

## **Multi-Faceted Measuring of the Quality as a Tool for Quality Improvement in the Kuopio University Library, Finland**

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**Abstract:** From the beginning of the 1990's, different types of quality management and evaluation systems have become integrated into higher education institutes in Finland due to the creation of the European Higher Education Area (EHEA). At the same time, an overhaul of the higher education legislation and structures was instigated in Finland. This has meant that the university services, e.g. libraries have had to integrate more efficiently into the core processes of the universities. The paper describes the building of the quality management system in one library and especially how different types on quality measurement systems - statistical analyses, benchmarking, surveys - are used in order to improve the quality of the library services. A major emphasis is in the involvement of management at both the strategic and everyday level.

**Keywords:** quality management; evidence based management; university libraries; Finland

### **1. Introduction**

The Finnish academic world consists of 20 state owned Universities and 30 Polytechnic high schools. In 2006, the Finnish Ministry of Education published the principles for the structural development of Finnish institutes of higher education (OPM, 2006). The main aims were to reduce the number of Finnish higher education units, especially by merging smaller units into larger ones. In addition it was intended that the autonomy of the Universities should be increased in order to improve the competitiveness of Finnish higher education and research (see also Saarti 2008).

From the beginning of the 1990's, different types of quality management (QM) and evaluation systems have become integrated into higher education institutes in Finland. One impetus for these systems, especially for the evaluation process, was the decision by the member states of the European Union to create a European Higher Education Area (EHEA), a process that was initiated in Bologna in the summer of 1999. This led to the establishment of pan-European policies and decisions on how these should be implemented in the member states. The Finnish Ministry of Education has listed the aims for quality control in Finland (Korkeakoulujen laadunvarmistus, 2004, also see ENCA, 2005) as follows:

1. Universities and polytechnics will establish quality systems that will cover all of the processes undertaken within the institution.
2. To meet the goals set in the Communiqué of the Conference of Ministers responsible for Higher Education in Berlin on 19 September 2003 (2003) in Finland, evaluations or auditing of the universities and polytechnics will be implemented.

Thus the higher education institutions have the responsibility for quality control on their campuses. The auditing is carried out by the Finnish Higher Education Evaluation Council (FINHEEC) (see FINHEEC, 2004). The timetable for these evaluations is such that all the higher education units are intended to have been evaluated at least once by the year 2010.

The University of Kuopio, Kuopio, Finland (<http://www.uku.fi/english/>) has an international reputation in the fields of health, environmental science and well-being, with particular strengths in biotechnology, life sciences and biomedicine. It is one of the 20 universities in Finland and has about 6,200 students, 1,800 staff members and an annual budget of about m€ 100.

Kuopio University Library is an academic library which is open to everyone. The library was established in 1972. Its library collections and expertise are focused on health sciences, pharmacy, biosciences, environmental sciences, information technology, business, and social sciences. The annual budget of the Library is about m€ 3. There are 35 staff members in the Library. The collections consist of approx. 143,000 monographs, 800 printed journals (subscriptions), 14,500 electronic journals, 50,000 electronic books, and 5,500 audiovisual sources and other material. Each year, information literacy teaching is provided for a total of 1,000 student credits.

As part of the above structural changes, two Finnish universities - the University of Joensuu and the University of Kuopio will merge to form the University of Eastern Finland to be launched from the beginning of the year 2010. This poses new challenges for the management as well as for the quality management of the library's services. In the following section we will discuss the building of the QM system of the library and especially the creation of the feedback system that we have been developing in order to gain evidence-based facts on which to base decision making.

## **2. Managing quality in an academic library**

In the year 2003, the University of Kuopio set a goal to adopt an ISO9001:2000 based quality management system in order to support the management and continual process of improvement throughout all University activities. The goal was to pass the Higher Education Evaluation Council audit (objective achieved in 2006) and the acquisition of an international certification of the teaching quality management system (target achieved in 2006).

The University Library initiated its quality management system construction at the same time as the university (see Saarti & Juntunen 2007). The library's designated quality manager has participated in all the University's quality network meetings. The aim has been to ensure that the library's activities are an integral part of the University's core functions: teaching, research and social function.

Kuopio University Library is defined as a service unit within the University. It is part of the Centre for Information and Learning Resource Services; the other units are the Learning Centre and Information Technology Centre. The Centre for Information and Learning Resource Services share a joint quality manual, which includes definitions of the management system, core processes,

resources and follow-up. Cooperation of the service units has been useful, because the activities are mutually reinforcing: for example, from the library's point of view the cooperation with the information technology professionals has made it possible to create better services, especially when so much of the information sources are currently available through computer networks. Cooperation with the Learning Centre has provided access to experts who offer support in the library's information literacy instructional courses.

Also in addition to the previously mentioned quality manual, the library's quality management system contains our terms of reference. They are divided into two parts: the library's web site describes the services which are offered to the customers. The library's intranet contains the terms of reference created for the staff to ensure the quality of services. These include detailed manuals for lending library materials and how to manage the reference service. They also ensure that the patrons receive the service promised in the quality management system.

So how has the situation improved within our library, due to this the quality work which has been systematically conducted for more than five years? First, the organization has become more coherent. The separation between departments has been substituted with operational teams that take responsibility for the planning, organizing, and reporting their operations. This affects each individual worker; they can now perceive how their input contributes to the totality of the library's functions. In addition the information flows more freely between individual employees working in teams.

The goal of the organization's management is to ensure that there are adequate resources, as well as, empowering, motivating and maintaining the skills of the staff and finally the management group monitors the activities undertaken by the organization. In our library, implementing QM-system has led to a remarkable growth in staff training as well as ensuring effective communications for both to our customers and staff.

The library has clearly changed during the quality work; it is now customer-friendly in all library core processes; i.e. the acquisition and organization of electronic and print collections, information literacy tuition and reference work, as well as lending and copying services.

It has been decided that the QM-system for the new University of Eastern Finland to be launched at the beginning of the year 2010 will be built on the principles of the University of Kuopio's QM-system. It also has been decided that the first internal audit is to be held during the year 2009.

There will be new challenges to be faced when building the QM system for our new University Library, e.g.:

- distance between the campuses is about 140 km
- University of Kuopio's faculties' disciplines make extensive use of electronic material; in Joensuu they use more printed material
- in Joensuu, the University has not carried out a systematic QM implementation: there is a notable need for the training of personnel and restructuring old ways of thinking
- the increase of the number of the staff to a total of 80 persons when joining Kuopio's 35 and Joensuu's 45 persons

- managing of the communications and a more complex unit; building community with the aid of modern virtual technologies.

### **3. Creating tools for the evidence based management within the library**

The past decades have seen a revolution in the social sciences and there is a vigorous debate on which are the optimal methods for gaining a better understanding of human and social behaviour. A type of triangulation has been applied in this type of approach where both quantitative and qualitative methods have been used in gathering and combining data in the analysis of the behaviour of the target groups.

Since the library and its services are about people, their needs and their actions, this triangular approach is most useful when building the feedback toolkit of one's QM system. In the Kuopio University Library, we have used the following methods:

- collecting and analyzing statistical data
- monitoring user actions
- undertaking user surveys
- conducting user interviews
- gathering feedback from our services, especially IL teaching
- analysing ones own actions in a yearly self evaluation and self assessment of teams' and staffs' achievements
- collating knowledge from the outside world of the ideas to the library service improvement including benchmarking
- conducting systematic management reviews

The most important statistical tool for our QM system is KITT – Research Library Statistics Database (<https://yhteistolasto.lib.helsinki.fi/index.jsp>). It was developed and is maintained by the National Library of Finland. The database follows the international ISO 2789 library standard. It contains statistical information about all the Finnish university libraries, polytechnic libraries and about twenty special libraries since the year 2002.

The KITT database provides the basic information about frame organisations, library collections, library use and users, opening times and facilities, finances and staff. It is a good tool for benchmarking library resources by using time series and analyzing the data through the key numbers and basic key figures that are automatically calculated by the system.

It is possible to obtain statistical data directly from the library system about catalogued collections, registered borrowers and home loans. The Finnish National Electronic Library, FinELib, gathers financial and statistical information about acquisition and the use of the electronic library resources. All the libraries have their own ways of collecting the other needed statistical data, using the common national guidelines.

Our user surveys can be divided into two categories: regular and case-specific. In particular, we have monitored our patrons' needs and actions in the acquisition and use of the library collections. We have found that tri-annual survey suits us best with respect to our own and our patrons' schedule. As a

result of our regular surveys, we have been able to make strategic decision, e.g. make a shift from printed journals into e-journals over the past 10 years as well as changing our library premises ideology from being book oriented to a customer oriented. (See Juntunen & al. 2005 and Kananen & al. 2006.) Case-specific surveys and user-interviews have been conducted in order to test the effectiveness of these new services and their functionality.

One important tool that has been implemented into our managerial tool box as a result of the building our quality system has been the decision to undertake systematic management reviews. We have taken a two-level approach here: at the beginning of the year we look at the coming year and at the end of the year we conduct the actual management review that combines all the data and feedback collected from our patrons and services. In addition to the reviewing of statistics and survey results we also have annual reports from our service teams that concentrate on the analyzed user feedback of our services and how the services have been developed based on this feedback.

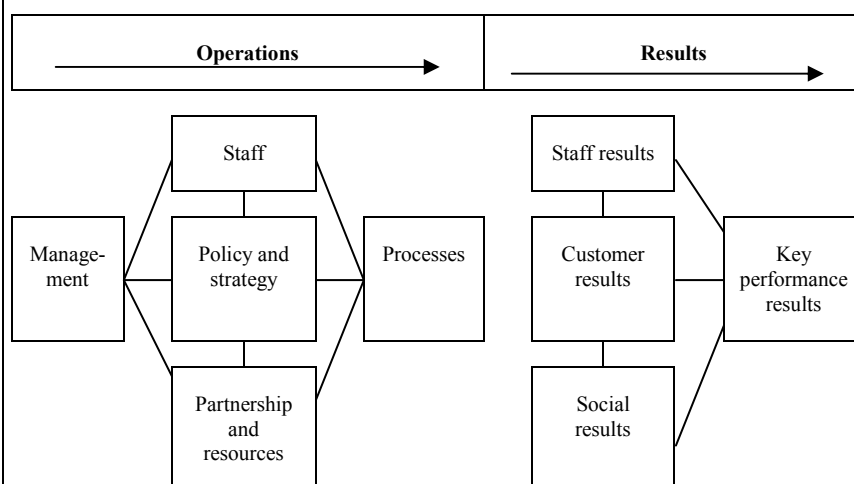


Figure 1. EFQM based facets for key figures

We also have become acquainted with the EFQM (European Foundation for Quality Management) model. The EFQM model was created to help to understand and review the connections between an organisation and its results. By using the model as an evaluation tool, it is possible to identify problems and develop the organisation's capabilities and resources. The central features of the results are the staff results, the customer results and social performance results.

The EFQM model is not yet in active use in Kuopio University Library, we have only made some tests to see how it should work. In order to make it a useful tool for the QM system, we have to develop our statistical methods to gather and analyze the data needed. The KITT database does not include all the required indicators to describe all the operations and results we want to exploit. At the present, we have defined the set of key figures to be followed and we are implementing their analysis according to the EFQM division shown in figure 1.

#### 4. Conclusions

So has the implementing of our QM-system been worth the effort? The answer is unequivocal: yes. At the staff level, there clearly can be seen a better motivation for the work as well as a desire to improve one's skills. At the management level, we have been able to move towards a more evidence based leadership that has evoked quite drastic changes in how we see our role and our services within our university. At the service providing level, we have been able to rethink and re-evaluate all our services as well as being able to implement a culture of continuous improvement.

The QM-system clearly needs a well-designed and a functional system for gathering facts on which the management as well as other staff within the library can base their decisions. Here we have found out that the triangulative approach is useful: we need statistical data and its analysis and we need surveys and other more qualitative methods that provide us on the other hand a clear picture what is happening but at the same time represent tools to identify the apparently minor changes that might revolutionize our future within a few years.

This data when analyzed appropriately and communicated in a compact manner also helps the library in its internal and external lobbying. This enables us to stress our contribution to the university's research and tuition as well as in helping us to convince those holding the university purse-strings why we need adequate resources in order to fulfil the needs of our customers.

The most rewarding experience that provided proof of our success has been the internal and national surveys (see e.g. Nummela 2008) where we have been able to demonstrate that we have actually improved continually our library: as well as regarding the image of the library and the grade that our customers award for the services provided. Another rewarding experience has been benchmarking other Finnish university libraries; our library have been placed within the "top five" service providers in our field.

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