Adapting Statistics and Query–Tracking Tools for Reference Services: Nazarbayev University Library Case Study

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The purpose of this paper is to show how Nazarbayev University Library (NUL), a small-sized academic library located in Central Asia and operating in a non-western, post-Soviet environment uses software tools, specifically Gimlet, Reference Analytics and Query Spy, to gather statistics on reference interactions, both virtual and face-to-face, to drive decision making.

The specific objectives are as follows: to describe how the above mentioned tools adapted to the local environment and needs of the Nazarbayev University Library; and, discuss if and how decision making in NUL can be improved using these tools as well as providing suggestions and recommendations for libraries in Central Asia thinking of adapting these tools to their needs. The authors believe that the topic of this article, specifically adapting technologies in libraries, is closely related to the themes of the conference, especially to trends and tools in academic library services.

The research design of the paper is a case study and qualitative research methods were adopted for the gathering of evidence and analysis of results. The authors narrate the history of gathering statistics for reference transactions in NU. Also, comparison is used to understand the advantages and disadvantages of automated tools with visualization features to the more traditional ways librarians in Central Asia have used to analyze and understand reference interactions.

Important findings of the research include: the use of software automates considerably the gathering of reference statistics, makes calculations easier and quicker, and improves the clarity of the picture librarians and management have about reference interactions.

The obvious limitation of this case study is that it is confined to the experience of only one library which has a very different vision and model of administration from other university libraries in Kazakhstan and Central Asia. As an implication, librarians from other settings should first consider carefully their context before adopting the NUL approach.

Tools for monitoring reference interactions are becoming easier to use and more sophisticated. Awareness of the available alternatives will help Kazakhstan and other libraries in Central Asia minimize the cost of implementation and choose the best solutions for their contexts. The authors believe this work is a stepping stone in that direction.

The researchers consider this paper to be highly original as research on gathering statistics for reference transactions in Kazakhstan and Central Asia is limited. Also, using technology to gauge online user's needs has not been touched upon, especially in the context of Central Asian English language universities.

Keywords: reference tracking systems, reference statistics, Central Asia

Introduction

Nazarbayev University Library (NUL), located in Astana Kazakhstan, consists of around 40 staff members. NUL consists of the main building located in Nazarbayev University Campus and a branch in the Medical School building. The service points of the library are: one reference desk, three circulation desks, and four to six offices of the reference librarians. Also library spaces, for example, reading rooms and out of the library locations, are considered service points because "Appointments/Book a librarian" service can take place in classes or the offices of the researchers. NUL has used two reference tracking systems (RTS) as of today, Gimlet (2011–2017) and currently Reference Analytics (2017–2018).

There are six librarians in Reference Service who do the main reference work. There is also a Patron Service with around 13 staff, including medical library librarians. Patron and Reference librarians are the only staff who log in reference transactions, although administration and other staff have accounts, which they use for inspection.

Nazarbayev University offers pre-undergraduate and pre-graduate (Center for Preparatory Studies), undergraduate, graduate and doctoral degrees. There are 4267 registered students as of 2018.

Literature Review

The nature of reference transactions is changing (Stevens, 2013); librarians now gather data not only for reference desk interactions but also for consultations, "online chat, email, texting, and automated question-answering systems."

Various RTS are used for gathering data. Free tools have been used as RTS such as Google Forms. But according to Carlozzi (2016) this tool has limitations in customization and functions. One example he notes is the poor export of date-time data to Excel and other software.

Gimlet, a subscription-based tool, mentioned by Bailey, Swails, & Tipton (2012) has benefits such as: easy categorization of data, exporting options and tags that can highlight issues. Bailey also notes that "the library now has objective data that can be used in decision-making" and this data can improve access to library resources.

Chan & Johns-Masten (2014) comment in their study of Gimlet that it is convenient, helps staff feel productive and can "generate informative statistics representing reference activity that help guide staffing coverage". One of the criticisms was that "it does not permit extensive analysis" and that there could be "improvement to the reports".

A reason to implement Reference Analytics according to Dean & Williams (2013) is that it offers greater functionality and customization options which helps to create better reports and datasets for administration and staff for decision making. He also mentions that "exploring ways to gather more descriptive reference statistics can provide valuable insights about user needs and is a good first step when considering new ways to demonstrate library value."

Flatley & Jensen (2012) expand on the use of the READ scale in Reference Analytics, a feature that NUL hasn't implemented. They argue that it helps library paraprofessionals recognize when a patron should be referred to reference librarians. The easier questions are answered by paraprofessionals (lower in the READ scale) and the questions of higher difficulty level directed to reference librarians.

Increased email and LibAnswers transactions are interpreted as a sign of the growing comfort of users accessing online information. (Flatley & Jensen, 2012). As a result "librarians are more needed in their offices where LibGuide maintenance is more likely to occur, and where other online transactions can happen without interruption or the time constraints one experiences at the desk (Flatley & Jensen, 2012). Related to this, Uzwyshyn, Smith, Coulter, Stevens, & Hyland (2013) in their article "A Virtual, Globally Dispersed Twenty-First Century Academic Library System" show that the analysis of timing of online transactions can help track the times users are mostly online and probably will seek help.

Carlozzi (2016) summarized the problems with RTS: the software being proprietary or expensive, inconvenient to use, supported for a limited time, not having all the necessary functions. Also: "As Goodsett (2013) observed, "if your staff has to answer a slough[sic] of questions every time someone comes to the reference desk or sends an email, they may be discouraged enough to just skip recording reference data altogether.". One good example of the potential for discontinued support is the once popular LibStats which is not supported anymore.

One option for tracking online transactions that LibAnswers offers is Query Spy. This tool tracks what the users have typed when searching the FAQ in LibAnswers

system. Query Spy is not a statistical tool, but it does keep statistics on how users interact with the LibAnswers platform. As Shepherd & Korber (2014) note: "The Query Spy is a useful feature to determine how successfully patrons are using the LibAnswers knowledge base". Tay (2013) notes that it can be used in two ways: firstly checking for the inquiries users want to ask but where there is no appropriate question in the database to answer their query, and secondly checking for other spellings (misspelling) or expressions of a question that is in the database but didn't come up in the results, which helps enriching that question with extra keywords, or different phrasing.

Research Question

Purpose

This paper showcases the experience of a small academic library based in Central Asia and functioning in a non-western, post-Soviet environment, using trending software tools to gather statistics and user's queries to drive decision making. The researchers aim to show how the above mentioned tools were adapted to the local environment and needs of the NUL. They are also interested in if and how decision making in NUL can be improved using statistics and query-tracking tools such as the above. Lastly they provide suggestions and recommendations for Central Asia Libraries in adapting these tools to their needs.

Research Methods and Materials

Design, Methodology, Approach

The authors adopted a qualitative research approach and used a case study as a research design. Researchers narrate the history of gathering statistics for reference transactions in NUL. Comparison is used to understand the advantages or disadvantages of using automated tools with visualization features in contrast to more traditional tools employed in Central Asian libraries for understanding reference interactions, both physical and virtual.

The researchers used the following methods to gather information: observation was used to draw a picture of the interaction between librarians and the RTS. Semi-structured interviews were employed to learn more about the background of reference statistics and RTS in Kazakhstani libraries. And lastly, data were harvested from the two RTS used in NUL to understand how the two systems compared with each other.

Limitations

The researchers are limited by a lack of access to all of the reference statistics as those from the start of using the RTS were not available. The other issue is that

the researchers are conducting the case study with the Nazarbayev University only. NUL is not a typical academic library, so this will be an exceptional case. Finally, the authors relied significantly on narratives and observations of personal acquaintances, which provided a limited sample.

Materials

More specifically the materials used in this research are as follows:

Downloaded raw data from two RTS used in NUL, Gimlet, Reference Analytics, Query Spy, and LibAnswers. Full datasets from all the years NUL has been gathering reference statistics were not available because until recently their preservation wasn't deemed necessary. Instead annual reports with final results were used to supplement the data where that was possible.

The semi-structured interviews were conducted either through email or face-to-face and transcripts and notes were analyzed.

Notes were kept during observations of librarians interacting with the RTS to understand their perceptions and issues using the system, for example, while logging transactions.

Background of Reference Statistics in Kazakhstan

The general practice to gather statistics in libraries in Kazakhstan is based on pen and paper and tallying. From personal experience and a brief survey of library professionals from our personal contact circle, both in public and academic libraries, the questions asked by users are categorized according to predefined categories, usually directional, technology, research and so on. Each library has a slightly different way of gathering this information. For example, in the National Academic Library of Astana there are two separate locations that such questions are expected, the computer room, where users are instructed how to use the online catalog, if necessary, by librarians in charge, or the Reference/Research room where users go with their research questions to find information on where to find materials, which collection they should consult and so on.

To show the value of the work that librarians provide, they use different ways to measure and demonstrate. Before technology was advanced, collecting statistics was done manually, by filling in dates and types of inquiry. One of the documents that helps librarians keep track was the so called "Дневник Библиотеки" (Diary of the Library) (Маршева, 2005). This document was created within Excel and has separate pages for each department to add statistics. Another situation was observed, that is, librarians were collecting statistics by Tukey Tallying and Slash Tallying.

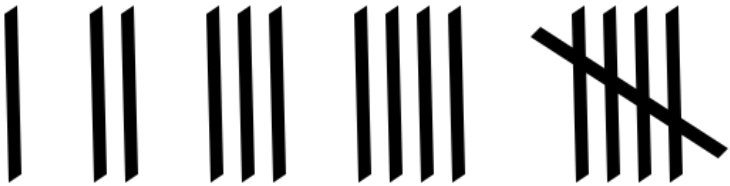

Fig.1 Tallying

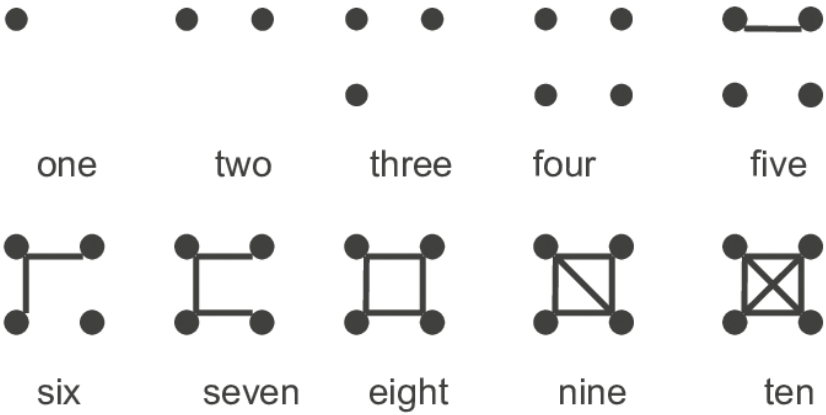

Fig. 2 Tukey Tallying

One important thing to note, is the reason for keeping reference statistics in libraries of Kazakhstan is not for decision making but for proving that working time has been spent constructively, that is, helping users. This has been the testimony of all our librarian acquaintances and the experience of the authors; the number of reference questions is already set in the beginning of the (academic or calendar) year as a goal to reach, not as a number to observe and from which further action can be planned. Reference statistics is evidence that the library is necessary for the university.

The procedure of statistics in the libraries of Kazakhstan is usually the following: every month the head of department sends data to the director of the library, and the directors at the end of the year send it to the Республиканская Научно-педагогическая библиотека (Republican Scientific Pedagogical Library) in Almaty. This is the body that collects all the data from the university libraries of Kazakhstan and sends it to the Ministry of Education of Kazakhstan. They don't collect many reference statistics, only two categories can be considered reference: what types of questions are asked (directional, bibliographic and so on) and the numbers of users.

Another observation is that electronic/digital methods to gather reference statistics are either not present or at their first steps in Kazakhstan libraries. There is a lack of literature describing any tools in the region and from our brief survey of local librarians, most of the libraries they worked in use paper tallying. Electronic/digital methods might be used for other statistics like entrance with RFID or by manual input, but not for reference.

In contrast, NUL started using RTS almost from the beginning of its functioning. Firstly Gimlet was the preferred tool, but recently we transitioned to Reference Analytics, part of LibAnswers, a SpringShare product.

Background of Reference Statistics in Nazarbayev University

The reference department at NUL began operations approximately a year after the library opened, in 2011. Previous reference questions were directed to the Patron Services department. With the arrival of the new department, an RTS gathering tool was also implemented, Gimlet.

Gimlet was divided into two locations, the Circulation desk, mainly aimed at Patron Services librarians, and Reference Services librarians. It follows that the information fields were also different as well as the purposes for gathering the statistics. As in other institutions in Kazakhstan the main goal was to prove the library was reaching its goals.

One librarian from each department was responsible for gathering at the end of each half year the statistics and giving the results to upper management to check if the goals had been reached. The same librarian periodically reminded the other librarians to continue log in information, as the librarians often forgot, a common problem noted in the literature as well (Bailey, Swails, & Tipton, 2012).

In order to participate, library staff need to understand the reason for collecting statistics. A policy paper on how to collect statistics and what it all means was created in 2017 so new staff can learn and older staff be reminded. Also there is a responsible librarian who monitors the correct inputting of statistics. In the policy itself we explained the reason: "Why should we keep statistics? Properly tracked and interpreted data should drive decision making" (quote from internal policy)

Transition to Reference Analytics

The decision to transfer to Reference Analytics from Gimlet was not because Gimlet was found lacking in any way, but because we had already subscribed to other Springshare products and using it would provide a more seamless experience. Also, it can be combined with the other statistics tools that products like LibChat, LibAnswers, and LibCal provide. The product was tried for about three months at the end of which the transition was made.

Training was organized according to the schedules of the staff. This training explained the reason for the change and how to use Reference Analytics with a QA section. From then on, whenever a staff member had questions they were encouraged to share it with the responsible librarian because their questions are important to improve the system. Also, whenever a new staff member or a student assistant is hired, individual training along with creating an account is provided.

Dean & Williams (2013) note that they didn't follow strictly the definition of reference transactions as stated by RUSA but included other transactions as well, and so does the NUL, for example directional questions are included. They also implemented a system of predefined questions that the librarians can choose from, with the addition of "Other". In NUL staff members can choose from a tag list so this feature was skipped.

The fields in Gimlet until 2016 were "Question type" (Direction/Policy, Equipment/Skills, Specific Search, Research/Consultation) and "Asked by" (Faculty, Staff, Student, Visitor, Unknown), and Location information, with the most important, for reporting purposes, Questions type > Research/Consultation. The Question and Answer fields were also present but optional.

Currently the Reference Analytics NUL form is comprised of 10 fields, two of which are optional, (Question and Answer). The rest gather information about time, location, level of user, school, and tags. As Dean & Williams (2013) mention attention should be given not to make changes to the forms that could affect the data gathering and analysis afterwards. This is why NUL introduces changes only during specific months, for example, after the three months' time needed for creating the reports and after six months for semester reports.

Research Findings

Carlozzi (2016) asks "with what specific reference services did patrons need help? How could staff respond best to those needs? How should we staff reference in response to these data?" In NUL the same questions are posed. An analysis of reference desk data can lead to decisions regarding the way reference help is provided, with more focus on instruction and development of online guides and services. As Carlozzi (2016) notes, saved time can be more productively used for developing information literacy programs and more advanced technology instruction. Based on the data shown below, most of reference transactions in NUL are directional or troubleshooting, which can be handled by Patron Services, an observation Carlozzi (2016) makes as well.

Although we did receive almost $^{1}/_{4}$ (16,01%) of our total questions at the Reference Desk, most of them are short, directional or equipment questions, as is evident from the metadata: 64% of the queries were resolved in under three

minutes and 71% were directional or troubleshooting with equipment (47% and 24% respectively).

One of NUL's goals is to observe if there is an increase in online reference transactions, as Stevens (2013) has noted, since the number of students is increasing each year. Moreover, NUL's online presence has expanded, which makes it worthwhile to track traffic with RTS.

According to the data, the number of students in 2016 was 3391 and the number of queries received 7542, out of which 852 were online and 958 were received at the reference desk.

In 2017 the number of students increased to 3832 and the number of queries received also increased to 2198+6126 = 8324 of which 565+1521 = 2086 were online with 1276 received at the reference desk.

Having more statistics and visualization tools to use with Reference Analytics in comparison to Gimlet, a deeper analysis is possible that can aid decision making, which will be helpful for the new building of the library and the expansion of its services. For example it is easy to check how many of these online questions were research/consultation type and how much time it took to answer them: Out of 50 research/consultation questions that were conducted online, 27 lasted from 10–40 minutes.

Tags are useful for analyzing what kind of questions NUL receives. The majority of the questions are tagged as "Other". After downloading the full transactions, it can be checked what the librarian put in the "Internal notes" field to flesh out what the users are asking:

Notes
cooling/heating
maps, digitized maps of kazakh
library hours
NUZYP
bloomberg keyboard
library hours
data search
BMC
DOI
earphones don't work
BMC
obhodnoy
printing, refill account
Bloomberg marketing course
IEEE Xplore challenge
IEEE Xplore challenge
mendeley
bloomberg
lit review
Bloomberg
Bloomberg access
maps

Fig. 3 Internal notes

From the example above, library staff and administration can review whether users ask for events in the library, specific materials for their assignments like maps and so on. Librarians can use this input to identify problems with specific databases or equipment, to create new FAQs or to enrich their LibGuides.

Another finding related to day and time statistics is that the second most popular day to ask the FAQ is Sunday, when there are no librarians for chat or F2F, so the usefulness of this service is established. There is a question why Fridays are so popular for asking questions.

Daily Distribution (what are the busiest days for asking questions on the site)

	MON	TUE	WED	THU	FRI	SAT	SUN
Count	40	47	61	51	83	42	64
Percent	12%	12%	15%	13%	21%	11%	16%

Fig. 4 FAQ statistics

Query Spy

Query Spy provides statistics about the FAQ already available to users and what the users are potentially searching for but cannot find an answer to. These FAQs are created based on questions the reference department receives: common questions, or other necessary information users need to know, for example, new events or a trial database. When the users search the FAQ database and they are matched with an answer, or they click from a list of suggested answers, this can be counted as an online reference interaction. For the last six months that we have used Query Spy the results are: 32 submitted questions found a direct answer and 104 users clicked on an answer from a results list.

From a brief analysis of QuerySpy transactions based on IP address researchers can analyze that users try usually up to two times to find an answer to their question and then give up. There are however some users that try many more times, but these are the minority.

FAQs are updated regularly based on Query Spy: either new FAQs are created based on queries that were not successful, or older ones are edited. For example, many of the queries that were not successful are about databases so FAQs for the most popular have been created.

Another example is the misspellings users make when searching for something, for example, "Ezproxy" is often typed as "exproxy". These misspellings are included as keywords to our already existing FAQs.

Other statistics that help decision making: LibAnswers & Query Spy

To strengthen the participation of librarians in FAQ creation Montalvo (2016) recommends creating a policy, a step NUL has already taken, as mentioned above.

13. Ask-a-Librarian Question forms & email

13.1. The service is implemented to provide an alternative for face-to-face reference interaction in an online environment and to encourage the users to use the Ask-a-Librarian service in a 24-hour basis.

13.2. Users are encouraged to consult the Frequently Asked Questions for common inquiries or in case the Chat service is offline.

13.3. Question forms and other online materials created by the Librarians are available through the Library's portal, Ask-a-Librarian page (see Appendix 2).

13.4. Questions are answered in no more than a working day's timespan.

13.5. Users are asked to provide comments and observations on the service for evaluating and improving the service.

13.6. Ask-a-Librarian forms that are not related to a reference interaction will be either forwarded to the appropriate Library Department, or ignored/deleted if the content is ethically inappropriate.

Fig. 5 Quote from reference department policy explaining the reason FAQ is used

NUL has also taken the next step Montalvo (2016) proposes: "[...] priorities should be established for different types of users and questions. It would be helpful to develop a guide for answering different types of questions and addressing user expectations". Reference has partnered with e-resources to forward questions.

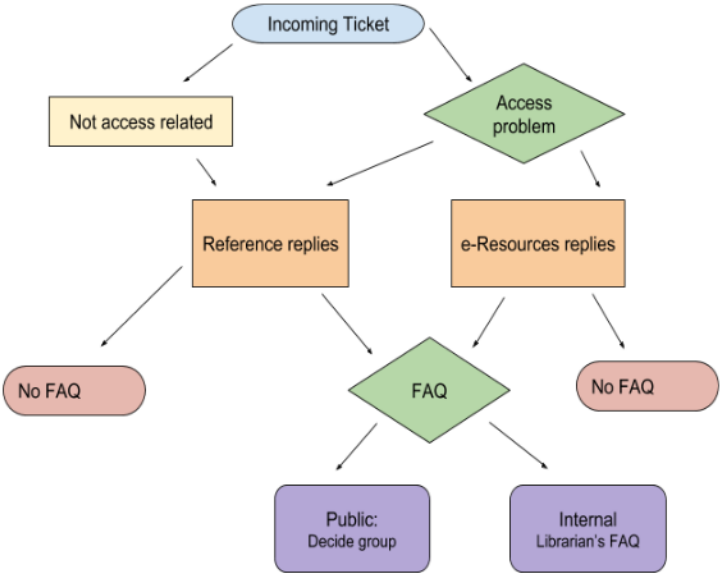

Fig. 6 Flowchart of cooperation with the E-resources department

More technical questions, for example, access problems that reference librarians cannot answer and which are the responsibility of the E-resources department, can then be sent to other departments to find the solution. The interaction of the user with the library though is seamless. The librarians can then decide, based on the statistics, if a question needs an FAQ, for example it is unique, as mentioned in the policy, or is very frequent. Statistics then helps us to improve reference help.

Should the statistics from Query Spy be counted as reference interactions? Stevens (2013) says certainly yes: "[...] failing to count these interactions as reference transactions ignores the important and effective reference work that has gone on behind the scenes to help patrons find answers to their queries". Based on a combination of times viewed and what the librarians deem important to highlight, an FAQ widget was placed on the portal of NUL to help students with their most frequent questions.

Query Spy allows librarians to take a peek at what users want to ask but where unsuccessful in finding an answer to. There is no set time the librarian reviews the tool, but it's recommended that this should be done each week. However, in the case

of NUL the data has been taken into consideration at least twice since the system was implemented, and since the volume was not large, the frequency is considered sufficient. Since January 2018, when the FAQ widget with the five most important questions (judged by librarians), appeared in the library portal front page, the volume of statistics from Query Spy has increased.

Other considerations

Because the NUL is using other Springshare products for reference work, namely LibAnswers, Libchat and LibCal, the services are integrated in many ways and a useful feature is that all of them keep a separate set of data. So the question arose, which data should we keep in Ref Analytics, since much is already available from the statistics features of these services? The short answer is: whatever they don't provide. For example, the set of data LibCal provides has been deemed enough for NUL needs. On the other hand, LibChat doesn't provide clear duration data so this information is kept in Reference Analytics

Problems with keeping statistics

Due to language barriers and differences in educational background, but also because paraprofessionals working in NUL are not educated in librarianship, some issues were observed. Firstly, librarians logged in interactions that were not strictly reference, such as checking in and out books. Secondly, there were technical problems such as blocked accounts where the staff member did not realize that they didn't enter a valid password. Some of the librarians didn't report this situation to the responsible librarian, either from negligence or fear that they were doing something wrong. The librarian needs to make sure that everyone participates, test with all staff that they can actually input information, and preferably create all the accounts BEFORE the training. Also they need to be encouraging and always checking in with the staff. Thirdly, staff sometimes forgot to use the system. One solution to this is to stress the importance of bookmarking the link to the RTS in all the browsers they use and on all computers. For example Patron Services change floors and therefore computers during their shifts, and so are reference librarians from their desks to the reference desk.

As Dean & Williams mention, staff understanding of the language of the tools, and staff being consistent with what data they input depends on training, but in the Central Asian setting we believe it also depends on prior education, understanding what reference is, which in turn depends on understanding different librarian models, which is slightly different in Central Asia as we have observed above, on how and why reference statistics are kept.

Lastly, on average it takes the librarian around 14 seconds to log in a transaction to Reference Analytics with the current settings. This is usually because the librarian needs to search through a long list of tags, enter an internal note if the question is unique and doesn't fall under current categories. One of the downsides Carlozzi

(2016) mentions about RTS is exactly this: "They may be inconvenient; for instance, users may need to select multiple options from a drop down menu" (Carlozzi 2016). Also, the first time the librarian logs in a transaction, all the tag fields need to be clicked, but the next ones don't need too much time since they are already selected from the last transaction. As Dean & Williams (2013) mention "Deciding how much data to collect is the primary challenge" and the goal was to complete a transaction in less than ten seconds. NUL has not reached that benchmark and the READ scale was not implemented exactly for the reason that it might take even longer to complete, especially for non-reference and new librarians.

Other findings

Dean & Williams (2013) mention that collecting questions other than reference has shown what other work librarians do. But in the case of NUL this has posed the question of what questions should Patron Services and other librarians actually answer, and what is the distinct role of reference librarians if these questions can be answered practically by everyone who works at the library. We need more research on that.

Conclusions

Dean & Williams (2013) mention that data is used for various purposes, for example, considering what new instructional materials to create and which FAQs are trending. NUL already used the data for similar purposes: it has helped improve current FAQs and consider what is lacking in information literacy instruction. Moreover, NUL is taking into consideration this data for future decisions about staffing the reference desk and training of Patron Services librarians and student assistants.

As Stevens (2013) notes, there is a need for lessening the repetitive nature of reference work (that is., constantly repeating answers to frequently asked questions), freeing up librarians to answer more complex queries or to perform other tasks that are more aligned with their expertise." Reference analytics can help librarians identify the most common questions which can then be automated and populate the LibAnswers knowledge base. Another suggestion is to allocate the time of Reference librarians to other tasks and improving their professional competence.

Suggestions and Recommendations

The researchers would recommend recruiting a statistician to help with questions such as for how much time should the library collect data before reaching a decision. (Dean & Williams, 2013). Although NUL hasn't done this yet, as the library and our user base expands, this would be useful for the future. Another related recommendation would be to preserve the full dataset, after it has been anonymized, because future researchers in the library might need it.

The authors also recommend keeping track of events, changes or other issues (for example with a calendar) that can impact received queries, as it is a useful practice to understand how these might affect reference statistics (Dean & Williams, 2013).

An important point to make is that reference statistics help libraries understand in which location(s) reference questions are firstly received, which might not be reference service but Patron or other services. According to Scales, Turner-Rahman, & Hao (2015) training the librarians who first receive reference queries to refer users to reference librarians is good practice. Related to this is Montalvo's (2016) recommendation to implement Virtual Reference services software, even for libraries that don't have a separate reference department, which can be applied to many Central Asian libraries "because most library assistants, other staff, and even student assistants offer reference services in one way or another, all of them should become acquainted with the knowledge base". With the implementation of READ scale, such a change can be well documented and later analyzed, to decide if it works for the library, as Flatley and Jensen (2012) note.

Moreover, the data, summarized and analyzed into reports, can be used to liaise with other departments in the university. As Dean & Williams (2013) mention in their article, they used the technical questions data to ask for greater support from the IT department. For example, in NUL assistance with printer troubleshooting and out-of-campus-access to e-resources can be solicited from the IT department, as these queries are common.

Stevens (2013) calls for more weight given to class instruction: "each student in the class is likely to learn more than they would in what is usually a far briefer reference transaction. Librarians [...] can teach the whole class once rather than spending hours repeating themselves to each student individually." The model of the instruction librarian instead of reference duties is an entirely new thing to Central Asian librarians.

As an alternative, Stevens (2013) elaborates on reference desk service that employs trained student assistants while a reference librarian is always available at their offices, a system developed when the operating hours available shrunk and the desk's title was changed to "Research Help Desk" in an attempt to use user-friendly language. The authors believe this would be an effective alternative for Central Asian libraries to introduce, if they desire a reference desk but do not wish to spend the valuable time of a professional librarian.

Regarding broader decision making, Dean & Williams (2013) call for greater statistics and database training for librarians who manage these systems. The authors would like to add that these skills will be useful for all reference librarians as data use has increased and is needed for answering questions or providing instruction.

Lastly, as the authors have observed, in Central Asia there is no official body that gathers reference statistics for analysis similar to how it is done in American libraries. Maybe this is one of the reasons reference service and data are so scarce. We recommend the creation of a body that would track this data to identify trends and drive change.

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