Information literacy activities in Germany between the Bologna process and the web 2.0

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Abstract

This paper gives a short overview and literature review on the information literacy landscape in Germany concerning the general situation and diverse activities especially of German university libraries. It includes issues like the influence of the Bologna process, the development of online tutorials, the role of e-learning and further new perspectives growing with the dawn of the Web 2.0.

1. Introduction

The German information literacy scene in higher education is coined by diversity and change. The scope ranges from library practice which grew out of classical user education to new course-integrated teaching activities as a result of library-faculty relationships because of the ongoing transformation of German universities through the Bologna process. Each library in higher education meets its own context within its parent institution. The new possibilities concerning electronic learning environments led also to library activities to produce online tutorials as well as to integrate their services in e-learning systems.

Although there are efforts of standardisation and merging of information systems through global players, through federated search systems or through portals which reduce the diversity, the development of the Internet led constantly to more diverse information systems. Not least this is seen with the emergence of the Web 2.0. The users of today have to know how to handle this information jungle to find their way and to make conscious choices.

2. The general situation of information literacy in Germany

The topic "information literacy" has been established in the German library scene since the end of the nineties of the last century. Between the years 2000 and 2001 the Federal Government supported a study on the information behaviour of students and university teachers showing a lack in information literacy in both groups (Gavriilidis, 2003). Shortly before first activities to reanimate what was formerly called user education led to a process of change starting within German libraries. In a statement of the German Federal Ministry of Education and Research (BMBF) the term Informationskompetenz, which is used in Germany for information literacy, was seen as a "prerequisite for efficient use of information" (BMBF, 2002, p.8) in the information society. Today no university library gets away with not promoting information literacy by some means or other.

2.1. Literature and communication

Since the review articles in English language by Homann (2003a, 2003b) a comprehensive overview on

information literacy in Germany appeared. In English translation it has the title "Teaching library in Germany : conveying of information and media literacy as a core role for public and research libraries" (Lux & Sühl-Strohmenger, 2004). 2007 followed a second German book including the term "teaching library" in its title (Krauß-Leichert, 2007). It contains a collection of papers by the main protagonists of the German information literacy scene from its beginning at the end of the nineties.

Today the subject "information literacy" is visible in frequent papers in German library journals as well as in regularly sessions taking place at library and information science conferences. In the November / December 2007 an issue of the German Library journal "Buch und Bibliothek[Book and library]" appeared with the main focus "Teaching Library".[1] Also conferences devoted to the subject information literacy alone took place:

- In 2003 a series of conferences with the title "Die lernende Bibliothek [The learning library]" started. The first meeting was in Bozen (Italy), the next 2005 in Augsburg (Germany) and the last this year in Innsbruck (Austria)[2].
- In 2004 the 4th Frankfurt Scientific Symposium brought international experts in information literacy to Germany. The title of this symposium was "What is literacy? What is information? What is knowledge? Ways of teaching and learning to use information effectively".[3]
- Lectures concerning the topic information literacy from Germany and abroad were given at the recent Konstanz Workshop on Information Literacy 2007, November 8-9, 2007.[4]

In Germany the political responsibility in the area of education lays in the governments of the Federal States of Germany. As a result there exists no common national initiative in the area of information literacy. Within Federal States or library networks working groups have been founded to coordinate work and to build a platform for communication. The working group in Baden-Wuerttemberg even developed its own information literacy standards. Others have just begun their work in the sense of a "community of practice" like the Working Group Information Literacy of the GBV Common Library Network of the Northern Federal States (AGIK GBV) which aims at promoting information literacy activities and create possibilities for communication within the participating libraries.[5] More formally organised are the libraries in North-Rhine Westphalia whose working group on information litearcy was founded in 2002 (Nilges & Reessing-Fidorra, 2006). They developed standards for the conveying of information literacy concerning teaching librarians, marketing, room set-up and technical requirements. In many universities in North-Rhine Westphalia information literacy courses are implemented in the curricula and get credit points.

The university library of Munich hosts the central portal for information literacy in Germany informationskompetenz.de which is a joint project of the information literacy working groups in the single Federal States. The portal contains an overview about activities in Germany, a growing collection of materials, a news service, and a service for statistical evaluation of information literacy practices in university libraries. In a position report the University Library of the Ludwig-Maximilians-University Munich described the situation in information literacy at a large German university (Schüller-Zwierlein, 2006), a situation which can be generalised to other German libraries.

2.2. Information literacy courses within university libraries

The range of courses in information literacy in university libraries has developed within three ways (Sühl-Strohmenger, 2007):

1) Independent courses (about 90 minutes or shorter) which were directly offered by the library often were less frequented. Nevertheless many libraries offer such courses. For example at the TUHH University Library a run of workshops with the title "SearchIng at noon" invites engineering students and staff for 30 minutes before or after lunch to learn and reflect on topics like "InformING by playing" or "In addition citations - searching for journal articles and analyzing citations in the Web of Science", "Searching for journal articles to identify the state of the art!" or " Exploring the Digital Library". An alternative for such courses may be the concept of road

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1 Buch und Bibliothek 2007, 59, 788-816.

2 http://www.uibk.ac.at/ub/lernendebibliothek/ , retrieved December 10, 2007.

3 http://www.ub.uni-frankfurt.de/messe/symposium2004/abstracts.html , retrieved December 10, 2007.

4 http://www.ub.uni-konstanz.de/bibliothek/projekte/informationskompetenz/kwil.html , retrieved December 10, 2007.

5 See for information about the AGIK GBV http://www.gbv.de/wikis/cls/Informationskompetenz , retrieved December 10, 2007.

shows, developed by the university library of Freiburg, which presents information literacy issues as well as library services outside the library on the campus.

In a recent talk Suzanne Rockenbach (2007) summarized her concerns about the usual practice of a 90-minutes-session for 150 participants to transfer information literacy contents. For Rockenbach it is important to provoke within the learners an positive attitude for life-long learning. For that reason it is necessary to make learners curious about what the information world can offer to them, so they will be more motivated to explore the information universe by themselves. In addition it is important for learners to create doubt as a pre-condition for their own thinking and for to be critical when searching for information.

2) One-shot sessions integrated in regular study courses are the second mode to deliver information literacy topics by university libraries.   For the author at a University of Technology the situation today is still similar to the situation in the year 2000: Information literacy activities, based on personal contacts as a subject librarian and on faculty-librarian collaboration, led to an agreement that has existed for years between the Dean for Study in Chemical Engineering and the Subject Librarian for Chemical Engineering.   So with one-shot presentations integrated in the curriculum of chemical engineering and biotechnology it has been possible to raise an awareness of information literacy and to reach at least 80 to 90 % of the process engineering students. The range of topics concerning "The world of engineering information – 10 points to survive" (Hapke, 2007c), which should be included in such sessions, is often too large for reasonable learning of the audience. Especially useful are such one-shot sessions in the beginning of subject-specific study courses which are project-based and which aim at self-dependent learning.

3) The Bologna process led to a reform of the curricula in the direction of bachelor and master as final degrees. Accreditation offices force university administrations to include more courses in key qualifications into the curricula. Nevertheless the universities can decide themselves to which extent and how key competences will be implemented.   So, many libraries have been asked to offer extra-courses in information literacy for a whole term of study with one or two hours every week. In this case the students can get credit points for this course. Students can select such a course as one of the obligatory elective subjects which have to be part of the area of key competencies. Disciplinary differences e.g. between subjects like engineering and the humanities play a special role for the possible enlargement of libraries' information literacy activities. The implementation of general key competence courses especially in engineering curricula could be improved in some universities.

2.3. Funded activities in information literacy

Very early from 2000 the BMBF ministry supported an information literacy project called LOTSE (Library Online Tour and Self-Paced Education, http://lotse.uni-muenster.de) of the University and State Library Münster. It gives users an overview about all areas of searching and handling scholarly information and was created with the Swedish Educate project and its website Into Info as a guide (http://educate.lib.chalmers.se/). LOTSE is now in further development by a consortium of libraries with a range of subjects from for example electrical engineering, history, physics and medicine to social sciences and economics.

Later from 2004 until 2007 the BMBF supported a second project in the area of information literacy, the joint project BibTutor. BibTutor (http://www.bibtutor.de) has been developed together with the university libraries Darmstadt, Hamburg-Harburg, Heidelberg and Kaiserslautern and the software company Brainbot Technologies in Mainz under the leadership of the German Research Center for Artificial Intelligence (DFKI) in Kaiserslautern. It supports and facilitates searching in library catalogs and databases adapted to the need of the user and to the context. BibTutor offers learning possibilities and suggestions to promote the information literacy of the user. In addition to support the selection of databases through an interactive BibTutor module which gives orientation about information systems offered, BibTutor gives context-specific advice at the point of need when the user searches a specific database interface. Oriented at the "micromoment" of searching, it also offers context-specific, just-in-time (e-)learning, through further information modules or linking to external learning modules like online tutorials as DISCUS or LOTSE. When searching via BibTutor the user automatically gets hints concerning misspellings, handling or syntax errors. If required, alternative search terms or in some cases terms of the controlled vocabulary of the database used are offered. All this is now part of the development of so-called next-generation catalogs in the Web 2.0 and the idea behind BibTutor to support and "teach/reach" the user in the real context will survive the BibTutor prototype.

Through funding by the German Research Foundation (DFG) the University Library Constance build up a comprehensive source of materials to support information literacy education (Dammeier, 2006). In form of

slides, proposals for assignments, and a complete syllabus the project offers a model for a stand-alone information literacy course for bachelors.[6] As part of the project the Constance University Library offers a series of online tutorials to complement the syllabus and which are offered via the e-learning platform ILIAS. All materials are licenced with a Creative Commons Licence what is worth emulating. Until 2007 the Constance University Library has made a further project on the practice of information literacy for advanced students in connection with Chinese partners (Franken, 2006; Kohl-Frey, 2007).

2.4. Online tutorials on information literacy

Although activating, learner-centred teaching methods have been developed also in German libraries, the problem to reach masses of students is still in need of solving. The personal development for librarians in the education area has to be planned strategically. In information society today the methods for promoting information literacy have to consider the electronic environment. To complement in-class instruction activities there has been a growing need for an online tutorial. The last paragraph already mentions the activities of the Constance University Library.

Raising awareness of information literacy and giving a general orientation to searching databases are the key goals of the bilingual tutorial DISCUS (Developing Information Skills & Competence for University Students, http://discus.tu-harburg.de) of the University Library of the Hamburg University of Technology (TUHH). In German and English DISCUS also gives a subject-specific orientation and includes interactive and task-oriented elements, with special emphasis on the visual appeal of the tutorial's interface. In addition to having something like a landmark for the promotion of information literacy, the most important reason for the TUHH library to do an e-learning project like DISCUS was a strategic one: To make the library part of the e-learning discussion within the university and to be visible as a library when building up a new electronic infrastructure. In DISCUS the user of databases and digital libraries is regarded as an 'information player' who plays with databases and search terms to improve research results. So DISCUS offers a playful and explorative way of transferring information skills. Nevertheless it is very difficult to create exercises which are fun, make sense and are challenging like the 'Boole's Restaurant' which is part of the tutorial. DISCUS draws heavily on searching information in an online world from a classical librarians point of view (Bieler, Hapke & Marahrens, 2005).[7]

A further tutorial by the TUHH library, VISION (VIrtual Services for Information ONline, http:// www.vision.tu-harburg.de), is on research methods and writing scholarly papers to complement DISCUS. VISION supports reflection about the set of problems concerning the production of information like reading, writing and publishing and also picks out as a central theme aspects like the journals' crisis, open access and intellectual property. Methodically significant for VISION are the different means of visualising its content as well as the inclusion of emotional and theatrical elements (Bieler, 2007). It is no comprehensive tutorial about research methods but should raise awareness and lead to further resources in form of lists of books and links in web 2.0 environments, like Librarything and social bookmarking services. Both projects received funds from the Federal State of Hamburg through the E-Learning-Consortium Hamburg (ELCH) via the Multimedia-Kontor Hamburg (MMKH).[8]

In North Rhine-Westphalia a basis tutorial has been developed which offers comprehensive, but lean and not animated content in all areas of information literacy (Schirra, 2007).[9] Other libraries like these in Constance mentioned above and also in Düsseldorf (Hauschke & Ullmann, 2006) include information literacy tutorials in existing learning management systems.

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6 For more look at http://www.ub.uni-konstanz.de/bibliothek/projekte/informationskompetenz.html , retrieved December 10, 2007.

7 See also the database PRIMO (Peer-Reviewed Instructional Materials Online) at http://www.ala.org/apps/primo/public/search.cfm where DISCUS was selected as website of the month in August 2005: http://www.ala.org/ala/acrlbucket/is/iscommittees/webpages/emergingtech/site/august2005.cfm

8 http://e-learning-hamburg.de/ , retrieved December 10, 2007.

9 http://www.informationskompetenz.de/regionen/nordrhein-westfalen/online-tutorial-informationskompetenz/

2.5. Information literacy activities outside university libraries

There are also activities in many other layers of the German educational system, especially concerning schools as well as adult education. Dannenberg & Haase (2007) developed a manual for becoming a teaching library for one-person libraries. For Holger Schultka (2007) of the university library in Erfurt each library has to offer educational services for a broader public, and he claims for an own library pedagogics. In its activities the university library of Erfurt cooperate with high schools as well as public libraries.

In 2005 the annual meeting of the German Society for Information Science and Information Practice (DGI), a German society for information scientists and specialists (http://www.dgd.de/), had the motto "Overall concept Information Competence". Information literacy is here in most cases understood as the key competence of information specialists or information brokers. Also actors from university departments which are responsible for the education of librarians and information specialists, often understand the term in this way. Nevertheless a growing awareness can be noticed to include the subject "conveying information literacy" into curricula for the education of librarians and information specialists, including academic instruction to create didactical competence for teaching librarians.

Concerning research activities within the area of information literacy in Germany this is done in most cases by library professionals. In Germany until now there seems to be nobody in library and information science departments in higher education who deals explicitly with information literacy, who has made substantial research in this area or who plays a key role in this subject like in other countries, e.g. Chrstine Bruce in Australia or Suzie Andretta and Sheila Webber in Great Britain. But more and more master theses on information literacy have been done and published, e.g. (Hütte, 2006), who gives an execellent overview in German language about the German information literacy development,[10] and there are also doctoral theses on the way (Ingold, 2005a). Also outside library and information science there can be observed a growing interest and research in information literacy.[11]

3. Between Dewey and Dewey - Information literacy 2.0

Information systems change and so has to change information literacy. In former times the information system and the user were strictly divided: The user send a search request to the system, the system answered with a list of hits. Sometimes in between there acted a human information specialist like a librarian. With systems for example like Amazon the information system learns from user input and the answer of the system is influenced by the searches of former users. In the world of social software the "users" or now better "co-producers" take part in building up the content of the information systems like weblogs, wikis etc. Users do learn from the system like before but they also learn from each other through the system which is now also a communication system.

Most information literacy instruction approaches in Germany are grounded in a librarians' viewpoint (Ingold, 2005a), for which the first Dewey in the title of this section stands for, the American librarian Melvil Dewey (1851-1931) who developed the decimal classification and in whose writings early views about the teaching role of librarians can be found. The emphasis on information literacy here lies in searching of information and learning with information. This concept of information literacy still predominating in German libraries has to be critically questioned, not only because of the changing role of the user in information systems of the Web 2.0. More than efficient retrieval and navigation strategies, information literacy today includes the creativity to organise and shape one's own information and learning process in a conscious and demand-oriented way.

The other Dewey, John Dewey (1859-1952), an American educational philosopher, stands for metaphors like "learning by doing" and an experience-based and democratic learning (Elmborg, 2006). Information literacy in this view means in addition to the former view seeing information literacy as an activity to promote reflection and learning about information. It includes a more holistic view on information literacy as an important part of learning as well as learning information literacy by practical experience "on the fly". In respect to this, issues like intellectual property, coping with information overload or problems in privacy, which are for example caused by

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10 See also Brunner (2007, pp. 10-31) for more on the history and development of information literacy in Germany.
11 This is especially true for the subject media information technology and educational sciences, see (Ballod, 2007) and (Hochholzer & Wolff, 2006).

the Web 2.0, have to be important parts of information literacy activities. In a world of "cut and paste" the use of citation rules and avoiding plagiarism are issues of information ethics. Economical and political questions within the information process like authors' rights and open access have to be picked out as a central theme. It is necessary to rise awareness about the quality of information and its sources as well as to create an understanding about ways and mechanism of publishing and information circulation. Information literacy 2.0 is a "learning experience" (Lupton, 2004) in a time where informal learning becomes always more important. Information literacy 2.0 includes not only learning with information but learning about information and knowledge.

The term "information literacy 2.0" (see Figure 1) challenges the library based concept of information literacy mentioned above. In the world of the Web 2.0 this view has to be changed (Hapke, 2007a). The view on information literacy 2.0 does not centre in social software or technology but in giving information literacy another, more critical perspective.[12] The user is seen not as a customer, but as a co-producer; education is not a transfer of information and knowledge but a process to create an ability of reflection and a critical awareness; the library is not a warehouse of information but a place for individual and collaborative experiences and learning.
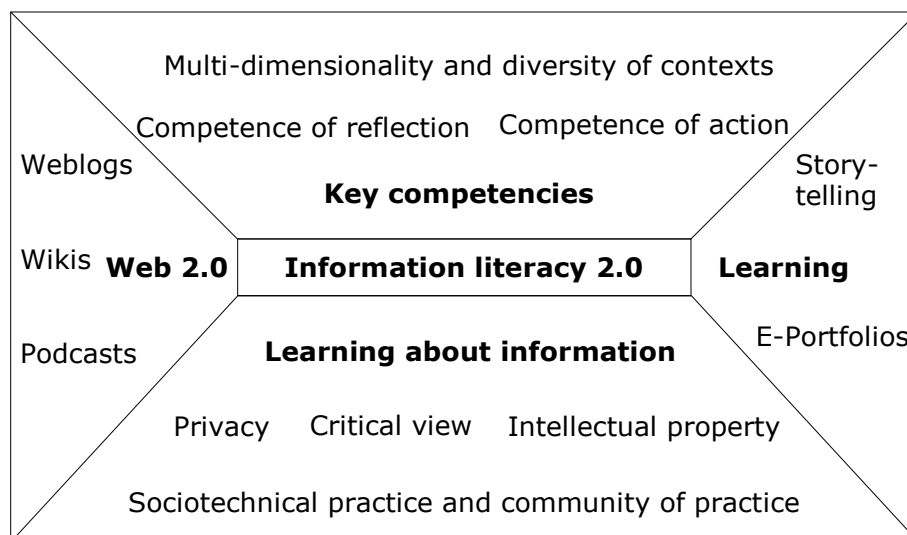

Figure 1: Information literacy 2.0

A holistic view on information literacy emphasizes the diversity of views on information literacy. In addition information literacy is one of many other key competencies, which are necessary for a life-long learning process. A whole bunch of important competencies and "new literacies" are discussed and available in the modern digital world: digital literacy, media literacy, interdisciplinary competence, intercultural competence etc. So, it may be good to look at information literacy also from a non-librarian view, e.g. from business, in which information overload for example is a key challenge (Ingold, 2005b). Until now in Germany information literacy is not used as an umbrella term for the key competence in a digital society like it is often used in other countries.

4. The library in the learning environment

Promoting information literacy today have to be part of the strategy of the whole library. In Germany most

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12 Some of this draw heavily on insights taken from readings of authors of the international information literacy movement such as James Elmborg, Barabara Fister, Cushla Kapitzke and others. See Hapke (2007a) for more detailed references. In addition these views are also influenced by many discussions within the Working Group Information Literacy of the Common Library Network (GBV) in Northern Germany.

activities in information literacy are a by-part of the normal library service. The whole library services have to be changed in the direction to promote information literacy. What can reference service do for this goal? How to change the catalog? One idea may be including Web 2.0 features to made it possible for the user to collect their personal database of selections. In addition to aiming at an information-literate university (Webber & Johnston, 2006) we have to create the information-literate library. Universities have to combine their strategies for the improvement of learning and teaching with their concepts for the service departments including the libraries.

At the Hamburg University of Technology activities in building online tutorials led the library to be a constitutional part of e-learning. A peer group of the university in which the library played a strong role developed a strategy plan for the development of e-learning which includes a chapter about the learning facilitating role of the library (Rohling, 2007). It is important to make the library visible in the e-learning environment through integrating library services and learning management systems (Hapke, 2005, 2007b). It is also important to facilitate the creation of information products by the patrons themselves, e.g. by creating services for digital consulting (intellectual property) and services for digital production. Again information literacy deals not only with searching and processing information but also with having the abilities to use information environments like social software or learning management systems to produce information and learning objects by learners as results of their own learning. Active information literacy in the sense of competencies and abilities for information use, information production and publishing is necessary (Tappenbeck, 2006). For this last point the Learning Resources Center in Göttingen is one German example. Also the concept of an information or learning commons which grew outside Germany has to be considered as an important development for German universities (Hapke, 2005).

Most learning management systems are still orientated to study courses. What is needed are places for learner expression, e.g. electronic portfolios, a form of learning diaries, whose importance were early emphasized by Roes (Roes, 2001). Learning management systems have to change and add possibilities for such personal learning environments. The Web 2.0 eases their realisation (Attwell, 2007). The work with weblogs and wikis corresponds with modern views of constructivist learning. Using and especially creating own weblogs can have similar advantages for learning like learning diaries and research log-books which have been recommended for a long time by researchers in academic instruction.

The term 'teaching library', which is quite popular in Germany, is to question. The author prefers 'learning facilitating library' instead, which can surely also contain teaching but not alone. But to remind: good teaching today means facilitating learning. Learning today in its best sense means mainly co-producing, collaboration etc. It is important that the student does not learn through teaching but through taking part at researching. For the author of this paper the metaphor of calling the student a 'customer' was challenged by the statement of a president of a small German university in 2006 who claimed not to watch students as customers but as co-producers, which clearly correspondents to the Web 2.0 world.

A learning facilitating library offers its customers - in addition to the physical library as an important place for learning - consulting services as well as possibilities for their customers to change and broaden their repertoire of experiences when searching and finding information (Pilerot, 2003). Our customers are very different as learning types. To address the "teachable moment" (Block, 2003) of customers as well as to address the full complexity of information literacy, it is necessary to offer a wide and diverse range of activities to promote information literacy and reference: one-off sessions in-class or outside of class, online tutorials, just-in-time-support as virtual reference, an informative library website, face-to-face meetings, newsletters via email, bookmarks, leaflets etc.

From a libraries' point of view, it is important to watch the student as customer who gets the best possible service from the library, but it may be also challenging to see the student as a co-producer and not as a user (of a library or of an information system). The term 'user' of information systems was correct clearly for the past, but the information systems of today, like wikis, blogs etc., were produced together by their 'users' which are now co-producers of the information system. The role of the library in this world may be the role of the trusted user (co-producer). Libraries will have an excellent future when librarians become co-producers, facilitators and "more critical commentators, mediators and mentors - perhaps nomadic intellectuals and cultural tourists - rather than traditional archivists and monitors." (Luke & Kapischke, 1999, p. 476).

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