



Date : 20/07/2006

A New Kind of Information Specialist for a New Kind of Learning

Helen Boelens
Kalsbeek College
The Netherlands

Meeting:	142 School Libraries and Resource Centers (part 1)
Simultaneous Interpretation:	No
<small>WORLD LIBRARY AND INFORMATION CONGRESS: 72ND IFLA GENERAL CONFERENCE AND COUNCIL 20-24 August 2006, Seoul, Korea http://www.ifla.org/IV/ifla72/index.htm</small>	

Abstract

At the beginning of the 21st century, educators are confronted with new visions, theories and aims of education in a changing environment. This can be summarised as "A new kind of learning". Concepts such as individual learning and lifelong learning have become very important. The introduction of ICT within schools has contributed to these changes. In order to support this strategy, the role and goals of the school library and information centre (SLIC) have altered. This paper presents a new vision for the role of both the SLIC and the school information specialist within the secondary school.

Introduction

This paper describes the need for a new kind of information specialist in secondary schools. This person has previously been known as the school librarian but due to recent developments in education and in the use of ICT within the school, a new title of “information specialist” is more appropriate. In this paper, this person will be called the school information specialist.

Background Information

Changes in Educational Policy and Theories of Learning

In new concepts of learning, individual or independent learning is very important. Pupils learn at their own pace, at their own level.

A new kind of learning

The concept of “a new kind of learning” dates back to the second half of the nineteen-nineties. The most important ground rule was “being able to take adequate action, rather than understanding and knowing. This “new kind of learning” covers nearly all the concepts that deal with modern education: it enables students to learn individually or independently (preferably with the support of ICT) instead of the traditional classroom environment with the cognitive transfer of knowledge. This “new kind of learning” focuses mainly on the gathering of knowledge and understanding, and the acquisition of the necessary skills. Pupils should not learn just to get a good report (or grade), but rather they should acquire competencies that they will need in the society and in their profession” (Simons, 2002).

Lifelong learning

On 9 November 2005, the *Alexandria Proclamation on Information Literacy and Lifelong Learning* was published by the High Level Colloquium on Information Literacy and Lifelong Learning held at the Bibliotheca Alexandrina. This meeting was sponsored by United Nations Educational, Scientific and Cultural Organization (UNESCO), the International Federation of Library Associations and Institutions (IFLA), the World Summit on the Information Society (WSIS) and the National Forum on Information Literacy (IFLA, 2005).

The proclamation declares that information literacy and lifelong learning are the beacons of the Information Society, illuminating the courses to development, prosperity and freedom.

Information Literacy lies at the core of lifelong learning. It empowers people in all walks of life to seek, evaluate, use and create information effectively to achieve their personal, social, occupational and educational goals. It is a basic human right in a digital world and promotes social inclusion of all nations.

Lifelong learning enables individuals, communities and nations to attain their goals and to take advantage of emerging opportunities in the evolving global environment for shared benefit. It assists them and their institutions to meet technological, economic and social challenges, to redress disadvantage and to advance the well being of all.

Information literacy

- comprises the competencies to recognise information needs and to locate, evaluate, apply and create information within cultural and social contexts;
- is crucial to the competitive advantage of individuals, enterprises (especially small and medium enterprises), regions and nations;
- provides the key to effective access, use and creation of content to support economic development, education, health and human services, and all other aspects of contemporary societies, and thereby provides the vital foundation for fulfilling the goals of the Millennium Declaration and the World Summit on the Information Society; and
- extends beyond current technologies to encompass learning, critical thinking and interpretative skills across professional boundaries and empowers individuals and communities.”

- 1) The norms for information literacy can be found in: *Information power: Building partnerships for learning* prepared by the American Association of School Librarians and the Association for Educational Communications and Technology (AASL & AECT, 1998).
- 2) The importance of learning and teaching information literacy skills is described in the book *Door de bomen het bos: Informatievaardigheden in het onderwijs (Through the trees, the forest: Information skills in education)* (Veen, 2005).
- 3) Information literacy skills are interdisciplinary and can be applied to groups of subjects. They are not specifically focussed on one subject.
- 4) Concepts of individual learning and information literacy, as tools for lifelong learning are described by Marzano (1992) who identifies the advantages of individual learning.

The Rapid Growth and Availability of Information

In February 2006, the FILTER Closing Event (2006) occurred in Amsterdam. This meeting was supported by the European Commission, Directorate General Education and Culture, and The eLearning Initiative. It is significant that the research carried out by the FILTER organization was not only the work of academics but included collaboration with ICT professionals from commercial organisations from different countries within Europe.

An article entitled *Zien en gezien worden; over eerlijke zoekmachines voor en door onderwijsorganisaties (Seen and being seen; about honest search engines for and by educational organisations)* (E-learning themasite, n.d.) discusses economic and cultural filtering of search engines. Its author, Sylvia van de Bunt-Kokhuis, project leader of the European FILTER project, writes about the reliability, accessibility and affordability of online learning.

Most of us use Google every day, for both our work and for private reasons. If we need information, we should be able to find it in Google. This is our unconscious starting point. But do you know how Google searches and what Google filters? Is that what you want – that information is filtered for you? Which sources, which cultures, which languages are not (or only partially) made available via the most commonly used search engines? Are we really aware of this and how can we best react to this situation?

The book *World Wide Work: Filtering of online content in a globalized world* (Bunt-Kokhuis, 2006), describes the work of the European FILTER project. The writer of this paper also took part in the FILTER project and presented the paper *Filters make it more difficult for pupils to find information: Instruction in specific information literacy skills, in several different languages, for final examination pupils* (Boelens, 2006) in Amsterdam on 10 February 2006. A second, more detailed paper: *Specific information literacy instruction, in several different languages, for pupils studying for university entrance examinations: School Library and Information Centre, Kalsbeek College, Woerden, The Netherlands* (Boelens, 2006) will be presented at the IASL (International Association of School Librarianship) international conference in July 2006. The writer's current research indicates that children have great affinity towards computers and the use of the PC. Some adults believe that many children and teenagers have advanced computer skills to the extent that they can make much better use of computers than their parents. However research suggests that when the average child uses the computer to find information for an academic purpose, his/her research and information skills are superficial and need to be developed.

A New Vision

The situation described in paragraph A New Kind of Learning is a European vision. During meetings in the Netherlands, teachers and information specialists often talk about the educational system in the Netherlands. The Netherlands is a relatively small country with a relatively small population, who speak Dutch, a language which is spoken by a relatively small number of people. The enormous and fast changes that are taking place in the use of digital information, described above, justify a second look at the Dutch education system, with special emphasis on the use of information and ICT within the school. The Dutch educational system should be reviewed in a world-wide context, within the context of globalisation.

Changes in Secondary Schools Due to the Introduction of ICT

During the nineteen-nineties, schools in the Netherlands received government funding for the introduction of ICT into the schools. ICT can be used in a secondary school to support various processes within the school, such as administration, educational resources, etc.

The introduction of ICT into secondary schools has caused major changes within the schools themselves. These changes sometimes give rise to feelings of uncertainty and have raised questions amongst school employees about the direction in which education, and the school itself, is heading.

The first phase of the introduction of ICT into schools was strongly influenced by members of staff who were interested in ICT. These active people were often hobbyists, without any formal training in ICT or information management.

The ICT facilities which can now be found in the average secondary school in the Netherlands are both extensive and complex. Various new jobs or functions for the use of ICT within the school have come into existence.

New developments

During the last decade, the following developments have taken place in some large secondary schools. In the Netherlands, the trend is as follows:

Throughout the School as a Whole

- 1) The school uses one, or sometimes more, (web-based) networks. Large amounts of educational and administrative software is made available through these networks.
- 2) Each pupil and teacher has his or her own account within this network or networks. This account is accessed by an individual password.
- 3) There is a target within the school of 1 PC for every 8 pupils. A comparison can be made with the computer usage of some small to medium commercial enterprises.
- 4) Computer classrooms with network connections have been established throughout the school. These are used for lessons in technical computer skills and also for lessons which require pupils to have access to an individual PC. Each classroom has enough PC's for a class of around 30 pupils.
- 5) Around four PC's with network connections are available in general classrooms.
- 6) Some schools use laptops that can access the wireless network.
- 7) PC's with network connections for teachers are available in special workrooms for teachers (approximately 1 PC for every 7 teachers). Since many teachers in the Netherlands now work part-time, the number of teachers who are present at the school at any one time is approximately 65%, so this ratio is even higher (around 1 PC for every 5 teachers).
- 8) PC's are also available for non-teaching personnel, who carry out administrative tasks. These PC's are also used for communication.

The use of these extensive facilities requires expertise and co-ordination, provided not only by a fully qualified systems manager who takes care of the day to day use and maintenance of the PC's within the school and makes sure that the network is running and the software is functioning, but also the expertise of a fully qualified information specialist, who co-ordinates the relevant information facilities required within the school and also accesses relevant information from outside the school.

School Library and Information Centre (SLIC)

The traditional school library has been modernised or renovated to become a modern school library and information centre (SLIC). New SLIC's have also been built. A new or modern school library and information centre is a learning environment where pupils can make use of different kinds of facilities, such as:

- 1) A large, modern space with an extensive collection of books and information in both traditional and digital form, in a number of different languages. Some large government funded secondary schools within the Netherlands have collections of books and information in up to 5 languages.
- 2) Areas where pupils can read, do their homework or study.
- 3) Computer hardware such as PC's, printers, scanners, copying machines etc.
- 4) At the time of writing of this paper, the SLIC of the HAVO/VWO department of the Kalsbeek College in Woerden, the Netherlands (a school for around 1,700 pupils) has the following facilities. It is important to note that this is a government funded school (not a privately funded school). The importance

which the school places on this facility, and the teaching of information literacy skills, is evident.

- An area of 400² meters, with 50 (new) PC's, and 40 study desks. The area is divided to provide different kinds of facilities for different kinds of pupils, depending upon their age and abilities. Instruction in information literacy takes place in this area.
- The area mentioned above also contains an extensive collection of information in traditional and digital form.
- Pupils can work in a light, colourful, friendly atmosphere.
- There is a second SLIC area of 50² meters with 10 PC's and 30 study desks.
- The SLIC uses a modern school library programme which is not only used for administrative purposes (e.g. lending of information), but also functions as an extensive library catalogue, which provides access to information in traditional and digital form.
- A new web-based school library programme provides teachers and pupils with access to the SLIC catalogue from within and outside the school.
- A web-based network, with access to Internet, E-mail, discussion groups etc.
- Access to the electronic learning environment (ELO)
- Access to databases in a number of different languages.
- Access to extensive educational software.

A New Kind of School Library and Information Centre (SLIC)

The question which needs to be asked is this:

- In the contemporary global society, does the average secondary school pupil need to have access to a school library and information centre (SLIC)?
- If so, what kind of SLIC does the average secondary school in the 21st century need?
- Who should manage this facility?
- What skills does this person need to have?

In the policy statement *Summary of the activities and goals of the SLIC for school year 2005/2006: Kalsbeek College, J.I. location, Woerden, The Netherlands*, the author describes eight different goals, all of which are equally important, for a modern SLIC, in the present educational situation described above:

- 1) Reading and literacy.
- 2) Social aspects of the SLIC.
- 3) Academic and intellectual goals.
- 4) Administrative work and efficiency.
- 5) Professional library work.
- 6) Educational goals (specifically, instruction for pupils and teachers).
- 7) Prevention of plagiarism.
- 8) ICT goals.

The goals described above are divided into:

- a) Existing goals
- b) Changing goals
- c) New goals.

Existing Goals

It is important to emphasise that the skills of the school librarian, which existed before the introduction of ICT into the schools, are still of utmost importance. These existing goals are:

- 1) Reading and literacy: reading pleasure, technical reading and reading comprehension. Searching for information for a project or paper.
- 2) Social aspects of the SLIC. The social goals and ideals of the SLIC are still important, e.g. individual attention for pupils, helping them to find a book or information or to answer a specific question, helping them with homework, etc. The SLIC is a pleasant, peaceful place where pupils can study.

Because the SLIC now has so many PC's, pupils sometimes think that it is a kind of recreational area where they can "play" with the computers and use them for numerous non-academic activities. Pupils need to be taught what the real goals of the SLIC are. They also need to be properly supervised.

- 3) Academic and intellectual goals The SLIC helps pupils develop good study habits and to prepare them for tertiary education. Research (*School libraries work: Research foundation paper*, 2006) in the USA has demonstrated that academic achievement, including the measurement of academic performance and marks (grades), and (even more important) the ability to actually graduate (receive a high school diploma) is increased, due to the optimal use of modern school library facilities, run by a professional school librarian or school information specialist.

Changing Goals

The introduction of ICT into the school and the SLIC has changed some of the other goals of the SLIC, for example:

- 1) Administrative work and efficiency. The school library administration is kept up to date by a modern school library software programme. When a pupil wants to borrow or return a book or information, it is scanned by the library clerk. It also requires constant maintenance.
- 2) Professional library work. It is very important that the school library has a good supply system. The products (books and information in both traditional and digital form) must be available in adequate quantity to fulfil the needs of the clients (the pupils and teachers). The purchase, provision and maintenance of these products, and insertion into the automated school library catalogue in such a way the borrowers can find the information they need, is the work of the qualified school information specialist. Co-ordination between the teaching staff and the SLIC is also of utmost importance. The school information specialist must ensure that the books and information needed to support the curriculum, are present in sufficient numbers.

This person must also make sure that the available information is placed in the appropriate place.

Unfortunately some school leaders identify the school library software programme with administrative programmes which are used within the school (e.g. a database containing information about pupils and teachers). They think

that the school information specialist is a kind of check-out clerk and that an unqualified person can carry out these tasks, thus reducing personnel costs.

A school library software programme is much more complex. To begin with, it contains much more information, not only the names and information about the borrowers, but also information about the collection itself in both traditional and digital forms. The correct use of this software requires specific training, the application of a specialised kind of logic, and accuracy.

The skills required to select information to meet the needs of the SLIC and make it available to pupils and teachers are complex. In Europe, school libraries have collections in both traditional and digital formats in a range of different languages. The new school library information specialist must be able read and carefully select information in these languages. The use of information in a number of different languages is expected to increase (Bunt-Kokhuis, 2006).

Different kinds of media are used to provide the SLIC with digital information. The school information specialist needs to understand how these programmes work and to solve problems when necessary.

The school information specialist requires an academic education.

New Goals

Since the introduction of ICT within secondary schools, the SLIC has acquired some additional goals:

- 1) Educational goals (specifically, instruction for pupils and teachers). A great deal has been written about new concepts of learning, individual or independent learning and the importance of instruction in information literacy. Instruction in information literacy, for both teachers and pupils, is a new goal of the SLIC. The school information specialist gives this instruction.
- 2) Prevention of plagiarism. Some pupils want to spend as little time as possible on a paper or presentation while still obtaining a good grade. They cut and paste all kinds of information from Internet (quite often from unreliable sources) and present a completed paper as their own work.

During instruction in the SLIC, pupils learn that this is completely unacceptable, that a paper has to be their own work, and that they should document the resources they use in a bibliography.

Teachers also receive instruction from the school information specialist in how to check on information sources and how to check for plagiarism.

- 3) ICT goals. The use of ICT within the school and in the SLIC has two parts:
 - A technical part, (is the available hardware working properly) and
 - A “content” part.

One of the most important ICT goals of the school information specialist is to manage information throughout the entire school; to make sure that it is correctly stored and can be retrieved when required. This information includes educational programmes for a number of different subject areas, at different academic levels, digital information used by teachers and school leaders (including websites) and multi-media. All this information needs to be correctly stored and managed. Teachers throughout the school need to know that this information is available and where it can be found.

Schools also make use of a number of large databases (including the school library programme), and content management systems (CMS) which

work within a web-based network (or networks). It is important to ensure that information is stored in the correct place, is not stored more than once unless this is absolutely necessary, and can be retrieved on demand. The application of modern searching software is very important.

These skills are important for the following reasons:

- Effective integration of different kinds of software within the school saves time and money.
- The logical application of the school library software and maintenance of this programme is essential.
- The school information specialist needs to be able to help pupils solve ICT problems when they are using ICT facilities in the SLIC.
- The school information specialist needs to be able to apply and use Electronic learning environment (ELO), inside and outside the SLIC. ELO's have proven to be very useful in countries where children are sometimes unable to attend school due to bad weather. The writer recently carried out a limited research project with regard to the use of the "library" within an ELO in schools in northern Norway. A group of Norwegian school librarians, who co-operated in this research, described the ELO "library" as a graveyard for old or unwanted documents and information. The writer also investigated the commercial interests of the provider of the ELO. Problems of this nature need to be investigated more carefully.
- The school information specialist needs to be able to make use of the school WebPage, as a communication resource, in order to promote the work of the SLIC.
- The selection and application of digital information for the school, and the maintenance of this information, not just for use in the SLIC, but also for other locations throughout the school (for example, the selection of commercial databases) is of utmost importance. This is the work of a professional information specialist.

The questions posed at the beginning of paragraph *A New Kind of School Library and Information Centre (SLIC)* were as follows:

- 1) Does the average secondary school in the 21st century need a school library and information centre?

After considering the changes in educational practices, the changes within the information society, the changes caused by the introduction of ICT into the school, and the goals of the new SLIC, the answer is a clear "YES".

- 2) If so, what kind of school library and information centre (SLIC) does the average secondary school in the 21st century need?

Paragraph 2 describes the changes which are currently taking place, and the new aims of the SLIC of the 21st century.

- 3) Who should run this facility?
- 4) What skills does this person need to have?

Answers to questions 3 and 4 will appear in paragraph *The New School Information Specialist*.

New staff members

New staff members have been employed, to cope with these new developments.

Throughout the School as a Whole

- 1) In the 1990s, systems managers were employed to service and maintain small scale configurations of networks, a relatively small number of PC's, and software.
- 2) ICT co-ordinators were also selected (this was often a member of the teaching staff). They co-ordinated between the available ICT facilities which were used for educational purposes. They discussed with teaching staff how various ICT applications could be used in their daily teaching and then proceeded to make sure that hardware and software was available to meet these needs.
- 3) During the last few years, applications managers have often been employed to solve problems with administrative programmes which are used within the schools.

In the School Library and Information Centre (SLIC)

In order to meet the (educational) goals of a modern SLIC (described above), the personnel needs to be selected carefully. Unfortunately, because of the enormous changes which have taken place within the SLIC in the last decade, school leadership often does not realise the importance of this selection process. The selection process needs very careful thought. An employee needs to be found (or retrained) who not only takes care of the important goals which were relevant to the school library before the introduction of ICT, but who also fully understands the importance of the new educational goals and is able to co-ordinate the use of ICT in the new SLIC environment.

The traditional goals of the school library and the role played by the traditional qualified librarian were thought to be old fashioned. These goals are described in paragraph *New Staff Members*. Recent international research proves that this is not the case (*School libraries work: Research foundation paper*, 2006). In fact, the work carried out by the "old fashioned" school librarian is just as important as it ever was, if not more so. Thousands of pupils have indicated that they really appreciate the individual attention and help which they receive from the school librarian.

However, the new theories of learning and changes in the teaching situation, described in paragraph *Background Information*, mean that the school librarian (now called the school information specialist) has an additional important role to play.

This paper introduces a new kind of information specialist for a new kind of learning in a new educational situation in secondary schools. This person preserves the traditional goals of the school library and is also engaged in the introduction of new important skills and ideals in the SLIC.

The New School Information Specialist

What is the Function of the New School Information Specialist in Secondary Schools?

- 1) The information specialist tries to meet the goals which are described in paragraph 4.
- 2) The information specialist's work is not only restricted to the SLIC. He or she is responsible for the optimal organisation and provision of information throughout the entire school.

What Skills does the Information Specialist Need?

- 1) The school information specialist provides leadership in the SLIC.
- 2) The document *De Schoolmediathecaris in het Voortgezet Onderwijs: Een beroepsprofiel* was published by the Landelijke Werkgroep Schoolmediathecarissen Voortgezet Onderwijs (LWSVO) in January, 2004 (LWSVO, 2004). It describes the work carried out by the qualified secondary school librarian in 2003. This school librarian has been educated at academic level.

Due to changes which have taken place within the information society and the developments which have been described in paragraphs *New Developments, A new kind of School Library and Information Centre (SLIC)* and *New Staff Members*, additional new skills are needed.

- 3) The school information specialist needs didactic knowledge. This person must be able to instruct pupils and teachers in interdisciplinary information literacy skills, at all different levels within the school.

In some countries within Europe, the school information specialist only works with pupils in the upper school (aged from 15 – 19 years). The writer believes that pupils in the lower school (aged from 11 - 15 years) should also work with the school information specialist and receive instruction in information literacy skills.

- 4) The school information specialist must be able to work with teachers as an equal colleague, who brings equivalent skills to the educational process. The role of the school information specialist has changed from a supportive, service function to an active role of a staff member who plays an important role in the educational process.

Unfortunately, in the Netherlands, and also in some other countries within Europe, school librarianship is still thought to be a lower, or service function. The training which school librarians received at university level (HBO or Bachelor) was considered to be of lesser value to the school. These attitudes have become evident during the writer's current research and will be presented in her doctoral thesis (see biographical notes). This research is concerned with current attitudes to school librarianship in secondary schools in Europe.

The concept of a graduate school information specialist is acceptable in countries such as Australia, New Zealand, the USA and Canada (to name only a few). Training at a lower level does not meet the requirements of the job description.

In the countries mentioned above, the work carried out by the school information specialist, and his or her working conditions, are equal to those of a qualified teacher.

- 5) ICT knowledge (at the appropriate technical and information management level).
- 6) Below is a job description for an information specialist (Wikipedia, n.d.):

An information specialist can organise an optimal supply of information. He or she discusses the requirements with the client, searches for, selects and collects information. The information specialist structures the information processes of an organisation and can develop information systems in order to control these processes. In short, the information specialist delivers “made to measure” information.

The study required to become an information specialist has a lot of similarities to an ICT study, but is not an ICT study. An information specialist is able to decide which ICT resources should be used within organisations. The use of ICT helps to streamline the information process within the organisation.

Why is this New Information Specialist in the School So Important?

The influence of the SLIC on the academic achievement of pupils has been verified by international academic research (*School libraries work: Research foundation paper*, 2006). The Research Foundation Paper *School Libraries Work!* (2006) contains the following statements:

- As mounting evidence affirms, school libraries staffed by qualified library media specialists do make a measurable difference on student achievement. Whether that achievement is measured by standardised reading achievement scores or by global assessments of learning. School libraries and school media specialists are a powerful force in the lives of America’s children.
- The school library is critical to every student’s learning experience and academic achievement.
- School libraries are critical for student achievement.
- School libraries have an important role in teaching
- School libraries are leading the way for technology use in schools.

The paper also contains the following summary:

The role of the library media specialist is diverse. He or she is at once a teacher, an instructional partner, an information specialist, and a programme administrator. Library media specialists play an essential role in the learning community by ensuring that students and staff are efficient and effective users of information. They collaborate with teachers, administrators, and others to prepare students for future successes.

- 2) This is only possible if there is optimal co-operation between the school leadership, teachers, the professional school information specialist, the ICT co-ordinator and the systems manager (Henri & Asselin, 2005).
- 3) The quality of the collection and the personnel of the SLIC are of utmost importance.

Problems which Arise

In her article *Specific information literacy instruction, in several different languages, for pupils studying for university entrance examinations: School Library and Information Centre, Kalsbeek College, Woerden, The Netherlands* (2006) Boelens describes a number of problems related to instruction for pupils in information literacy skills. Her current research also indicates other new problems (see biographical notes).

- 1) Many teachers are not proficient in information literacy skills.
- 2) Some teachers only have adequate information literacy skills in their own subject area, in one language. Their skills are not interdisciplinary.
- 3) Emotions (and anxieties) of teachers play an important role. Some teachers feel a great deal of uncertainty when they are confronted with new concepts of learning. They try to defend their own subject against changes (Veen, 2003). They feel threatened by the new role played by the information specialist in the school.
- 4) The enormous amount of information, in many different languages, and the filters which are described in *World Wide Work: filtering of online content in a globalized world* (Bunt-Kokhuis, 2006) make the situation even more difficult.
- 5) At the time of writing, the writer is carrying out research into the computer facilities which the average pupil and average teacher have in his or her own home. At the moment it is not known what percentage of users have inadequate facilities. A first impression suggests that one (old or outdated) PC is used by a number of family members. This would indicate that the services provided by the SLIC (for pupils who want to make use of modern PC's) and the opening hours become even more important.
- 6) The new SLIC, with its new responsibilities, needs sufficient, qualified staff. Unqualified staff needs to be retrained or replaced.
- 7) Qualified (graduate) school librarians, presently working in SLIC's, may need retraining, in order to carry out the tasks described above and meet the demands which will be placed on the new school information specialist.
- 8) Present degree courses for school librarians need to be adapted to the new criteria.
- 9) Salaries for school information specialists need to be reviewed. Young graduates need an incentive to begin working as a school information specialist.
- 10) The school information specialist often works longer hours than teachers, because the SLIC needs to be open for as long as possible. This situation needs to be reviewed.
- 11) A similar study and diploma deserves a similar salary and conditions. The school information specialist earns less than a teacher with a similar diploma. The new school information specialist prepares and teaches lessons. In view of the new responsibilities which are being taken by the school information specialist, this discrepancy should be adjusted.
- 12) Lessons in information literacy skills should be part of the school's normal teaching programme and should appear in the rooster.

Conclusions

- 1) The modern SLIC is a dynamic engine for the knowledge and information society.
- 2) The SLIC, run by a qualified school information specialists is an essential part of the secondary school in the 21st century. It helps prepare pupils for their role in our globalized society.
- 3) The qualified school information specialist plays a very important role in the introduction of a “new kind of learning” within the school.
- 4) All pupils at the school should learn to, “recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information,” (ALA, 2006).

In closing, two relevant quotations:

- “The purpose of computing is insight, not numbers,” (R.W. Hamming).
- “An instrument can teach, it can illuminate; yes, and it can even inspire. But it can do so only to the extent that humans are determined to use it to those ends. Otherwise it is merely wires and lights in a box.”

This statement was made by Edward R. Murrow, at the RTNDA Convention in Chicago on October 15, 1958. He was referring to the new medium, television.

References

- American Association of School Librarians & Association for Educational Communications and Technology. (1998). *Information power: Building partnerships for learning*. Chicago: American Library Association.
- American Library Association. (2006). Retrieved January 18, 2006, from <http://www.ala.org/ala/acrl/acrlstandards/informationliteracycompetency.htm#ildef>.
- Boelens, H. (2006, February). Filters make it more difficult for pupils to find information: Instruction in specific information literacy skills, in several different languages, for final examination pupils in Amsterdam. *FILTER Closing Event: Filtering of online content in a globalised world - Good practice and recommendations*. Amsterdam, The Netherlands.
- Boelens, H. (2006). Specific information literacy instruction, in several different languages, for pupils studying for university entrance examinations: School Library and Information Centre, Kalsbeek College, Woerden, The Netherlands. To be presented at the *International Association of School Librarianship* international conference in Lisbon, Portugal, July 2006.
- Bunt-Kokhuis, S. van de. (Ed.). (2006). *World wide work: Filtering of online content in a globalized world*. Amsterdam, The Netherlands: VU University Press.
- E-learning themasite [E-learning theme site]. (n.d.). Retrieved April 13, 2006, from <http://e-learning.surf.nl/e-learning/artikelen/2932>.
- FILTER Network. (2006). Retrieved March 25, 2006, from www.filternetwork.org.
- Henri, J., & Asselin, M. (Eds.). (2005). *Leadership issues in the information literate school community*. Westport, CT: Libraries Unlimited.
- International Federation of Library Associations and Institutions. (2005). *The Alexandria proclamation on information literacy and lifelong learning*. Retrieved April 30, 2006, from <http://www.ifla.org/III/wsis/BeaconInfSoc.html>.
- Landelijke Werkgroep Schoolmediathecarissen Voortgezet Onderwijs [Dutch Association of School Librarians]. (2004). *De Schoolmediathecaris in het Voortgezet Onderwijs: Een beroepsprofiel* [The school librarian in the secondary school: A professional profile]. Retrieved March 31, 2006, from <http://www.nvbonline.nl/index.php?id=273>.
- Marzano, R. J. (1992). *A different kind of classroom: Teaching with dimensions of learning*. Alexandria, VA: Association for Supervision and Curriculum Development.
- School libraries work: Research foundation paper. (2006). Scholastic Library Publishing. Retrieved April 15, 2006, from www.scholastic.com/librarypublishing.
- Simons, J. (2002, December). *Leren in de 21^{ste} eeuw: Van twaalf tot achttien* [Learning in the 21st century: From twelve to eighteen] (pp. 28-30). Meppel, The Netherlands: Uitgeverij School.
- Veen, K. van. (2003). *Teachers' emotions in a context of reforms: Een wetenschappelijke proeve op het gebied van de sociale wetenschappen* [Teachers' emotions in a context of reforms: Scientific proof in the area of social science]. Doctoral thesis, Catholic University, Nijmegen, The Netherlands.
- Veen, M. J. P. van. (Ed.). (2005). *Door de bomen het bos: Informatievaardigheden in het onderwijs* [They can't see the woods for the trees: Information literacy in education]. Heerlen, The Netherlands: Open Universiteit Nederland.
- Wikipedia. (n.d.) *Informatiedienstverlening en -management* [Information services and information management]. Retrieved April 14, 2006, from http://nl.wikipedia.org/wiki/Informatiedienstverlening_en-Management

Author Note

Helen Boelens is the Chief Librarian, Kalsbeek College, Woerden, the Netherlands. She is also a PhD research student at the School of Lifelong Learning and Education, Middlesex University in London. She is a founding member of the European Network for School Libraries and Information Literacy (ENSIL), a member of the LWSVO (Landelijke Werkgroep Schoolmediathecarissen Voortgezet Onderwijs) and a member of the NVB (Nederlandse Vereniging voor Beroepsbeoefenaren in de Bibliotheek-, Informatie- en Kennissector).