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Is the collaborative service always superior to the single library service?

A project for evaluating the chat reference services in USA

With the development of the digital reference service, more and more single service institutions have been involved into consortia to participate in the collaborative online reference service. Nevertheless, to some extent it is still questioned whether the collaborative service is always superior to the single service. This paper reports a student research project that gives a reply to this doubt. During the project, the chat reference services provided by four categories of libraries in the United States were evaluated. At first, the author describes the origin, scope, methodology and limitations of the project. Then the workflow is briefly introduced step by step. Later some important results created from the project will be summarized. At last, the author draws conclusions including the advantages and disadvantages of both the collaborative and single library chat reference service and the experiences and lessons achieved from the project.

Ist der Verbunddienst dem Einzelservice immer überlegen? Ein Projekt zur Evaluierung der Chat-Auskunftsdienste in den USA

Zunehmend beteiligen sich immer mehr einzelne Auskunft gebende Dienstleister an Konsortien zur Teilnahme an Online-Auskunftsdiensten in einem Verbund. Trotzdem wird – in einem gewissen Ausmaß – noch hinterfragt, ob der Verbunddienst dem Einzelservice immer überlegen ist. Dieser Beitrag berichtet von einem studentischen Forschungsprojekt, das Antworten auf diese Fragen gibt. Für das Projekt wurde der Chat-Auskunftsdienst von vier unterschiedlichen US-amerikanischen Bibliotheken evaluiert. Zuerst beschreibt die Autorin die Entstehung, den Rahmen, die Methodik und die Grenzen des Projektes. Dann folgt eine kurze schrittweise Einführung in den Ablauf des Projektes. Danach werden wichtige Ergebnisse des Projektes zusammengefasst. Aus den Erfahrungen und Lektionen, die aus dem Projekt erwachsen, zieht die Autorin Schlüsse und benennt Vor- und Nachteile von gemeinschaftlich organisierten bzw. einzelnen bibliothekarischen Chat-Auskunftsdiensten.

Le service en collaboration est-il toujours supérieur au service d'une seule bibliothèque? Un projet d'évaluation des services de référence par chat aux Etats-Unis

C'est avec le développement du service de référence digitalisé que de plus en plus de services d'institutions différents sont entrés des consortia afin de participer au service de référence en ligne en collaboration. Néanmoins, sous certains aspects on peut poser la question si le service en collaboration est toujours supérieur au service individuel. Cet article présente un projet de recherche d'étudiant qui donne une réponse au doute. Les services de référence par chat fournis par quatre catégories de bibliothèques aux Etats-Unis furent évalués au cours du projet. D'abord l'auteur décrit l'origine, l'étendue, la méthode et les limites du projet. Puis, la pratique du travail est brièvement introduite pas à pas. Plus tard, quelques résultats importants en suite du projet sont résumés. Enfin, l'auteur tire les conclusions en y incluant les avantages et les désavantages des deux, du service de référence en collaboration ou d'une seule bibliothèque, par chat, et les expériences et les leçons reçues par le projet.

Introduction

The digital reference service (DRS) in the library is one kind of the latest services that the library provides to its users. Through this evolving service, the library extends its services to the world beyond the wall of its building where it is physically located. No matter how the service is called, either „digital“, „virtual“, „live“, „real time“, „interactive“, „web-based“ or „synchronous“ service, its essence is to provide reference service via the computer network. As regards to the definition of this term, there has been no an absolutely authoritative one. It's very often that every service provider creates a new one according to its own understanding and experience to describe what kind of the digital reference service it's conducting. Besides research-

ers put forward their own viewpoints. William (Bill) A. Katz, the writer of the ‚Bible‘ in the area of reference work in the library, defined the DRS as below: „Digital reference service (DRS) can be thought of as an online reference interview which can run to less than a minute to ‚as long as it takes‘ to reach a satisfactory response“¹.

Another reasonable definition about DRS could be found in the project for assessing the DRS proposed by Charles R. McClure and R. David Lankes as following: „Digital re-

¹ Katz, Bill: Digital reference: an overview. In: Katz, Bill, ed. Digital reference services. Binghamton, USA 2002/2003. 2.

ference service is „human-intermediated assistance offered to users through the Internet“².

One another widely accepted definition about the digital reference, the equivalent of the term „virtual reference“, comes from the Guidelines for Implementing and Maintaining Virtual Reference Services which was prepared by the MARS Digital Reference Guidelines Ad Hoc Committee of the United States. „Virtual reference is reference service initiated electronically, often in real-time, where patrons employ computers or other Internet technology to communicate with reference staff, without being physically present. Communication channels used frequently in virtual reference include chat, videoconferencing, Voice over IP, co-browsing, e-mail, and instant messaging.“³

According to the definitions above, it can be summarized that the DRS is a kind of reference service provided on the platform of the computer network and the human experts are involved in such service.

Since it came into being, the digital reference service has developed very quickly. One research by Joe Janes and his colleagues found that (until 2000) 45 % of academic libraries and 12.8 % of public libraries offer some type of digital reference service⁴. One another encouraging proof comes from the Library of Congress (LC). The relevant statistics could be found in Figure 1. The Library began to use QuestionPoint, currently the most popular software for digital reference, in June 2002. The earliest statistics for using QuestionPoint showed that from June through December 2002, – within only six months – this library received 35 206 questions. Then in calendar 2003 it received 55 932 reference questions through QuestionPoint. The statistical then switch to fiscal year (October-September), for Fiscal Year (FY) 2004 it received 47 729 questions, for FY05, 58 611. The problem in the statistics here that causing a reduction in questions that year from the previous year is that the Library installed an „intermediary page“ in 2004 although the numbers are back up now. Regardless of that there is a problem for that the units for the statistics are not the same, the changes of columns' height in Figure 1 has roughly indicated the general rising tendency of the usage of the digital reference in the Library. And this is definitely not an individual phenomenon but a very common one in the library world⁵.

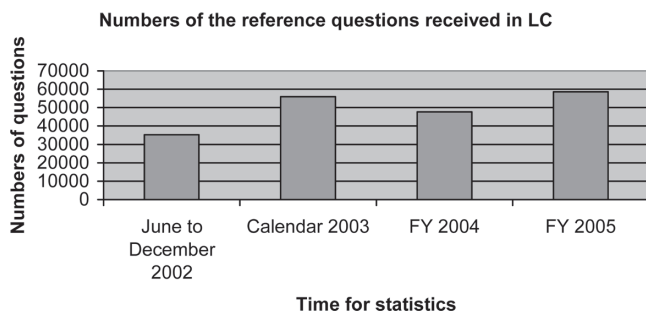


Figure 1: Numbers of the reference questions received in LC

The project

With the development of the digital reference service, more and more single service institutions have been involved into consortia to participate in the collaborative online reference service. Nevertheless, to some extent it is still ques-

tioned whether the collaborative service is always superior to the single library service. To the user of the reference service, the key point is to get a right answer to meet his information need no matter the service provider is from a single library or a consortium. However, to the library that has not yet started the online reference service or that is wondering the tendency of the online reference service, it's an inevitable question whether to stand/keep alone or join a consortium.

Thinking of this doubt, a small group evaluated the digital reference services provided by single, or independent, academic and public libraries and member libraries of consortia of academic and public libraries in the United States. Although it's a small student research project, it explored a theme that has seldom been touched ever before but is very meaningful to the further development of the digital reference service.

Origin

In the summer semester of 2005, Prof. Ingeborg Simon, a teacher of the Faculty of Information and Communication, Stuttgart Media University (HdM), Germany initiated a seminar on evaluation of online reference service. Since then, the seminar happens every two semesters. On the basis of a former successful project⁶ under the cooperation with the Department of Information Management, Peking University, China, in the summer semester of 2005, a new student research project was implement-

² McClure, Charles R. and R. David Lankes. Assessing quality in digital reference services: a research prospectus. Internet WWW page, available at <<http://iis.syr.edu/tiki-index.php?page=Digital+Reference+Quality+Standards>> (Accessed 23 February 2006).

³ MARS Digital Reference Guidelines Ad Hoc Committee, Reference and User Services Association, prepared. Guidelines for implementing and maintaining virtual reference services. Internet WWW page, available at <<http://www.ala.org/ala/rusa/rusaprotocols/referenceguide/virtrefguidelines.htm>> (accessed 13 March 2006).

⁴ Janes, J.: Current Research in Digital Reference: Findings and Implications. Presentation at Facets of Digital Reference, the VRD 2000 Annual Digital Reference Conference, 17 October, Seattle, WA.

⁵ All the statistics mentioned in this paragraph should be available from the web page with the title of „Digital Reference Project Resources“ at <<http://www.loc.gov/staff/rr/refresources/>>. However since this web page is available only to the staff members of the Library of Congress, the author got them actually from a chat with the reference librarian of the Library of Congress. Thanks a lot for her/his help here!

⁶ In the summer semester of 2005, there was a student research project under the cooperation between the Faculty of Information and Communication, Stuttgart Media University, Germany and the Department of Information Management, Peking University, China. The subject of the project was evaluating the worldwide digital reference services in the libraries. During this project, 14 German students and 21 Chinese students separately evaluated nearly 200 email reference services all over the world. The German students implemented during the Seminar on Evaluation of the Online Reference Service.

ed it during the seminar of this semester, i.e. from March till June, 2006.

The project was conducted under the supervisor and guidance of the teacher of HdM, Prof. Ingeborg Simon and the guest professor of HdM, Dr. Jia Liu. Four students of HdM were involved in the project, which were Sonja Wiesler, Anja Steinert, Benjamin Stasch, Carola Schreiber. Since the email reference service had been evaluated in the last project, the team members chose chat reference service as the target for evaluation in this project.

Scope

Defining the scope of the services evaluated in this project troubled the project team quite a lot at the beginning. It took a lot of time and energy for the team members to think about it until they decided to focus on the current scope for evaluation finally.

During the preparation period, the student who was responsible for selecting the libraries was asked to search for chat reference services in English provided by the worldwide libraries. Unfortunately, the result for this search was fairly frustrating. It was found that a lot of libraries did not provide any clues in English about their chat reference service. In the meantime, many such services target only their members though some of the institutions providing the chat reference are public libraries. The team members initially would like to make an international comparison based on the evaluation. After this search we had to give up this idea for the number of the chat reference services in English even in Europe was too small. At last, it was decided to locate the evaluation scope at the United States where the digital reference service has entered into mature stage and it's possible for us to have enough samples for evaluation.

Chat reference services provided by four categories of libraries (single academic and public libraries, libraries involved in the consortia of academic and public libraries) are evaluated during the project. The number of each category of libraries is 10. The table in Appendix 1 shows the full list of these libraries.

Methodology

According to Jo Bell Whitlatch, the traditional research methods for evaluating the reference service remained useful in the online environment, which are surveys and questionnaires, observation, interview and case studies⁷. Since this is actually an unobstructive project, the methodology of the project was not complex. Only two following research methods were used during the evaluation.

- **Questionnaire:** The questionnaire is an instrument for collecting information directly. In this project, one questionnaire was designed after the team members previewed the dominating standards and guidelines related to the digital reference service. Under the title „Evaluation Guide“, the questionnaire is displayed in Appendix 2. Team members used it for recording and gathering the primary data.
- **Observation:** As defined by Whitlatch, „observation methods collect information on people as they behave in real-life situations.“⁸ The students posed as common users during the chat sessions. They observed the whole procedure of the chat sessions and recorded the required information. Sometimes, they needed to form judgments according to their knowledge and im-

pressions for they could not get all information directly from the observation.

Limitations

As declared at the beginning of this article, this project is a just a modest student research project. Meanwhile, this is the fourth semester for the students to study in HdM. It's understandable that there are some limitations of the project.

The biggest limitation might be that the number of the project samples is so small that each sample weighs too much in the statistics. It is fairly difficult to make any conclusion of common sense based on the statistics of such a small scale.

One more limitation is that all the samples in this project were chosen from the United States, though this is not the project members' initial intention. The digital reference service started in the United States and it has developed quite well there after the exploration for so many years. However, the current status of the online reference service in different countries or areas differs quite a lot. Therefore, it's hard to say that the data achieved from the evaluation of the chat reference service in the United States could be representative of the digital reference service all over the world.

Workflow

The project started on March 15, 2006 and ended on June 21 of the same year. Except the holidays, the project lasted for totally 14 weeks. The implementation of the project could be divided into three phases, which are preparation phase, evaluation phase, and summarization phase. In the following sections, the author will describe more details about the working procedures step by step.

Preparation phase

In order to guarantee a successful project, a lot of work was done in the preparation phase of the project.

- **Literature preview:** At first, the participating students were asked to read several important literatures (see Reference) selected by the author. Because the students' time was very limited, only a few documents had been chosen for their reference. In addition to an introductory presentation on the subject of digital reference service given by the author, the students learned more professional knowledge about the field from these documents. These documents are also fundament for the team members to design the questionnaire in the following period.

⁷ Whitlatch, Jo Bell: Evaluating reference services in the electronic age. *Library Trends*, Fall, 2001: 207-17. Internet WWW page, available at <http://www.findarticles.com/p/articles/mi_m1387/is_2_50/ai_83342855/print> (accessed 28 April 2006).

⁸ Whitlatch, Jo Bell: Evaluating reference services in the electronic age. *Library Trends*, Fall, 2001: 207-17. Internet WWW page, available at <http://www.findarticles.com/p/articles/mi_m1387/is_2_50/ai_83342855/print> (accessed 28 April 2006).

- **Work distribution:** Then a variety of work was distributed to different participants as following.
 - Project-leader (The two teachers had to act as the project leaders in this case because the participating students are so few).
 - List of libraries with DRS (Sonja Wiesler).
 - Evaluation Guide / Question (Anja Steinert).
 - Statistical results (Excel) (Benjamin Stasch).
 - Presentation for the students of the second semester (Carola Schreiber).

In addition to the project leaders whose tasks had been clarified as moderation of all meetings, time-management and coordination, the other project members were assigned to be responsible for various tasks during the implementation of the project. The project instruction (see Appendix 3) was used to make sure that each team member was well aware of his own tasks during the project.

- **Pre-test:** A pre-test was conducted so as for the students to get a primary impression about the chat reference service. After the pre-test the team members had a discussion about their experiences and the criteria of the chat reference service of good quality. After the discussion, it was decided which kinds of libraries would be evaluated during this project.
- **Libraries selection:** At first, the student responsible for creating the list of the libraries for evaluation managed to find 106 libraries from Europe, Australia, Canada and the United States that provide the digital reference service. Then the geographic scope was shrunk to the four categories of libraries of the United States. Finally the student selected ten samples of each category. Since it is too difficult to get ten consortia purely composed of only either academic or public libraries, two consortia chosen in the project are in fact mixtures of academic and public libraries.
- **Cognitive interest, general questions and hypotheses proposal:** The cognitive interest of the project defined the fundamental tune of the project. It was drafted as that „we will learn whether the American chat reference service fulfills the standards of the American Librarians Association (ALA), International Federation of Library Associations and Institutions (IFLA) and some American experts“. Two general questions and hypotheses were proposed as below. During the following periods, the team members were asked to pay attention to the special points mentioned here and at last to make judgments on the hypotheses.

General questions

 - Which kind of library offers the best chat reference service?
 - Do the American chat reference services fulfil the standards of the ALA, the IFLA and those mentioned by American experts?

Hypotheses

 - We guess that they fulfil them partially.
 - We guess that there are differences concerning the quality between the categories of public libraries, academic libraries, public library consortia and academic library consortia.
 - We guess that the consortia will offer a better service.
- **Questionnaire, scenario and test question design:** Based on the commonly accepted guidelines and experiences achieved from the pre-test, a questionnaire

was designed (so-called ‚evaluation guide‘ in the project, see Appendix 2) as the tool for the evaluation. On the other hand, a scenario including the enquiry and the context for the chat session was defined so that evaluating results could be comparable later. The scenario for the evaluation is that „we are students from abroad (Germany) and need help with our specific question“. And the test questions are:

- Two students took a question for evaluating the single public and academic libraries:

I would like to know the costs of living in your country/city (rents, food etc.).
- Two other students took a question for evaluating the public and academic library belonging to consortia:

I would like to know the most often exported goods of your country (exact amount, maybe statistics).

Evaluation phase

Three weeks were spent in evaluating the chosen chat reference services. The team members pretended to be common German students with enquiries and conducted the chat session with the reference librarians. During the tests, the two questions mentioned above were used.

Each student was asked to evaluate ten chat reference services falling into one of the four categories included in Appendix 1. They used the questionnaires for evaluation and collected required data. In the meantime, they recorded some personal comments.

Some comments are recorded as below which might be interesting to researchers and practitioners in the field of the digital reference service:

- **Single public libraries**
 - 1) You hear an audio signal when a new message appears on the screen. (*Memphis PL*)
 - 2) I got very good additional information via E-mail. (*Harris County PL*)
 - 3) Possibility to check a box to make the session anonymous and get a chat transcript via a link which remains active for ten days. (*Kansas City PL*)
 - 4) E-mail with very good information after two days. (*Houston PL*)
- **Consortia of public libraries**
 - 1) The „24/7“ service was not available at 3:30 p.m. on Friday and at 4 p.m. on Sunday. (*Ask away*)
 - 2) Possibility to check a box to make the session anonymous and get a chat transcript via a link which remains active for ten days. (*Ask Why KY & Answer Xpress & Ask Us Now*)
 - 3) The librarian asked which resources I’ve already looked at and also asked for the purpose and level I am at. (*Massachusetts*)
 - 4) If you enter a non-Californian zip code you are told that you aren’t allowed to use the chat reference service. (*Ask Now*)
The librarian didn’t come back fast enough as I guess she had a few chats at the same time. (*Know It Now*)
 - 5) The librarian asked if I wanted to wait in the chat or receive an E-mail. (*Answer Xpress*)
 - 6) The only one question is concerning the reading level. The librarian asks whether I have a library

card. The librarian only searched on the Internet. (*Live Librarian*)

– **Consortia of the academic libraries**

- The librarian gave resources for which an account (Lexis Nexis ID etc.) would have been needed. (*UT System Digital Library*)
- The librarian forwarded a lot of websites that indicated the way of searching clear (for someone with research experience) but didn't explain anything. He did not find an answer but gave contact information to other institutions to address. (*Virginia Community College System*)
- The service is actually for Everglades-related questions – the librarian answered nevertheless, but was not happy about it. (*Everglades Information Network*)

Summarization phase

The final phase is one for harvest. Based on the collected data, questions set up before were replied and judgments on the hypotheses and some summarization were made during this period.

- **Data collection and analysis:** One team member collected all the data and used Excel files to organize them into tables and figures. According to these statistical results, the team members analyzed the data and shared more personal experiences got during the evaluation phase. Besides, they identified the best example of the chat session transcript (see Appendix 4).
- **Reply to the former questions and making judgments on the former hypotheses:** According to these statistical results, what have been found is that it's difficult to reply to the first general questions in simple words. Each service has its own advantages and disadvantages. The reply to the second question is partially negative. It means that the American chat reference services fulfil parts of the standards of the ALA, the IFLA and those mentioned by American experts. As regards to the judgement on the former hypotheses, the project proved that except the last one, all the hypotheses made before are true. It's hard to conclude simply which kind of library offers the best chat reference service.
- **Project evaluation:** The work of all the team members were evaluated finally. It was also evaluated whether the project achieved its initial goal.

In addition, one presentation about the project was given to the students at the lower grade later and an overall work report was drafted at the end.

Results

Except the questions for the concluding judgments, there are totally 40 questions listed in the evaluation guide. In order to lay stress on the results directly related to the main question, here the author only picks up a part of the results created from the project. It was counted separately on how many aspects the collaborative service is the same good or very similarly good as the single library service, on how many aspects the collaborative service is superior to the single library service and oppositely on how many aspects the collaborative service is worse than

the single library service. Table 1, 2 and 3 show the results for this summarization.

The author's pickup strategies are:

- In the case that there are more than one sub-questions under one question, only one question is counted.
- In order to make the results more concentrated on the main question and avoid too much complexity, only the cases when both consortia of academic libraries and public libraries are at the same or similar level / superior to / worse than the single and academic libraries are counted.

Comparison	Number of the aspects	Percentage (%)
At the same or very similar level	14	53.9
Collaborative services are better	9	34.6
Single library services are better	3	11.5
Total aspects	26	100

Table 1: General comparison with a table

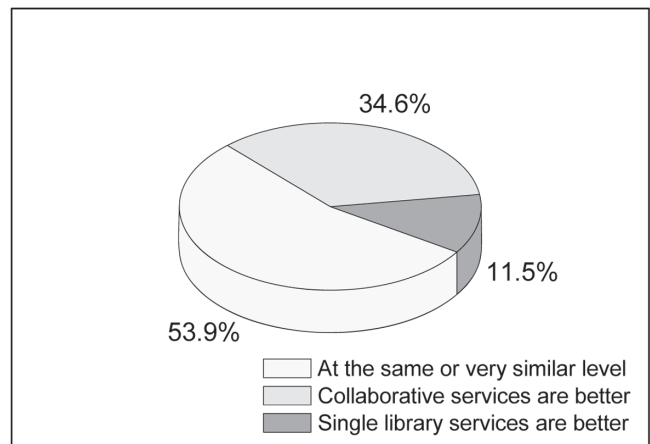


Figure 1: General comparison with a figure

On the following aspects, the tested collaborative services are at the same or very similar level as the tested single library services:

Positive aspects

- The homepage (the first web page) links directly to the chat reference service.
- The opening hours are clearly defined.
- It's clearly defined what type of questions are allowed to ask.
- The evaluators felt encouraged to ask a question by chat because of the welcome of the library.
- Most of the reference librarian understood the evaluators' questions.
- The FAQs give information about the use of the chat reference.
- There is an automatically generated screen welcoming you so that you know your request is in progress.
- During the chat sessions, the evaluators mostly did not have to wait uncomfortably long (longer than one minute) until they got reactions on what they typed.

- Around half of the reference librarians asked the enquirers whether if the answers were helpful to them.
- Most of the evaluators had enough time to check if they are satisfied with the given answer before the librarian logged off.

Negative aspects

- Most of the librarians did not reveal their own names.
- Most of the reference librarians did not describe their search strategies.
- Mostly the reference librarian did not invite the user to use the chat reference again.
- The working status of the librarian was seldom made visible to the user.

Aspect	Number of services			
	Single academic library	Single public library	Consortium of academic libraries	Consortium of public libraries
Does the library have an archive for the questions?	1	1	6	6
Does the website inform you if they will save your answer in their archive?	0	0	6	5
Do you get any technical advise on how to use the chat in advance?	4	5	9	7
Do they assure protection of your private information?	4	3	8	8
Does the librarian address you with your name?	5	3	5	9
Does he/she explain to you what sources he/she is using for research?	3	4	6	7
Does the librarian use co-browsing?	4	7	8	8
Are you invited by the library to evaluate the service afterwards?	5	5	6	9

Table 2: Aspects on which collaborative services are superior to single library services

Additionally, as regards to the average opening hours per week, the collaborative reference services have great advantages over the single ones. In this project, average opening hours per week of the consortia of academic and public libraries are 114 and 115 respectively while those of the single academic and public libraries are only 62 and 56, i.e., around half of the collaborative services.

Conclusions

On the basis of the results of the project, the author draws some conclusions in respects of the advantages and disadvantages of the collaborative and single library reference services. Additionally, the author also summarized some experiences and lessons during the project.

Aspect	Number of services			
	Single academic library	Single public library	Consortium of academic libraries	Consortium of public libraries
Do they invite you to use alternatives (calling or e-mail) if the chat is closed?	10	9	4	5
Does the librarian use a form of welcoming you? („Hello XY, Good morning etc“.)	10	8	7	5
Was the answer you got useful for you?	8	8	6	3

Table 3: Aspects on which single library services are superior to collaborative library services

Advantages and disadvantages

It has been found that it's hard to say in a word which type of service is always superior to the other one. Both the collaborative and single library chat reference service have their own advantages and disadvantages in the meantime.

The report about the service „Ask-Us! Illinois“ once outlined the advantages and disadvantages of the collaborative and the single library service very comprehensively⁹. It's unnecessary for the author to repeat them in this paper. Furthermore, it's hard for this unobstructive project to reach the same extensive achievements as the big-scaled project, such as „Ask-Us! Illinois“, could do. According to the results of this small research project, the author draws the following simple conclusions:

- On many aspects, the chat reference services provided by the collaborative and single libraries are at the same or very similar level. For example, all of them highlight the logos and linkages of the service on the homepage of the library, define the opening hours clearly, state the questions which are allowed to be asked, etc.
- In most cases, the collaborative chat reference service has advantages. The prominent advantage of the collaborative service is that its working time per week is

⁹ Ask-Us! Illinois: statewide virtual reference service evaluation and recommendations to the Illinois State Library. Internet WWW page, available at <http://www.cyberdriveillinois.com/departments/library/whats_new/pdfs/askusillinois.pdf> (accessed 30 May 2006).

about twice of that of the chat service provided by the single library according to the statistics in this project. It is because responsibilities could be shared among the participants within the consortium. Here is one more example. From May 5 to late August 2006, the „Ask-A-Librarian“ live chat service of the University of Mississippi Libraries had not been available. Since this library is a member library within the Association of Southeastern Research Libraries (ASERL), the largest regional research library consortium in the United States, the user who fails in using this service may turn to other member libraries, such as the University of Alabama Libraries, for replacement. One more interesting example comes from the Berlin Central and Regional Library (Die Zentral- und Landesbibliothek Berlin, ZLB). ZLB is located in central Europe and Berlin is an international metropolitan where a big population of foreigners live. Considering the situation that on one hand many users might not be able to use German fluently and on the other hand the reference staff could not understand questions in foreign languages, ZLB provides multilingual virtual reference service on the basis of a cross-nation cooperation. With the technical support from QuestionPoint, currently ZLB offers virtual reference service in 14 languages¹⁰. Without cooperation, it's impossible for a single library to afford the digital reference service in so many languages.

- However, in some cases, the single library could provide better chat reference service than the library involved in a chat reference consortium. In this project, almost all of the single academic and public libraries invite the user to use alternatives under the case that the chat service is closed. Comparatively, only half of the libraries belonging to consortia of either academic or public libraries do so. Of course, it's understandable that the main reason for this circumstance is that the collaborative chat reference serves much longer than the single one. But more or less there must still be an absent time of the collaborative chat reference service. Additionally, it's interesting for the evaluators to find that the answers from the single libraries are more useful to the project members. This is a very important point because the quality and usefulness of the reply is what the user cares the most.

Experiences and lessons

During the implementation of the project, the team members have got a few experiences and lessons.

As regards to the experiences, in addition to good communication and teamwork, the following ones are remarkable:

- **Idea of project management:** The idea of project management penetrated in the project from the beginning until the end. It guarantees the success of the project.
- **Not so simple just like white and black:** Numerous things in the world could not be simply divided as good and bad ones just like white against black. They might have their own advantages as well as disadvantages simultaneously.
- **Presentation to the students at lower grade:** Such presentation provides the student at the lower grade an initial impression about implementing a project.

Some lessons could also be taken from this project:

- The type and area of the libraries to be evaluated were not defined at the very beginning of the project. This made the student who was assigned to select the libraries for evaluation had to work very hard at the beginning. The student proposed that it would be better to make the two points clear before starting the search for the evaluation target so as to spare much time and energy. At the same time, another student who was responsible for drafting the evaluation guide put forward the similar suggestion. When she began to draft the evaluation guide, the type of the libraries and kind of online reference service for evaluation were neither decided. So it was hard for her to design more focusing questions in the evaluation guide. It resulted in that some questions were too general rather than especially for testing the chat reference service.
- More professional knowledge would be required for conducting such a project. This could lead the project in a more professional way rather than with too much empirical color.
- If deeper analysis had been done, more conclusions would have been drawn so that more characteristics behind the facial facts could be dug out.
- Limitation of the user group sets obstacles to the user who is not the target of the service. Some chat reference service is open only to a definite user group. Though such limitation is understandable, the inconvenience and block to some users exist practically.

Topics for further research

The author thought that some topics as below might be interesting for further research:

- Which factors lead the user to choose the digital reference service?
- What could be done to attract the user to use the digital reference service?
- What are the dominant factors that might lead the user to choose between the collaborative service and single library service?
- What is a successful chat session transcript? What should be included in a successful chat session transcript?
- Does the academic library provide better digital reference service than the public library does?

Some other words

By the way, this is actually the first time to have a seminar in English in the Stuttgart Media University. That's the reason why so few students selected this seminar. Nevertheless, it is expected that this would be only the temporary situation. Under the tendency of internationalization, Germany has been on the way to an immigrant country. According to the latest census in Germany, 15.3 million German citizens, i.e., almost one fifth of the entire population, have foreign background¹¹. A lot of German higher

¹⁰ OCLC. QuestionPoint respects language diversity. Internet WWW page, available at <<http://www.oclc.org/services/brochures/questionpointcasestudyberlin.pdf>> (accessed 24 April 2006).

education institutions have begun to provide courses in English. The seminar during which this project was implemented could be taken as a meaningful trial. Besides, this project might be also a good example for the student research project under the strict project management procedures.

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¹¹ Cencus in Germany. Deutsche Welle, 7 June 2006. Internet WWW page, at <<http://www.dw-world.de/dw/article/0,2144,2046029,00.html>> (accessed 7 June 2006).

Appendix 1 List of the chat reference service providers**Single public libraries**

- | | |
|----------------------------------|---|
| 1. Houston Public Library | http://www.hpl.lib.tx.us/services/infolive.html |
| 2. New York Public Library | http://www.nypl.org/questions/chat.html |
| 3. St. Charles Public Library | http://www.st-charles.lib.il.us/247ref/holdpage.htm |
| 4. Kansas City Public Library | http://www.kclibrary.org/about/contactchat.cfm |
| 5. Carmel Clay Public Library | http://www.carmel.lib.in.us/cgi-bin/virtualref/askref.htm |
| 6. Nashville Public Library | http://www.library.nashville.org/ask/chat.htm |
| 7. Loudoun County Public Library | http://www.lcpl.lib.va.us/QuestionPoint/QPchat.htm |
| 8. Memphis Public Library | http://vrlplus.cb.docutek.com/memphislibrary/vrl_entry.asp |
| 9. Harris County Public Library | http://www.hcpl.net/ref/patron_chat.html |
| 10. Rhode Island | Statewide Reference Resource Center Providence Public Library
http://www.askri.org/ |

Single academic libraries

- | | |
|--|---|
| 1. Arizona State University Library | http://www.asu.edu/lib/help/ |
| 2. University of California, Los Angeles Library | http://www2.library.ucla.edu/questions/ |
| 3. Austin Community College | http://library.austincc.edu/help/ask.htm |
| 4. Louisiana State University Library | http://www.lib.lsu.edu/virtual/ |
| 5. University of Georgia Library | http://www.libs.uga.edu/askaquestion/ |
| 6. University of Massachusetts Dartmouth Library | http://www.lib.umassd.edu/forms/refrequest.cfm |
| 7. Michigan State University Libraries | http://eref.lib.msu.edu/vrlplus/vrl_entry.asp |
| 8. University of North Texas Library | http://vrlplus.cb.docutek.com/unt/vrl_entry.asp |
| 9. University of Central Florida Libraries | http://library.ucf.edu/Ask/ |
| 10. University of South Carolina | http://www.sc.edu/library/ask.html |

Consortia of academic libraries

- | | |
|---|---|
| 1. Ask Colorado | http://www.askcolorado.org/academic/index.html |
| 2. Everglades Information Network | http://everglades.fiu.edu/ |
| 3. 24/7 Boston Library Consortium | http://lts.brandeis.edu/research/help/ask/ris.html |
| 4. Penn State University Libraries | http://www.questionpoint.org/crs/servlet/org.oclc.home.TFSRedirect?SS_COMMAND=CUST_SUP&Category=PENN |
| 5. The Chippewa Valley Technical College
(within the WISPALS Library Consortium) | http://www.cvtc.edu/Library/ChatForm.htm |
| 6. Research Help Now | http://aal15.tutor.com/nGen/Apps/SocWeb/main.aspx?ID=f9af6213-7284-4c3c-a206-0248f7302cba |
| 7. LRC live: Virginia Community Colleges | http://library.vccs.edu/reference/lo!l.htm |
| 8. Ask a UT System Librarian Texas | http://www.lib.utsystem.edu/students/faq.html |
| 9. Q and A New Jersey | http://www.qandanj.org/ |
| 10. AskUs 24/7 | http://www.wnylrc.org/vreferen/index.htm |

Consortia of public libraries

- | | |
|---|---|
| 1. AskNow - Libraries throughout California | http://www.asknow.org/ |
| 2. MassAnswers Massachusetts | http://www.massanswers.org/ |
| 3. AskWhy Kentucky | http://www.information-station.com/ |
| 4. AnswerZone Texas | http://www.answerzone.org/ |
| 5. Live Librarian Suffolk County | http://www.suffolk.lib.ny.us/snl/ |
| 6. AskUsNow Maryland | http://www.askusnow.info/ (zip code: 20898) |
| 7. Ask?Away | http://www.palsnet.info/librarianlive/ |
| 8. AnswerXpress Idaho | http://www.answerxpress.com/index.asp |
| 9. Know it now Ohio | http://www.knowitnow.org/ (zip code: 43060) |
| 10. Q and A New Jersey | http://www.qandanj.org/ |

Appendix 2: Evaluation guide

Evaluation Guide : Chat Reference

Name of student:
Name of the library:
Homepage of the library:
URL of the Chat Reference:

Before using the chat reference service

Approachability

- 1. a) Does the homepage (the first website) link directly to the chat reference service?
 yes no
- b) If not, how many clicks do you have to do in order to reach the reference?
 clicks
- 2. a) Are the opening hours clearly defined?
 yes no
- b) If they are, please fill them in here:
.....
.....
- 3. Do they invite you to use alternatives (calling or e-mail) if the chat is closed?
 yes no

Interest

- 1. Is it clearly defined who is allowed to use the chat reference?
 yes no
- 2. Is it clearly defined what type of questions you are allowed to ask?
 yes no
- 3. Do you feel encouraged to ask a question by chat because of the welcome of the library?
 yes no

Transparency

- 1. a) Does the library have an archive for the questions?
 yes no
- b) If it has, does the website inform you if they will save your answer in their archive?
 yes no I can choose if my question may be archived
- 2. Can you find any hints that the chat might be a part of a network? (Question point etc.)
 yes no

Technical help

- 1. Do you get any technical advise on how to use the chat in advance?
 yes no
- 2. Do the FAQs give information about the use of the chat reference?
 yes no

Formal criteria

1. What information do they want to know from you before you can enter the chat?

[Please mark those that are optional with an X in the field.]

- | | |
|--------------------------------|--------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |

2. Do they assure protection of your private information?

- yes no

During the chat session

Waiting time

1. Is there an automatically generated screen welcoming you so that you know your request is in progress?

- yes no

2. How long do you have to stay in the queue until the librarian picks up the dialogue?

- 0 – 1 minutes 1 – 2 minutes
 2 – 5 minutes longer than 5 minutes

3. During the dialogue: Do you have to wait uncomfortably long (longer than one minute) until you get a reaction on what you typed?

- yes no

4. Does the librarian tell you that he/she will be busy doing research for a while?

- yes no

Friendliness

1. Does the librarian address you with your name?

- yes no

2. Does the librarian use a form of welcoming you? ("Hello XY, Good morning etc".)

- yes no

3. Does the librarian reveal his/her name?

- yes no

4. Do you have the feeling that the librarian takes his/her time in order to give you a satisfying answer, or do you feel cut short?

- yes no

Interview / Research /Follow Up

1. Does the librarian understand your question?

- yes no

2. Does he/she ask you questions in order to specify your need?

- yes no

3. Does he/she explain to you what sources he/she is using for research?

- yes no

4. Does the librarian describe his/her search strategy?

- yes no

5. Does the librarian offer you to send in-depth information by e-mail if the question could not be answered during the chat? *(if you got an answer by chat, just leave this question out!)*

- yes no

6. Does he/she ask you if the answer was helpful to you?

- yes no

- 7. Do you have enough time to check if you are satisfied with the given answer before the librarian logs off?
 yes no
- 8. Does he/she invite you to use the chat reference again?
 yes no

Technique

- 1. Do you still see any technical help while you are chatting?
 yes no
- 2. a) Do technical problems occur? (e.g. logg off)
 yes no
- b) If yes, please specify:

.....

- 3. Does the librarian use co-browsing?
 yes no
- 4. Is the working status of the librarian made visible to you?
 yes no

After the Chat session

- 1. Do you get a chat transcript?
 yes no
- 2. Was the answer you got useful for you?
 yes no
- 3. How long did the chat session take? minutes
- 4. Are you invited by the library to evaluate the service afterwards?
 yes no

Concluding Judgement

	positive			negative		
	+3	+2	+1	-1	-2	-3
How friendly answered the librarian?						
How well did they understand your question?						
How useful was the answer?						
Would you use the service again?						
How satisfied are you with the whole service?						

Space for comments, further information:

Appendix 3: Project instruction

Coordinator¹:

Members:

Mentor: Dr. Liu, Prof. Simon

Objective:

Tasks:

Results that have to be worked out:

Conditions:

- **What do we need from the other teams?**
- **Which resources / materials do we need?**
- **Who do we have to inform?**

Deadlines, milestones:

¹ Since only four students were involved in the project, each of them acted as a group responsible for one series of tasks. Therefore, the coordinator and member of every group was the same in this case.

Appendix 4: The best example of the chat session transcript**Chat with the reference librarian of the Carmel Clay Public Library**

(<http://www.carmel.lib.in.us/cgi-bin/virtualref/askref.htm>)

Chat Session Transcript:

Chat Transcript: Hello, I'm interested in the costs of living in your city.

[Librarian 13:33:48]: Good afternoon, what sorts of cost information are you looking for?

[Benjamin 13:34:34]: I would like to know if there are any statistics where I can see how the living costs are, for example for food, rent...

[Librarian 13:34:51]: In general, I would say that the costs in the Carmel area are very comparable with the general Indianapolis costs.

[Benjamin 13:36:15]: Could you please give me some information where I can find specific data?

[Librarian 13:36:21]: Just a moment.

[Librarian 13:37:13]: There is a resource that we have here at the library called the ACCRA Cost of Living Index.

[Librarian 13:37:40]: This index will have information about the costs of various items in metropolitan areas around the country.

[Librarian 13:37:49]: Please hold for just a moment.

[Librarian 13:39:07]: Back

[Benjamin 13:39:34]: Are there any online resources where I can find the living costs?

[Librarian 13:39:37]: It has information about what various staple foods, energy, housing, etc. cost.

[Librarian 13:39:53]: While Carmel is not listed, it does have Indianapolis listed.

[Librarian 13:40:24]: Off of the top of my head, I do not know, but please let me check to see if I can find anything similar online.

[Benjamin 13:40:48]: Sure, thank you!

[Librarian 13:41:08]: It turns out that the ACCRA index is online.

[Librarian 13:41:24]: You can compare two cities at <http://www.coli.org/compare.asp>

[Librarian 13:41:59]: And Indianapolis is listed as one of the available cities.

[Librarian 13:42:37]: Bah. Never mind, I just noticed that that site asks that you pay for the information.

[Benjamin 13:42:56]: Yes, I see...

[Librarian 13:46:51]: I am now looking through the Bureau of Labor Statistics Consumer Price Index pages to see if I can find Indiana data.

[Librarian 13:48:22]: Unfortunately, I can not find data for Indianapolis online. However, I have a possible work around.

[Librarian 13:49:04]: The link to the PDF document that I will send shortly tells you average costs across the country for a wide variety of items.

[Librarian 13:49:29]: The ACCRA Cost of Living Index tells what each location costs in relation to the national average.

[Benjamin 13:50:52]: That would be perfect! Thank you so much for your help!!

[Librarian 13:51:17]: For instance, Indianapolis is 95% of the national average for cost. So if something costs an average of \$100 the Indianapolis cost would be \$95.

[Librarian 13:54:04]: So, here are the Indianapolis costs: Grocery items 99.5% Housing 94%. Utilities 97%. Transportation 101.4% Healthcare 93.8% and Misc Services and Goods 92.2%

[Librarian 13:54:39]: Ok, I am now going to send a link to an Adobe Acrobat document that will give average costs for the country.

[Librarian 13:55:12]: Here is the BLS Consumer Price Index detail.

[Librarian 13:55:15]: <http://www.bls.gov/cpi/cpid05av.pdf>

[Benjamin 13:55:50]: Ah, that's great. Thank you for taking so much time for me!

[Librarian 13:56:00]: Is there anything else I can help you with today?

[Librarian 13:56:53]: If you can get your hands on a copy of the ACCRA Cost of Living Index, I would recommend it. Most libraries should have a copy of it.

[Benjamin 13:57:34]: Okay, I will first work through this document, and then I'll see.

[Librarian 13:58:14]: Thank you for using the Carmel Clay Public Library's "Ask a Librarian" service.

[Librarian 13:58:29]: Librarian ended chat session.

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