

**“We have big plans.” –
Information Literacy Instruction in Academic and Public Libraries
in the United States of America**

Maria Henkel^{*a}, Wolfgang G. Stock^a

^aDepartment of Information Science, Heinrich Heine University Düsseldorf,
Universitätsstr. 1, Düsseldorf, Germany

*Corresponding Author: maria.henkel@hhu.de

ABSTRACT

Information literacy instruction is an emerging research topic. In a small bibliometric analysis on LISTA and Web of Science we found that information literacy instruction is strongly associated with libraries. In this article we focus on information literacy instruction in academic as well as public libraries in informational world cities in the United State of America (Boston, Chicago, Los Angeles, New York and San Francisco). We performed a quantitative gap analysis between the librarians' expectations for an ideal information literacy instruction in libraries and the experiences in their library. Additionally, we collected qualitative information regarding all topics of information literacy instruction. For all studied dimensions of information literacy instruction, the gap between expectation and experience was high or even very high (for assessment of instruction outcomes, the libraries' technical-spatial infrastructure, courses on online safety, courses for advanced learners, and instruction on information law and ethics). Most of the interviewees realized problems, but they see possible solutions as well and “have big plans”.

Keywords: Academic Library, Public Library, Information literacy, Library instruction, Information literacy instruction, Informational city, United States of America

1. Introduction and Literature Review

Information literacy pools competencies on searching and finding knowledge as well as on creating and presenting knowledge and plays a vital role in the everyday life, at the workplace (Bruce, 1999), and at school and university (Stock and Stock, 2013, p. 78). It is a key competence of the information society (Lloyd, 2003), counteracting the digital divide (Linde and Stock, 2011, p. 93 ff.). Information literacy instruction means the education of people concerning information literacy.

Since around 2000, “information literacy instruction” is a topic of scientific researches. In our small bibliometric survey, we observe a growing number of articles in both, the

library-oriented information service LISTA (Figure 1) as well as the multi-disciplinary database Web of Science (Figure 2). And we observe, too, that the research topic “information literacy instruction” is often combined with the topic “library” (see the blue bars in Figures 1 and 2). Obviously, libraries play important roles in information literacy instruction.

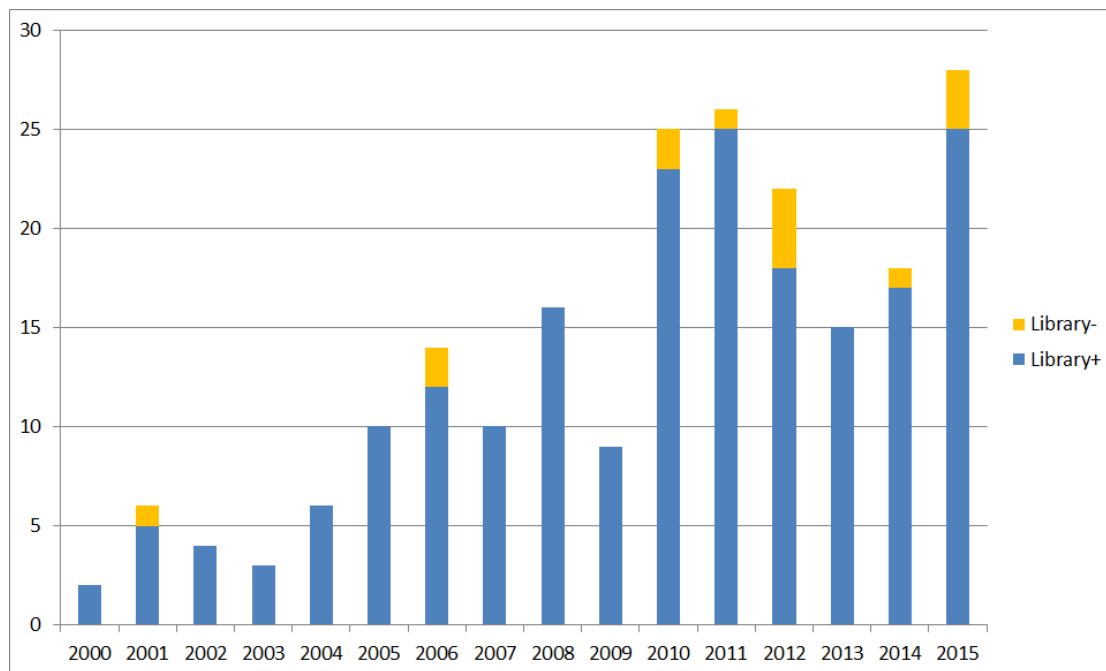


Figure 1: Publications on “Information Literacy Instruction” as seen in LISTA (“information literacy instruction” in title; blue: librar in “all text”; yellow: librar* not in “all text”). N = 214. Source: Library, Information Science & Technology Abstracts / EBSCOhost.*

In the literature, most articles treat information literacy instruction in academic libraries, i.e. teaching university students topics of information literacy (e.g., Julien, 2000; Julien and Boon, 2004; Julien, 2005a; Julien, Tan and Merillat, 2013). For Owusu-Ansah (2004), the academic library is even the center of a comprehensive solution of information literacy education. But with academic libraries alone we fail to reach all other citizens besides university students. Here public libraries come into play. The amount of literature on public libraries’ information literacy instruction is not too big. We were able to identify a paper by Heidi Julien (2005b) in which she sees a long road ahead for public libraries (especially, in Canada) on their way to comprehensive information literacy instruction. Again, for Canada, there are empirical results on the roles of academic as well as public libraries as “educators of the information society” using the examples of Vancouver, Toronto and Montréal (Henkel, 2015a, Henkel

2015b).

In studying information literacy, we pursue two threads. The first of these deals with practical competences for information retrieval. It starts with the recognition of an information need, proceeds via the search, retrieval and critical evaluation of information, and leads finally to the application of information deemed positive. Thread 1 has been pursued for more than thirty years. It is rooted in bibliographic and library instruction and is practiced mainly by university libraries. The Association for College and Research Libraries (ACRL) of the American Library Association provides what has become a standard definition: “To be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information” (Presidential Committee on Information Literacy, 1989).

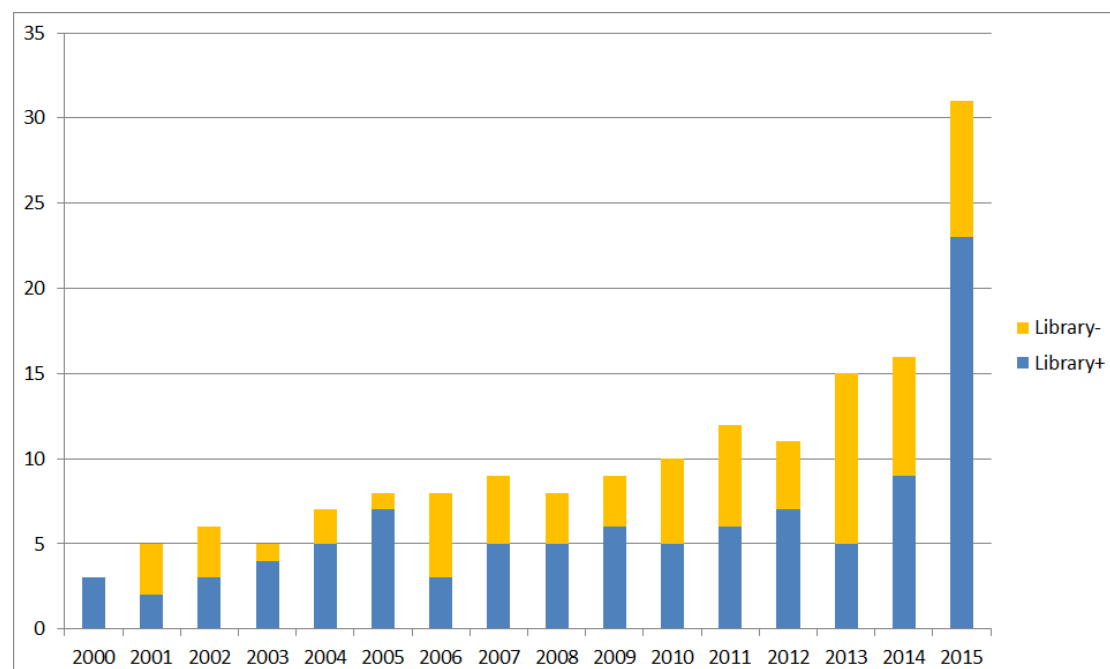


Figure 2: Publications on “Information Literacy Instruction” as seen in Web of Science (“information literacy instruction” in topic; blue: librar in topic; yellow: librar* not in topic). N = 163. Source: Web of Science Core Collection.*

The second thread summarizes practical competences for knowledge representation. Apart from the creation of information, it emphasizes their indexing and storage in digital information services as well as the ability to sufficiently heed any demands for privacy in one’s own information and others’. Thread 2 has become increasingly important with the advent of Social Media. Here users, who used to be able only to request information in a passive role, now become producers of information, too. Users create information, such as blog posts, wiki articles, images, videos, or personal status

posts, and storage them digitally via WordPress, Wikipedia, Instagram, YouTube, YouNow, Facebook and – especially faculty and students – Mendeley or ResearchGate. It is, of course, important that these resources be retrievable, and so their creators give them informative titles and index them with relevant tags or hash-tags in the context of folksonomies. Additionally, the user is expected to have a keen sense for the level of privacy they are willing to surrender and the risks they will thus incur. For both of these threads, it is of great use to possess basic knowledge of information law and information ethics. Figure 3 exhibits the two lines of threads of information literacy.

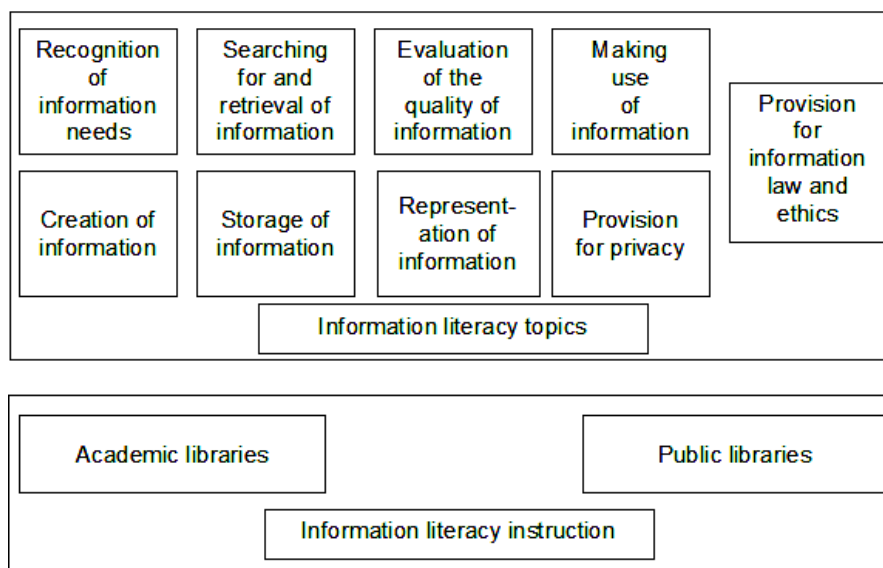


Figure 3: Topics of information literacy and institutions of information literacy instruction.

Based upon the framework of the two thread lines of information literacy, Beutelspacher (2014a) created generic indicators for the different building blocks and questionnaires to assess users' states of information literacy (Beutelspacher, 2014b). The questionnaire has been evaluated by a university class (Beutelspacher, Henkel and Schlögl, 2015). We adopted Beutelspacher's generic indicators for our survey on competence areas (Table 1, items 12 to 18).

Since we are not able to study all libraries in a country, we have to select certain cities and their libraries for our research. In a project on prototypical cities of the knowledge society (Stock, 2011; Stock, 2015) the researchers were able to identify so-called "informational world cities". Such cities meets two criteria: they are world cities and they are called "knowledge city", "creative city", "digital city" or "smart city" in the literature. For the U.S., Mainka et al. (2013) identified Boston, MA, Chicago, IL, Los Angeles, CA, New York, NY, and San Francisco, CA, as informational world cities. So we chose those cities as our case studies. In this article, we focus on information literacy

instruction in academic and public libraries in informational world cities in the United States of America.

2. Methods

In the third quarter of 2015 we interviewed librarians of public (n=4) and academic (n=6) libraries in Boston, Chicago, Los Angeles, New York and San Francisco. We met with those librarians in charge of library programs and information literacy instruction personally, to work through our questionnaire and initiate discussions on their current situation and work regarding information literacy instruction, but also to get a better impression of the conditions and challenges of the libraries. Due to the fact, that often more than one person in charge of instruction was interested to participate in the interviews, not only one-on-one but also group interviews were made possible. We welcomed this opportunity as it would allow a wider perspective on the topics and generate more input for the qualitative evaluation. Our aim was to survey at least one public and one academic library in each city. With the exception of New York, we were able to visit the main branches of all cities' public libraries. A full listing of all institutions surveyed can be found in the acknowledgements at the end of this article.

The interviews were structured by the questionnaire we created beforehand. An overview of all topics covered by the questionnaire can be found in Table 1. After a short introduction and explanation of the tool by the interviewer, topics would be introduced by the questionnaire items. After every question an explanation by the interviewee(s) or short group discussion on their opinions and experiences would follow to eventually decide on a rating from 1 to 7. Thus, every item was a starting point for qualitative contribution by the librarian(s). After the questionnaire there was time for an open discussion or further questions. Questions occurring before, during or after the interview could be clarified directly. The interviews were recorded to summarize qualitative contributions later on.

The questionnaire was derived from the SERVQUAL diagnostic tool (Parasuraman et al., 1988) and was already used in an earlier survey of public and academic libraries in the informational world cities of Canada (Montreal, Toronto and Vancouver) (Henkel, 2015a; Henkel, 2015b). It comprises of two parts: Part I (question pairs 1-11) consists of questions regarding information literacy instruction, in Part II (question pairs 12-18) the seven competence areas of information literacy (Beutelspacher, 2014) are being thematised directly (Table 1). Items are numbered from 1 to 18 and always consist of two questions – one for the “Expectation” column (left side) and one for the “Experience” column (right side) of the questionnaire (see Figure 4). Questions are each formulated in the same manner to compare the expectations of the interviewed person (their vision for a perfect library) with the experiences they had in the past and

also the current condition in the library they are working in.

Table 1: Content and structure of the questionnaire

PART	NO.	TOPIC
PART I: INFORMATION LITERACY INSTRUCTION	1	Qualification and continuing training of library staff
	2	Assessment of instruction outcomes
	3	Focus of instruction: Beginners
	4	Focus of instruction: Advanced Learners
	5	Importance of technical-spatial infrastructure
	6	Instruction method: Face-to-face courses
	7	Instruction method: eLearning
	8	Instruction method: Problem-oriented support
	9	Contents of instruction: Specialised databases
	10	Contents of instruction: Online safety
	11	Contents of instruction: Information technology
PART II: INFORMATION LITERACY SKILLS	12	Realising and phrasing information demand
	13	Locating and exploiting information that is needed
	14	Critically evaluating information and its sources
	15	Using information efficiently and constructively
	16	Managing and organising information.
	17	Generating, quoting and presenting information.
	18	Considering the rights and obligations regarding the use and distribution of information.

EXPECTATION (Vision)							EXPERIENCE (Condition)								
3	For how important do you consider courses that are specifically offered for beginners, in general?							3	What value do courses, that are specifically offered for beginners, have at your library?						
	1	2	3	4	5	6	7		1	2	3	4	5	6	7
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Figure 4: Example for a questionnaire item.

Items of the questionnaire are to be rated by a seven-point Likert-type scale (Likert, 1932) ranging from “Not at all important” (1) to “Extremely important” (7). The seven

levels of importance (Vagias, 2006) are:

- 1 – Not at all important
- 2 – Low importance
- 3 – Slightly important
- 4 – Neutral
- 5 – Moderately important
- 6 – Very important
- 7 – Extremely important

The distances between two adjacent numbers are considered equal. In line with Likert (1932, p. 42) we are able to calculate average values.

Participants may rate their own expectations and experiences, according to these importance levels, by marking the corresponding number underneath each question. The collected data from closed questions of the questionnaire were analysed quantitatively, the topic discussions and qualitative comments were analysed thematically. For group interviews the results of the standardised questions and answers of the questionnaire were combined to one rating for each library.

Based on the difference between expectation score (E_1) and experience score (E_2), the gap score (G) can be calculated ($G = E_2 - E_1$). The gap score G describes the discrepancy between expectation and experience of the current situation as it is perceived by librarians. We use the gap scores to diagnose perceived deficits in library instruction.

With our methods, quantitative data in form of expectation, experience and gap scores was generated as well as additional qualitative information regarding all topics and information literacy ability areas covered by the research project and beyond. In this article we would like to concentrate on the latter and discuss the current situation in both public and academic libraries as well as future developments and differences between the two groups.

3. Results

In the following section, the results of the survey will be presented and discussed. While the focus lies on an evaluation of the qualitative results, the quantitative results will be helpful in evaluating the significance of explained problems and to assess differences between public and academic libraries. The average gap scores for each questionnaire item can be seen in Figure 5. The separated gap scores for public and academic libraries are pictured in Figure 6. A table with all results can be found in the appendix.

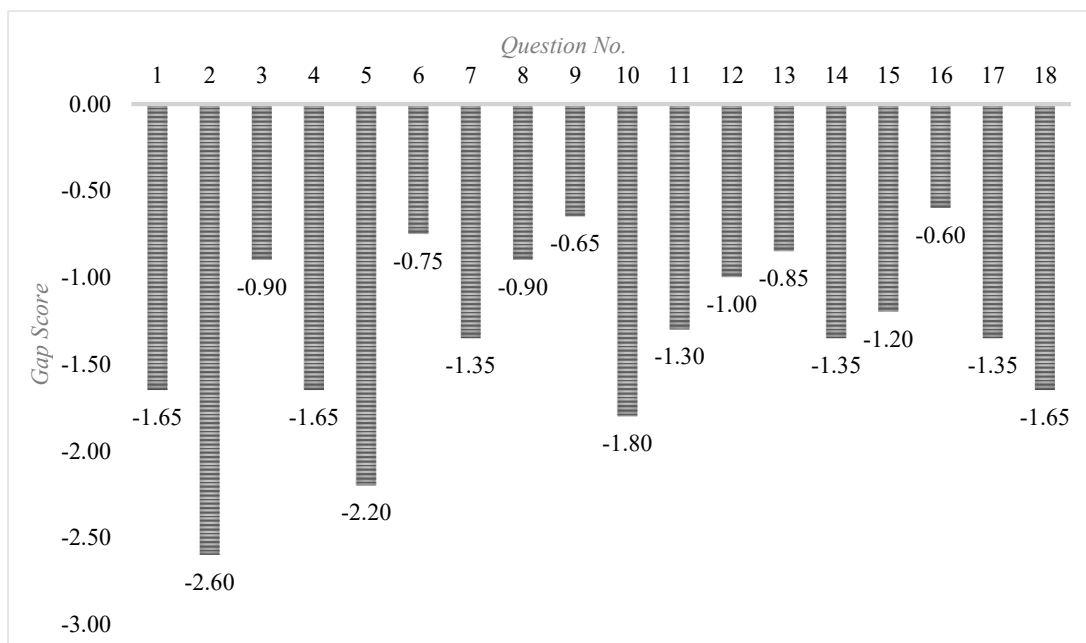


Figure 5: Overall gap scores for all interviewed libraries.

3.1 Professional Development (Item 1)

At first interviewees were asked about the importance of professional development for librarians in general and whether they felt they were supported enough in this matter. “Learning is part of our profession, we have a responsibility to do professional development” (L9) is a quote that sums up most opinions. The librarians felt they needed to do it to get “new ideas” and find “new ways of doing things” (L3). While all agreed that it is very important to extremely important in general, many felt that there is either not enough financial support or time for it. A total gap score of -1,65 underlines this (see Figure 5). Librarians stated that “it could be better” (L2), “there are not enough funds for even one conference” (L3) and that “budget prioritizes different things” (L2) or “support varies in departments” (L5). Some mentioned that there is support but not all use it due to time constraints or a lack of interest. Two interviewees told us, that professional development happens on site: in monthly meetings or via in-house classes and workshops or with the help of online classes (L6, L8).

3.2 Assessment (Item 2)

We asked all interviewees whether they deemed the assessment of instruction outcomes important or not and if – and how – it is being done at their library. This questionnaire item yielded the highest overall gap score (-2.6, see Figure 5). It should be noted that this is due to the high gap score resulting from the interviews in academic libraries (-3.25 see Figure 6). Librarians from academic libraries rated this as “very important” (L2) or “becoming more and more important” (L7), but admitted that they were not doing it or that “very little is being done” (L3, L2). They said that it is “hard to evaluate

the outcomes” (L1) and some were “still struggling with the ‘how’” (L7), while others stated that it “strongly depends on the individual” (L9, L5) since “some are not motivated to do it” (L1) or “don’t want to be judged” (L5). They also explained this with the lack of “clear learning outcomes” (L1) for one-shot classes without follow-up or stated that this “is a faculty domain” (L5). Some are doing a 1-Minute-Paper (L2) or pre/post-tests in classes (L7). For the future, workshops (L5) or student surveys (L3) were planned. Public libraries did not assess at all and were planning to do this in the future (L4, L10) or were evaluating satisfaction rather than learning outcomes (L4, L6, L8). One library started to use external data sets, for example the performance of pupils and students who visited the library, because assessment in class might “kill the joy of learning” (L6). Librarians said that assessment could help “to gear the future classes” (L8) and that private funders have the “desire to see a proof of social benefit” (L6).

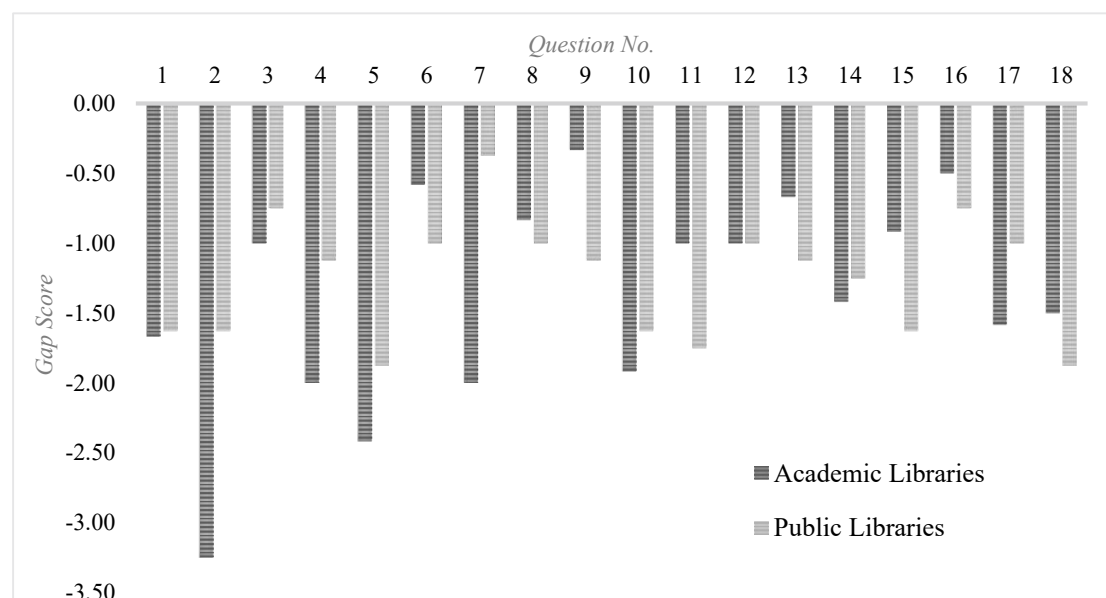


Figure 6: Gap scores for public and academic libraries.

3.3 Focus of Instruction (Items 3-4)

We wanted to know if and why librarians were focussing rather on beginner or advanced courses and if they felt they were offering enough services for both target groups. Almost all interviewees agreed that both groups are equally important, but gap scores for instruction on an advanced level were higher for both public (-2.0, see Figure 6) and academic (-1.13, Figure 6) libraries compared to gap scores for instruction on a beginner level (-0.75 and -1.00, Figure 6). With the exception of two libraries, all were stating to do more for beginning patrons. Especially conversations in public libraries emphasised the need for basic computer classes like “How to use Google”, “Computer Comfort” or “Creating and organising E-mail Account” to help senior citizens and those

who do not have any experience at all. Librarians from public libraries told us, that there are patrons who have to learn to use a mouse and that, while there are many other possibilities for citizens who know how to use a computer and the internet, there is nowhere else to go for rudimental computer knowledge and training (L6, L8). Often, material and advanced courses are offered online, with the help of external partners like Lynda.com (2016). There are also libraries which did not offer any courses at the time of the survey. All librarians were planning to improve the situation by offering courses, more courses and/or courses for all target groups in the future, but often there is not enough time, staff or space for it. Also, many interviews in academic libraries showed, that librarians there were wishing for more time with the students and in classes. Some do “one-shots” for first year students or in writing classes, but they felt they had more to offer than what they were doing already. Librarians “offer instruction to faculty but they are not always successful” (L1, L9).

3.4 Technical-Spatial Infrastructure (Item 5)

We asked librarians to tell us about the importance of a library’s technical-spatial infrastructure and to rate the infrastructure at their own library. We wanted to know whether they thought to have enough rooms for classes and space for patrons to read and work in. We also asked about their technical equipment: What is being used, is it working properly and “up-to-date”? This question resulted in the second highest gap score of the survey (-2.2, see Figure 5). Librarians need flexible classroom and work space, software has to be up-to-date and most importantly reliable, modern libraries need WiFi and enough power outlets. Reality looks different in most cases. Some libraries have no or only one classroom. “It’s never enough, and not what we want” (L1) sums up what many librarians told us. We were told that it is “important to have staff dedicated to technology” – this staff as well as administration have to understand the work and the needs of the librarians. In some libraries, this infrastructure or parts of it can be found. Other libraries are currently renovating or planning this in the future: “We have big plans” (L4). New buildings with big windows and comfortable areas, numerous computers for the public or students to use, business centers, e-classrooms, maker labs, are being planned or already in use. Some lend out laptops, e-readers and tablets, or have an audio/video-recording lab. For public libraries this is often part of a strategy to address young citizens and show them what the public library can offer: “We want to create a space for children, where they feel at home, where they want to spend their time in a creative and productive and positive way” (L6). Sometimes, freeing space for new projects means sending parts of the reference collection away. Librarians described this as a “balancing act” (L7) since many found that browsing among the stacks was still very valuable for patrons.

3.4 Way of Instruction (Items 6-8)

In a library, there are many ways to assist patrons and to promote information literacy among students and citizens of the information society. Three of those ways are face-to-face courses at the library, e-learning courses and assistance at the point of need, for example when approached by a patron in the library or at the reference desk. We asked our interviewees, how important they deemed each of those and whether or how much they are a part of the daily work at their own library. Face-to-face courses were seen as a very important form of instruction. Academic librarians value the opportunity to form a relationship with the students and show them that they are welcome at the library. Public librarians stated that especially senior citizens and children need the face-to-face interaction in courses or activities like “Story Time”. Many libraries were already offering e-learning courses or online materials, for example electronic subject guides, video tutorials, subject courses, or even online programs to earn a high school diploma. Positive aspects of these e-resources as the possibility to learn at one’s own pace and at home were mentioned – “e-learning is an opportunity for students who can’t make it to the campus” (L1) or for patrons who are looking for particular contents the library is not offering in a course. Some libraries, who did not offer any courses at the time of the survey felt “behind the curve” (L5) or “behind the time” (L4) and were planning to do this in the future. Also, the gap score for e-learning was higher than those for face-to-face courses or assistance at the point of need (Figure 5) because especially interviews in academic libraries yielded low experience scores for this item (Figure 6). Although e-learning was seen as a good complementary service to offer in libraries, face-to-face instruction was still valued more. Librarians said that “e-learning can teach specific skills very well but face-to-face is important for others like critical thinking” and that “higher learning has to happen in class” (L9). All interviewees agreed that assistance at the point of need, for example at the reference desk, is most important. We were told that “librarians take their work at the reference desk very seriously” (L1). Nowadays, librarians have found several ways to assist patrons as good and as fast as possible: Not only in person, but also via e-mail, telephone, chat and even messaging service. Some of those services are offered 24 hours every day. Compared to the other two ways of instruction, this topic got the highest expectation ratings from both public and academic libraries.

3.5 Contents of Instruction (Items 9-11)

Librarians were asked about the importance of the proper use of specialized databases, online safety and security and about teaching how to use modern communication devices, such as smartphones, e-readers or tablets.

In many interviews, the question arose, whether it is still important to know how to use specialized databases, since many libraries use a surface tool or discovery service. With those new interfaces, searching in databases and the library catalogues is as easy as using Google or other web search engines. They “make it easier to jump in and find results” (L5). But especially interviewees at academic libraries thought, that it is still important to use specialized databases because they “offer much more” (L1). Students have to learn to “define a search strategy” and become a “smart researcher” (L2). Some academic libraries teach this a lot, some want to do it more but also said that the purpose decides about necessary tools, needed results and sources: “Sometimes Wikipedia is fine” (L3). Public librarians stated that their “audience is not primarily doing research” (L6) and that “database classes are not as popular” (L4), therefore it was rated to be “not as important for public libraries” (L6). The overall gap score for this item is -0.65 (Figure 5).

Except for one case, there were no courses on online safety and security in any of the other libraries we visited. Librarians from academic libraries said that they “don’t have time for it” (L1), or that it is “not very important in an academic library” in general (L3, L9) – but some also said that it “is part of being information literate and of being in society” (L1) and that it should be mentioned more: “We don’t talk enough about privacy and protecting user information” (L5). Librarians from public libraries stated that “particularly new users need this” (L4) to protect themselves from viruses, fraud, and other threats. Public librarians want to “protect [their patrons] from being exploited” (L6). Some try to teach a little of it in other internet-related classes, but most said that it was not enough since it is becoming more and more important. The overall gap score for this topic is -1.8 (Figure 5).

New communication devices and how to use them is no topic in academic libraries. Librarians say that “students already know this” (L1, L5, L9) and focus on content rather than instruction on how to use tablets and e-readers. This is a little different in public libraries. Some “do this a lot” (L4) and show patrons how to use their camera, manage apps on tablets or similar. Many lend out devices as well. While some want to do more of this in the future, to enable patrons to use their e-content, others want to focus on tools and content more than on the device itself. They think that target-focused instruction is more important. The overall gap score for this topic is -1.3 (Figure 5).

3.6 Information Literacy Skills (Items 12-18)

Librarians had high expectations for instruction regarding information literacy and the promotion of particular information literacy skills. They rated all of the seven information literacy competency areas to be “very important” to “extremely important”. Gap scores in this part of the questionnaire ranged from -0.6 to -1.65 (see Figure 5).

While some librarians from academic libraries did not feel like they had enough time to teach the ability to realize and phrase an information demand in classes and that “students have assignments and not questions” (L9), others claimed to concentrate on this in research courses. The opinion was that “phrasing a demand is almost more important than finding the answer” (L3). Public librarians try to help with this while sitting at the reference desk.

Librarians found locating and exploiting information that is needed to be very important and some recognized it as the “main task of the library” (L7). Academic librarians reported to do this a lot in classes or one-shot instruction courses. Public librarians told us, that there is also pressure to be successful in helping patrons with this step: “If you can’t find something, they won’t come back” (L4).

Librarians regarded the ability to critically evaluate information and its sources as very important, especially in times of Google: “Evaluating is essential because they can find anything on the web” (L7). They also found that patrons trusted in their expertise in this matter. Many academic librarians were not satisfied with reality because they wished to have more time with the students to do it and raise more awareness for this among them.

Using information efficiently and constructively was another ability area. Some librarians try to incorporate this by answering questions like “How do I use what I am finding?” (L7) with the students, some think that this process does not have to be efficient but students have to make their own mistakes and find own ideas. Some public librarians stated that they did not feel like they “get to see this part of the process” (L6). Especially interviewees from academic libraries found the step of managing and organizing information important because students have to learn to use citation tools and manage their research. They try to help students by teaching how to use helpful tools.

Academic librarians try to support faculty with teaching the generating, quoting and presenting of information, some also offer courses. We heard that this is “not so important for public libraries” (L6) but there were also public librarians who stated they “would love to help with that” (L4).

Considering the rights and obligations regarding the use and distribution of information was valued very highly. Some librarians admitted that they “don’t cover very much of it at all” (L1), some give out information sheets on copyright or creative commons, some claimed to “do this indirectly” (L8). There are academic libraries who offer advice for national and international students who are not familiar with the rules and we were also told about workshops on “ethical research” (L7). Librarians want students to “think about how information is produced” (L3) and authorship. Public libraries valued this as “important for the public” (L6).

4. Discussion

“Information literacy instruction” is a fairly new research topic, which is strongly associated with libraries. We analyzed in a quantitative and a qualitative way information library instruction in academic as well as public libraries in informational world cities in the United States of America. By the means of the questionnaire used, the perceived quality of library instruction as seen by the librarians themselves was measured. For all studied aspects of information literacy instruction, the gap between the librarians’ expectation and their experience was high or even very high. The greatest gap scores were calculated for the assessment of instruction outcomes, the libraries’ technical-spatial infrastructure, courses on online safety and security, courses for advanced learners, and instruction on information law and ethics. We spoke to instruction librarians and to groups of up to five librarians in charge of training where often several different opinions were represented. However, results are not representative for all libraries in the United States or even the libraries we visited as a whole. Nevertheless, we learned of many developments and challenges, sometimes different ones for public or academic libraries, sometimes for both kinds of libraries alike. Most of our interviewees realized problem areas in the current state of information literacy instruction in libraries, but they see also solution possibilities – and some “have big plans”.

ACKNOWLEDGEMENTS

We would like to thank the librarians in Boston, Chicago, Los Angeles, New York and San Francisco who participated in this survey and provided valuable insight into their work and their libraries:

Boston Public Library, Boston University Libraries, Chicago Public Library, Columbia University Libraries, Los Angeles Public Library, New York University Libraries, San Francisco Public Library, The University of Chicago Library, University of California: Los Angeles Library, University of San Francisco: Gleeson Library.

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APPENDIX

Table 2: Complete and Average Survey Results

No.	Academic Libraries			Public Libraries			Overall		
	Expectation	Experience	Gap	Expectation	Experience	Gap	Expectation	Experience	Gap
1	7.00	5.33	-1.67	6.75	5.13	-1.63	6.90	5.25	-1.65
2	6.42	3.17	-3.25	6.88	5.25	-1.63	6.60	4.00	-2.60
3	6.25	5.25	-1.00	7.00	6.25	-0.75	6.55	5.65	-0.90
4	6.17	4.17	-2.00	5.50	4.38	-1.13	5.90	4.25	-1.65
5	6.25	3.83	-2.42	7.00	5.13	-1.88	6.55	4.35	-2.20
6	6.08	5.50	-0.58	6.75	5.75	-1.00	6.35	5.60	-0.75
7	5.25	3.25	-2.00	5.88	5.50	-0.38	5.50	4.15	-1.35
8	6.67	5.83	-0.83	7.00	6.00	-1.00	6.80	5.90	-0.90
9	6.17	5.83	-0.33	5.63	4.50	-1.13	5.95	5.30	-0.65
10	4.00	2.08	-1.92	6.75	5.13	-1.63	5.10	3.30	-1.80
11	2.67	1.67	-1.00	6.25	4.50	-1.75	4.10	2.80	-1.30
12	6.58	5.58	-1.00	6.75	5.75	-1.00	6.65	5.65	-1.00
13	6.67	6.00	-0.67	7.00	5.88	-1.13	6.80	5.95	-0.85
14	6.92	5.50	-1.42	7.00	5.75	-1.25	6.95	5.60	-1.35

15	5.92	5.00	-0.92	7.00	5.38	-1.63	6.35	5.15	-1.20
16	6.25	5.75	-0.50	6.00	5.25	-0.75	6.15	5.55	-0.60
17	6.75	5.17	-1.58	5.75	4.75	-1.00	6.35	5.00	-1.35
18	6.67	5.17	-1.50	6.75	4.88	-1.88	6.70	5.05	-1.65
Avg.	6.04	4.67	-1.37	6.53	5.28	-1.25	6.24	4.92	-1.32