

## **Chapter 10 - Helping Users Help Themselves: Maximizing LibAnswers Usage**

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### **A Introduction**

Frequently Asked Questions (FAQs) are a commonly seen feature on library websites. Most libraries provide a short list of FAQs on static HTML pages while others employ full-blown knowledge base systems that list the answers to hundreds of questions. In Aug 2010, the National University of Singapore (NUS) Libraries began using Springshare's LibGuides. At the same time, we also moved from a static HTML list of FAQs to Springshare's LibAnswers platform - a database driven knowledge base system enriched with Web 2.0 features.

LibAnswers is a stand-alone but related module to LibGuides. It acts as a tool to allow students to e-mail or text questions to a librarian. LibAnswers tracks and organizes these questions. A librarian can then answer a question and add it to the knowledge base which is accessible through a widget which can be placed on a LibGuide or on a static HTML page. As an added benefit, LibAnswers has a reporting component which allows questions to be tracked and reported. Reference Desk questions can be tracked, as well.

Properly employed, the LibAnswers platform can be used to create a knowledge base of FAQs that provides the following benefits:

- Saves the time of users by allowing them to assist themselves,
- Saves the time of librarians by allowing users to answer their own commonly-asked questions,

- Saves the time of librarians by allowing them to easily create and maintain a knowledge base,
- Tracks user queries to measure the performance of the knowledge base,
- Acts as a repository for those unusual questions librarians answer repeatedly.

After reviewing the basic components of LibAnswers, the rest of this chapter will discuss various methods libraries can use to increase the patron use of, plus the efficacy of, the LibAnswers knowledge base. This chapter does assume that you have a basic familiarity with LibAnswers. Depending on your level of knowledge you may want to review Springshare's LibGuide for LibAnswers (<http://www.springshare.com/libanswers/index.html>) before continuing.

#### **/A What is LibAnswers?**

LibAnswers, at its most basic level, is designed to be a searchable knowledge base. Users can find answers using natural language due to a Google-like auto-suggest feature. If no answer is found or if the user is not satisfied with the answer, they can submit a question to the library. The librarian answering the question can choose to answer the question privately via e-mail, or to convert the question (after suitable modifications for privacy reasons) to a public FAQ.

LibAnswers is suitable for collaboration between librarians with different expertise. Questions arriving in the module can be claimed by individual librarians. Librarians can also leave notes for one another or channel submitted questions to appropriate colleagues for their answers.

One of the most useful features in the LibAnswers system is Query Spy. This statistical function allows the library to track the performance of the knowledge base. Using Query Spy, one can see what users are typing into the search and which, if any, of the resident answers are

selected. Many other statistics are also available, including what system the query is coming from (e.g. Mobile, LibAnswers, LibGuides, etc.), the referring page, date and time, and IP address. You can export the statistics to a comma-separated values (CSV) spreadsheet file or use the built-in system to generate charts and tables.

The optional reference analytics module provides even more statistics allowing you to store and track all kinds of reference transactions including chat, phone, and face-to-face. Another optional module is the SMS/Texting module, which allows libraries to provide SMS reference service.

#### **/A Why Users Don't Want to Use FAQs and What to Do about It**

Unfortunately, libraries face an uphill battle to get users to use knowledge bases, as it has been my experience that most users do not like to read help files and prefer to figure things out themselves. So what can librarians do? Arguably to improve usage of FAQs, librarians have to consider the following issues:

- Can users find the knowledge base?
- Does the answer to what the user is looking for exist in the knowledge base?
- If the answer exists, can the user find it by searching or browsing the knowledge base?

LibAnswers includes many features that can be used to help control these three issues.

#### **/B Can Users Find the Knowledge Base?**

The best knowledge base in the world, packed with all the answers that a user could want would be useless if it could not easily be found. Besides putting a link to the knowledge base on the library homepage, links can also be placed at the point of need. Point of need refers to places or

points in users' workflow where they may be stuck and would naturally look for help. This could be anywhere from the library-controlled systems such as the library catalog to other systems such as university courseware pages.

Besides linking to LibAnswers at various levels (homepage, topic pages, specific FAQs, etc.), LibAnswers also provides additional options in terms of different widgets that enable answers to be searched without leaving a webpage. Librarians should discuss and consider the following:

- Where are users most likely to be looking for help (points of need)?
- Should a widget or link be included? If a widget, which type of widget? If a link is included should it be linked to the LibAnswers homepage, an appropriate LibAnswers topic page, or to a specific FAQ?
- Should all Contact Us points be channeled through LibAnswers first?

In the section, Placing LibAnswers at Points of Needs, I will discuss the various points of needs at which librarians can embed links or widgets to LibAnswers.

### **/B Does the Answer Exist in the Knowledge Base?**

The importance of populating the knowledge base with questions for which users actually need to know the answers may seem obvious, however Jakob Nielsen (2002), a noted usability expert, observed that

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Too many websites have FAQs that list questions the company wished users would ask. No good. FAQs have a simplistic information design that does not scale well. They must be reserved

for frequently asked questions, since that's the only thing that makes an FAQ a useful website feature.

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Users who find that the knowledge base does not have what they need are unlikely to return; hence it is important to create FAQs within the patron's realm of confusion. One reason why most knowledge bases do not list questions that are actually being asked, is that there is often no easy way to determine what users really want to know.

LibAnswers helps to reduce this problem in three ways:

- The Query Spy feature tracks what users are searching for and whether they find the answer.
- Users are able to submit questions directly to the library if they are unable to find the answer they need; librarians can answer directly and post an edited version of the question on LibAnswers.
- Users can comment on existing FAQs.

Librarians should discuss and consider the following:

- What type of FAQs should be included, e.g. policy-related, subject-related? What should not be included?
- Should information be placed in LibAnswers or elsewhere, e.g. a LibGuide or on a library page rather than an FAQ?
- What question sources should be used to create FAQs, e.g. e-mail, chat?
- Should all questions asked by users be listed publicly?

In the section, Setting Up and Pre-populating LibAnswers with Questions, I will discuss what sources to use to populate the LibAnswers system and how to select FAQs to include.

Maximizing Hit Rates and Adding More Questions will provide tips on how to use LibAnswers' Query Spy system to measure the performance of existing FAQs and how to include FAQs that users are looking for but are not in the system.

### **/B If the Answer Exists, Can the User Find It ?**

While LibAnswers provides features for browsing and searching, most users are “search dominant” (Nielsen, 2011). Nielsen defines “search dominant” users as users who go straight to the search button, as opposed to “link dominant” users who browse the site via links. As most librarians are aware, searching, in general, often fails, not because the information doesn't exist but because the keyword searched for does not match the terms used. This is often called the “synonym problem” (Beall, 2008). The same problem exists when patrons search a library knowledge base.

To improve the likelihood of users finding the FAQ needed, librarians should use the keyword function in LibAnswers in combination with the Query Spy system to add appropriate synonyms to the FAQ to enhance its retrieval probability.

Though most users are “search dominant” (Nielsen, 2011), some thought should also be given to organizing FAQs by topics, as topics allow librarians to create a more context-aware environment by leading users to the FAQs for which they are likely to be looking. For instance, users who are seeking help on the Library Catalog webpage are likely to be looking for only a specific subset of FAQs. Instead of linking to the LibAnswers homepage, they can be linked to a

LibAnswers topic page for that area, which will list the most frequently-asked questions for that topic, increasing the chance of users finding what they need.

Librarians should discuss and consider the following:

- What topics should be created?
- How should FAQs be phrased to increase their ability to be found?
- How often should Query Spy be monitored to check for FAQs not included in the knowledge base?

The section, Maximizing Hit Rates and Adding More Questions will provide tips on how to use LibAnswers' Query Spy system to refine existing FAQs to ensure that they can be found by users.

#### **/A Placing LibAnswers at Points of Need**

The LibAnswers system allows users to help themselves and, as such, an obvious place to add a link to the system are at points just before users want to contact the library to ask a question. In many libraries, clicking on a Contact Us link results in an electronic form for submitting questions. This would be a good place to include a LibAnswers widget to encourage users to search the knowledge base before sending a question (see Figure 10.1).

<Insert Figure 10.1, Ask A Librarian.>

A slightly more intrusive way to encourage usage would be to link all Contact Us pages to the LibAnswers homepage. As this page includes a “more ways to ask questions” box, which lists all the communication channels provided by the library, all queries could reasonably be

routed to the main LibAnswers homepage first, where users can choose either to use the knowledge base or choose one of the communication options.

Besides points where users want to contact the library, libraries can consider adding access to LibAnswers at various points including:

- Library homepage,
- Every page of the library portal in a menu-bar or as a button on the far left of a page by using the LibAnswers pop-up widget,
- Library catalog,
- Courseware (e.g., Blackboard, Desire2Learn, etc.),
- Databases (e.g., EBSCOhost databases),
- Social media sites (e.g., Facebook, Twitter, wikis, blogs),
- All LibGuides,
- Library Toolbars, such as the LibX tool-bar (<http://libx.org/>) or the Conduit tool-bar (<http://www.conduit.com/>),
- Library e-mail loan notices, and e-mail signatures of library staff.

Libraries should embed Google Analytics (see chapter 11 for more information about Google Analytics) into LibAnswers to track how users are accessing the FAQs, thus allowing greater customization. Academic libraries should consider linking from courseware, catalogs and databases as these tend to be high-volume, high-traffic webpages where users often get stuck.

#### **/B Where Should You Put LibAnswers Access Points?**

At the National University of Singapore, access to LibAnswers is available from such webpages as the library catalog (see Figure 10.2). LibAnswers is also available from our



courseware page, on the menu-bar of all library pages, and our page on Facebook. (It takes a bit more work to embed LibAnswers into library Facebook pages; refer to <http://www.springsharelounge.com/forum/topics/libanswers-and-facebook> for how this is achieved.)

<Insert Figure 10.2. Library FAQ Link on the Library Catalog Search Page.>

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According to recent statistics at NUS Libraries, most of the incoming traffic to LibAnswers comes unsurprisingly from links on the library homepage. The next highest source is LibGuides (34 percent). The third highest source comes from the link on the Blackboard page which accounts for 13 percent of all incoming LibAnswers traffic. The library catalogue is fourth highest at 5 percent.

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### **Considering the Context of the User**

Once you have determined the points of access to LibAnswers, you can provide entrance to it in several ways. The most obvious thing to do is to create a plain HTML link to the homepage of LibAnswers, but a more customized approach can be taken. For example, you can:

- link to a specific LibAnswers topic page,
- link to a specific LibAnswer FAQ,
- use an embedded widget with popular and featured questions,
- use a pop-up widget as a button on the left of every webpage,
- link to a related LibGuide on the topic with a LibAnswers box with predefined questions.

Figure 10.3 shows an example of an auto-suggest widget that has been customized by Lehman Library's LibGuides administrator, Aaron Dobbs.

<Insert Figure 10.3. Lehman Library "Instant Answers" Widget (<http://library.ship.edu>)>

Figure 10.4 shows an example of the landing page that greets users at NUS when they click on the Help link from the library catalog. Our library has a specific LibGuide about the library catalog which introduces its features. This is supplemented by a LibAnswers box with predefined questions drawn from the system. This allows users to have quick access to the FAQs they are likely to use, on top of the possibility of exploring the LibGuide for more information about the features of the catalog.

<Insert Figure 10.4. NUS Landing Page (<http://libguides.nus.edu.sg/lincplus>)>

What are the advantages of giving users this extra information? In the case of the embedded widget, it allows users to get instant satisfaction by searching directly without leaving the page. While searching for FAQs are important, the predefined or featured questions option, if properly deployed, allows users to quickly access required FAQs without even searching. This saves them time and improves the possibility of their finding the right FAQ.

#### **/B How Do You Decide Which Predefined Questions to Add?**

Properly handled, predefined questions or featured questions can predict user needs and display the FAQs they are mostly like to seek without their searching. But how do you know what

questions to list? In many cases because you are channeling in users from specific places, you have a very good guess regarding what types of questions users are looking for by considering the context of use. For example, users who are clicking the FAQ link from the library catalog will most likely be looking for FAQs related to loan services, searching for items, etc.

In our library, we also employ chat boxes by Libraryh3lp (<http://libraryh3lp.com>) embedded in both LibAnswers and LibGuides systems. The questions asked by users from chats are tracked giving us potential FAQs to add to the knowledge base. For instance, we found that one of the most common chat questions asked by users coming through a link from the catalog was a question about our “marked for export” function. We quickly added the answer as an FAQ and added it as a predefined question in a LibAnswers box (See Figure 10.4).

<Insert Table 10.1. Pros and Cons of Different Methods of Linking to LibAnswers.>

#### **/A Setting Up and Pre-populating LibAnswers with Questions**

It is often difficult to predict what users will look for, hence it is important to base FAQs entered into the system on actual questions that have being asked by users. If you are populating the LibAnswers system from scratch, some good sources of pre-existing data can be found in e-mail transactions or chat transcripts.

#### **/B Sources for Pre-populating FAQs**

At NUS library, we studied a year’s worth of e-mail queries and divided them into major categories. As queries often reflect difficulties in navigating the library website, it is not worthwhile to study transactions that go too far back due to various changes. We also used word

visualization tools like Wordle (<http://www.wordle.net/>) to create word clouds that helped us understand which words were being used in the transactions.

While this data excluded questions asked in person, we could have supplemented this analysis by librarians brainstorming about typical questions that were asked at the desk. This was not done however, because we already had a substantial number of questions both from this analysis and also from transferring existing FAQs from our previous knowledge base.

Another method to begin populating the knowledge base would be to channel all Contact Us links to the LibAnswers embedded question form widget. This would allow the capture of every online query sent to the library which could then be converted into FAQs if desired. As the knowledge base fills up, it might be worthwhile to switch to other widgets which allow searching the knowledge base first before submitting the question.

#### **/B Should Information be Kept in LibGuides, LibAnswers, or on the Library Website?**

The same piece of information can reside in LibGuides, LibAnswers and on the library webpage itself. To avoid duplication, whenever possible, it is advisable to put the same information at only one place. You may have already begun answering this question if you have clearly defined what information you will place within a LibGuide as compared to what information goes onto the library webpages. To ensure the likelihood that FAQs are found, make sure that your site search (which could be a Google Search App or a simple Google Custom Search) covers all three areas.

In general, LibAnswers is suitable for brief answers; if you need to describe a library service, such as the full details of document delivery, it might be better to put a brief description

in LibAnswers but link to the full details on a LibGuide or a library webpage created for that purpose.

In the other direction, you can use a LibAnswers box in LibGuides to embed related FAQs from LibAnswers in the relevant LibGuides. Another option would be to use a widget with appropriate questions embedded in a library webpage.

### **/B What FAQs Should be Listed?**

An analysis of questions asked by users is likely to result in hundreds of potential questions that can be listed. In most cases, the more you list, the greater the chance of the users finding what they need. As patrons use LibAnswers, they will submit more questions which can then be converted into more FAQs. The question facing libraries is this, “What should be added to LibAnswers?”

There are two main approaches. The first approach is to create an FAQ for every actual question asked. The other is to be more selective, listing entries in LibAnswers based on certain criteria. The first approach has the advantage of requiring little judgment on deciding what to list, however there is the potential for the LibAnswers system to grow to an unmanageable size which could lead to a maintenance issue as you have to remember to update more FAQs when they become outdated.

NUS library decided on the more selective approach, listing only items that we believed were most likely to be searched. In particular, the 80/20 rule implies that we can answer most questions by selecting just a smaller proportion of the most popular questions.

<Insert Table 10.2. An Informal Survey of Six Libraries with LibAnswers.>

**Commented [A1]:** I guess I mean maintenance in terms of needing to update the information. I tried to clarify this

**Commented [Cook2]:** Can you double-check this with Springshare or drop it. I can't imagine that a big FAQ knowledge base would cause maintenance issues. Doug

The 80-20 rule or Pareto principle has been studied in the library context. For example, it has been used to study whether articles downloaded in Emerald were mostly drawn from a small subset of journal titles (Evans and Peters, 2005). An interesting question is whether this holds true for FAQs. Table 10.2 shows the results drawn from a survey of six libraries with LibAnswers systems of varying sizes.

As shown in Table 10.2, the 80-20 rule doesn't quite hold for FAQs but it comes close. For four libraries, roughly 70 percent of views come from the top 20 percent of FAQs, while for the remaining two, they account for 50 percent of views. In either case, it does show that the distribution of views is highly skewed with the top few FAQs accounting for most views. More in-depth research should be done, although the results do suggest that libraries seeking to maximize return on investment on creating and maintaining FAQs can focus on including the most popular FAQs.

At NUS library we gave higher priority for providing answers in cases where users

- can help themselves without intervention from librarians, e.g “How do I reset my password?” (An automated way to reset this exists.)
- can be guided to contact the right specialized departments or persons directly when time is of the essence, e.g “What do I do if I lose my library card?”
- have been asking or searching numerous times in the past.

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### **Fix Root Causes**

Another benefit of studying user questions is that patterns may point to a design flaw in your website structure. As you study past transactions to look for FAQs to add you will start noticing

patterns – questions that are asked over and over again. Try to understand the root cause. Why are these questions being asked repeatedly? Is the wording on the webpage unclear? Is the mechanism for reserving books obscure? If so, fix the problem, so that the FAQ is no longer necessary. You may be able to preclude future questions by fixing the root cause of the question.

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### **Organizing Topics in LibAnswers**

Besides populating the LibAnswers system, you can also group FAQs under different topics. LibAnswers search widgets give patrons the possibility to browse the knowledge base as well as to search it. The question remains: how often do users browse for questions as opposed to searching? As suggested previously, the answer is “not often” as searching is the dominant practice (Nielsen, 2011). In NUS libraries our analysis of the LibAnswers homepage shows that while the top ten most popular questions on the homepage are clicked 45 percent of the time, the topics box which exposes the categories for browsing is not used as much. Despite being placed very prominently just under the search box, they are clicked only 20 percent of the time. Users probably do not want to spend time figuring out the categorization system.

But topics can be used to channel users to specific pages when you can predict what they are looking for. When adding a question to the knowledge base the librarian has the choice to assign the FAQ to a specific topic. These topics can be used to organize FAQs. For instance, a link for help on an electronic online form for requesting inter-library loans can be linked to a LibAnswers topic page covering that. Alternatively in a LibAnswers box in LibGuides, you could select a topic to automatically list all FAQs from that topic.

Another effect of putting FAQs into topics is that the topics affect the Related Question list at the bottom of each FAQ. If the FAQ is tagged with multiple topics, it will only show one topic – alphabetically the first topic you assigned. For example if you assigned both “Loans” and “Passwords” to an FAQ, only “Loans” will display as it comes before “Passwords” in the alphabet.

#### **/A Maximizing Hit Rates and Adding More Questions**

Understanding how LibAnswers matches search queries with FAQs created is critical in ensuring users can find what they are looking for. As time passes, even a well-adjusted knowledge base will need to be tweaked as things change. For example, new services may be added, library pages could be redesigned making some features less obvious while exposing others which will result in new queries. This section will provide tips on how to ensure your knowledge base continues to be useful to users. But first, we need to understand how LibAnswers matches queries.

#### **/B How Does a LibAnswers Search Match Questions?**

Currently the search component of the LibAnswers knowledge base is quite similar to that of a typical search engine. Understanding how the system searches can help you to circumvent potential answers being missed by patrons. Following are basic functions of the search software:

1. Direct Matching via auto-suggest is akin to auto-complete in Google searches; all characters typed will have to match characters entered in the questions fields or defined keywords in the order they were typed.



2. If a typed query finds no Direct Match, the software tries to match all search terms in any order and may even match questions where not all the search terms are in the same order. Potential matches will match text in questions, keywords, and answers with priority given to the first two.
3. There is some simple stemming which occurs. For example, typing the term “Room” will match a question that has the word “Rooms” for both auto-suggest and potential matches.
4. Hyphens are not handled so "inter-library" is different from "interlibrary."

The Keyword function can assist in avoiding some of the problems listed above. For example, use keywords to add synonyms and variant forms for matching. Even if the text is in the question or answer already, one can add keywords to further improve the ranking of FAQs in the relevancy ranking. For even more targeted keywords you can add phrases such as “borrow books”.

Putting this all together, when phrasing questions try to use the terms that you expect users to use in searches. Going through e-mail queries and Query Spy will help with the correct phrasing. In general use plurals (e.g., “Rooms” rather than “Room”) to increase hit rates. Synonyms should also be added by the Keyword function to help improve search results. For example, add "inter-library" as a keyword if the main body of your FAQ uses the term “interlibrary.”

LibAnswers currently does not allow the setting of stopwords hence it is a good idea also to use common words like “library” or “book” sparingly in the question and answer as users like to type those in the search queries and as such FAQs which use the word “book” or “library” multiple times in answers and questions will float to the top of results even if they may not be most relevant.

## **/B Reviewing Performance with Query Spy**

Users have the option of submitting questions via the system when no answers are found; this theoretically allows LibAnswers to be self-adjusting when you post those answers directly into the knowledge base. In practice, we find that the vast majority of users do not submit a question when they cannot find the answer in the knowledge base. At NUS, we found only 35 submitted questions from January to May 2011. This is less than 2 percent of the unsuccessful queries (queries where users did not click on any answers).

This makes it important to manually review the Query Spy logs to pick up failed queries. Here in NUS Libraries we review such logs weekly at a minimum. We monitor Query Spy to detect two types of failures:

1. The query fails because the FAQ matching the search does not exist.
2. The query fails despite the fact the FAQ matching the search exists.

The first case requires the creation of a new FAQ. To determine how often a query has been searched, simply search Query Spy with the appropriate keyword. While the first case does not necessarily require action, the latter case almost always does. If a query fails because of a synonym matching problem, a keyword could be added or the FAQ could be edited to include the synonym.

## **/A Conclusion**

This chapter discussed a number of methods which libraries using LibAnswers to create a knowledge base of FAQs can utilize to maximize the efficiency of the software. Much of what was discussed centered around understanding how users typically search and in understanding the fine points of LibAnswers. In summary, the following actions were reviewed.

First decide where to place links or widgets at points of need. For academic libraries, besides the library's main page, we recommend putting links or widgets in LibGuides, courseware, and the library catalog. Databases are the next obvious points.

Next, start populating LibAnswers. There are two approaches. One can start seeding the knowledge base with questions and answers before releasing to the public or one can just start accepting questions. In the first case, FAQs can be created from many sources including e-mail and chat transcripts or recorded transactions at the desk. The golden rule here is always use actual questions asked by users in the past as a guide to creating FAQs. In the second case, one can start LibAnswers with almost no questions and try to quickly build up a bank of FAQs by directing all online queries to the embedded question form widget, so all enquiries can be placed into the knowledge base. One major decision when populating LibAnswers is to decide on criteria for including an FAQ. We believe that the 80-20 rule suggests that libraries should be selective in listing only the most common FAQs rather than trying to answer everything.

Lastly, monitor LibAnswers using Query Spy to ensure that the knowledge base is working well. In particular, our experience at NUS Libraries is that when a search fails at LibAnswers, very few users bother to submit the question. As such, it is critical to monitor Query Spy to see what users are failing to find.

LibAnswers is a very flexible and powerful tool that can be used by libraries to maximize usage of FAQs. By using the full set of LibAnswer features one can ensure that users find the FAQs they are looking for with few problems.

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