the Info Desk, the other medium of reference services are email and one on one consultations / walk-ins. KAUST community can email their questions via a dedicated library email account. This email account is accessible to only several designated library staff. One of the tasks of the staff is to re-direct such questions to relevant library staff who will respond to the users’ inquiries.

In addition to that, the CIS subject specialists provide a more personalized reference service. They conduct outreach initiatives by visiting the faculty members, students and researchers at their offices / labs / classes. During those sessions, the academic community has the opportunity to ask about library services and facilities as well as getting more information about the subscribed electronic resources as well as print materials.

Need for Change
From observations as well as informal discussions involving library staff, it was noted that the frequency of questions received at the Info Desks have not been growing dramatically over the years since the library’s opening. On the other hand, the amount of questions received via email has increased tremendously. There is an imperative need to have a proper and robust system to track and monitor such emails.

Common questions that the library receives via email are:

- Obtaining journal articles / book chapters
- Access issues related to electronic resources
- Searching for particular print book titles
- Printing and Photocopying services

It was noted that email communication pertaining to reference service poses a number of challenges to library staff. Some of them include:

- No proper tracking / monitoring system: There was no proper system of checking of whether the assigned library staff responded to the question on time or whether it was
answered at all. Apart from that, there was no proper system to ‘assign’ the questions to particular library staff.

- Organizing issues: There was a need to organize the email responses into various categories such as Completed, Pending, Need further investigation and New Queries.
- Search and Retrieval features: This feature was not robust enough to enable library staff to search and retrieve responded emails.
- Statistics: There was a growing need to obtain statistics on inquiries received per month, per quarter and per year. Email software did not provide such features that would enable library staff to assess and evaluate the reference questions patterns.
- Metadata: There was no feature that would enable library staff to tag keywords to these emails to describe the nature of the question.

Apart from that, one on one consultations and phone interviews were also not captured in verbatim format. More often, subject specialists would conduct such interviews without capturing them into paper format. This resulted in the loss of tacit knowledge. Such knowledge needed to be shared as it would assist other library staff in responding to similar future questions. The lack of sharing such knowledge reduced efficiency and productivity that affect our Reference services. Having such knowledge stored in a shared and single repository would enable library staff to learn, share and re-use the information to answer future questions.

The Solution
KAUST library identified LibAnswers as one of the potential solution to the identified issues. Based on our interactions with other peer libraries as well as attending international conferences, our library staff compiled, evaluated and shared the information with library management as well as relevant library staff.

LibAnswers is a product by Springshare. It is a “reference tool that provides an easy-to-navigate public interface and an intuitive yet robust behind the scenes component” (Shepherd & Korber, 2014). Some of the benefits of using LibAnswers are:

- Knowledge base features
- Virtual chat and SMS modules
- Monitoring and Tracking features
- Generating statistics
- Widgets
- Public Interface: Frequently Asked Questions

(Shepherd & Korber, 2014)

Springshare stated that LibAnswers would a “single platform for all online reference needs” (Springshare, 2016). On top of that, 1,200 libraries worldwide have jumped on the LibAnswers bandwagon. Springshare added that LibAnswers provide features such as:

- Email, chat, sms and twitter (social media features)
- Create unlimited FAQs
Project Implementation

After several discussions involving relevant library staff as well as library management, it was proposed that the library chose LibAnswers to resolve these issues. The E-Resources Specialist was tasked in leading the implementation of LibAnswers in April 2015. The aim of the project was to set-up LibAnswers for the library and to train library staff on using LibAnswers. A team was also set up to work with the E-Resources Specialist in this project. They comprised of staff from the various sections. The team met up regularly to discuss the timeline and resources needed as well as keeping the library management updated on the implementation progress status.

Activities were broken down into several stages. The first stage was the pre-implementation stage where the project lead proposed a feasible project timeline and conducted a literature review on other libraries who had implemented LibAnswers. During this stage, the group contacted Springshare and arranged for webex sessions. This webex sessions conducted by Springshare gave useful insights into LibAnswers and provided opportunities for questions and answers between library staff and the vendor. These questions ranged from basic information on LibAnswers to more complex technical inquiries. At the same time, the group visited several libraries’ websites that have adopted LibAnswers to get more information. Presentations were conducted regularly with library staff as well as library management to keep them updated.

The second stage is beta testing. During this stage, the group tested LibAnswers by coming up with mock-up scenarios. Questions were entered into the system and selected library staff were tasked to respond to those questions. The group observed the workflows in responding to the questions: from tracking, delegating and responding to the questions. Time taken to respond to the questions were also noted and compared. The various features of responding to the users were also taken into consideration. They include:

- Responding and Closing the inquiries
- Responding to obtain more information from user
- Sending internal notes to library staff on a particular user questions
- Assigning / Transferring the questions to another library staff

As the group studied the workflows, new procedures and policies were drafted which were later translated into official documents. It was also decided to re-route all emails coming via the main query email into LibAnswers. In this way, library staff would receive notification from LibAnswers of new incoming inquiry emails.

The beta testing stage also involved the creation of frequently asked questions that were ‘pushed’ into the beta site for viewing. The project team came up with several frequently asked questions based on previous inquiries. The FAQs were categorized into various topics such as: About the...
Library, EResources, Plagiarism, Open Access Policy, EndNote, Academic Writing, Records Management and Document Delivery services. These questions were moderated by the respective managers. Workflows and procedures for creating new FAQs and amending existing ones were also drafted for management approval.

All workflows, procedures and policies that were drafted for approval were stored in MS Sharepoint. The project team decided to use Sharepoint’s wiki and document management features to store the important information regarding LibAnswers. Important checklists related to LibAnswers were also stored in Sharepoint.

The final stage involved live demonstration on LibAnswers features. Library staff were given hands-on demo on the various functions of LibAnswers as well as the new public interface of the library FAQ website. During these sessions, the project team responded to the various questions posed by various library staff. The project team escalated the more complex and technical questions to the vendor. This session also provided a platform to hear the concerns of other library staff who were not part of the project team.

During this time, the project team worked on LibAnswers promotional and marketing materials for the KAUST community. It was decided to mass email the new services to the KAUST community coupled with putting up posters at various strategic campus locations such as the campus diner, library café and student center. The team also decided to use the university electronic billboard to highlight this new service. Together with University’s Marketing and Communication department, the project team collaborated closely with them to ensure that our promotional materials adhered to the campus regulations. In addition to that, University Information Technology department were also consulted on the URL address matters. The library decided to use this URL as the official URL for our public interface: [http://asklib.kaust.edu.sa/](http://asklib.kaust.edu.sa/)

Prior to the live launch of LibAnswers, the project lead worked with the library management on the administrative side of LibAnswers. Library staff were given different levels of administrative rights in LibAnswers. The rights were given based on their job designation and tasks. This include the rights to (among others):

- Assign inquiries to respective library staff
- Respond to inquiries
- Delete spam messages
- Post important internal notes to library staff on LibAnswers main dashboard
- Create new or amend FAQ postings

On the statistics management side, it was decided to monitor the number of queries received as well as the type of inquiries. Monthly statistics were churned out and shared among relevant staff to elicit their feedback and views. It served as a platform to better improve our reference services. Some of the statistics that LibAnswers provide are as follows:

- Daily distribution of questions received
- Hourly Distribution of questions received
- Turnaround response time to the questions received
Monthly breakdown of questions received
Source of the questions: via email, via online forms

Go Live
On 1 June 2015, LibAnswers were officially launched. The move from email-based inquiry system to a cloud based system was seamless. There were a few minor glitches but they were resolved quickly by the project team. All questions were channeled into LibAnswers dashboard. Library staff were ready to receive and respond to the questions. At the same time, the FAQs website was also launched.

The public interface as illustrated below (http://asklib.kaust.edu.sa/) allows users to browse the popular FAQs as well as search for topics. Library staff has the option to highlight a particular FAQ under the Featured Tab.

The FAQs have been tagged according to the various library topics. These topics were determined by relevant library staff. In addition to that, the number of views for every FAQ are visible to users.
This also serves as a useful indicator to library staff on the answers that users are constantly searching / browsing.

Users have the options to either email library staff, submit a question via an online form or report an e-resource issue.

LibAnswers provides an admin module that allows library staff to capture, track and monitor questions. Questions received in LibAnswers are known as “tickets”. Each of these tickets are given unique IDs for easy tracking, searching and monitoring. The tickets are also given statuses.
The status indicates whether the tickets are new, closed, pending and open. Whenever a library staff handles a particular ticket, they are shown the options to reply to the inquirer or post an internal note to another library staff. Only 3 library staff with higher admin rights have the ability to assign/transfer tickets to another library staff. This assign / transfer feature is useful in the case where the tickets are ‘sitting’ in the queue with no one answering it.

LibAnswers generates useful statistics for library staff to identify question patterns. This can be broken down to:

- By Month, Day and hour
- Metadata values
- User Account
- Referring URL
- Turnaround time
One Year On

The impact of LibAnswers have been profound. One of the main benefits was that all received inquiries are captured, tracked and monitored. Inquiries are assigned unique IDs for easy search and retrieval. Tickets are either answered directly by library staff or they are assigned to relevant library staff for their follow-up actions. All answers are captured whether they are responses to the inquirer or an internal note to another library. No tickets slipped through the cracks or are left unanswered.

There was a total of 1,135 questions received by the library between June 2015 and May 2016 (1 year). Out of the 1,135 questions that the library received, 1,062 questions came via email while 42 came via online forms. The rest was entered by the library staff for the users. March (170 questions) was the peak month where the library received the highest number of questions. This could be due to the fact where students were finishing their projects and assignments and needed most assistance. Wednesdays (230 questions) received the highest number of questions. Most of the questions were received between 10pm – 11pm (332 questions). In addition to that, the average response time for the tickets was approximately 16 hours.

Table 1: Monthly breakdown of questions received

<table>
<thead>
<tr>
<th>Queue</th>
<th>JUN</th>
<th>JUL</th>
<th>AUG</th>
<th>SEP</th>
<th>OCT</th>
<th>NOV</th>
<th>DEC</th>
<th>JAN</th>
<th>FEB</th>
<th>MAR</th>
<th>APR</th>
<th>MAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic Resources</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>11</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Uni Library</td>
<td>21</td>
<td>37</td>
<td>83</td>
<td>61</td>
<td>97</td>
<td>68</td>
<td>92</td>
<td>125</td>
<td>110</td>
<td>166</td>
<td>98</td>
<td>142</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>38</td>
<td>84</td>
<td>61</td>
<td>99</td>
<td>79</td>
<td>95</td>
<td>128</td>
<td>111</td>
<td>170</td>
<td>103</td>
<td>144</td>
</tr>
</tbody>
</table>

Table 2: Daily distribution of questions received

<table>
<thead>
<tr>
<th>Queue</th>
<th>MON</th>
<th>TUE</th>
<th>WED</th>
<th>THU</th>
<th>FRI</th>
<th>SAT</th>
<th>SUN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic Resources</td>
<td>4</td>
<td>7</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>Uni Library</td>
<td>181</td>
<td>197</td>
<td>225</td>
<td>194</td>
<td>49</td>
<td>38</td>
<td>215</td>
</tr>
<tr>
<td>Total</td>
<td>185</td>
<td>204</td>
<td>230</td>
<td>197</td>
<td>51</td>
<td>41</td>
<td>227</td>
</tr>
</tbody>
</table>
Table 3: Turnaround time to answer received questions

<table>
<thead>
<tr>
<th>Queue</th>
<th>0-10 minutes</th>
<th>10-60 minutes</th>
<th>1-12 hours</th>
<th>12-24 hours</th>
<th>1-3 days</th>
<th>3+ days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic Resources</td>
<td>6</td>
<td>9</td>
<td>14</td>
<td>4</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Issues</td>
<td>0.9%</td>
<td>0.8%</td>
<td>1.2%</td>
<td>0.4%</td>
<td>0.2%</td>
<td>0%</td>
</tr>
<tr>
<td>Uni Library</td>
<td>538</td>
<td>102</td>
<td>165</td>
<td>119</td>
<td>122</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>47.4%</td>
<td>9%</td>
<td>14.5%</td>
<td>10.5%</td>
<td>10.7%</td>
<td>4.6%</td>
</tr>
<tr>
<td>Total</td>
<td>544</td>
<td>111</td>
<td>179</td>
<td>123</td>
<td>124</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>47.9%</td>
<td>9.8%</td>
<td>15.8%</td>
<td>10.8%</td>
<td>10.9%</td>
<td>4.8%</td>
</tr>
</tbody>
</table>

Average Response Time: 15 hours, 54 min

The top 5 viewed FAQs are:

- Resolving an issue in Endnote (539 views)
- Downloading licensed software provided by University IT department (307 views)
- Obtaining KAUST logos, templates, brochures, photos and videos (251 views)
- Library opening hours (168 views)
- Accessing e-resources off-campus (135 views)

The implementation of LibAnswers and the creation of FAQs by library staff are straightforward. The challenge is getting all library staff up to speed on using Libanswers. To achieve this, the project lead conducted several trainings and live demonstrations for all library staff. Procedures and How-To's were drafted, approved and saved in MS Sharepoint. On top of that, the project team got together and came up with library staff and their areas of responsibility in the creation of FAQs. As each library staff had different learning curves, it was imperative to mix the training sessions with one on one consultations and other forms of training methods.

Moving Forward
Despite the successes, the project team felt that there are a number of LibAnswers features that could be introduced. They are namely:

- RefAnalytics
- LibChats

RefAnalytics is a tool within LibAnswers that facilitate, among others, the configuration and management of datasets. Library staff is able to 'enrich' the tickets with additional metadata so that more meaningful patterns can be obtained.

LibChats allows library staff to communicate in real time with our users. The use of LibChat widgets on library websites as well as LibGuides would enable our users easy access to these online forms without any geographical constraint. However, this would need further discussion as this would include pulling away manpower and resources from other tasks. There has to be careful allocation and management of these resources.
One of the concerns among library staff is the function of the Info Desk with the introduction of LibAnswers. Based on observations and short discussions with staff manning the Info Desk, LibAnswers will continue to play an important role in the provision of Reference service. The Info Desk will still play a focal point (at least for now) in the library. The next major step is analyzing and evaluating of having the Info Desk in the library or re-positioning it strategically in the library. As more and more disruptive and mobile technologies come into the picture, it's imperative that libraries consider implementing them side by side with the traditional reference services.
References:

