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Botte, Alexander

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Kontakt / Contact:

pedocs
Deutsches Institut für Internationale Pädagogische Forschung (DIPF)
Mitglied der Leibniz-Gemeinschaft
Informationszentrum (IZ) Bildung
Schloßstr. 29, D-60486 Frankfurt am Main
E-Mail: pedocs@dipf.de
Internet: www.pedocs.de

Challenges of Educational Reform in Germany and the Potential Role of Information Literacy

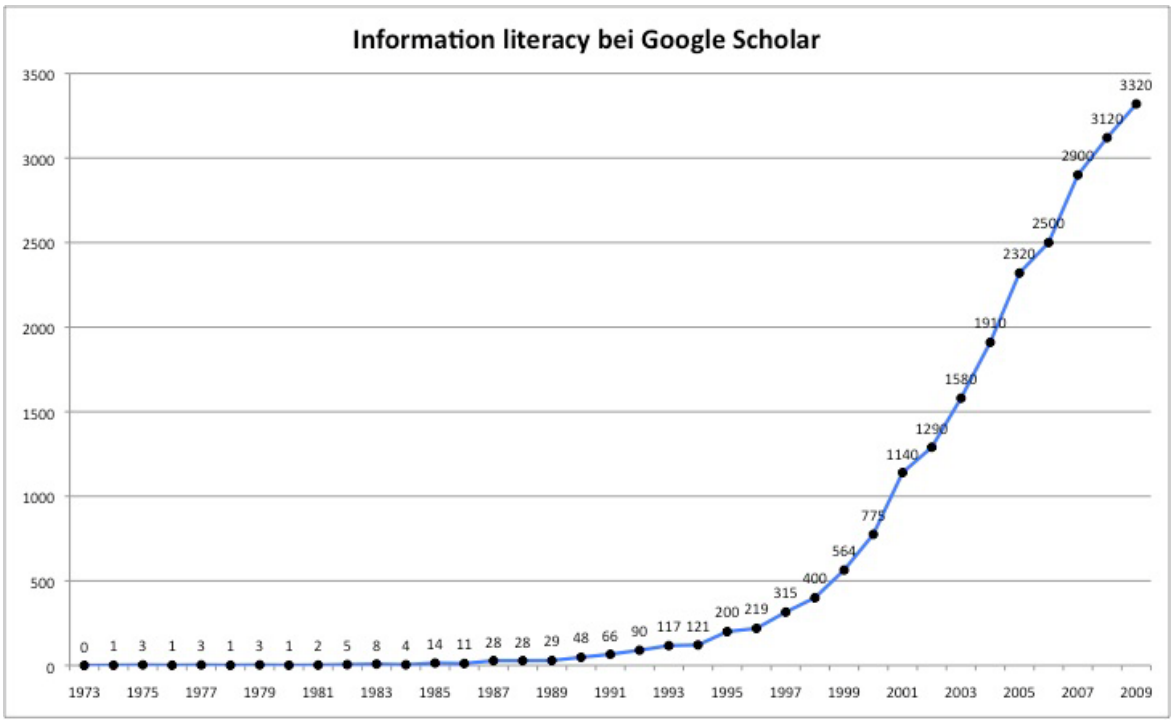
Alexander Botte

Abstract

This presentation will look at the concept of Information Literacy (IL) in the light of some major objectives of current educational reform in Germany. Germany was “shocked” by relatively poor results in the first PISA assessments, which attested Germany a more or less unexpected mediocre achievement in PISA rankings. In consequence, there was a loud and widespread call for educational reforms. Some major aspects of the ensuing debate created a supportive environment for IL principles and opened the door to a public discussion on the relevance of IL in education. This contribution will show the interlinks between educational challenges and IL settings, give a short state of the art of IL in Germany, explain drawbacks of an overarching establishment of IL in education, and propose some basic strategic decisions in order to foster IL in educational settings.

Introduction

According to a study by a German graduate student Linda Treude (Treude, 2011, p. 49), the worldwide awareness of IL has vastly grown since the 1990s. She provides evidence for this growth in interest by the increase in the number of publications and web mentions of the respective terms. The example of GS in only one of several databases Treude queried, the characteristic of the graph is similar in all cases.



Linda Treude (2011):Das Konzept Informationskompetenz: ein Beitrag zur theoretischen und praxisbezogenen Begriffsklärung

Even though the main reason for this increase of publications is the growing amount and relevance of digital information in general, it also reflects the growing awareness of IL as a consequence of this foremost technical development.

Information Literacy has become a topic of major societal relevance, but it is discussed as such nearly exclusively in librarian contexts. This article will look at IL from the perspective of a quite renowned German non-university educational research institute, the German Institute for International Educational Research. This institute is unique in combining the tasks of educational research and educational information services. So, this approach to IL is grounded in the perspective of an information infrastructure provider in the context of school improvement.

I. Educational Reform Objectives and IL

The basic assumption is that major aims of education policy and many educational reform objectives support the idea of IL as a key element in future education. This assumption is supra-national, but it will mostly be made explicit by providing German background information. But first of all, a European example for educational reform ambitions will be presented. The *Strategic Framework for European cooperation in education and training* ('ET 2020') pleads for four major targets of educational reform, representing an official European perspective on educational needs (Eurydice, 2012):

- Making lifelong learning and mobility a reality
- Improving the quality and efficiency of education and training
- Promoting equity, social cohesion and active citizenship
- Enhancing creativity and innovation

It is evident that this is a decisive political view of education which aims at a certain idea of a socially aware, but also economically competitive European citizen. In Germany and some other countries, this European view on educational reform was accompanied by a specific reform discussion that started with the so-called 'PISA shock': Some countries were profoundly surprised by poor results in the first PISA assessments in 2000. Germany was one of the alerted countries. Discussions about necessary changes immediately began and gave a special impetus to reform activities (Fahrholz, 2002). Europe was also at the background of the movement, in terms of the need for European harmonization, comparable standards and conditions of learning (A comprehensive view at the connections between PISA and educational reform in Germany is given by Raidt, 2010).

Many aspects of education have been debated; here the focus is on the more strategic ones:

1. The holistic view on education: The whole life span from early childhood to vocational education and in-service training is seen as a continuum of lifelong learning
2. The dynamic view on education: Knowledge, skills and challenges change according to technical, social and economic framework conditions
3. From input orientation to output orientation: Instruction is designed towards competences' and standards' oriented teaching and towards self-regulated learning

It is interesting and essential that these concepts of reform touch upon all three levels of education: the individual learner, the instructional level of the classroom, and the institutional level of the school.

Looking closer at these three strategic targets, you can derive the following operational objectives in German reforms, which also make sense in the light of aforementioned EU targets:

1. Learning as a continuous lifelong process needs to start earlier (kindergarten); it requires a better preparation and tuning of transitions between educational institutions and levels and a lifelong perspective of qualification (regular further and adult education). Reforms focus on:
    - transitions not only between educational levels but also between regional or career spheres,
    - spiral learning with increasing levels of competences
    - Autonomy of learning and school organization stimulating the overall goals of creativity and innovation in individuals, learning groups and in school administration.
2. In Germany, there was a general conviction that the school system was good by tradition. However, knowledge, skills and challenges change according to social and economic conditions. Good examples of this are todays' relevance of the internet and the involved juridical and social-psychological conflicts or the cultural complications going along with Europeanization and migration. Such challenges cannot only be met by traditional learning content and principles. Reforms focus on the following aspects:
    - Personal abilities must be embedded into the changing social environment.
    - The ultimate vision is that a personality can adequately deal with new intellectual and cultural challenges. From a European perspective, this supports the overarching goal of citizenship.
3. These broader goals concur with a fundamentally new didactic approach. There is a growing amount and diversity of potentially necessary knowledge and skills, which cannot be represented by a fixed number of educational objectives. Instead the learner must be enabled to grasp many different subject matters, skills and personal abilities in an efficient way. Conclusions for educational reform were:
    - Learning was aimed at competences instead of objectives in order to increase the ability for adaptation and competition of learners.
    - Competences are measured by standards which allow for national and international comparability.
    - Measures of quality assurance frame the reform changes on all levels (school programmes, competitiveness, 'test culture')

Looking at this package of educational challenges you will immediately comprehend that IL would be a crucial element of such a reform, if a comprehensive concept of IL which can refer to an individual as well as to an institution is applied.

II. The status of IL in Germany

The topic IL is on the agenda worldwide and this international concern is also mirrored in Germany. Some people try to raise a qualitative claim by starting a campaign for IL as the fourth basic cultural technique besides the competences of reading, writing and calculating. Consequently IL has more and more become a topic of conferences, proclamations and public funding.
Some highlights may illustrate this development.

- In 1999, the Arbeitsgemeinschaft Informationskompetenz (Working Group on Information Literacy) was founded, which was and still is a network of university teaching libraries. Networks at the regional level of German states (Länder) followed.
- In 2001, the so-called Stefi-Study (Klatt, 2001) informed the interested public about the very low level of information competence of university students. This gave remarkable impetus to the teaching library movement in universities and to the launch of a corresponding internet platform: www.informationskompetenz.de.
- In 2002, Benno Homann translated and commented ALA IL Standards in a German journal.
- But only at the end of the following decade, awareness of IL was raised in other educational fields, especially schools. E.g. in 2008, a working group of our Association for Information Science and

Practice (DGI) in cooperation with an expert group of school librarians tried to support this discussion by a memorandum.

- In 2009, a report of the Federal Ministry of Education and Research on Media Literacy and Education was published, followed by a big funding programme for Media and Information Literacy. But this programme could not be extended on schools, as only the federal state ministries are legally entitled to care for schools. Hence, this funding is restricted to vocational and further education.
- Many activities and proclamations followed to support media and information literacy. Among them was "Keine Bildung ohne Medien!" (No education without media!) 2011.
- A consortium of mainly library, but also information service associations published a programme of targets on Media and IL in 2011 ("BID-Zielsetzungen").

Only a few empirical studies have been conducted on the dissemination of IL elements in school curricula, because doing so is not so easy, as you would have to examine all subject curricula in 16 different German federal states -Länder – on behalf of Germany's decentralized school system! Still, there are several quite up-to-date reports on initiatives and the general state of the art of IL in Germany. A recent doctoral dissertation also attempts a short comparison with other European countries (Balceris, 2011). The situation in Germany seems to be similar to Scandinavian countries, whereas in parts of the UK, the Netherlands and Spain, initiatives targeting the schools level are more common (cf. UNESCO, 2007).

Generally, all these reports show that representative activities are still restricted to the university level, and that even in higher education curricular implementation has only just begun! IL education for schools and pupils depends also on libraries' initiatives, as information literacy preparation for the final school grades is mainly offered by university libraries. To sum up, there is an IL movement in Germany in terms of political efforts and in terms of projects and best practice, but the level of schools has so far not yet been thoroughly considered.

III. Insufficient IL Implementation in Schools

As we assumed that there is a strong convergence of school reform targets and IL as a special competence, the question is raised what obstacles cause the slow implementation of IL principles in school life. Among others the following reasons are relevant:

1. At first there is a general curricular innovation overload. There is the general adjustment to competences and standards, there are sometimes more subjects taught, e.g. more foreign languages, there is more vocational orientation, more media education – and there is the reduction of secondary level schooling in Gymnasiums by one school year (adaptation of European standard duration). In the latter case, reform started before curricula were properly adjusted.
2. There is a general reform overload through growing self-administration efforts, school programmes and competitive financing. There is gradient and school wide investment in evaluations, reporting and other measures of quality assurance. A so-called *Jahresgutachten 2011 des Aktionsrat Bildung* (annual report of independent experts on educational reform in Germany) recently confirmed that with regard to these challenges, Germany is still lagging behind comparable countries and there is a lack of acceptance, notably on the level of teachers (Aktionsrat Bildung, 2011). An exigent step would be to convince teachers of the advantages of new management and assessment strategies.
3. Finally, the acceptance of IL as a desideratum must be considered as low, as for many teachers some general aspects of IL are a traditional element of instruction, meaning that teachers take them as conventional principles of good education. A cursory understanding of IL as the application of certain

principles in searching and evaluating information does not evoke evidence of innovative aspects and advantages of IL. To some degree, a lack of special knowledge of digital information sources and their conditions of use is responsible for the lack of understanding with respect to the urgent need for IL.

IV. Basic Steps and Strategic Alliances

As we have seen, the implementation and embedment of *information literacy education* depends on many factors and conditions: national and international politics, innovation and reform environment, understanding and attitudes – apart from budget and time resources, of course. Therefore, for implementation in educational settings, the following basic steps and strategic alliances are suggested.

1. Basic Steps

Definition of content

The common ground must be a complex understanding of IL as a disposition for learning and researching, which includes cognitive, psychological as well as social and situational components. A possible definition is proposed: "Information Literacy is the ability and ***disposition*** to act appropriate, self-determined, creative and with social responsibility in contexts of information needs". (translation from Balceris, 2011, p.181).

For educational purposes we need a detailed delineation of such a definition (standardization), possibly as an international convention, but still with national niches for specific educational realities (e.g. school curricula). One international guideline serves as the basis of most international concepts, the Information Literacy Competency Standards for Higher Education (ACRL) from ALA in 1998. IFLA developed and detailed these standards in several publications (e.g. Jesus Lau, 2008). These international efforts are paralleled by many national approaches, the German speaking countries Switzerland (www.informationskompetenz.ch) and Germany (www.informationskompetenz.de) are among them. The major initiatives to develop curricula and standards for pupils (at least for the upper secondary classes) in Germany once again emerge from the universities and their scientific libraries. In some cases, the regional networks of these libraries work on school targeted programmes which are generally accepted.

Undoubtedly, a framework of contents for IL in lifelong learning and also in schools does exist already, but the international authorization and the dissemination of specified versions into a relevant number of countries and educational institutions is still to be done. And the approaches need to cross the border of librarianship, where most of the activities were born.

To start with a European Reference Framework which is adapted in most of the European countries would be a good measure. Such a reference framework has successfully been established for languages already. A possible link to such an initiative could be the European Reference Framework *Key Competences for Lifelong Learning* which is launched by the General Direction of Education and Culture based on a Recommendation of the EC from 2006 (Education and Culture DG, 2007). One of the mentioned competences is Digital Competence, but the understanding of DC is very skill oriented. It will be crucial that the broad concept of IL which includes the psychological, social and juridical implications of detecting and using information is realized, as accessibility and technical aspects tend to be in the foreground in the age of "digital natives".

Quality Assurance and Testing

Secondly, we need corresponding instruments of assessment to be able to control success and progress of learning. So far, most instruments to assess IL exist on university level and are of Anglo-American origin. The PISA 2009 Assessment had a special focus on 'Digital Technologies and Performance' (digital reading assessment). The assessments need to fulfill both, to test if a pupil does dispose of the general abilities and knowledge to act flexibly and responsibly in unspecific situations of information need, and to test the transfer of this disposition on subject specific problems. The difficulty is that general competences cannot be observed, they need to be detected as a performance, which is backed by the necessary knowledge, proficiencies and skills (Klieme & Hartig, 2008). Besides the international comparative test initiatives which have begun to integrate IL into their test sets, first attempts have been made in Germany to develop national assessment tools for ICT competences which include international standards. A good example is (Balceris, 2011) who developed and tested an assessment model, called "Situational-Judgement-Test", for pupils, grade 9.

Implementation in official curricula and best practice

In Germany there is no discussion about implementing IL into schools as a new subject. Two good reasons can be given against treating IL as a special topic or subject. The more extrinsic argument is: The experience with media education in Germany shows that as a consequence of curriculum overload specific media education curricula were not successfully implemented. And the even more relevant intrinsic argument is: a social and context based setting of IL – as it is suggested by the challenges of educational reform – means that you have to integrate IL methods and principles into the subject-specific curricula. Many subjects offer settings (project work, annual work, self-organized problem solving etc.), where the application of IL is appropriate and a recursive spiral training should be targeted at gradient levels of IL competence. This means that IL principles can enter the official curricula in every subject, which is more and more the case in Germany even though the term "Informationskompetenz" (IL) is scarcely used. IL elements are not only part of the native-language curriculum German, but also in Mathematics or foreign languages instruction.

Besides curricula implementation of IL we need more best-practice examples on different levels of instruction and for an increasing number of subjects. The function of best practice examples is to show that every subject can benefit from IL, its methodological and cognitive approaches. Transferable examples of curricular modules which provide insight into the advantages are initially sufficient. They can guide teachers in transferring the concept to other suitable areas of instruction. It is suggested to start very early with training of dispositions and principles, our institute made experience with a special unit for Primary Education.

2. Strategic Alliances

To foster the implementation of IL in schools strategic alliances are helpful.

There are first of all **institutional alliances**: Already addressed were the libraries and their networks, which approach schools for cooperation initiatives and projects. As there are not many school libraries in Germany, co-operations with regional libraries are more frequent. These co-operations with fully equipped local libraries have at least the advantage that pupils can access a richer environment than most school libraries can offer. As we already learned, in Germany scientific libraries of higher education

institutions play a major role for school programmes – and if they do so, they do it with a relatively high level of experience in IL education. Cooperative Co-ordination of different types of libraries approaching schools is essential.

The involvement of libraries is not surprising, but in addition I want to plead for alliances with Information infrastructure services which offer professional validated content via databases and internet portals. It might be that the German situation with a range of subject specific information services cannot be found in other European countries. The German services are all focused on the scientific audience or the industry. But e.g. the DIPF with the Information Center Education offers services also for educational practitioners (teachers, pupils). There is information available on instructional materials; there are internet portals like the *School Web* and even a special portal *IL in Schools* (www.eduserver.de). Another example is the Chemical Information Center which produced *ChemgaPedia* (www.chemgapedia.de), a very valuable didactic source for Chemistry education.

The German national information Association DGI (German Association for Information Science and Practice) will foster IL as a key aspect of its work. Established were two working groups for the areas of IL in business and in education. The idea is to involve information infrastructure services more deeply in the task of promoting IL. Cooperative work at the level of library and information associations is important and not always easy (BID: Library and Information in Germany).

Secondly, there are **topical alliances**. In order to introduce IL into the curricula and the classrooms it will be beneficial to look at the continuum of competences which are relevant for IL. Primarily, seeing IL as part of complex media education opens up many opportunities. In Germany, this approach is quite successful and "media and information literacy" are often written and thought of as an integrative or associated combination. In other educational systems or educational settings, a strategic alliance with ICT-literacy might be meaningful, as I already showed by hinting at the special ICT competence focus in OECD-PISA 2009. Other competences like internet competence or library competence or even presentation competence are relevant in specific contexts which are essential for IL. All these "entrance doors" for IL content should be made available to introduce the idea that information is a good which needs to be handled with care.

Finally: If the principles of IL were a consistent part of instruction and self-regulated learning in future classrooms without being labeled *Information Literacy Education* explicitly, such a state-of-the-art would be a very good success of the Media and Information Literacy movement in schools anyway!

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Alexander Botte, German Institute for International Educational Research, Frankfurt Main

Alexander Botte is a former teacher and was trained as a scientific documentalist. He is now deputy chief of the Department “Information Centre Education” at the German Institute for International Educational Research, Frankfurt Main. Since 1979, he has been working with bibliographic databases on educational topics and since 1992 he has been project manager of the German Education Index, a cooperative initiative of more than 30 documentation units of research and higher education institutions in the German-speaking countries. Since 1999, Alex has also been project manager of the German Education Server, an online portal for educational research and practice. He is Speaker of the Working Group “Information Literacy and Education” of the German Association for Information Science and Practice (DGI).