Digital literacy - a civic skill in the information society

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Abstract

In Finland, the building of information society focuses on bringing the benefits widely available to all citizens. The government's information society programme aims at improving regional equality and the quality of life and well being of citizens by making information and communication technology available throughout our society.

For the purpose, Finland has made major investments in the library infrastructure. Our public libraries have been equipped with modern computers and network connections. Open to all, library is a neutral and accessible environment to start studying computer skills. The mission of the library institution is to ensure everyone equal access to knowledge and opportunities to use the services provided by the information society. At libraries, computers and network connections are available to all citizens free of charge.

In an effort to promote information society skills of its citizens, the City of Tampere has furnished some new library premises with public "net squares". They have been designed to instruct people in the use of computers and the Internet and to offer them an opportunity to independent work on computers. Tampere City Library has developed a special operational model for teaching basic information society skills at the net squares.

The role of public libraries in promoting literacy has expanded to include digital literacy. The net squares are a hands-on approach to enhancing digital literacy in the local community. The digital gap is also a challenge for developed countries. Most of the daily clients of the net squares are immigrants, pensioners, and unemployed people, who are thus provided facilities to learn information society skills.

The library gives free basic courses in the use of the computer, Internet and e-mail. Most of the course attendants are senior citizens and women. They usually want to learn how to use electronic services, such as web banks, needed in daily life. Each net square is equipped with 20 computers with Internet connections and a versatile set of programmes.

The proficiency of the net square personnel combines the competence of library professionals and information technology professionals in a new way. Librarians are charged with developing the content of the activity and teaching information seeking. Internet instructors teach basic skills in information technology. The net square personnel helps make unique network competence accessible to the city library staff and clients.

Please find more information on Tampere City Library at
http://www.tampere.fi/english/librariesandarchives.html

1. Development of the information society in Finland

The basic values of the information society include the right and ability of citizens to get information and the availability of information. In Finland, the national Government has committed in its programme to promote civic skills needed in modern society, such as computer skills and digital literacy. The Government's programme for the years 1999 to 2003 says: "Public libraries are developed as part of the promotion of citizens' information society", and "to prevent the exclusion of citizens and regions, information society services are made available equally to all". The information society programme of the present Finnish government 2003-2007 aims at promoting regional equality and improving citizens' quality of life and well-being through effective use of information and communication technologies throughout our society.

Among the objectives of the programme, securing citizens' qualifications for the information society is closely interconnected with the library system in Finland. By securing the citizens' qualifications for the information society, the programme aims at providing everyone an opportunity to acquire basic IT skills, media literacy and readiness to use the services of the information society, to the extent that is useful for each particular individual at any given time. The Government's programme ensures that all population groups and age categories possess an adequate amount of competence required by the evolving information society. Services provided by the information society are only useful if citizens are familiar with the techniques.

An important element of the programme, from the library's point of view, is the gradual equipment of public service providers – notably libraries – with computers and Internet connections. The Government's programme reinforces the role of libraries as a propagator of basic information society skills. A risk involved in the current social development is the emergence of new types of digital gaps between different population groups, if only part of the citizens can enjoy the benefits of the information society. The biggest risk of being excluded from the information society, in Finland, is faced by older citizens, less educated people, low-income groups and immigrants.

2. Role of libraries in the information society

In Finnish society, municipal public libraries are open to all free of charge; they are easily accessible and politically independent organizations. They are perceived as free, equal and neutral places for anyone to enter. The role and responsibilities of libraries in the new digital environment were recorded in the Library Act in 1998. Libraries are actively involved in promoting the Finnish information society. Library services are available through the various phases of an individual's life. A dense nationwide network ensures that libraries are physically accessible to all citizens. Computers and network connections are available to all free of charge.

The rapidly advancing information society with the introduction of new technical tools and procedures has thrown down huge challenges to libraries. Finnish libraries have been pioneers in many ways. They have adopted new technologies earlier and faster than public libraries in many other countries. While in many countries Internet cafés offer citizens an access to computers, we in Finland are accustomed to using computers in public libraries. In fact, many of us have had their first computer experience in a library. The Ministry of Education has set public libraries the target of offering one computer with Internet access for 1,000 inhabitants.

In public administration, basic education and the library system shoulder the primary responsibility for providing citizens an opportunity to improve their information society skills. Libraries are working to offer an increasing amount of instruction, not only in information retrieval but also in the use of the web and electronic services.

3. New literacy requirements

The role of libraries in promoting conventional literacy and encouraging reading is important in the new situation. Conventional literacy is the basis for digital literacy. In Tampere City Library, we find it our duty both to encourage conventional reading pursuits and to give instruction in digital literacy. The concepts of media literacy and digital literacy are very close to each other. Here, we are using the term digital literacy to cover basic computer skills, information

retrieval from the Internet, and the ability to critically evaluate the search results.

There is more than one kind of literacy. There is a great number of ways and levels of reading, which each generation uses to build its own particular literacy. New literacy consists of elements such as digital literacy, information literacy, cultural literacy, media literacy, computer literacy, web literacy, and visual literacy. In modern society, the amount of knowledge and information has increased hugely and the nature of information has changed. It is important to be able to find the required information and to distinguish between essential and unessential information.

The logic of conventional reading of a book is broken in the net. Being used to reading a linear text from left to right, we face a new challenge in interpreting hypertext and web structure. Internet users must assume a more active role than anyone reading a book. They must make choices amidst all the pages and links and move both forward and backward in the text. And they must be able to scan the text and browse through high numbers of search results. Learning digital literacy is not different from the process of learning how to read in the conventional meaning – the only way is through practice and training.

But literacy requirements change as media, texts and social requirements change. Literacy is a basic educational right and necessary for our well-being. To feel well in the electronic world, we must regenerate our literacy on a continuous basis. At the same time, we can practise the idea of lifelong learning.

4. Background for the "net squares" of Tampere City Library

In the years 2000 to 2005, the City of Tampere ran a special information society programme called eTampere, which was designed to take our city to the leading edge of information society development. One of the major goals was to generate services that facilitate the daily life of people, to make such services available to all citizens and to ensure that they know how to use them. Tampere City Library was an active contributor to the programme. We

produced new forms of activities to support the citizens' information society skills.

In 2001, we began by launching an Internet bus and somewhat later we founded two "net squares" in two local branch libraries. The bus and the net squares were designed to instruct customers in information society skills by organizing basic courses in computer use and by giving personal instruction in computer use.

The Internet bus tours the city area on order. Adult customer groups can order the bus wherever they want in the city area. The bus has been equipped as a computer class for twelve people with a convenient auditorium. Our first net square was founded in the Sampola branch in the downtown area in 2003. The second was completed in 2004 in the Hervanta community. The services of the bus and the net squares are easily accessible to citizens in different parts of the city.

In terms of equal development of the information society, it is important to offer the citizens not only access to computers but also places where they can receive free instruction in the use of computers and electronic services. In Tampere, net squares are regarded as an important permanent service to help promote digital literacy among adult population.

5. Resources of the net squares

The net squares operate in their special facilities within the libraries. Both net squares are equipped with 20 computers with Internet connections and a versatile set of programs. They are equipped in the same way as computer classes at schools. Whenever there is no instruction going on, customers can use the workstations for their own personal work. The net squares are open from eleven in the morning to eight in the evening on workdays and from ten to three on Saturdays.

The proficiency of the net square personnel combines the competence of library professionals and IT professionals in a new way. Each of the staffs consists of three Internet instructors and an information specialist. The instructors have been trained in information technology and they teach customers in basic IT skills. The information

specialists are librarians by training. Information specialists are responsible for coordinating and developing the activities and they also give instruction in information retrieval. The net square personnel help bring new IT competence accessible to the city library staff and clients.

6. Operation of the net squares

6.1. Independently but not alone: work and instruction at the computer

Customers can book a computer for one to three hours a day. They can work on their own or, if required, they are given instruction in the use of computer and software. They are accustomed to using the computers for fast electronic errand management as well as longer-term work. They use the computers and programs mainly for reading and sending e-mails, for performing their work assignments or study tasks, for information retrieval, for web banking or other electronic online services of public administration, image processing, or web page design. Previously, Tampere City Library was not able to offer customers such a high number of computers with a versatile set of programs as well as instruction in computer skills and the services of expert personnel.

The net squares are visited by a wide range of different clients. The biggest groups are children, senior citizens, unemployed people, students and immigrants. Almost one third of all net square visitors are foreign students or immigrants. For them it is vital to be able to communicate with family and friends by e-mail and relay chat programs. Electronic newspapers, Internet news services and music listening provide an important connection to their own culture.

Net squares have been designed as peaceful spaces for work and study. The customers are happy with an opportunity to use computers for several hours at one session to be able to concentrate on demanding tasks in peace. And people only just training in information society skills can do so without a sense of urgency and, if necessary, ask for personal guidance. The net squares, the equipment and staff expertise are available to all users of Tampere City Library. If

any customers of another branch library are interested in learning computer use, they can be referred to either of the two net squares.

6.2. One is never too old to learn: Basic courses in computer use

Children who use computers and the Internet acquire web literacy skills spontaneously. But how and where are "new illiterate" adults, who are unfamiliar with computers, instructed in these skills? According to Finnish studies looking into the readiness of the population to adopt information society skills, senior citizens experience the most problems in the use of information technology. Almost a quarter of them feel sidelined by IT development. Senior citizens with the lowest education use computers the least.

Actions to lower the threshold for the use of information technology are still in demand. Basic courses are arranged in the net squares for beginners in the use of the computer, Internet and e-mail. Daytime and evening courses are organized on a continuous basis throughout the year. The courses are free, participants register for them in advance, and their starting level is determined at the registration. To be able to offer good learning conditions, the participants should be more or less at the same level in terms of their existing computer skills. This ensures that no one will feel inferior and the classes can advance at a leisurely pace.

The participants of these courses are usually middle-aged or older, most of them women from 55 to 65 years of age. They have typically been employed in jobs where computers have not been needed at all. Senior citizens are usually motivated by a desire to learn how to use bank services in the web or e-mail. The Finns hugely appreciate education and opportunities to learn. Even older generations want to study and develop themselves in matters that they find important.

There are always two Internet instructors teaching the course. The net square courses consist of alternating periods of lectures and hands-on training, with the focus on the latter. The course material includes exercises, a training programme in mouse use available on the Internet, and a guide booklet. The participants train in the use of the mouse and

keyboard, basic text processing, filling in electronic forms and the use of e-mail. The objective is to remove unnecessary fears and prejudices, which many older people have. Having completed the course, the participants can continue training in the net squares in their own schedule. Many participants are pleased to find the familiar instructors in the net square if they need some further advice.

The recruiting requirements for instructors – apart from extensive technical competence – include good social and interactive skills. In the basic instruction of computer use it is essential that the teachers use clear and easily understandable language rather than computer slang. The courses advance slowly using repetition. The idea is to create an encouraging atmosphere with a lot of discussion. Many older people have physical hindrances, such as problems with eyesight or coordination. Positioning the cursor, double clicking the mouse or the use of the keyboard may be very difficult for some. Teaching situations require that the instructor is patient and has a long fuse and a sense of humour.

All participants are requested to give feedback on the contents of the course. This is used to improve the courses so as to meet customer needs better still.

6.3. Information retrieval and Internet contents: teaching of information management skills

The librarians working in the net squares teach information retrieval from the web to customer groups of different ages. The lessons provide training in the analysis of information, search techniques and critical evaluation of the information found.

Student groups of all ages visit the net squares for instruction in information retrieval. Only preschoolers and the youngest school children are not taught in information retrieval. Instead, they are taught how to use the computer, where to find Internet pages for children, and how to behave safely on the Internet.

Older school children are also trained in information retrieval skills by librarians. They are trained to compare differences between the use of electronic and printed sources. For today's children it is important to realize that in some cases printed sources are more useful and reliable. In the classes,

pupils can do exercises or search for material for their actual on-going school projects. Students are more motivated if they have a need to search information for a certain real-life purpose.

General courses and theme courses in information retrieval are also offered for adult groups. In the general courses, people are taught in the use of web search engines and subject directories on the Internet. Theme courses mean studying a certain theme, such as travelling, literature, interior decoration or music, on Internet pages.

6.4. Cooperation: network of IT instructors

The net squares work within a network of local IT instructors. The network covers adult education centres, community colleges, senior citizens' computer society, associations for the disabled, and the City's own actors. The members meet regularly, usually four times a year, to plan future education and marketing. The benefit of belonging to such a network is awareness of each others' training services and target groups, which helps the members refer clients to the right place. Common planning also helps avoid overlapping training programmes. Network actors organize common instructor training and make field excursions.

The network actors inform jointly of their future courses and training sessions on the Internet as well as by newspaper advertisements. Joint communication helps them reach people more efficiently, and thus even smaller actors have an opportunity to make their services known. Joint advertisements are economical as well.

The network actors arrange free and open theme evenings on computer use in the net squares or in their own premises. The themes discussed include literary sources on the Internet, travel information on the Internet, use of electronic online services, free web calls, or the possibilities of genealogical research on the Internet. Together with banks, the network actors have organized open guidance in web banking, where bank officials have served as instructors in the net squares or other premises.

7. A model for sharing

The purpose of this net square activity is to combine the promotion of digital literacy and instruction in information retrieval with the more comprehensive education in basic IT skills and the improvement of citizens' information society. Similar activity can be organized in libraries of various sizes and resources, if only the staff is skilled in instructing customers in computer basics. The library can be a place where customers are guided in basic computer skills and led to the sources of digital literacy.

By combining IT knowledge and teaching skills with professional library skills in information retrieval and evaluation you create resources which help libraries better respond to the challenges of modern information society.

8. Customer feedback is encouraging

Positive feedback shows that people are satisfied with the courses provided. Here are a few examples of typical feedback:

Fluent and calm course leaders - you get so easily nervous with computers!

A man (65 years)

Good group size, inspiring leaders, easy to approach for help. Web banking is now in control, but I still need help with the Internet and e-mail. Thank you.

A woman (63 years)

Now the computer feels humanly possible. The advice and instructions were very understandable and clear.
It went home, unlike at home! Thank you!

A woman (37 years)

Many important things were raised and we trained a lot. I sometimes need quite a lot of help in small matters, such as search for information. But after the course everything is faster. The service was very agreeable. I'll now begin to use the help of the computer even in ordinary matters, such as banking.

A woman (27 years)

The programme, the instructors and the group size met my expectations of a good web school. The tools and spaces were almost dashing. Thank you for the many tips. Personal assistance was available, if necessary. The time was always too short! My hunger for learning would have sustained me for a few more hours. I still have a number of questions, but I don't think the idea was to turn out computer experts. But you managed to produce a brave experimenter.

A woman (63 years)

The course was very good but I still have to digest the tuition and probably repeat all of it over and over again. Thanks for the wonderful teachers for their patience.

A woman (70 years)

This was a good beginning, but I'm sure I'll need quite a lot of training still. Practice makes perfect and even the perfect ones will train. Thank you and all the best.

A woman (62 years)

The tuition was consistent and easily understandable. Considering the short time, I got enough information in a pleasant way. The teachers were qualified and sympathetic. A huge thank.

A man (71 years)

A pleasant course. The instructors had a very warm attitude. The instruction was clear.

A woman (57 years)

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