The polytechnics are the newest part of the Finnish system of higher education. The whole polytechnic system is being developed on the basis of systematic monitoring and evaluation of its activities. Staff development and library and information services were both targets selected for evaluation in this study carried out to identify the educational needs of the library staff. The questionnaire consisted mainly of structured questions, but respondents (175 librarians, information specialists, library directors, library assistants, and information service secretaries) were also encouraged to express opinions and feelings concerning the issues asked. Results indicate that the library staff of Finnish polytechnics have many different educational needs. The staff is willing to gain both new personal and professional competence. They want: to teach; to relate library and information services to the polytechnic education, organizational mission, and strategies; to exploit networks effectively; and to speak foreign languages. (AEF)

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Educational needs of Finnish polytechnic librarians

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Introduction
Since the beginning of the Information Age, Finland has been in the front line of applying new technology in libraries. Changes in the field of education have also affected the libraries. New concepts of knowledge and learning, in particular, have called for substantial improvement in integrating library and information services into learning and teaching and curricula. These, together with the polytechnic initiative or experiment, have meant many challenges for Finnish polytechnic librarians in recent years. However, no research has been done on the new competencies and skills the librarians need in new learning environments. This article reports a study carried out in order to identify the educational needs of the library staff of Finnish polytechnics. [1]

The Finnish polytechnic system
The polytechnics are the newest part of the Finnish system of higher education. This educational reform started in 1991 with the launching of 22 experimental polytechnics, which were built on former vocational colleges and institutes. The aim of the polytechnic reform was to create a non-university sector, which is more practically and professionally oriented, to raise the standard of higher vocational studies, to provide better linkage or combination between vocational education and working life and to respond to changing needs for expertise and skills needed in working life. Now 32 polytechnics are offering polytechnic degrees (bachelor) in seven disciplines (e.g. engineering, business, art and design, health care and social services) for students who have passed the matriculation examination or who have a basic vocational qualification. Most polytechnics are multidisciplinary.

The whole polytechnic system is being developed on the basis of systematic monitoring and evaluation of its activities. Staff development and library and information services were both targets selected for the evaluation. [2]

At the beginning of the experiment the library services of many polytechnics were insufficient for higher education, and they often had no professional librarians. The international evaluation of two Finnish polytechnics (North Karelia and Kemi-Tornio), which was carried out in 1994 and 1996, reported that there were not many signs of a systematic approach to creating for learning resources centres. [3]

Since then, many signs of such an approach have become visible. The polytechnic libraries are still small, but they are currently experiencing a dynamic stage of development. New services and collections have been developed, and the polytechnic libraries are becoming important parts of the Finnish library network. They house about 1.7 million books, mainly new ones, and the total staff numbers about 230.

The work in polytechnic libraries is challenging. The librarians have met new initiatives alongside establishing the services for new organisations, e.g. teaching of information skills has become more important. It is evident that the librarians need new competencies to keep pace with change and to meet the needs of their new role in supporting self-directed learners (self-directed learning is one of the stated...
educational goals of the polytechnics). How capable is the library staff of meeting these new challenges? Do they feel lacking competence? What educational needs does this reform bring up?

In Finland these problems had not been studied as they have in many other countries. In the previous IFLA round table meeting (Copenhagen 1997) on continuing professional education for the library and information professionals many experts were talking about the need to improve our teaching skills, our educational credibility and our ability to build partnership with teachers or the faculty. [4] The Rectors' Conference of Finnish Polytechnics ARENE was willing to study the educational needs of the polytechnic library staff, and three librarians (Widenius, Viiri, Tahvanainen) belonging to the ARENE Library and Information Services Group were given this task.

The aim of the study

Our aim was to identify the educational needs. This identification would then be used for planning continuing professional education and training suited to their particular needs. We decided to concentrate on the personal development and learning needs identified by the library staff and wanted to ascertain:

- needs for both vocational and academic education in librarianship
- needs for continuing professional education and in-service training
- needs for leadership and management education
- needs for post-graduate/doctoral studies

We did a nationwide questionnaire that could be answered by mail or via Internet. The questionnaire consisted mainly of structured questions but the respondents were also encouraged to express opinions and feelings concerning the issues asked. In the questionnaire the topics of possible or predicted educational interest or need were grouped into four main themes (See Table 1).

Table 1. Educational themes and topics offered

<table>
<thead>
<tr>
<th>Library work</th>
<th>Leadership &amp; management</th>
<th>Information technology</th>
<th>Learning &amp; learning environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>collection development, indexing &amp; cataloguing, customer services, information skills &amp; resources, language skills</td>
<td>economics &amp; funding, leadership &amp; development work, project &amp; team work, library as part of polytechnic information management, quality issues, marketing &amp; communication</td>
<td>basic IT skills, networks, digital libraries, software</td>
<td>learning organisation, adults as learners, learning environment, pedagogy and training skills, collaboration with degree programmes</td>
</tr>
</tbody>
</table>

The respondents were told to choose not more than ten topics they felt were important for themselves.

We received replies from 175 respondents at 27 polytechnics. The total number of the library staff at that time was 183, so the response rate was 96%. The respondents were librarians, information specialists, library directors, library assistants and information service secretaries. Half of them had an academic background (81% in library and information science) and the other half had a vocational education background (mostly commercial college education for library assistants).

Topics of interest most commonly chosen by the library staff

Most members of the library staff felt they needed to learn more about how to teach information skills, how to integrate libraries into the context of polytechnic information management and how to use information
networks effectively. About 70% of the respondents were interested in learning more about these three topics. Evidently the respondents have understood the pedagogical meaning of the library. The design of the learning environment was recognised as an educational interest by half of them (53%) and they wanted to improve teaching and training skills (53%). The topics chosen most often are shown in Table 2.

Table 2. Topics most commonly chosen

<table>
<thead>
<tr>
<th>Topic</th>
<th>Percentage of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>information skills</td>
<td>74</td>
</tr>
<tr>
<td>library as part of polytechnic information management</td>
<td>70</td>
</tr>
<tr>
<td>information networks</td>
<td>69</td>
</tr>
<tr>
<td>learning environment design</td>
<td>53</td>
</tr>
<tr>
<td>pedagogical &amp; training skills</td>
<td>53</td>
</tr>
<tr>
<td>language skills</td>
<td>53</td>
</tr>
</tbody>
</table>

Differences between academics and assistants

We compared the needs identified by qualified librarians and by those with vocational educational background. As could be predicted these groups had slightly different needs, but the differences were rather small. For example, the topics thought to be especially interesting to those in charge of the library services also interested the library assistants. The reason for this might be that everybody working in a polytechnic library has to do almost everything. The staff member of a polytechnic library often operates as a solo librarian and has to be multi-skilled.

The academics were more interested in information skills, apparently because they are teaching them. And as they are in charge of the libraries, they also wanted to know more about the library's role in information management of the polytechnic. They do not want to develop their libraries as separate islands in the polytechnic. Planning of digital libraries is also one of their challenges. In recent years there has been a shift in librarian's work towards tutoring, teaching and consulting. Therefore pedagogical and training skills and learning environmental design were found interesting. On the other hand, they felt no need to update their library skills, as the assistants did.

Two things about the needs of the qualified librarians were unexpected. First, we assumed that they would find learning more about economics and funding to be important and useful, as these are essential parts of the library director's work. However, money seems not to interest them. The reason might possibly be because they do not have real economical responsibility. Second, if self-evaluation and internal evaluations are so important and crucial for the polytechnics, how will the polytechnic libraries evaluate themselves when only 1/5 are interested in quality work?

Compared with the academics, the assistants were more interested in obtaining better language skills and taking language lessons, which is quite understandable in light of their educational background. Since their establishment, the polytechnics have experienced rapid and large-scale internationalisation. Now they are receiving more foreign students every year and customer services can no longer be managed without the ability to communicate in foreign languages. The assistants also wanted to know more about marketing and library work.

Information technology no more makes library staff feel uncomfortable. On the whole, the respondents felt they had enough basic skills in information technology. Among those with the academic background the
digital libraries are recognised as part of the future possibilities. Networks, the internet and its overwhelming resources are used daily and are still considered interesting and worth becoming better acquainted with.

Preferred organisation of learning opportunities - "Anything goes if it will make me more competent in my work"

We also wanted to find out what were the preferred styles of learning and methods of teaching. How did they feel about classroom teaching, taking study modules, attending courses or distance learning?

It can be assumed that those practising a profession are not so eager to become full time students, but are most probably interested in continuing professional education. That was also the case here. Almost 80% of the respondents wanted such studies. Interesting enough, about 40% were degree- or diploma-oriented, stating that setting a goal for oneself is a matter of motivation.

The type of learning these respondents quite clearly preferred is open and flexible learning and multiform teaching. The respondents are ready to spend evenings and weekends on their studies and are willing to have distance modules, learning in teams and in projects, and they are ready to use networks for their learning.

How could their needs be met?

What could be done to respond to the needs of the library staff? There seem to be some needs for improvement in library education, professional development studies, doctoral studies and in methods of instruction. Our suggestions are:

Library education in Finland is now based mainly on university studies. The University of Tampere, which has the oldest Department of Information studies, offers a M.Soc.Sci. programme. Librarianship can also be studied at Oulu and Turku Universities. These universities all educate academic information professionals and librarians. There seems, however, to be a need for a vocational degree programme for library assistants. Some years ago vocational education for library assistants was available in many commercial colleges, but that programme no longer exists. There is also a need for advanced professional studies in librarianship offered by the polytechnics. This would serve the needs of the assistants with the commercial college background.

In many countries, universities offer special courses or programmes for school librarians or teacher librarians. The possibilities of having such programme at some university in Finland should be studied. Tailored PD (professional development)-studies, especially in the field of pedagogical and training skills, should be offered by universities or academic centres of further education. These organisations could offer leadership and management education and training courses, which would meet the needs of other library directors.

Many of the respondents were already doing post-graduate studies at different universities. As most of them are carrying out research on topics related to polytechnic libraries, it would be rational to organise a doctoral programme for them. The polytechnic system would benefit from research done in that programme, and the students in that programme would benefit from their peers and from sharing the same research interest with others.

In custom-designed higher education the emphasis should be on integrating libraries into learning and on creating readiness for developing services and products, change management and knowledge management. All studies should be organised in real interaction with working life. Students should have individualised curricula, where former studies and work experience are taken into account. New learning and teaching methods should be applied, because for librarians it would be useful to gain first-hand experience of new
learning styles and teaching methods applied at the polytechnics. Knowing and understanding those methods would help the librarians to help their customers.

Apprenticeship should be developed as means of entering the library world. Academic apprenticeship could be one way to recruit new people with thorough knowledge of a particular subject-area (e.g. engineering) to work in polytechnic libraries.

Information technology is no longer making librarians feel uncomfortable. The respondents feel they have no problems with Word, Excel, PowerPoint etc. but they want to learn more about the networks. They are interested in the contents, not in the technology. As it seems that polytechnic libraries are not well enough integrated into polytechnic information management, continuing education and training in information technology and management could be offered to ADP professionals and library professionals together. They should plan and manage the information resources of the whole polytechnic collaboratively.

Conclusions
According to these results, the library staff of Finnish polytechnics have many different educational needs. The staff is willing to gain both new personal and professional competence. It was found that they want to learn:

- to teach,
- to relate library and information services to the polytechnic education, organisational mission and strategies
- to exploit networks effectively
- to speak foreign languages

It is also obvious that they want to learn in a new way, by new methods. Universities, polytechnics and other organisers of education have a mission to provide educational opportunities, and to develop and offer tailored education that could serve their needs.

It is also obvious that research on future learning needs of the librarians and the changing role of the librarian is needed. In my ongoing research I am concentrating on pedagogical librarianship which I understand as librarianship (library & information services, the work of the library professionals)

- integrated into teaching and learning, curricula and learning environment
- supporting open and flexible learning
- meeting the needs of the learners
- part of the learning organisation
- form of expertise

The purpose of that study is to define 1. what is the future pedagogical role of the Finnish polytechnic librarian, 2. what is the new expertise they need and 3. what is their consensus about needed pedagogical skills and competencies. The views concerning pedagogical librarianship are studied using the Delphi method (rounds of responses by experts moving towards consensus). I hope my results will clarify librarians' and library services' pedagogical role and their contribution to teaching and learning and will help in building partnerships with teachers. I think that we who are working in learning organisations must have a pedagogical approach to our profession. I believe that if the librarian understands the pedagogical possibilities of his/her work, and if the organisation and the teachers do, the work of the library and information services does have an impact on learning outcomes and on the quality of the education"

References


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