The hybrid library: from the users’ perspective

A report for the DEFF project "The loaners’ expectations and demands for the hybrid library".

The National Library and Copenhagen University Library
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1 Introduction

The purpose of this project is to gather information on how the needs of the core users are fulfilled by research libraries through use of physical materials, electronic materials, and the library employees in the physical library. The investigation was meant to reveal how the users utilize these resources nowadays, and, on the basis of the qualitative data, suggest how the hybrid research library of the future can improve its services.

The investigation focused on three key aspects of the hybrid library:

1. How the library’s web interface can be improved.
2. What role the library’s employees will have in the future.
3. What role the physical library should play.

The project’s primary method is a field study, wherein the guiding idea has been to collect knowledge about the users’ information-searching in their customary environment.

Via the field study, the investigation has painted a picture of the users’ behavior. Through two follow-up workshops, it gave an idea of what services the library should provide in the future, if it hopes to fulfill the users’ demands and expectations.

It is planned for this qualitative study to be followed up with a quantitative questionnaire, which can give insight into how widespread various behavioral patterns and expectations are among the users.

The results of the project do not dictate what the libraries and their employees ought to do in the future. The results of the project can only be used to determine how different users relate to different possible developments.

1.1 Overall progress and methods of the project

The project was launched by a pilot project at the State and University Library, where the field study method was developed from its infancy for use in the later stage, with all of the participating libraries. The method was evaluated and refined using input from the working team and the advisory committee, as well as assistance from professional consultants.

The main portion of the study consisted of sixteen individual case studies on selected students and researchers. Each case study included initial interviews, followed by informants filling out journals with notes, printouts, and photos. Thereafter, there was a contextual interview wherein the content of the journals was discussed with the informants.

Concurrently with the user study, the libraries carried out interviews with their employees, in order to include their views of the users and of the libraries’ offerings.
You can read more about the progression and methods of the investigation in chapter 6 and read the evaluation of the practical application of the method in chapter 7.

The field study gave a picture of how the users work, and of how they relate to the library. The study shows just how different the users of the hybrid library can be, and thereby how accommodating a library needs to be, if it wants to satisfy all users’ needs.

You can read more about the results of the field study in chapters 2 and 3.

In addition, the working team had users evaluate a number of different possible library services. A number of ideas arose as a result of the field study, which were tested in two workshops with a total of sixteen participants, where the users could comment on and evaluate the ideas.

You can read more about the workshop results in chapters 4 and 5.

A researcher from the study tells about what the library can learn from Århus Sporveje1: “The photo of the bus is the most important thing: They change the route if people needs another route. There’s no question like “bus service should always be like this”. It seems that they are anticipating the needs of the users instead of saying “this is how we’ve always done it”. There’s an approach to doing things that’s non-judgemental: “We listen to what our users are saying”.

1 Århus Sporveje is the mass transit company which operates bus services in the greater Århus area.
2 Conclusions

This section contains a summary of the most important results of the investigation, seen as a whole.

2.1 What behavioral patterns do the users exhibit?

The result of the investigation “The loaners’ expectations and demands for the hybrid library” is a picture of how a number of selected users (both researchers and students) at the participating libraries work and study. Sixteen users took part in the field study, and sixteen other users participated in the workshops, wherein they evaluated ideas for possible future development. In addition, sixteen library employees were also interviewed to obtain their perspective on the needs of the users.

With only sixteen informants, it is impossible to obtain a statistically representative sample of the entire population of users, but we can look at the individual users’ behavior, and observe whether patterns emerge which are relevant to how the library offers its services. In selecting users, we placed emphasis on finding informants who were, among other differences, distinguished by the closeness of their relationship to the library. For example, some should be frequent and very active users, while others should be users that the library has a harder time reaching out to.

The construction of the three personas in this report is a means of representing the archetypal usage patterns which were observed in the course of the investigation. It is easy to imagine that an actual user can incorporate traits of all the personas, or can, over time, evolve from one kind of user to another.

The personas show how the library can influence the users in different ways and to differing extents. At one end of the spectrum, we have the library enthusiast, with whom the library is in close contact throughout the majority of the enthusiast’s work processes. At the other extreme, we find the worker bee, who works in an almost completely isolated manner. Somewhere in the middle, we have the drive-in user, who uses the library in a very focused and goal-oriented way.

It is also possible to use the data we collected to create personas who are geared quite differently from those we present in this report. These personas were created because they can be used as a tool in discussions of what the library should take into account in determining its future services.

- Read more about the idea of the personas as a communicative tool in section 6.8.
2.1.1 The drive-in user

The drive-in user uses the library in a very goal-oriented manner. The stated goal is, as a rule, to pick up or drop off books, or to execute practical tasks such as printing or photocopying.

The drive-in user is currently by far the most effectively served: the ability to check their books out themselves is one thing that this user greatly appreciates.

The drive-in description also covers behavior in the virtual library: the local library catalog or bibliotek.dk is used for ordering materials or downloading documents. The selection and evaluation of literature usually occurs before the user consults the library to order the material. The drive-in user is found among both students and researchers.

The drive-in user is generally content with the effective self-service the library makes available. Among the library employees, it is seen as a source of disappointment that the library has so many services that the focused drive-in user never utilizes.

A message from the journal of a user who functions in the drive-in role: The informant is very goal-oriented in their library visit, and “just pop in to find materials, make copies, or print instructional materials.”

I ALWAYS HAVE PLENTY OF TIME WHEN I VISIT THE LIBRARY! DESCRIBE YOUR REACTION

Unfortunately not. I’m usually busy, and I just pop in to find materials, make copies, or print instructional materials. But I’m trying to take more time, because I get better results and learn more when I read the materials I’ve found in peace and quiet.

A message from the journal of a user who functions in the drive-in role: The informant is very goal-oriented in their library visit, and “just pop in to find materials, make copies, or print instructional materials.”

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2 Bibliotek.dk is the national Danish library super-site, which can simultaneous search the catalogs of all Danish libraries, both public and research.
2.1.2 The worker bee

This user type is seen in the physical library, which they occupy in periods of time of varying length, e.g., during term paper writing, exam preparation, or group work. The worker bee uses the physical areas of the library quite actively as workplaces, and they are generally content with this possibility.

The investigation shows that the library does not have a great deal of qualitative influence on this user’s work – they either isolate themselves, or consult their peers more than the library’s range of employees and services. The worker bee user is found primarily among the students. The researchers typically carry out their work at the university, rather than the library.

I WORK BEST AT HOME!

DESCRIBE YOUR REACTION:

Probably not, as I’m easily distracted and tend to do things instead which aren’t relevant to my studies. Though it’s nice that I get to decide everything myself: if I want to hear music while I study, I can eat lunch when and where I want to, etc. The most effective studying/exam preparation definitely takes place in the reading room or in the law library, because I can concentrate better there.

A journal page, which is a fragment from the field study, contributes to fleshing out the worker bee as a model user. The user accentuates the reading room as a place to concentrate – far better than at home, where it’s easy to be distracted.
2.1.3 The library enthusiast

The library enthusiast knows about many of the services the library offers. The library enthusiast knows that, e.g., you can ask the librarian for advice, and that there is much more available on the library’s website than just searching in and ordering from the library catalog. For example, the library enthusiast knows how to access electronic resources and databases, or that there are subject-specific pages available.

The library staff frequently meets the library enthusiast, and they generally express delight about the existence of such a user. This user type is found both among students and among researchers.

The library enthusiast is generally content with the library’s offerings and services. The investigation did, however, show that library enthusiasts from one library are very good at figuring out important services offered by other libraries they visit.

It would seem that the library enthusiast exists because the relevant users have a close working relationship with one or more employees at the library.

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The library enthusiast has a thorough knowledge of the library’s offerings, and would like to have even more. Here we see a user react in their journal to the statement “There are far too many databases to choose from”: “Could easily use more” is the comment. The databases mentioned are three frequently-used databases in the field of law.
2.2 The users’ strategies for selecting and evaluating literature

The field study identified three key strategies that users utilize for selecting literature: by getting recommendations from colleagues, advisors, or fellow students; by exploratory work in bibliographies and references from previously known works; and by using various net-based services (e.g., Google).

These three seem to be the dominant strategies – it is apparently not through use of the library catalog or bibliotek.dk that literature selection typically takes place.

The library does, however, offer services which serve a purpose in the users’ selection of literature. Some users mentioned that a system such as Web of Science is useful in this context; in addition, they relate that, for example, databases with journal articles can be used to find materials that they weren’t previously acquainted with. A few users utilize keyword searching in the library catalog, but this strategy does not appear to be the prevailing one.

The users remarked that, when using the library catalog or bibliotek.dk, many times they are not able to evaluate the relevance of the material. This could be related to the fact that, in other contexts, users evaluate borrowed, downloaded, or purchased material based on abstracts, tables of contents, citations or references which cite the work, which are rarely immediately accessible in the library catalog or bibliotek.dk. This does not mean, however, that the users are discontent with the library’s services in general.

The search engine Google is not, as far as the users are concerned, a direct competitor with the library: Google is used extensively in the selection of literature, whereas the library is used in the ordering part of the process.

- You can read more about the users’ strategies for selection and evaluation of literature in section 3.1.
2.3 The users’ relationship to the virtual library

The investigation confirms that the library’s net presence is extremely important for the users. Net presence is technically many things: the local library catalog, the library’s other webpages, bibliotek.dk, the databases the library subscribes to, and the other net-based services which are offered through the library.

By their own testimony, the users primarily use the library catalog, bibliotek.dk, and selected journals and databases which the library purchases access to. The latter is difficult to identify more precisely, because the users are not always clear about what the library makes available.

Overall, the users don’t give a great deal of thought to the virtual library, but the users do fundamentally appreciate the web interface when they actually use it: it is, of course the means of accessing the library’s copious resources, which are of great value to the user. The ease of operation of the numerous systems is, however, quite variable; for example, in certain instances the users complained about library catalogs which were difficult to use.

- You can read more about the users’ utilization of the virtual library in section 3.1 and the users’ expectations for instruction in use of the library systems in section 3.4.

Access to both electronic and physical materials is that which makes the library unique for the users. Google can do many things, but in the last step, where the users need to retrieve articles, for example, it is usually the library which plays the crucial role.

2.3.1 How can the library react to these observations?

The field study’s observations of the users’ selection and evaluation of literature, as well as their use of the virtual library, cannot automatically be turned into a strategy for the development of the library’s net presence.

It is a strategic decision as to whether the library should attempt to become more actively involved in the part of the process where the user selects and evaluates literature, or whether it should primarily focus on offering an effective, logistically-oriented service. To effectively improve the basis for such a decision, the project tested a number of possibilities for future development via
the workshops which followed the field study. The users were receptive to such initiatives, provided that they didn’t replace the effective ordering of materials.

- You can read more about the testing of ideas in section 4.1.

2.4 The users’ relationship to the library’s employees

The users know that there are people who work at the library, but for many of them, it’s not quite clear what the staff has to offer. This means that the employees’ services are seen as invisible by a large number of the users in the investigation.

The users frequently come to the library with purposes other than receiving personal advice – namely, checking out or checking in books, or working.

Another group of users in the study already had contact with an academic subject expert, for example, and predominantly expressed a great deal of contentment with their experiences. This group can, by and large, be described as library enthusiasts (see section 2.1.3).

A large portion of the users, by their own admission, consider the library employees to be busy, and therefore unapproachable. This impression is even more pronounced on the web interface: here, the users don’t even realize that the library employees offer their help.

![Image](image1.png)

A researcher uses a picture of Post Danmark to illustrate how he measures the library’s logistic flexibility and personal friendliness: “Things happen as I expect it to happen. When you are waiting, they have this number system. I do my post business and I can leave. No surprises. They’re a state institution, but they’re actually friendly.”

The interviews with users show that by far the most of them don’t expect that library employees can assist with things that go beyond that which is related to retrieving materials. The users express that, if the library wants to supply a credible offering that goes significantly further than their expectations, the library employees must have clear academic expertise.
2.4.1 How can the library react to these observations?

The field study cannot answer the question of how the libraries ought to react to the users’ opinions. It is a strategic decision whether, for example, to make the library employees more visible, and whether, for example, to profile their skills differently. To create a better basis for such a decision, the project has, via the workshops which followed the field study, tested how increased visibility and academic profiling of the library’s employees was received. In particular, direct referral to academic subject experts, as well as creating closer working relationships with them, were received positively by the users.

2.5 The users’ relationship to the physical library

The users generally utilize the physical library as a workplace; the investigation revealed a number of parameters for what makes it a successful one, as far as the users are concerned. The users had a relatively traditional attitude towards how the library should be organized. They stressed the importance of quiet places of working, as well as a clear division of the library’s different functions. The investigation does not clearly show whether or not open stacks, and journals laid out for reading, are good services for the users. One the one hand, open stacks give users the possibility for browsing, but on the other hand, they can be difficult to navigate. It was also observed that the use of electronic journals is overtaking use of the print editions.

The users seem to be relatively isolated from both the staff and the other resources available at the physical library. The students are generally content with the library as a workplace, which can, however, be developed to be even more attractive.

2.5.1 How can the library react to these observations?

It is, once again, a strategic decision to determine how to react to these observations; to decide whether, for example, to try to come into greater contact with users in the physical library.

The project has tested how users reacted to different initiatives which attempted to turn the library into an agent for creating networks between the users. The users were generally very skeptical about these ideas.

Read more about idea testing in sections 4.4 and 5.3.2.
A user photo of "a good workplace". The picture gives an impression of how peculiar an idea the users can have of what constitutes a good workplace. The user's comment is: "People aren't made for sitting still." Other users express that the quiet reading rooms, which facilitate a structured workday, are the library's most important offering.
3 Results of the field study: What is the user’s relationship to the library?

The data collected from the field study is vast, and was analyzed collectively by the entire working team, using the method described in section 6.6. In the following chapter, we will present an overview of the most important results. The general conclusions are, in each section, supported and illustrated by journal quotes, quotes from the interviews, and notes from the interviews.

3.1 The users see themselves as self-sufficient in the selection of literature

Via the journals and the interviews, the field study placed special focus on the users’ literature searching, because the working team saw this as important knowledge for the libraries to have. We therefore specifically asked the users what literature they read, how they tracked down this literature, and whether or not they sought help in finding it.

A rarity: Users hardly ever marked in their journals that they got help with searching. This user noted in connection with this help: "I know fully well that it’s stupid that I don’t ask the librarian for help more often. They can help, and they would also like to help.”

A central observation in the field study was that the users often select their literature without help from the library. This applies to both students and researchers, regardless of their library tasks, e.g., a small assignment or a larger thesis. The field study clarifies for the field of library science what is actually involved in ”finding literature”. For the users, it can be seen as an interconnected process, where the library is not equally involved in all parts of the process. In order to understand the users’ activities in finding literature, it is useful to differentiate between two distinct phases in the literature searching process:

1. The search phase, where the users figure out what literature is actually available, and where they figure out which literature is relevant to their task, be it work- or study-related.

2. The retrieval phase, where the previously identified material is ordered, checked out, purchased, downloaded, or, in whatever way, obtained.
It was clear to see from the field study that, in the search phase, the users utilize strategies and tools which the librarians apparently have very little influence over.

In contrast, the library plays a decisive role during the retrieval phase: the material which the user has chosen is quite often ordered at the library or biblotek.dk. It may also be the case that the users have chosen articles which are only available in electronic form via the library’s subscription. It is also in the retrieval phase that the users are most likely to ask the library staff for advice if they run into problems. For example, there could be an instance where the material is difficult to identify in the system.

3.1.1 Extensive satisfaction among the users

The users notice the effects of the fact that the libraries actively attempt to make the users more self-sufficient. A student from Aarhus University responds thusly in his journal to the statement, “I don’t need help from the State and University Library. I can manage by myself.”:

"That seems to be what you want from us. I can check out books by myself, log onto the net by myself, find materials by myself. Some days where you’re feeling lonely, it might be nice to have some forced interaction with other people. Some days, it’s nice not to need to”.

The users feel good about their self-sufficiency – the process is effective, free of waiting time, and it’s exciting to find literature yourself.

3.1.2 Gap between the library staff’s and the users’ views

The investigation’s interviews with librarians and other library staff shows that, in the library culture, there is a desire to assist with the users’ selection of literature, because the users are seen as “happy amateurs” in many instances. This view is mentioned in this report because it contrasts so markedly with the users’ own view, namely of being quite content with the working process they have at the moment. It’s important to keep in sight of the fact that, although the users may need to become better at selecting literature, this is not a need which the users themselves have acknowledged to any great extent.

The library employees’ pronouncements can be affected by the fact that they are often first contacted with the users are really in trouble, or that they just have different literature-searching methods than the users do.

► Read more about the methodological importance of not taking the library employees’ statements about users at face value in section 7.2.1.

In many instances, the library employees consider the users to be incompetent. Examples of this view from the interviews include statements like:

"Many loaners use the wrong databases. They can’t always figure out which database they should use for what...”

"The students aren’t sufficiently prepared... to search, ... to manage the search results, [and] to manage information in general"

"When they [the students] reach the thesis stage, they suddenly need supplemental literature – and then they often run into problems.”
Some librarian do, however, soften this stance by saying, for example, that it is often the technical solutions that, in practice, are hard to manage:

"Someone ought to put pressure on the database suppliers, so that they try to achieve a standard interface for their databases."

"The problem with the databases is that you can't content yourself with just searching one place, like you can with Google. It is hard for the students to differentiate between the different databases."

The library employees’ statements point in two directions: either that the users need to acknowledge their need for improvement to a greater degree, or else that the system should be changed so that they can, to a greater degree, be operated in such a way that the libraries achieve the user behavior they want.

The users often have a nuanced view of literature searching and use of information sources. Here a user notes in their journal: "I am an expert googler! I love google, but for research it is never entirely sufficient."

### 3.2 How the users select literature

The field study contributes observations of how the users select literature, using entirely their own strategy. As the observers in the field study, we noted that the user does not often consult the library during this selection phase. Observation of their selection behavior reveals that they have a range of strategies, which they find sufficient for locating relevant literature. These strategies do not, in the early stages, involve the use of the library and its services. If one asks the users, they give the distinct impression that they know their subject...
the best, and that they themselves are best at evaluating which literature is relevant for them.

The field study points up three key strategies, which the users have for finding their way to the relevant literature. We will explain these strategies in the next three sections.

3.2.1 Users turn to subject experts in their academic network

A common thread throughout both the interviews and the completed journals is that the users utilize their academic network when they need to find literature. For researchers, the network consists of colleagues in the same subject area; that is, usually researchers at other universities. For the students, it is usually the instructor or the advisor who is the authoritative guide in selecting literature. From time to time, however, they might also ask their fellow students.

One student formulates it thusly:

"The best help in finding references within my own subject has always been professors, friends, or the internet. That is why I spend so much time with fellow academic friends – I really learn a lot from those kids. And my professors - obviously they are doing something right if they've gotten so far".

In the notes from an interview with a researcher in anthropology in Copenhagen, we find:

"I myself ask colleagues for literature recommendations if there is a need to orient myself in adjacent subject areas".

When we call users "self-sufficient" in the way we have done, it is not that we mean that they work alone, but rather that they do not use the library staff, the local library catalog, or bibliotek.dk to any great degree during the selection phase.

3.2.2 The users find something new via something known

The users utilize known literature to find more relevant sources, by identifying references in the text. The literature list in the back of a book or at the end of an article is, in many instances, an important starting place for finding interesting or relevant literature. The literature, which the user is already in possession of, is used as a stepping stone to further material, which in turn can function as a starting point for new reconnaissance of the academic terrain.

In the notes from an interview with a student, the strategy is discussed in this way:

"A typical way to seek information by: [she] gets a recommendation for a good basic article from her advisor. From the references for this article, she searches further. This method offers some certainty that she’s getting ahold of high-quality material."
Many users remark that, at any time, they will know more about their subject than the librarian, who, for this reason, is not considered important in an academic context. In the journal, we see how one user does not think about the librarians in an academic context: “I can remember something I was told once about there being librarians for the different subject areas. But I’ve never looked into it more closely.”

It’s not just from physical materials that students find references. In many instances, net-based services support this strategy:

"Sometimes I use 'cited reference': who has cited this article. This is something I do quite frequently. I think it’s a really good way to find the most re-
cent work in any area. Because they say: this is the article they absolutely must have cited, if they were doing anything of value themselves.”

A researcher expressed a similar opinion, that this is a common strategy. She pointed out that it is impossible to read through everything, and commented about it in the interview in this way:

“"You find your ‘heroes’ and go on from there."

3.2.3 The users refine searches using Google

Some students find and retrieve literature via Google, which is used directly for solving assignment, but this is not seen as the central role of the search engine. Many of those interviewed – students as well as researchers – express a great deal of skepticism about Google, because the search engine simply cannot make nearly so much quality material available as the libraries can offer. In other words, the libraries have a very strong standing in relation to Google when the users in the study reach the stage of retrieving full-text material – printed as well as electronic.

However, in the selection phase, services that lie outside the library’s control are dominant. For example, Google and Amazon.com come into play when finding the right words for a subject you are in the process of getting a feel for. A user expresses it like this:

“When I’m getting started on searching in a new subject, I search a bit loosely around on the net, both on Web of Science, Google, and Amazon. Just sort of generally searching and seeing... what turns up. Some kind of pattern starts to emerge, with some references that turn up repeatedly... and those which they all mention, those are the ones I know I’d better get ahold of.”

Even though such a literature searching method may seem a bit chaotic, the users, in their own words, think it does the trick.
Is the librarian of the future behind the scenes at the search engine? A user notes in his journal that he doesn’t envision librarians being replaced by search engines in the future. "They have the background knowledge to make the search engines work in a proper way".

It should be mentioned that users in certain interviews related that they do sometimes make keyword searches in the library catalogs when they select literature. One user describes an example of a keyword search which does, however, later result in another strategy. In the interview, it was noted:

"He types in the same search term as he did when they started searching for materials for this term paper, and he finds the same thesis as that time. He says that they used this thesis a lot as an example, and that they especially used the literature list in the thesis, and to a great degree use the same literature. In this way, the starting point for searching is, as a rule, a keyword search in Merkur, from which more literature is found – most often out of the literature list in the material they found."

In the National Library Authority’s proposal for Danish library development\(^3\), it was noted that “especially Google [has] become a significant competitor with the libraries’ traditional offerings of study-related information.” This investigation qualifies this supposition, in as much as that Google seems to have a qualitative effect on the users’ selection of literature. However, the vast major-

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\(^3\) Fra Information til viden - Bibliotekstyrelsens oplæg til strategi for dansk biblioteksudvikling. (From information to knowledge – The National Library Authority’s proposal for strategies for Danish library development) 2005. Available from www.bs.dk, Danish language only.
ity of users – both students and researchers – still state that Google has a sparse selection of literature.

3.2.4 How the users evaluate literature

Selection and evaluation of literature are often two sides of the same coin, as evaluation of the literature’s relevance also occurs during the selection process. The interviews did, however, reveal that an evaluation also occurs at the point in time where the material has been retrieved and the user can look it over. Many users pasted copies of tables of contents and literature lists in to their journals. They related that it was with the help of elements like these that they evaluated whether material was relevant or not.

In one workshop later in the project, we tested whether the evaluation of material could, to a greater degree, occur prior to ordering the material, if these central elements were made available in the library catalog.

- Read more about the testing of concrete ideas for future development in section 4.1.

3.3 Great confusion about the role of the library employees

This investigation of the library users has based itself on self-reporting in their journals, follow-up interviews, and observation of their behavior. A portion of the analysis of the journals also consisted of observing what the users didn’t mention.

As the users’ expectations of the library employees is one of the topics we are treating in this investigation, it has been a significant element in the interviews with the users. Some users mentioned the library employees in their journals, and in these cases, we used those statements as a step-off point in the interviews. Other times, and in many cases, the users didn’t mention the library employees at all, which was used as a starting point in their interviews.

In the first place, we should mention that the library employees consider themselves to have a good contact level with a large number of users. In addition, this opinion is mutual for the majority of users who have actually had contact with the library employees. Many of those interviewed have experienced good service; for example, a researcher from the Aarhus School of Business stated the following:

“*The librarians have a ton of general knowledge, especially about accessible resources. Even though they perhaps do not have specific knowledge about the subject, they have a fantastic sense for where you should look.*”

In the conversations with the users, a great number of remarks about the library employees sprang into the working team’s view during analysis of the data. There are two main groups of remarks, which illustrate how the library employees are viewed, if they don’t already have an established relationship with the users:

1. The employees can be perceived as being busy and unapproachable
2. The employees aren’t seen as having any academic expertise.
3.3.1 Employees can be seen as busy and unapproachable

The perception of the busy, and therefore unapproachable, staff became evident as early as the pilot study portion of the investigation. During the interviews, many users expressed genuine surprise that they could actually ask library employees for advice — they seemed busy with their work, and didn’t signal to the users that they were available to be of assistance.

This perception contrasts with the opinions the library employees hold, of having a good deal of contact with the users. This gap in understanding can be explained by the fact that the users who participated in the study were recruited, not by the library employees, but by email inquiries to departments and by flyering. This way, we came in contact with users who didn’t already have a close working relationship with the library staff, and therefore didn’t know that it is allowed to ”disturb” a library employee.

A student mentioned how she decided to chat with people at an ethnic shopping center, because they clearly signaled to the customers that they wanted to talk:

"The library can learn from Bazar Vest by seeing how approachable people are. The librarians at the State and University Library are reserved and don’t seem friendly."

This is a surprising and somewhat provocative statement from a users who otherwise likes to come to the library, and comes there often. Other interviews with the users showed that the users’ impression of the staff can, to a great degree, be influenced by the other work they are doing, and how the staff are placed in the physical space of the library. For example, a user at the University Library of Southern Denmark expressed it in this way:

"The information counter seems like a 'workstation', and you don't want to disturb them."

Another user put it this way:

"When you’re seeking help from the staff, it’s a barrier if they look occupied."

A master’s student suggests plainly that the staff could reach out more directly to the users:

"The staff could certainly take the lead and, for example, ask: Did you find what you were looking for?"
A user remarks in their journal: "How much time have I used at the public libraries, running around searching for books, just because I didn’t dare ask and disturb the librarians?"

3.3.2 Employees aren’t seen as having academic expertise

In conversation with the users, it became clear that they don’t distinguish between, e.g., librarians and academic subject experts, and that the users aren’t told what it is that makes the individual librarians and academic experts different.

If the library wants to reach out to the users who don’t already know the library employees and their abilities, the observations suggest that signaling the employees’ individual areas of expertise can have a large effect. The users all demand employees who are knowledgeable about their subject, if they are to be involved in the phase where the users select literature.
Today, the employees are, to a great degree, considered to be most competent at offering assistance during the phase of retrieving literature. For example, at the Aarhus School of Business, it was noted in an interview:

"She believed that the people at the counter and at the desks were just there for practical matters, not in any sort of advisory capacity".

Much points to the fact that a more precise profiling of employees will also improve the quality users experience when seeking academically-related help. A user in the investigation tells about how the lack of knowledge about employees can be hampering:

"If you get ahold of the right person who happens to know something about what you’re asking, it’s quick work and very effective. On the other hand, you can also have the experience of not getting anywhere, just because the person doesn’t know enough to help. That’s really frustrating.”

Another user describes a different way of profiling the employees’ academic expertise:

"Having services split up by subject area would be an improvement. Earlier SDLIB (The University Library of Southern Denmark) had a special counter, "Social Sciences Information", where I practically knew the librarians. I’d like to have that again."

► Read more about how users evaluated concrete ideas regarding profiling of employees in sections 4.1.1, 4.2 and 5.1.

Many users have a preconceived notion of what the library staff can assist with. “A librarian, however, is someone I see as a helper of finding books” writes one user in their journal.
3.4 Users expect courses to be goal-oriented

The participating libraries offer to instruct users in information searching. The courses can be seen as a means by which the users can become "information-competent". Niels Ole Pors defines the concept in this way: "Put concisely, it's about teaching students to manage information and information sources in both a reasonable and creative way, at the same time as working on instructional models that can increase the cooperation between libraries and educational institutions around the informational component."

The interviews with the users contribute to the understanding of the fact that courses are less interesting if they only focus on the retrieval phase. It is only when they are geared towards the academic subject, and support the literature-selection phase, that they seem interesting and educational for the users.

The investigation cannot conclude whether the libraries will be able to supply sufficient subject-specific courses such that the users will be content with such an offering.

3.4.1 The courses should ideally have personal, subject-specific advising

From the interview data, it is clear to see that the users expect goal-oriented courses, where the focus is on their particular approach to the library, rather than courses of an introductory nature. For example, one user says:

"I've been on one of those two-three hour courses on how you use the library, and I just don't think it was enough."

This statement is supported by a user who speaks about courses as something that need to be tailored to the academic subject, and be goal-oriented:

"Maybe you could offer more goal-oriented courses, e.g., in statistics or law, where you go into more detail."

In the same way, a user points out the advantage in library help being based on the librarian’s already knowing something about the user’s problem or interests:

"It could be nice to get advice from a librarian who is already somewhat acquainted with what I need. If you had someone like that, then I could just go to the person who is able to say, 'This is what you need to do.'"
The librarians are qualified to help the users in many instances. One user notes in their journal, "The times I’ve asked for help, I’ve gotten good answers."

3.4.2 Timing of courses is important

In addition to the academic slant, the timing of the courses was of great importance to how relevant they are to the users. Ideally, the courses should be closely knitted with the study- or teaching-related activities that they are in the midst of at that moment. For example, several students remarked that introductory courses for the library should be planned such that they occur in connection with term-paper writing.

In the interview notes from an interview with a user from the National Library and Copenhagen University Library (denoted KB1), we see the following:

"KB 1 believes that she will need more assistance, particularly in connection with writing her bachelor project and especially her master’s thesis. She therefore intends to sign up for some courses at the institute’s library, and possibly at the National Library and Copenhagen University Library."

Another user relates:

"It's all well and good to have introductory courses, but when it comes to writing a term paper, you need some specific advising."
The idea that the library employees can be consulted personally, and at the
time when the users wish to do so, is supported by the fact that, across all the
users, there is an expressed interest for being able to order a librarian (often
known as "booking a librarian"). For example, the following was noted from
the interview with a user:

"To the question of what extent “book a librarian” would be a good
idea, she replies that it would be helpful in connection with writing
her master’s thesis."

3.4.3 Less interest in advice on operating IT-systems

The users’ expectations for library courses can be understood in light of the di-
vision of literature searching into the phases presented in section 3.1. In that
section, we saw that the users consult librarians primarily during the retrieval
phase. However, there seems to be an interest in courses that focus on the first
stage of searching, namely the selection and evaluation of literature. This could
be related to the fact that this is the phase where users consider human advice
to have a clear advantage over the library’s IT-systems, which primarily assist
the users during the retrieval phase:

"Even though they [the librarians] perhaps don’t have specific knowledge of
the subject, they have a fantastic sense for where to search."

The working team noticed a minimal amount of remarks in the journals and
the interviews about the library’s homepage and search system. The users pe-
riodically described operational difficulties, and, to a lesser degree of detail, the
use of the homepage, but these didn’t occupy much space.

This can be seen as an expression of the fact that the operation of the library’s
web-interface neither bothers nor worries the users to any great extent, which
can explain why the users don’t look for classes in operating the web interface.

The users cite problems with courses in using specific search tools, e.g., the li-
brary catalog. On one hand, courses seem to be premature, when users remark
that they easily forget what they learned. From one interview:

"He is acquainted with Merkur from the presentation made in connec-
tion with the introduction to the library. It ought to come a bit
later in the course of study, as otherwise you forget how it works."

On the other hand, courses can easily come too late, causing you to miss out on
a lot:

"It seems that she missed something by coming to HBÅ (Aarhus School
of Business Library) so late in her course of study. As with her
fellow students, she never got an introduction to how to write term
papers and seek out information."

The field study does show that users have vastly different opinions on this
point, with regards to when courses in operating the search interface become
relevant. This suggests that, in any case, instructing the users in operating the
IT-systems is a great challenge. The working group can see a potential solution
in either letting this instruction be personal or, as UNI-C suggested in their report, "The user-friendly digital research library"5:

"An alternative to courses and information campaigns is to change the interface, such that it attracts the user with interesting possibilities. The advantage here is that help is offered at those points in time where it is relevant for the users, and in this way doesn't depend on the user remembering information he has previously received from the library. In other words, it is a “pull-strategy”.

3.5 The users see the physical library as a workplace and a place for picking up materials

The field study had the purpose of finding out how the users think of and relate to the physical library. If the users didn’t mention the physical library in their journals, the topic was taken up during the interviews. The working teams at the National Library and Copenhagen University Library and the Aarhus School of Business Library placed particular focus on the users’ opinion of the library as an attractive workplace, in that users at these libraries used disposable cameras to capture their image of an attractive workplace.

3.5.1 A valuable workplace

Generally, among all the libraries, the students focused to a great degree on the fact that the library can function as a workplace which offers a structured workday. For example, in an interview at the Aarhus School of Business, it was noted:

"The user prefers to work at the library, because you have to get up and get in early to get a spot. The day becomes more structured."

The reading rooms are used less for looking at reserve materials, and more for a workplace, where the students bring their laptop and own materials with them. One user at the National Library and Copenhagen University Library relates:

"I really like to use the Diamond and especially the Eastern Reading Room, because these have a good combination for quiet and activity – there’s something going on around you – and because it’s nice to get out of the house while writing your thesis."

---

The library is highly valued as a workplace for many users. One user notes in their journal regarding working from home: "In the mornings, I sometimes have the naive idea that I can work [at home], but the day disintegrates and gets frittered away with mid-day naps, websurfing, telephone calls, morning TV, etc. I have to go to the reading room, have structure in my day, preferably have lunch arrangements. I simply get depressed from trying to work at home."

3.5.2 Goal-oriented behavior

The users generally don’t expect that the library is an inspirational place. It is, however, a plus that the physical surroundings are bright and spacious. Some users expressed that they appreciate art and stimulating things in the surroundings, but this doesn’t seem to be something that users as a group expect of the physical research library.
Quite a lot of users are extremely goal-oriented, and say, for example:

"I mostly come to the library to pick up and drop off books. There's not a lot of reason to go wandering around in the library."

Statements like this one gave use to the model of the "drive-in user", which you can read about in section 2.1.1.

The users' statements point to the fact that the library's resources, in the form of employees and materials, are not automatically part of the academic network in which the users find themselves. The users noted and told us how many times they stay in the library all day and discuss research problems in their field with their classmates in the breaks. The library's staff and the library's materials are mentioned only rarely in this context. In an interview from the investigation, for example, it was noted how one's classmates are the primary source of personal contact during a library visit:

"KB3 has a classmate who is in the same situation as she is, and whom she meets with at the Diamond (in the National Library and Copenhagen University Library) – the two of them focus on the subject and keep each other on task."

In another interview it was noted how meeting with classmates at the library is a fixed point in each day:

"He eats lunch together with A almost every day and discusses new developments in his thesis with him. It’s an academic exchange and [...] when he could explain it understandably to his friend, he knew he was well on his way."

In this way, the libraries are seen as physical facilities whose use is determined by the users. The investigation cannot decisively conclude that the cause of the users’ “isolation” can be blamed solely on their confusion over the role of the librarians, as we described in section 3.3.

3.5.3 Parameters for an attractive workplace

There are lots of parameters which, according to the users, make the library an attractive workplace. It seems that a varied environment is worth striving for, so that different needs can be satisfied at different points in time.

If you look over all the users' statements about what makes the library attractive for study purposes, there are aspects such as:

- possibility for concentration, peace and quiet
- lots of space
- open early in the morning (at least from 9am) and in the evening
- many computers
- possibility for socializing during breaks
- being able to have your things stay in the same place from day to day
- wireless internet access
• access to printers
• access to snacks and coffee in certain areas
• spaces where you can work both standing up and sitting down, possibly with adjustable-height tables.

As you can see from the list, many of these things represent dreaming on the part of the user, while others are already reality. The list can be seen as an expression for the parameters that need to be adjusted, if one wants to satisfy the needs that the users themselves articulate.

According to the users, if you want to point out two things that are particularly hampering to a good workplace, these are they:

• disturbances
• too little space.

The working team thinks that, from the users’ own words, it is clear to see that the users would appreciate more and better workplaces in the setting of the library.
4  Workshop Results: Ideas about the future library for students

In addition to the field study, the project also ran workshops based on the steering committee’s desire to see us reach the stage of having concrete proposals for future library services. Before the workshop, the project had a more observatory character, whereas here it entered a more creative phase. The workshops were used as a tool for developing and testing ideas in cooperation with the users.

▷ You can read more about the methodical differences between the field study and the workshop in chapter 6.

One workshop at the State and University Library dealt with ideas for services based on the students’ behavior.

▷ You can read more concrete information about how the workshop played out in section 6.7.

The station on the web interface was by far the most popular, and therefore is the most thoroughly discussed in this chapter.

4.1  The library catalog of the future

Of the four stations, the station on improving the library catalog unequivocally aroused the most interest and enthusiasm among the users. In a survey of the users, 8 out of 9 of them voted for this station as the most important.

In order to stimulate discussion of future possibilities, we worked up a number of prototypes of elements, which conceivably could be included in the future web interface. The prototypes were developed on the basis of the observations which the working team gathered earlier in the investigation.

The stations’ prototypes showed a future library system, which could be imagined as a local interface, bibliotek.dk, or another system altogether.

▷ You can get an overview of the observations these ideas are based on in section 2.3.

The foundation for the presentation of these ideas was a prototype consisting of two screenshots, namely a search result and a record display:
Prototype from the workshop: A search result with a number of possibilities which the users got the chance to evaluate.

Translation of the most important elements of the prototype:

**Headline:** “Search for “democracy+diamond” 15 results”

**Categories of the search result:** “Sure hits”, “Books”, “E-books”, “Articles”, “CDs”, “Newspaper Articles”, “Webpages”, “Chat”, “Academic Subject Specialists at the State and University Library” and “Students who would like to discuss”.

The “Chat”-category includes “Chat with a librarian who knows something about democracy and political systems” and the “Students who would like to discuss”-category includes “Democratization in Eastern Europe ... Jens Hansen”.

---

**Søgning på “democracy+diamond” 15 resultater**

- **Sikre hits (1):**
  - Civil society and the development of democracy
    - Diamond, Larry
    - 1997

- **Bøger (4):**
  - Civil society and the development of democracy
    - Diamond, Larry
    - 1997
  - Democratization in Africa
    - Diamond, Larry
    - 1999
  - Economic reform and democracy
    - Diamond, Larry and Plattner, Marc F
    - 1995

- **E-bøger (0):**
  - Article (2)
    - Economic Reform and Democracy
      - LJ Diamond, MF Plattner
      - 1995
    - Is the Third Wave Over?
      - Diamond, Larry
      - 1996

- **C’d'er (0):**
  - Avisartikler (1)
    - En ensom cowboy
      - Krasnik, Martin
      - 1988

- **Nettekster (2):**
  - Universal Democracy?
    - Diamond, Larry
    - 2005
  - Between Democracy and Stabiility
    - Diamond, Larry
    - 2005

- **Chat (2):**
  - Chat med en bibliotekar der ved noget om demokrati og politiske systemer
    - --
  - Chat med en bibliotekar der ved noget om kultureri
    - --

- **Fagspecialister på Statsbiblioteket (1):**
  - Økonomi og samfundstidende
    - Henrik Vetter
    - 8946
    - 2157

- **Studerende der gerne vil diskutere: (2):**
  - Demokratisering i Østeuropa
    - Jens Hansen
    - Statsk.
  - Eternes betydning i Afrika
    - Britta Skov
    - Antropologi
Prototype from the workshop: A record display, which was used as a foundation for showing extra possibilities which could be shown in connection with a bibliographic record.

The record view contains traditional information such as “Title”, “Publisher”, “Series”, “Author/Source” and two buttons: “Order” and “Print”

The search result was presented to the users with one addition at a time in the form of the introduction of a subject expert, for example, and new elements such as articles, the chat option, and the option for discussion with fellow students.

The various ideas were received quite differently. In the following sections, we have categorized them based on the comments the users gave them.

- The chat function was also treated in the station about library employees. Read about the users’ comments regarding this function in section 4.2.3.
4.1.1 Good idea: Employee in the search result

The users were all enthusiastic about the possibility of making reference librarians and/or subject experts visible in the search result. The idea behind the prototype was that subject experts with a related profile can pop up when they match the criteria the users have searched under.

There was a somewhat hesitant attitude towards what one, as a user, can "demand" of the staff, and there was a stated desire to see greater visibility regarding the individual employees' skills and responsibilities.

► Read more about the users confusion about the role of the employees in section 3.3.

4.1.2 Good idea: Integrated abstracts and tables of contents

<table>
<thead>
<tr>
<th>Indholdsfortegnelse og første sider</th>
</tr>
</thead>
<tbody>
<tr>
<td>Se bogens indholdsfortegnelse</td>
</tr>
<tr>
<td>Læs side 1-5</td>
</tr>
</tbody>
</table>

Abstract
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonumy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat. Ut wisi enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

A prototype illustrated how a bibliographic record could be enriched with an abstract, access to the table of contents, and access to the first pages of the book. The links says "See the book's table of contents" and "Read pages 1-5"
The idea for this prototype arose because the field study showed that elements such as abstracts and tables of contents are exactly those things which the users utilize in evaluating the relevance of the material.

- Read more about the observations on the users’ means of evaluating materials in section 3.2.4.

This idea was well-received by all. The users expressed that this possibility would mean that they could judge materials’ relevance earlier, and thereby avoid "mistaken orders". One person formulated the problem with information-deficient records in this way:

"Poetic titles that mask the content are damnedly irritating."

Some users suggested at the same time that you should be able to see scanned book covers. This would strengthen the feeling of being in the library, and assist with the selection process.

4.1.3 Good idea: See what others have borrowed

The possibility for seeing what others have loaned (comparable to Amazon.com’s "Customers who bought items like this also bought..." feature) was judged decisively positively. The function was already developed in the "My Library" project, but was presented at the workshop, because it had not yet been tested in the context of a research library, and because it could further substantiate the patterns by which we observed the users choosing literature during the field study.

- Read more about the users’ means of selecting literature in section 3.2.

A prototype element, which can be coupled with the bibliographic record. The paper prototypes were low-tech, so that they gave the users the distinct impression that they were not looking at a finished product. This way it was easier for the users to feel they could freely offer criticism. The headline in the prototype says: "Others who borrowed this book also borrowed:" and the link says "See more".

Another prototype showed the possibility for seeing books loaned by others in the same subject area. This was characterized as somewhat superfluous by about half of the users. This can be explained by the presumption that most people are interested in much more than just their subject, and that the function is, to a certain degree, covered by the "what others have borrowed" function. Those who were receptive to the idea thought that it would also be relevant to see other subject areas, and that they wanted a way to switch areas as a means of narrowing literature searches.
Testing of the idea gave cause to believe that there is some potential and an explored possibility in presenting data based on a combination of borrowing patterns and knowledge of the user’s area of study or research.

4.1.4 Neutral response: Reviews on bibliographic records

The idea of adding reviews to bibliographic records arose because it could reinforce a pattern identified in the field study: users recommend literature to each other.

User reviews were evaluated positively by most participants, who were already acquainted with the possibility from buying CDs and recipes. Access to reviews by those who actually have academic expertise, e.g., reviews in academic journals, were vastly more in demand with the users. The comments also pointed to the fact that reviews by users should, to a great degree, incorporate authority as a portion of the role of the reviewer.

There was some amount of agreement that the comments should be short, with the possibility for voting on them, such that the quality and relevance could be increased.

A prototype element that illustrates how user reviews could appear in a bibliographic record. The heading above the input field is: “If you have read this book, you can write what you thought of it below”. “Gem” means “Save” or “Submit”. The heading below the input field is: “Others who also read this book made these comments:” The comments are: “A really good overview of the area...”, “Interesting point of view, but I disagree with the conclusions...”, “He has a broad understanding of the field and writes very concisely...”
4.1.5 Neutral response: Cataloguing theses

The students are clear about the fact that theses and term papers are of varying quality. These are, however, a type of material that is often utilized when users find literature via others’ literature lists. Therefore, we incorporated the idea of making theses accessible via the library catalog into the workshop.

The idea of being able to access theses in an easier and more structured way was welcomed by all. It was emphasized, however, that only theses and larger term papers were of interest, not ordinary homework.

<table>
<thead>
<tr>
<th>Se også:</th>
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<tbody>
<tr>
<td>Tidligere eksamensopgaver i fagene:</td>
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<tr>
<td>Demokratiseringsteori</td>
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<tr>
<td>Politiske systemer i den tredie verden</td>
</tr>
<tr>
<td>Bistandspolitik</td>
</tr>
<tr>
<td>Se også eksamensopgaver inden for andre fag og emner</td>
</tr>
</tbody>
</table>

A prototype element that illustrates how term papers could be made accessible via the library’s net interface.

Translation:

See also:

Previous term papers in these subjects:

Democratization Theory
Political Systems in the Third World
Welfare Policy

See also term papers from other areas and subjects
4.2 The library employee of the future

The users were presented with a series of scenarios regarding employees’ visibility and service offerings, which were based on the observations we made during the field study. There was a great deal of agreement about which were good ideas, and which were bad.

- Read more about the users’ view of the library employees in section 3.3.

4.2.1 Good idea: Find your expert at the library

In keeping with the field study’s observation that the users experience a great deal of confusion about the employees’ role at the library, this station contained a series of ideas about how these roles can be made clearer, and how the staff can be made more visible.

The station contained a storyboard, where there was a suggestion for how the employees’ role can be made more obvious for the users of the physical library. Picture text: THE LIBRARY STAFF WOULD LIKE TO HELP YOU. Henrik Vetter is a researcher in economics and international politics. At this moment: He is on the 2nd floor in the social science room.

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<th>Befinder sig</th>
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<th>E-mail</th>
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<tbody>
<tr>
<td>Henrik Vetter</td>
<td>Økonomi</td>
<td>8946 2242</td>
<td>På fagsalen på første sal</td>
<td>2600 2242</td>
<td><a href="mailto:hv@statsbiblioteket.dk">hv@statsbiblioteket.dk</a></td>
</tr>
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</table>
| Eva Lous       | Kvinde- og kænsforskning   | 8946 2300 | På sit kontor.  
Du kan kontakte hende pr. telefon | 2600 2300 | el@statsbiblioteket.dk   |
| John Kruuse    | Kemii og biologi. Naturvidenskab generelt | 8946 2158 | På fagsalen på første sal | 2600 2158 | jk@statsbiblioteket.dk     |
| Niels Erik Frederiksen | Historie og kunsthistorie | 8946 2179 | På fagsalen på første sal | 2600 | nef@statsbiblioteket.dk |

The station also contained a more detailed mockup, where there was a suggestion of how the different library employees could be profiled, e.g., at information stations. This idea especially generated enthusiasm among the users. Headline says: “Academic Subject Specialists in the library at the moment”. The column headers of the table says: “Name”, “Subject Area”, “Telephone”, “Is located in”, “SMS” and “Email”.
The possibility of getting an overview of which employees the library has, and what expertise and skills they have, was positively received by all the users. They stated that they could thereby go directly to the person who could help them in a given area, so that they could avoid being sent further. This overview could be created with the help of a poster with pictures, names, subject area, telephone number, email address, and possibly even a search function.

The users suggested making an alphabetic list of subjects to select from, whereupon the faces of the relevant library employees would appear. One user added in the blink of an eye:

"Does the librarian have a beeper on, so you can see where he is?"

Many users stated that an overview of which librarians were present on a given day should also be visible on the homepage, so that they didn’t “bike in vain” to the library.

4.2.2 Neutral response: Clear signal about exam help

The station contained a storyboard that illustrated how the library can send a clear signal that you can get help for something specific.

Frame 1: "4 days before deadline"
Frame 2: "The State and University Library"
Frame 3: "Exam Help"
Frame 4: "I’m confused about whether I can discuss Goffman’s understanding of institutions in the same context with Anthony Gidden’s."
Frame 5: "I can help with that."
Frame 6: "Should I also look over your literature list and send you my comments in an email?"

The users thought it was a good idea to make the librarians’ presence and desire to help clearer. However, the users were skeptical as to whether they would use the librarian in the situation in question, namely when they were struggling with a term paper. The users were skeptical because they thought that who they got to help them would be entirely random. Many said that they would rather ask their advisor, or a fellow student who knew the subject. They would feel more secure with advice from a person who knew the subject and the assignment more deeply. It was suggested that, instead of offering aca-
demic help, there should be a counter called “Help with information searching”.

Only a few users thought it was a good idea to be able to have a librarian look over your literature list to influence the selection of literature on a topic. Others were of the opinion that their advisor was more competent in this area, and stated that the idea was “utopian” or “unrealistic”. Many suggested, to the contrary, that the librarian could check if the formal requirements, not the content, were in order. One user added sarcastically, “Can you also write my paper?”

4.2.3 Rejected idea: Academic chat with a librarian

The idea of being able to chat online with a library employee was only included in the workshop because many librarians, during the interviews and other internal activities, had suggested it as a useful tool for future communication with users. Therefore it was thought to meet the need for getting in contact with a library employee just when the user needs to.

User/Peter: I’m confused about whether I can discuss Goffman’s understanding of institutions in the same context with Anthony Gidden’s.

Librarian/Filippa: I can help with that.

Librarian/Filippa: Should I also look over your literature list and send you my comments in an email?

The chat function was viewed with skepticism by a portion of the users who thought that it would easily become superfluous. In cases of larger or more complicated problems, the users thought communication by email or telephone was preferable, inasmuch as it is easier to go into depth on the topic. In addition, the users stated that a number of inconveniences go along with internet chat: you don’t know if you’re getting ahold of the most knowledgeable librarian, and it was considered unrealistic that such a service wouldn’t involve waiting time.

One user stated:

“I would think it would be altogether too bothersome to explain my problem to a librarian over internet chat. It’s easier face-to-face or by email.”

Another user commented:
"It would take maybe half an hour over chat to explain what you mean, and then the librarian has gone home. In any case, I’d rather send an email. It gives the librarian better time to send a well-formulated answer.”

One rationalization about presenting this idea could possibly be, in retrospect, that a chat function is perhaps better suited to support services. The user could get help with difficulties in operating the library catalog, for example.
4.3 The physical library

In the field study, we got the impression that, in many places, the library’s rules were too rigid, and it was seen as outdated to ban coffee and consumption of food in certain areas of the library.

Therefore, we worked up a drawing that shows different areas in a possible future library environment:

- Relaxation area
- Coffee and food allowed in the same space as library materials
- Newest journals on display
- Electronic bulletin boards

The subject of expanded opening hours was also touched on at this station.

4.3.1 Good idea: Areas divided by function

The users were in agreement about the fact that the library currently offers a good physical framework, but that there are too many distracting factors such as chitchat, people working with their laptops, etc. If there could be agreement on a physical environment more clearly divided according to purpose, there would be greater contentment.

Most of the users thought it was a good idea to have an area for relaxation. It could also be an area for taking a quick look through the books you’ve just borrowed, so as to avoid hauling home anything that isn’t relevant.

The users said it ought to be allowed to drink coffee at the library, but at the same time, they thought it should continue to be forbidden around books.

Many users signified that they primarily read journals in their physical form. There was support for a proposal that the newest journals should be displayed in a collected forum, possibly in an area where you can relax. Opinions were
divided, however, as many mentioned that the relevant journals were at the institutional libraries.

Expanded opening hours would be highly welcomed. The users stated that access to the physical library was the most important, and having library staff available was of lesser importance.

The interior design of the library can certainly be dominated by shelves with lots of books – the library is welcome to be a place "where time stands still", where there is nostalgia, and where you can be inspired – exploration and concentration are the key words.

4.3.2 Rejected idea: Youthful café environment

The majority didn’t care for the café-like concept, which they described with words like "pop", "pre-fab", and "cookie-cutter". It is fine to have reading rooms, places for group work, and relaxation areas, respectively, but they should be separated.

The electronic bulletin boards were also used as an example of the pop image. The users opined that the library should stick with the academic image it has today.

4.4 The self-sufficient user

The workshop’s clearly-rejected ideas reinforced the observation that the users are self-sufficient, and help each other with selecting literature. This station dealt with ideas of how the library could, instead of offering to help users via its employees, facilitate the creation of networks and contacts between users.
4.4.1 Rejected idea: Indicate what you’re doing to like-minded users

The idea was made concrete in a storyboard created on the basis of a suggestion by a user during a field study: A future library, where users can, via small screens at their workplace, indicate to the other users and the library employees what they’re working on, and whether they would like to discuss it with others.

The possibility for networking with like-minded students was, as a general phenomenon, well-received by most users, especially at the graduate level, where it can be difficult to get in contact with others working on the same research problem.

The users were, however, doubtful that the library should be responsible for mediating this kind of contact, and completely rejected the proposed scenario.
5 Workshop results: Ideas for the library of the future for researchers and instructors

In connection with the project, a user panel was set up at the University Library of Southern Denmark. In the course of a few weeks, 150 people signed up, of which roughly 120 were employees at the university. Therefore, it was this library which did a follow-up workshop, after the investigation’s field study, which focused on instructors’ and researchers’ expectations and demands for the hybrid research library.

- You can read more concrete information about how the workshop was developed in section 6.7.

The following chapter presents the most important results from the workshop.

5.1 The employees

In the field study, most researchers and instructors expressed that they almost never use the library’s employees.

- Read more about the users confusion about the role of the library employees in section 3.3.

At the station about the library’s employees, the researchers were presented with a sketch of researcher Claus Borris:

| He prepares roughly for his teaching before the start of the semester. |
| In the semester itself, he prepares from week to week. |
| He uses the library’s books and journals to check up on a topic. |
| He rarely finds what he needs, but he manages with what’s there. |
| He finds that the students are bad at information searching, and uses a lot of time explaining to them how to find literature. |
| He often has to hand out the literature he uses himself. |
| He has enthusiastic graduate students and advisees, who inspire him both in his teaching and his research. |

Some expressed that they manage just fine with the material found in the library. Others could certainly recognize Claus Borris’ situation. In those instances where the library’s resources don’t cover their needs, they often turn to their academic network, rather than the library.
Posterboard from the station on the role of the employees.

5.1.1 **Good idea: Personal librarian**

Of all our proposals, the one which was received with the greatest enthusiasm was the idea that each unit should have a set contact person. Personal contact and personal service was emphasized by almost all of the workshop’s participants. An instructor from the natural sciences said:

"For me I would consider the contact-person the most important thing – someone for my institute: Who do I go to?"

The instructors expressed that it’s easier to express your difficulties to someone you’ve already put a face to, and that it’s important to build up a comfortable
relationship wherein the library employee can, over time, form a thorough understanding of the researchers and their research areas.

5.1.2 Good idea: Clear signal of what one can expect

The researchers seek concrete guidelines for that they, as employees, can expect from the library – and who to turn to when they have a given problem. The workshop’s participants suggested a "catalog of services", which presents personalized and specific offers to the university’s employees. An instructor from the social sciences says:

"It could be nice to get a clear message about what possibilities there actually are... some sort of directed catalog of wares that the library offers".

Most of them had heard that there are academic subject experts at the libraries. But a relatively new employee from the humanities sought information from the library’s side about how and to what extent one can influence the library’s collection:

"As a new employee, I haven’t gotten an introduction to how I can influence new book purchases – or who is our subject expert. Therefore I think I have a bit of a hard time asking. It’s not because it’s hard for me to find new things."

5.1.3 Good idea: Work more with the students

Among the workshop’s participants, there was a lot of attention given to intensifying efforts to improve the students’ information skills. Furthermore, there was interest in involving the library employees, as it can reduce the work that is entailed with individual advising. An instructor from the humanities relates:

"I think I use a lot of time on something where the [students] could just as well find inspiration from each other, with regard to formulating questions, limiting topics, etc. And with respect to information searching, it could just as well be the librarian instead of me."

In section 7.2.1, you can read why, in terms of methodology, one should take care not to take statements on others’ behalf at face value. The researchers express that they want to intensify efforts with the students – this should be taken as an expression of the researchers’ wishes, and not automatically be regarded as the students’ wishes.

The pressing need for instruction arises at the time of the bachelor project and during thesis writing. Here it is an advantage to intensify the library’s course offerings and integrate them into regular instruction. An instructor from the humanities comments:

"I believe that literature-searching courses should be integrated with instruction. That they should take place in their regular classroom, and that the instructor should be there. This way it feels more like an obligation, and less like an 'offer'... they should experience literature searching as an integrated part of instruction."
5.1.4 **Rejected idea: involvement in instructional material**

The researchers express doubts about the degree to which the subject experts’ expertise can be involved in selecting material for instruction. This is “dangerous territory”.

A younger researcher from the humanities is also in doubt about to what extent the library is even interested in her subject area:

"As a new employee, I haven’t even found out what the library would like to know about us... or do they need to know anything about us?"

A more established researcher from the natural sciences sees it as his own responsibility to make contact with the library:

"It is, after all, your own responsibility to make sure you talk to your subject expert and get ahold of things. It’s just getting it done, right? Because then next week it’s already accomplished, and then you’re on to something else."

There wasn’t a single workshop participant who expressed that they had contacted the subject expert to have materials purchased for subject areas that weren’t covered.

5.1.5 **User suggestion: Assistance with seminars and conferences**

One of the participants suggested that you could involve the library employees’ skills with the intent of compiling bibliographies for seminars and conference, for example. An instructor from the humanities says:

"It can be a lot of work to find out which introductory textbooks are used in adjacent research areas. It could be good to have these sorts of bibliographies that give an overview of a field."

5.1.6 **User suggestion: Instruction in programs for information management**

Another proposal was that the library recommend and offer courses in "Information Management" programs. A researcher from the social sciences says:

"There are unbelievably many programs for managing your own information. Not-taking programs, and a thing called 'Outliners', which helps with structuring text... and reference managers. And there are really some PhD students and new employees that could use it. It would save so much time. So it could be part of the information packet for new employees. For example, the library could recommend these utilities. And offer courses in them."
5.2 Web interface

It is clear from the field study that the library’s interface is the portal to all that the library offers. It was, however, expressed that it can be a dilemma that there isn’t enough time to perform thorough literature searching.

We described different situations regarding the library’s web interface and information searching:

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
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<tbody>
<tr>
<td>It takes far too much time to perform focused literature searches – can’t we just automate the whole process?</td>
<td>Can the librarian be replaced by automated searches? Is the human dimension even necessary?</td>
</tr>
</tbody>
</table>

The workshop participants expressed that they prefer to do as much as possible from their office or from home. A researcher from the natural sciences notices that he doesn’t at all need the library’s four walls – or its employees:

“I am afraid the human factor is dying completely ... I just send you an email or I use the web”.

This point of view could be related to the lack of visibility on the part of the library employees’ capabilities.

Fundamentally, the workshop’s participants are of the opinion that they are quite capable of doing information searching. An instructor from the humanities relates:

“I really think it’s quite simple – once you’ve gotten a librarian to show you how to use the databases. It’s relatively easy to keep up with new articles.”

The researchers can also live with the fact that they don’t find everything. An instructor from the natural sciences states:

“I’m quite clear about the fact that I don’t find everything... but you just learn to live with it.”

5.2.1 Good idea: Integrated search engine and e-alerts

The thought of an integrated search engine was very positively received. It is best only to have to search in one place. E-alerts are already used to a great extent, and most considered automation to be a natural part of this development. A researcher from the social sciences says:

“The future is definitely individual, personalized internet agents.”

Some consider it a problem that you can’t see how the e-alert system works, which is why it can be hard to set up a satisfactory profile:

“It’s hard to see through to what’s going on underneath... if I’m interested in ‘business’, should I also include political science?”

If the libraries want to develop integrated search engines and alert-services, it will be necessary to focus on other sorting mechanisms than the traditional ones, which are based on set categories and specified search terms. In addition, the functions will have to be user-friendly and easy to turn on and off.
5.2.2 Neutral response: Integration of the library with e-learning

In relation to the net-based services, and especially the subject-portals that the libraries are developing, some doubts were expressed about where the border should be, between what the instructor himself recommends and sets up on the e-learning platform, and what the library recommends. The idea of referring to the library’s resources was, however, received positively by a researcher from the natural sciences:

"For me this blurs the line between Blackboard, which I control as a teacher ... but I guess we just need a link to ... the library has a good subject-page already ... this is a good idea".

5.2.3 Rejected idea: fundraising and compilation of literature lists

The workshop participants were surprised by and skeptical about our idea that the library could offer help with fundraising and compiling literature lists. With respect to compiling literature lists, this would only be relevant in connection with the publication of larger works. Fundraising is an area that steals a lot of energy. But researchers doubt that this specialized market is something for the library. A researcher from the social sciences comments:

"It could perhaps be of great help... but I agree that it's unbelievably specialized... Because you would have to search in all of Europe, and that's not even all that's on the net, and a whole lot of it comes via the academic network and just gets sent by mail... Plus it overlaps with some other providers."

5.2.4 User suggestion: Digitizing materials

One of the workshop participants requests that the process for digitizing monographs gets speeded up, and that the library clarifies the process of assembling digital course readers. An instructor from the health sciences remarks:

"If you had all these things in electronic format, it would be easier to throw everything together".

In addition, there was an expressed desire to have some influence on prioritizing which materials are digitized.
5.3 **The physical library**

One thing the employees in the field study had in common was that they don’t use the physical library very much. It is only in the most extreme necessity that they head to the library: if they can’t find material electronically, or if there are problems with ordering materials. This gave an opportunity to test whether the library can do something to become a more attractive place to come to.

In the field study, we saw in addition that some employees felt the lack of a (physical) collegial network at the university. For example, it was mentioned that they lack a forum where they can discuss methodological issues.

In the workshop, we presented the participants with a sketch of a user:

<table>
<thead>
<tr>
<th><strong>Susanne Nielsson</strong></th>
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<tbody>
<tr>
<td>She networks with people from all over the world, but misses a &quot;physical&quot; network in the workplace.</td>
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<tr>
<td>She wants more openness about research processes – which methods people use, and how they seek out new knowledge in the area.</td>
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<tr>
<td>She doesn’t have a perspective over whether there are any resource people in adjoining subject areas that she can take advantage of.</td>
</tr>
<tr>
<td>She lacks a cross-disciplinary forum where people can exchange experiences and ideas.</td>
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</table>

The majority of workshop participants confirmed that their network does not reside in their workplace. An instructor from the humanities related:

> "I think it’s rare that your nearby colleagues are your primary network. In our case, you find your network outside the four walls of your department. It goes across institutions."

An instructor from the humanities explains that this situation goes together with the fact that you’re typically hired because your research is distinct from the previously existing research at the university. Therefore it is more the exception than the rule to have colleagues in the same field at the same institution:

> "An institution often employs only one person to cover a certain area."

5.3.1 **Neutral response: The library as workplace for visiting scholars or as refuge**

As an alternative proposal, one of the workshop participants asked if the library can offer attractive workplaces for visiting researchers and students. A research from the humanities comments:

> "It would solve a problem if you could offer folks from outside a place."

An instructor from the health sciences suggested that we aim for creating workspaces where you can get away from it all for a little while:

> "... if we could isolate ourselves in a cloister at your place. That way we could get things done instead of sitting in our offices."
5.3.2 Rejected idea: Support of the academic network

The participants didn’t necessarily see "loneliness" as a problem – more as a normal condition. Our idea that the library, as "neutral territory", could offer a sort of "science dating" in both digital and physical space, therefore did not arouse particularly great interest.

Our idea that the physical library could have a future by offering some attractive physical frameworks in the form of, for example, "The Scientific Society Lounge Club", was met with skepticism by most. A researcher from the natural sciences stated:

"You can’t force people to be social and to think by giving them a nice place to go. If we want to have a discussion about our subject – we would stand on the street and do it."

In addition, time is a scarce resource for researchers. Some express that they would like to meet and discuss with people outside their discipline. But for the "lounge club" to work, it would have to be as a framework for developing or relieving concrete tasks. An instructor from the humanities expressed:

"It has to have something to do with my academic work, and it should help me with some of the functions I perform."
6 The Method

In this chapter, we will give an overview of where the different methods were used in the course of the investigation. As many of the methods are relatively unknown in the field of library science, we have chosen to describe what they entail.

6.1 Overview of the sequence of events

As was mentioned in the introduction, the project started with a pilot study, wherein the field study method was tested and adjusted. Thereafter, the project continued at the four research libraries: the State and University Library (SB for Statsbiblioteket), the University Library of Southern Denmark (SDUB for Syddansk Universitetsbibliotek), Aarhus School of Business Library (ASB), and the National Library and Copenhagen University Library (KB for Det Kongelige Bibliotek). The working team consisted of four local teams with 3-5 members from each library, sixteen members in all.

This schematic shows how the sequence of events progressed:

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<tbody>
<tr>
<td>Advisory committee meeting Working team formed</td>
<td>ASB: 4 users recruited Preliminary interview</td>
<td>ASB: Probes handed out. Return after 3 weeks.</td>
<td>ASB: 4 contextual interviews based on probe results</td>
<td>Joint work-up of data in affinity-diagram Presenta-</td>
<td>SDUB: Workshop with researchers</td>
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<td>tion of data to advisory committee</td>
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<tr>
<td>SDUB: 4 users recruited Preliminary interview</td>
<td>SDUB: Probes handed out. Return after 3 weeks.</td>
<td>SDUB: 4 contextual interviews based on probe results</td>
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<tr>
<td>KB: 4 users recruited Preliminary interview</td>
<td>KB: Probes handed out. Return after 3 weeks.</td>
<td>KB: 4 contextual interviews based on probe results</td>
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<tr>
<td>Library employees selected for interviews</td>
<td>In parallel at all four libraries: 4x4 qualitative interviews with library employees</td>
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The overview shows that local activities alternated with working team meetings, where we both prepared the investigation and worked with our data. The advisory committee was typically present during a few hours of the meetings. The members of the advisory committee were presented with data, participated in discussions, and gave inspirational data.
6.2 The selection of the qualitative method

We utilized the following methods:

• Field studies, which in this project were composed of cultural probes, which consisted of journals with photographic assignments and inserted "statements", as well as contextual interviews.
• Qualitative interviews with library employees
• Workshops

The above three methods supplement each other and constitute a cohesive foundation for the results of the investigation. All three points can be described as qualitative methods.

The qualitative methods can give results which consist of nuanced knowledge and understanding of a small selection of users. The methods make it possible to see beneath the surface and get a glimpse of the users’ behavior, which otherwise would not be visible. In addition, one can achieve proximity in an interview with a user which would not be possible otherwise.

It is not possible to generalize on the basis of so relatively few users, as it would be in a larger quantitative investigation. Therefore, as mentioned in the introduction, this investigation will be followed up with a quantitative questionnaire-based investigation. This will give the possibility of clarifying how widespread some of the tendencies we uncovered are.

6.3 Selection and recruitment of users

It was decided that each library should perform a field study of four users.

The sixteen people who participated in the field study were seen as a common pool. Furthermore, to insure that we generated material which was as multifaceted as possible, the criteria for users were selected after a principle of extremes and diversity.

The following categories of users constituted the pool, with at least two from each: non-users, e-resource users, visiting scholars, distance-learning students, users of the physical library, users of library assistance, and foreign students. In addition, factors such as seniority and distribution over different subject areas were considered.

Each library was assigned four user types from the pool, whereupon recruiting could commence. This took place with the help of emails which were sent out to students via the various institutions, and by putting up posters at the library.

Simultaneously, the local working teams selected from each library four employees, who were asked to participate in the interviews. These employees were also selected following the principle of obtaining as much diversity as possible.

6.4 Field studies, cultural probes, contextual interviews

The field study is a qualitative method which has its origin in ethnography. A field study entails that the researcher investigates a subject in its natural envi-
Within the field of IT-design, this ethnographic method has been re-utilized; but it is also frequently used in other investigations of societal topics.

The field study commenced by briefly interviewing the participating users, and handing out a "cultural probe". A cultural probe is a packet of materials, handed out to a person, who works on it and returns it after a short period. In our study, the probe consisted of a journal and a disposable camera. The journal was to be filled out over a period of three weeks. With the camera, the users were asked to either take pictures of motifs that for them exemplified good service, or photograph that which they connected with a good workplace.

A cultural probe can, for example, consist of a disposable camera, a glue stick, a pair of scissors, and a journal. The user can enrich the journal with cutouts, notes, and photos, and thereby tell us about what their daily experiences consist of.

In the journals we handed out, we had pasted in items such as a series of provocative "statements", which we asked the users to respond to.

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6 The following article has been greatly inspirational for our development of the cultural probe concept: Gaver, Bill; Tony Dunne & Elena Pacenti (1999) Cultural probes. Interactions, 6 (1) p. 21–29.
A statement in a journal from the Aarhus School of Business Library.

Picture text: I don’t need the library – I use Google. Write your opinion.

When the journal and camera are returned, the investigation can get an insight into the culture that surrounds the user, the user’s manner of working, and their view of the library.

We got such an insight, which we then used for:

- Preparation of the interview guide for the contextual interview
- Inspiration for preparation of materials for the workshops

This way, the user also got the chance to reflect on their behavior over a longer period. This made it possible to have interviews where the user was better able to articulate how they used their time – both in relation to their studies and the library.

In this way, the journals and photos formed the basis for the contextual interviews. At the same time, questions about the three core areas (web interface, employees, and the physical library) were also incorporated into the interview guide.

A contextual interview is an interview that takes place with the user in the environment where the user normally works. Concretely, it means that the interviewer asks questions while the user carries out his normal work activities. This means that the interviewer gets the chance not only to see where the user works, but also what he does when he searches for information, for example. One advantage with being able to observe actual behavior is that there is often a discrepancy between what users say they do, and what they actually do. Behavior is often based on that which is called "tacit knowledge", i.e., knowledge that is used implicitly, and which is hard to put words to. With the help of observation, together with exploratory questions, the interviewer can get an insight into their tacit knowledge.
A contextual interview is thus a combination of conversation and observation. Specifically, for this investigation, this meant the interviewers, who were present at the user’s workplace, often encouraged the user to act in some way – e.g., to search for information on the computer – so that it was possible for us to observe the user’s behavior in connection with information-searching.

### 6.5 Qualitative interviews with library employees

The selected library employees were people who come in contact with the users in the course of their daily work. This group consists of librarians, course organizers, instructors, subject experts, and IT-support.

The purpose of the qualitative interviews was to gather information about the library’s users and their usage of the library, but from someone other than the users themselves. Furthermore, as mentioned, it can be difficult for a user to give a comprehensive description of his own behavior – not least because much behavior is unconscious. Methodologically, however, we have to be careful not to take second-hand accounts at face value.

- An example of the difference between observation of the users’ behavior and the library employees’ view of the users can be read in section 3.1.2.

This type of interview consisted of:

A. An open, qualitative interview with a semi-structured interview guide.

B. An inspiration exercise with provocative statement-cards.

Part B did not take place at all of the libraries.

The intent with the often somewhat provocative statements was to push the interviewee over from rational, analytic contemplation to a more spontaneous, emotional reaction.

### 6.6 Data analysis

After the field study and interviews, we at each individual library found ourselves with extensive material consisting of interview transcripts and completed journals.

To be able to consider all the materials collected, all interviews were divided into statements, which afterwards were cut out in strips. Thereafter, the entire working team participated in the process of re-assembling these statements all over an affinity-diagram[7] on a long row of posters in a meeting room.

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A little extract (roughly a tenth) of the entire affinity diagram

The affinity-diagram is a cohesive picture of a user group, made from a long series of individual notes. The diagram is created “bottom-up” by assembling the different statements according to theme.

The many themes are collected under common titles. These titles are an expression of a grouping based on the focus of the project: employees, web interface, and physical environment.

The same notes and themes could have been organized entirely differently, had the focus of the investigation been elsewhere.

The process of grouping so many notes takes a long time, and it can only be done when the cutouts can easily be moved around on a large wall. When you can see all the notes at the same time, it’s possible to shift your focus from the details to the larger trends in the groupings, and thereby create harmony between contents and categories.

In this instance, the process was carried out under the expert guidance of senior consultant Julia Gardener from UNI-C.

On the technical side, it was subsequently possible to handle the large amount of data by periodically digitizing all materials – minutes, transcripts, links, and pictures – and making it available to the working team on a wiki set up for that purpose.
6.7 Workshops

At the workshops, a group of users were assembled with the intent of getting feedback on a topic. The participants go through a series of everyday activities, or react to a series of future scenarios or prototypes.

The result of the workshop is getting the users’ demands and wishes in relation to the scenarios or products they encountered in the workshop. You draw on the users’ knowledge of their everyday activities and get their spontaneous reaction to a concrete proposal.

The project provided a basis for holding two workshops: one for students (at the State and University Library), and one for researchers (at the University Library of Southern Denmark).

The ideas for these workshops came about as a result of:

- data from the field studies, where the users themselves offered ideas and suggestions
- the many interviews with library staff at the participating libraries
- employee input from, e.g., librarians, subject experts, and IT developers
- the advisory committee’s and steering committee’s input of ideas

The two workshops consisted of three to four stations, where posters initially showed:

- A series of observations of users’ behavior and some of the dilemmas which the field study brought to light. It was determined whether the users could recognize the situations, and it was possible for them to offer comments, suggestions, and ideas.

When these posters had been gone through and the users’ comments were written down, the next poster was revealed:

- Ideas for how the library can accommodate the behavior. This was realized with drawings, storyboards, paper-prototypes, mockups, or scenarios.

By waiting until the end to reveal the poster with our own suggestions, it was possible to avoid leading the users significantly.

Everything said in the workshops was noted, and later assembled in a common report. The workshop was concluded with a gathering where the users individually got the chance to point out one or two future scenarios, which they thought had significant potential for being developed.

The workshop with researchers was not nearly as directed towards testing concrete ideas. Instead, the goal was to get the participants to come up with their own wishes and ideas. The workshop consisted of seven researchers and instructors, ranging from new employees to established department chairs, from the university’s four colleges.

The workshop with students consisted of nine students, from first-years to masters students, some from the humanities, and some from the social sci-
ences. It was not possible to get students from the natural sciences to participate in the workshop.

A sketch showing the organization of the workshop with nine students at the State and University Library. The four stations were called “The library catalog of the future”, “The librarian of the future”, “The self-sufficient user”, and “The library environment of the future”. The station leaders and note-takers were selected from the project’s working team. The station leader could explain what the station was about, and, in the same way, the users could ask exploratory questions about details of the presented concepts. It was possible as well to add modifications in the form of post-it notes.

6.8 Personas

The concept of “personas” is often used in connection with IT-design and other development work. The concept involves a realistic yet fictitious description of an archetypical user, which is created on the basis of the field studies, among other things. The model user can give a quick overview over and insight into complex data, and can help with preserving the user’s point of view.

The model user concept often goes hand in hand with the scenario concept, inasmuch as that the model user can be placed in different scenarios. For example, you can describe a scenario which tells how the model user works with searching for and ordering the books that he will later come and pick up at the library.
There are many "recipes" for what data a model user should be developed from, and how that data can be manipulated. Data such as behavior, demographics, goals and tasks, background, psychology, and character traits can be involved. Normally, 3-5 personas are described in order to cover the entire target group. In our case, the personas were constructed from the collected mass of data from the field studies and the executed workshops.

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8 See, for example, two short articles:
Calabria, Tina: An introduction to personas and how to create them. KM column, March 2004
Seminal article: Pruitt, John; Grudin, Jonathan: Personas: Practice and theory. 2003 s. 1-15,
Proceedings of the 2003 conference on Designing for user experiences, SanFrancisco, California
7 Evaluation of the overall method

The motivation for choosing this qualitative research design is readily summed up by the following quote:

"The qualitative method is an investigational type one chooses when the investigation’s most important categories are not laid out in advance, but are, on the contrary, developed as a result of the investigation itself. One knows something about the idea, but not about how it is structured. It is known that one will examine how people in category A relate to phenomenon B, but it is as yet unknown how they will relate." (Dahler-Larsen, 2002 p.70).

In keeping with the above, it has been our intent in choosing this method to get close to the library’s users, and in this way to get new and different knowledge about the way that different groups of users study in and research in the context of their library use.

Our experiences with this method are summed up in the following sections.

7.1 Field studies facilitate close contact and give rich data

In the project proposal, we used the following argument in favor of field studies: "The user has the opportunity to act and express themselves freely.” This freedom and room to be yourself, together with the long duration of the case studies, resulted in 16 very different journals, wherein the users expressed themselves a little or a lot, and by which we were able to get very close to their reality in the follow-up interviews.

The investigation can thereby illustrate the users’ behavior in a way that gets very close to the users’ reality. Literature searching and library use were observed in both a study- and research-related context, and the method used has made it possible for the users to bring unexpected actions and points of view into play.

The working team’s preparation of the journals prior to handing them out was a fun process, which created enthusiasm for the project. The journals came back with varying amounts of content, and the subsequent analysis of the completed journals, along with any included pictures, gave a unique starting point for structuring the contextual interviews with the users. The interviewer had advance knowledge of the user’s work and personality, and, in the course of the three weeks spent working on the journals, the user had already reflected on the different aspects of the library. This reflection process gave, among other benefits, a number of ideas for improvements, which might not have arisen otherwise.

In the massive amount of data gathered, there was a fair amount of information without direct relevance for the library, e.g., information on workspaces in the home, or general information about work or study situations. These types of observations can, however, be quite relevant for understanding the library’s current and future role in relation to different groups of users. The more we know about how the users study, research, and seek information, the greater the likelihood that we can offer them the right services.
7.2 **Collection, structuring, and interpretation of data is non-trivial**

Sixteen journals plus 32 interviews, each conducted from its own individualized interview guide, equals an overwhelming amount of unstructured data. We subsequently discussed some of the different reservations that one can have about qualitative investigations of this type, especially with such a large working team doing the structuring and interpretation.

Each interviewer watches and listens from their own point of view, and even though the investigators strive to be objective, we can never fully avoid influencing the results.

In the following discussion, we bring up the points that we considered to be the most important to pay attention to:

7.2.1 **Library employees should be considered a secondary source**

In using library employees as a means of gathering information about library users, it is extremely important to be aware of the fact that the information you end up with is not necessarily information about the library’s users. Sometimes it will just as likely be information about what the library employees believe or imagine about how users act. Therefore, this information is different from the information we gather when we speak directly with the users. The information gathered from the employees is best used as a supplement to the actual field studies, or as a basis for forming hypotheses which can be included in preparing for the field studies.

7.2.2 **It takes experience to recognize ambiguity in users’ testimony**

A number of the interviews and testimonials from the workshops contain built-in ambiguities, which does not make the interpretation process any easier. For example, the researchers would state information about the students’ practices and needs, not just their own. If you don’t have experience in working with qualitative methods, it can be difficult to maintain a separation between users’ statements about their own practices and, for example, the employees’ or the researchers’ statements about the students. In addition, without this experience it can be difficult to go into greater detail about the users’ potentially ambiguous statements, without simultaneously putting words in the users’ mouths.

7.2.3 **The observer needs to be aware of their own role**

During the course of this study, we have maintained an awareness of the fact that all of the members of the working team are, themselves, library employees. If you are not attentive to this fact, it can, as a result, influence the interpretation of the data to such a great degree that it shifts the study away from being user-focused. To ensure that we, as library employees, are not working with unarticulated and unconscious agendas, we have to constantly reassure ourselves that the conclusions we reach are based on the empirical data, and not on our own presuppositions.
7.2.4 **Definitive weighting of the results is not possible**

Certain elements can be weighted differently, and data can’t always be interpreted unambiguously. For example, the investigation cannot prove to what extent the “correct” solution is to instruct the users (traditionally the librarians’ approach), or to reformulate the IT-systems such that instruction is unnecessary (traditionally the IT-developers’ approach).

All in all, it takes a great deal of perspective over the data to grasp that even a single user often expresses contradictory opinions about the role and functions of the library.

7.2.5 **Users’ statements must be handled carefully**

Finally, it is worthwhile to pay attention to what it means when you split up conversations and use each statement by itself – out of context – as we did in the affinity diagram (see section 6.6). In the interviews, the individual statements work together to form a connected discourse. When the individual statements are separated to form the structure of the diagram, it is possible to lose messages that are implied or read between the lines. The danger, however, is likely to be greatest in those interviews where the purpose is to elucidate thoughts and opinions, rather than behaviors.

7.3 **Workshops as an extension of field studies and interviews**

In the two workshops, the informants had the chance to relate to concrete scenarios that showed future possibilities for the libraries’ web interface, staff, and physical environment, which were formulated on the basis of the collected data.

The strength of the workshop form has, in our situation, been that while setting up these scenarios we could utilize a portion of the many ideas which were more or less directly contained in our data. Afterwards, we could observe the users’ experience of, and spontaneous reaction to, these ideas. Many times, these reactions were different from what we had expected. This way, we were able to come closer to the users’ immediate needs in certain areas.

7.4 **Hard work, knowledge-sharing, and commitment**

It is hard work, requiring a large time investment, to collect, summarize, structure, and interpret qualitative data. In the end, it can be hard to say whether the results of this qualitative investigation prove themselves to be worth the time consumption.

All of the working team members have been deeply committed to the process, and we have, along the way, had the chance to reflect on the users’ statements, both the positive and the negative. This is clearly a strength when the time comes for each library to follow up on the results of the investigation. The thorough analysis of the data, and all the work it entailed, strengthens the organizational acceptance of the results.

The working team’s members went into the project with different backgrounds. The entire process has been a learning exercise, wherein knowledge of how to
execute a qualitative investigation has been shared along the way – both within the individual working libraries and across the four participating libraries. Working with such a difficult method would never have been possible without the more experienced members of the working team, and our consultant, Julia Gardner from UNI-C.

7.5 **Personas can be applied as a communication tool**

Our three personas’ function as a means of communication has already been tested in connection with an employee meeting at the State and University Library, among other situations. It appeared that the personas had a great deal of meaning for those employees in attendance. The personas were used in the discussions about which services the library should develop, and who those services should be directed towards.

The personas are an abstraction – a simplification – which represent some perspectives on the library, while omitting others. This is both an advantage and a disadvantage – the personas naturally attract a great deal of attention, and we therefore need to be careful. Those aspects of a user which are not present in the personas’ characteristics might be overlooked by those reading the results of the study.

The three personas, which were constructed in connection with this study, can eventually be refined by those libraries that want to use them in their developmental work. There is also a possibility for constructing entirely new personas on the basis of the data we collected.
8 Project Participants

This section lists those involved in the project.

8.1 Working Team

The working team consists of the 16 library employees who designed and executed the study.

The National Library and Copenhagen University Library: Sten Barfort, Gitte Petersen, Bo Søgaard Jensen and Katja Guldbæk Rasmussen.

The Aarhus School of Business Library: Anna Mette Morthorst, Henrik Tvermoes Jensen, Lise Arnfred and Tine Bagger Christiansen.

The State and University Library: Michael Poltorak Nielsen, Jens Hofman Hansen, Gitte Behrens, Henrik Vetter and Lotte Thyrring Andersen.

The University Library of Southern Denmark: Gitte Bach Markussen, Jeppe Lomholt Akselbo and Gina Bay.

8.2 Advisory Committee

During the course of the investigation, the working team presented partial results to the advisory committee. The advisory committee’s task has been to provide input and hypotheses to assist in the further progress of the study.

Jens Thorhauge, The National Library Authority
Michael Cotta-Schønberg, The National Library and Copenhagen University Library
Kaj Grønbæk, Department of Computer Science at the University of Aarhus
Niels Ole Pors, The Royal Danish School of Librarianship
Claus Vestager Pedersen, Roskilde University

8.3 Steering Committee

Birgit Henriksen, The National Library and Copenhagen University Library
Birgitte Sønderkær, The Aarhus School of Business Library
Ingelise Stæhr, The University Library of Southern Denmark
Birte Christensen-Dalsgaard, The State and University Library

8.4 Consultant Assistance

Julia Gardner, UNI-C, has assisted periodically in refining the study.
Lotte Jepsen, Designit, provided inspiration and input at the commencement of the project.
9 Appendices

Appendices to this report, along with any follow-up information, are available on the web at:

http://www.statsbiblioteket.dk/brugbarhed/feltstudier