Layers of a national digital information strategy in Germany

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Abstract

Due to the lack of a sustainable tradition of private patronage for tertiary education, German libraries have developed a complex layered network of communication and support to cope with a permanent lack of resources. The tiers of this structure of cooperation and funding reflect the organization of Germany as a coalition of federal states. National, regional and local ventures to improve education infrastructure massively rely on funding by the National Research Foundation DFG (Deutsche Forschungsgemeinschaft) which on its part presents frameworks for project proposals by issuing specific support programmes for universities and libraries. The paper presented describes current structures and policies of the German library network and gives examples of best practice ventures all of which are bound to contribute to the vision of a national virtual library.

Keywords

National information infrastructure, Germany, political funding bodies, digital information projects.

1. Background and Strategic Context

Like Austria, Canada, the USA, Argentina or Switzerland, Germany is a federation, consisting of currently 16 federal states (Länder) with political autonomy in certain areas and subordination in others. The legal foundation of the division of powers between federal and provincial authorities is based on the Basic Law for the Federal Republic of Germany. Article 30 deals with the division of authority between the Federation and the Länder and asserts that

except as otherwise provided or permitted by this Basic Law, the exercise of state powers and the discharge of state functions is a matter for the Länder

The Federation retaining framework responsibility, the cultural sovereignty lies with the federal states of Germany, giving them the responsibility to shape the whole educational system, creating new forms of schools, devising new educational programs and final degrees, setting up their proper standards and cultural priorities. This element is at the heart of their sovereignty. And cultural diversity, which was a cornerstone in the formation of Germany as an amalgamation of many small states, can thus be maintained, but makes competition, comparability and cooperation rather difficult. And although there are national instances like the German Federal Ministry of Research and Technology, a binding national library policy is rendered impossible.

2. Supraregional Library Networking – Structure and Resources

Requirements of efficient information provision are irrespective of particular political coincidences but have to build upon them. Lack of a sustainable tradition of private sponsorship and limited public resources add to the importance of cooperation and networking. Offline regional cataloguing networks existed since the early 1970s and have their seeds in a nationwide interlibrary lending code, dividing Germany in interlibrary loan regions soon after the
second world war. Apart from the national serials database ZDB and the old union catalogue of
machine readable catalogue date VK, which were considered as regional cataloguing networks,
there currently exist six regional library networks in Germany

Joint Library Network (GBV)
Headquarters: Göttingen
Members: Lower Saxony, Saxony-Anhalt, Thuringia, Hamburg, Bremen, Mecklenburg-Western
Pomerania, Schleswig-Holstein

Cooperative library network of Berlin and Brandenburg (KOBV)
Headquarters: Berlin
Members: Berlin, Brandenburg

North-Rhine Westfalia Library Network (HBZ)
Headquarters: Cologne
Members: North-Rhine Westfalia, Rhineland-Palatinate (administrative districts Koblenz, Trier)

Hessian Library Information System (HEBIS)
Headquarters: Frankfurt/M.
Members: Hesse, northern parts of the Rhineland-Palatinate administrative districts (Rhine-
Hesse)

South West German Library Network (SWB)
Headquarters: Konstanz
Members: southern parts of the Rhineland-Palatinate administrative districts, Saarland, Saxony

Bavarian Library Network (BVB)
Headquarters: Munich
Members: Bavaria

The basic reason for their emergence is the obvious demand for cooperative cataloguing, which
at that time resulted in the creation of corporate databases for bibliographic description and
subject indexing according to particular codes (RAK, RSWK, RVK). All of them use records
externally available (particularly from the German National Library) and link to authority files
(PND, GKD, SWD). The compelling success of regional library networks brought them further
tasks to support the missions of their member libraries including conjoint further development of
library services, thus going beyond the concerns of cataloguing centrally. Network Headquarters
support local IT administrators and provide interfaces between the central cataloguing system
and the local library systems. Cooperation among library networks is a major issue these days
as nationally important political authorities more and more question the necessity of as much as
six different networks. In fact national political structures relevant for culture and education exist
- the relevance of combined efforts on a national level is obvious beyond librarianship, two of
which are of particular significance for tertiary education.

With a view to co-ordinating cooperation in the areas of education and training, higher education
and research, as well as cultural matters, the Länder established the Standing Conference of
the Ministers of Education and Cultural Affairs (Ständige Konferenz der Kultusminister der
Länder) in 1948, which has served as a forum for permanent cooperation ever since. The
particular body responsible for joint educational planning and research promotion between the
Federation and the Länder is the Joint Commission for Educational Planning (Gemeinsame
Wissenschaftskonferenz GWK), the successor organization of the Bund-Länder Commission, in
which the Federal Government and the governments of all Länder are represented with the
same number of votes.

Within the Federal Government, it is the Federal Ministry of Education and Research (BMBF)
that is responsible for policy, coordination and legislation regarding the general principles of the
higher education system, as well as the expansion and construction of institutions of higher
education, out-of-school vocational training and training assistance. Contrary to the two
instances mentioned above, the BMBF’s mission and budget allow fundamental funding of science and research, the ministry thus forming a cornerstone of the development of library services in particular. The declared goal of the current government is that 3% of the German gross domestic product (GDP) should be invested in research and development. With a total volume of 9.187 billion euros in 2008, the BMBF’s budget increased by 670 million euro compared to 2007, an increase by 7.85 percent. The additional funds are mainly spent on research. Financing of projects is arranged either directly between the BMBF and the applying research institution or via the German Research Foundation (DFG), the budget of which is provided by the Federal Ministry of Education and Research. According to the DFG annual report, 1,580 million euro were spent in 2006 to support projects and initiatives nationwide, the annual appropriations being supplied by the BMBF and the state governments likewise.

The Deutsche Forschungsgemeinschaft (German Research Foundation) DFG is the central, self-governing research funding organisation that promotes research at universities and other publicly financed research institutions in Germany. The DFG serves all branches of science and the humanities by funding research projects and facilitating cooperation among researchers, both DFG and BMBF thus constituting the national body of sourcing education and research in Germany, supporting governments of the Länder, the second level of funding, as well as universities and further institutions on a first that is local level, to make education and research possible.

Concerning the selection of projects to be funded, DFG and BMBF rely on the Science Council, the Wissenschaftsrat as an advisory body to the Federal Government and the state governments. Its function is to draw up recommendations on the development of higher education institutions, science and the research sector as regards content and structure. Currently no new library building is constructed without the consent of the Wissenschaftsrat.

3. Examples of Best Practice in the Development of a National Digital Information Infrastructure on a Local Level

Fortunately the advancement of a library service portfolio not only depends on intricate and comprehensive workout of application papers. Creativity and a restricted budget made a difference by realising dokumenTUM, an in-house meta-search engine for journal articles at Technische Universität München that supports full-text and relational information retrieval as well as electronic article ordering and delivery. The conjoint development of the university library and the computer science chair for database systems and knowledge bases started in the mid 1990s and produced a software that was sold to “SISIS Informationssysteme GmbH”, now OCLC in 2000. As standalone “SISIS-Elektra - the Portal Software” or established OPAC-module InfoGuide of the integrated library system SISIS-Sunrise, it is used in all Bavarian university libraries and many others. Search entries of the dokumenTUM database are based on SwetsNet content pages, that are supplied on a daily basis. In case a search result is available electronically at the campus, the system provides the appropriate URL. If there is only a printed version, the user can order the desired article electronically, thus triggering a commission to scan the article at one of the 9 branches of the university library system. The article finally digitized and stored on the library web server, the orderer will be informed about the article deposit-URL by email. Otherwise he or she is referred to other sources via ILL-link or SFX.

Local initiatives can also be of fairly large impact and public interest, as can be seen by a recent project of bulk digitisation at the Bavarian State Library (BSB). As part of a long term objective of digitisation of the complete BSB copyright-free collection - except incunables and manuscripts – the BSB management signed a partnership agreement with google to digitise the complete BSB collection published between 1700 and 1900. According to the BSB speaker google will provide sophisticated quality control routines. A high resolution copy of each issue will be supplied to the BSB without copyright restriction. Digitisation of about a million books is said to take place somewhere in Germany and will require several years. A nondisclosure
agreements bars any further information, so we shall have to wait for the results and Google’s resourcefulness to convert printed objects into digital cash.

4. Examples of Best Practice in the Development of a National Digital Information Infrastructure on a Regional Level

Important and often unique printed collections in university libraries are on their way to the networked public as well, e.g. funded by an initiative announced by the Bavarian State Ministry of Sciences, Research and the Arts. Funds will be available to improve university library scanning infrastructure and for processing of full text scan projects. Customer surveys in several states have – among other issues - confirmed the guess that patrons appreciate browsing content pages of journals and monographs as a means to better form an opinion about the relevance of catalogue entries for their studies. Consequently state governments allocated a considerable budget to scan content pages of monographs nationwide based on division of labour. Apart from copyright issues, the initiative evoked much controversy around German librarianship as probably almost all content pages being scanned in fact already exist in digital form with publishers, although they don’t like to come out with them at the moment. Be that as it may, OCR data of all digitised objects are integrated into the catalogue of the respective library network and will thus be at the disposition of the inclined patron. In Bavaria eLibris DigiTool and Adam are used as software tools for data management of scans that are inserted into the central aleph500 database system. Implementation of an ILL component into aleph500 and the local library systems SISIS-Sunrise was also funded by the Bavarian State Ministry of Sciences, Research and the Arts. Interlibrary loan ordering nowadays is managed entirely in electronic form all over the country.

As a last but not least example of endeavours funded on a regional level we want to mention the long term project Bavarian History Online – BLO (Bayerische Landesbibliothek Online). The website complex BLO serves as a central portal relating to culture and history of Bavaria and is a joint venture of

- University Library Augsburg
- University Library Bamberg
- University Library Regensburg
- University Library Würzburg
- Provincial Library Coburg
- Bavarian State Library

BLO offers

- articles on factual issues of Bavarian history
- important documents on Bavarian history (texts, maps, pictures, audio files)
- recommendations for further readings and hints to original document
- Links to pertaining online-offers

5. Examples of Best Practice in the Development of a National Digital Information Infrastructure on a National Level

As was already mentioned the most substantial budget to support library infrastructure initiatives is available on a national level that is with the German Research Foundation DFG and the Federal Ministry of Education and Research BMBF, the first one of which is accountable for a well established supraregional literature provision initiative, the National Distributed Library Plan - Sondersammelgebietsprogramm (SSG). The SSG program provides 23 scientific libraries and some special libraries with in total 9 million euro annually to collect the foreign highly specialized research literature in all academic disciplines. Giving access via interlibrary loan and direct document delivery, this accumulated but nationwide distributed collection is meant to cover “peak demands” of scholarly literature provision, going beyond the mandate and resources of university libraries. The libraries involved are liable to acquire the highly specialized research literature published in Germany by proper resources. The SSG-plan was initiated in 1949
already and is being complemented by various digital amendments. The DFG action line “Digitisation of SSG Collections” will distribute 9 million euro annually between 2008 and 2012 approaching the long term objective of a distributed national digital library even more.

Already now some of the abovementioned SSG libraries and further centres for information (Fachinformationszentren, FIZ) present themselves – in a very liberal translation of their official German name – as “national centres for specialised information provision in science and technology”.

FIZ Technik

presents itself as the German national centre for techno-scientific information and documentation for advanced research and science, in particular the industrial research and development in small and medium-sized companies. FIZ Technik offers its products as online databases and further information products.

FIZ CHEMIE Berlin

is the FIZ Technik equivalent as Germany’s Chemistry Information Centre and likewise is a state-supported non-profit information agency financed by the Federal Government and the Governments of the German States whose primary task is to provide high-quality information services concerning chemistry, chemical engineering and related fields to science, education and industry.

FIZ Karlsruhe

Complementing the above centres the focus of FIZ Karlsruhe is on fundamental sciences too as well as information on energy technologies.

TIB Hannover

The Technological Information Library is described in its webpages as the German National Library of Science and Technology and the related basic sciences. The TIB/UB has spent decades successfully meeting the challenge of being an innovative and competent information provider. On the basis of their superb holdings, the TIB/UB today ranks as one of the world's largest specialist libraries, and one of the most efficient document suppliers in their subject areas.

The above national four-leaf clover have initiated the web portal GetInfo, which is sponsored by the Federal Ministry of Education and Research BMBF with 2.4 million euro in total. Corresponding to the collections of the participating institutions GetInfo provides bibliographic references to literature from the fields of science and technology, offers direct access to electronic full texts and supplies print copies of full texts from journals, books, conference papers, reports and dissertations/theses. In addition to published literature, the underlying database also incorporates “grey literature” (items that are not available in bookshops).

GetInfo on its part is a partner of Vascoda the next cornerstone of a distributed national digital library and a real expansion of the system of a national distributed library plan to electronic information resources. Vascoda is on its way to become the standard meta search engine of virtual subject libraries which already exit for many branches of science and humanities.

More than 35 virtual subject libraries provide

• subject guides of internet resources
• simultaneous search in different databases, library catalogues and other information resources
• availability check
• including union catalogues
• including search in ZDB (journal union catalogue) and EZB (electronic journals library)

Vascoda is jointly sponsored by the German Research Foundation and the Federal Ministry of Education and Research, receiving 2.9 million euro annually.
A quite recent initiative of the German Research Foundation sounds quite compelling at first sight but may have severe drawbacks in the future. National licences give free access to retrospective and current issues of full texts and journal archives and cost 15 million euro per year. Universities and non-university research institutions (institutions of the Fraunhofer Society, Helmholtz Association, Max Planck Society, Leibniz Association) can access the contents free of charge. Individual users can also register for a large number of products: persons with an academic interest who are resident in Germany can use certain products with a personal login code. Access to current issues is organised as consortium – in most cases consortia in Germany take place on a regional network level - with all the adherent well known restrictions. We shall see not before long whether or not national licences will motivate local governments to slash university library budgets.

As further significant projects which are nationally funded should be mentioned
- ZDB (journal union catalogue) and EZB (electronic journals library)
- Deutsche Internetbibliothek – the Knowlegde Portal for Libraries
- Bibliotheksportal – Network of Competence for Libraries
- nestor - the German Network of Expertise in Digital Long-Term Preservation
- subito – documents from libraries society for Libraries
- Centers for Retrospective digitisation in Göttingen (GDZ) and Munich (MDZ)

The initiatives presented above can only provide a glimpse at the varifold of endeavours being accomplished in German libraries. As the cooperation system is very tight and rather efficient most of them are planned and carried out in a coordinated way as building blocks of a sophisticated network, all of them contributing to the vision of a national digital information strategy in Germany.

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