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FACILITY MANAGEMENT IN LEARNING ENVIRONMENT
CASE: YLITORNION YHTEISKOULUN LUKIO

Bachelor's Thesis 2009

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ABSTRACT

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Facilities management is an integral part of the overall management of the school. The actualization of the goals and objectives of education require the provision, maximum utilization and appropriate management of the facilities. Furthermore, advances in science and technology, necessitate that the school manager should adopt modern methods of facilities management. This will improve the quality of teaching and learning.

A direct relationship exists between the quality of school facilities provided and the quality of the products and service of the school. The physical environment of a school is a major determining factor in the attainment of its objectives. The purpose of this research is that it describes the concept, nature, types of school facilities, need for facilities in schools and facility management problems. It also suggests methodologies for facilities management and concludes that school facilities give meaning to the teaching and learning process.

The objective of the research was to determine the needs, expectations and requirements of the students in order to identify the areas that need further development. The qualitative research was conducted to identify unmet needs of the students. The questionnaire used in the research was designed to cover the satisfaction level of all the renovated areas.

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Tilojen hallinta on olennainen osa yleistä hallinnointia koulussa. Oikeanlaisella tilojen hallinnalla ja nykyaikaistamisella saavutetaan opiskeluympäristön realistiset ja nykyaikaiset tavoitteet ja odotukset, joka näin ollen parantaa opetuksen laatua ja oppimista. Tuotteiden laadulla ja fyysisellä ympäristöllä on merkittävä osuus tavoitteiden saavuttamisessa ja opetus- ja oppimisprosessissa.

Edellytyksenä on kuunnella asiakasta, sillä sen avulla tarpeet ja tavoitteet pystytään tunnistamaan. Siksi läheinen yhteistyö Ylitornion yhteiskoulun lukion ja opiskelijoiden välillä on hyvin tärkeää ja siitä hyötyvät molemmat osapuolet. Kun palveluiden tuottaja tiedostaa asiakkaidensa tarpeet ja tavoitteet, voi hän ennakoida tulevaa sekä samalla kehittää omia toimintojaan oikeaan suuntaan.

Tutkimuksen tavoitteena oli arvioida Ylitornion yhteiskoulun lukiossa tehdyn laajamittaisen modernisoinnin vaikutusta oppilaisiin ja muuhun henkilökuntaan. Tavoitteena oli määrittää opiskelijoiden tarpeet, odotukset ja vaatimukset. Tällä pyrittiin tunnistamaan kehitystä vaativat osa-alueet. Laadullisella tutkimusmenetelmällä kartoitettiin opiskelijoiden tyydyttämättömiä tarpeita. Tutkimuksessa käytetty kyselylomake oli suunniteltu kattamaan modernisoinnin kaikki osa-alueet erikseen. Tutkimuksen tulokset osoittavat että modernisoinnilla on saavutettu sekä tavoitteet että odotukset.

1 INTRODUCTION

Until the beginning of the 1990s, the Finnish government provided standards for school buildings, long corridor with identical classrooms. Since then schools have been built, according to the number of student and the needs of the school. The main standard was “safe learning environment”.

The main concept of modern school buildings main idea, is usually one big, high area as the “heart of the school”. This area is the centre of the school.

When designing a new school or renovating an old one, biggest role has the representatives of the school. They define the vision of the school according to an “action-plan” including the size, shape and physical appearance.

As a part of the development of an information society, schools are going through cultural changes. The main goals of the strategy are: Finding common goals, strengthening cooperation and pedagogical development and strengthening action conditions.

The school of today and of the future no longer conforms to the traditional corridor/classroom concept, in which long rows of similar classrooms are connected by a hallway. Instead, the new school building is often analogous to the urban environment: it resembles a small community or village built around a square. The square is the scene of information searching and processing, meals, encounters and social intercourse.

School is a multifunctional concept, not only a place for teaching and learning but also a place for social interaction, both for children and adults. Outside normal school hours, schools can become small community centres.

The Finnish National Board of Education organised an international conference on the learning environment and its relation to pedagogy,

student achievement and well-being at school in April 2006, offering visits to local schools. The conference emphasised the importance of physical factors to schoolwork. How can we create innovative and inspiring learning environments now and in the future, what are the criteria for evaluating school buildings, and what kinds of demands does fast-developing information technology pose?

Entitled “The School of Tomorrow – Learning Environment, Pedagogy and Architecture”, the conference in Helsinki gathered almost 100 participants from 21 countries to hear both speakers from Finland and guest-speakers from abroad.

Several international studies, including the OECD Programme for International Student Assessment (PISA), have rated Finland among the world’s highest in student achievement, generating international interest in the Finnish school system. The National Board of Education believes that Finland’s exemplary performance is largely due to the country’s main principles for comprehensive education: equal opportunities; regional accessibility of education; education totally free of charge; a supportive and flexible administration; individual support for the student learning and welfare; development-oriented evaluation and student assessments – no testing or ranking lists; highly qualified teachers; and quality learning environments.

The Finnish speakers presented the country’s education system, the processes of school construction and the quality criteria for a good school. These criteria were created in response to the need to evaluate the school environment; they help the teaching staff and building owners to assess their school buildings. The school library was noted as an important element in the Finnish school as the central learning resource.

Mukund Patel spoke on the United Kingdom’s school building programme. The tremendous need to provide new school facilities and refurbish existing schools is putting considerable pressure on the country’s education budget.

Pamela J. Loeffelman presented award-winning school projects in the United States that have been part of a programme by the American Institute of Architects. For many years the programme has tried to find the best examples of school architecture that adapt new and inspiring concepts to the learning environment.

The conference programme included visits to comprehensive, general and vocational upper secondary schools, which complemented the Finnish presentations and illustrated the character of today's Finnish school: open, transparent and flexible, with multifunctional spaces.

1.1 Improving the quality of educational building

Many countries, regions and communities are becoming extremely concerned about issues such as the maintenance of ageing stock, vandalism, the reuse and adaptation of buildings, up to-date furniture and equipment, the use of premises for more than one purpose and the reduction of premises, as well as related expenditure. "Improving the Quality of Educational Building", the quality of facilities has an impact not only on educational outcomes but on the well-being of students and teachers. There is a growing awareness of the role that educational facilities play in shaping attitudes toward the environment and the contribution they make to urban renewal.

Some of the most important factors that influence learning and living are those that relate to control of the thermal environment, proper illumination, adequate space and furnishings. If, as studies and experience strongly indicate, achievement (i.e. student test scores) is greater in above-standard schools than in substandard buildings, it is the obligation of the responsible authorities to improve the facilities.

The quality and durability of a building are affected by how it is looked after, the ways in which servicing and repairs are carried out, and the rate at which

needs and requirements change. Therefore it is necessary to develop strategies for managing educational facilities and to conduct research to better understand how facilities influence student behaviour and achievement.

1.2 Company profile

Ylitornion Yhteiskoulun Lukio is located in the small commune of Ylitornio, close to the river Tornionjoki. The population of Ylitornio is 5400.

Ylitornion Yhteiskoulun Lukio was established in 1947. It is a privately owned upper secondary school. Ylitornion Yhteiskoulun Kannatusosakeyhtiö owns the school and its premises. Ylitornion Yhteiskoulun Lukio offers high upper secondary school education and also adult upper secondary school education. Most important for Ylitornion Yhteiskoulun Lukio is its co-operation with Swedish upper secondary school in Övertorneå, Sweden. The Schools are organizing student exchange, theme days and meetings with each others. Ylitornion Yhteiskoulun Lukio co-operates with an Upper secondary school from Pello. At the moment school has about 100 students and 16 teachers.

Ylitornion Yhteiskoulun Lukio has applied for government funding for modernisation for the past 10 years, in 2005 the school received the government funding. The building was in very poor condition and needed repairs. The budget for the modernisation was 2 000 000€ of which 100 000€ was allocated for furniture and new equipments. A school for disabled students is in the “west wing” of the premises of Ylitornion Yhteiskoulun Lukio. Ylitornio commune took up a 20 year lease on the premises. Advance payment of the rent covered the modernisation of the “west wing” and the modernisation was carried out according to their needs. The amount of government funding for modernization depends on the amount of the students and space needed for that amount.

The “west wing” and the class room in “north wing” didn’t receive any specific government funding but it is also included in the total budget. The “west wing” accounted for 15% of the total budget. Ylitornion Yhteiskoulun Lukio is leasing the “north wing” class room annually for different uses. Currently it is used as a music school and local band is using it for rehearsal.

The basic idea of the modernization was to have new, clean , cosy and attractive school. Ylitornion Yhteiskoulun Lukio is fairly small school and school needs more students to remain viable. The main goal was that the new image will attract more students, including some from neighbour communities. Most of all, the school needs the local secondary school students to continue to upper secondary school.

As we can see from the old and new ground plan, the biggest change was in the lobby area. The school wanted to have a modern lobby area which would work as the “heart” of the school. All the students gather in same area and “corners” of small groups of people would be avoided.

Figure 1 Principal’s office before renovation

Figure 2 Cafeteria “Sumppi” before renovation

Figure 3 Cafeteria “Sumppi” converted into principal’s office

Figure 4 Reading room before renovation

Figure 5 Teachers room before renovation

Figure 6 The teachers' room became a reading room

Figure 7 Hallway before renovation

Figure 8 Hallway after renovation

The schools' cafeteria "sumppi" has been relocated to the lobby after the renovation. The cafeteria is owned by the student body of Ylitornion Yhteiskoulun Lukio. The cafeteria is also used as a meeting room for the student body.

The board of the school wanted, The teachers' room, student counsellors' office and principals' office to be one big entity. Previously the teachers' room and principals' room were separated by the lobby area.

The principals' office has glass walls, enabling the principal of the school to remain in contact with the students and lobby area. In the new premises the decision was made that dedicated shoes would be worn indoors and outdoor cloths would be left in the lobby area. The school hopes to create a "homelike" atmosphere by these means.

2 FACILITY MANAGEMENT

The role of facility management is to ensure that everything is available and operating properly to enable the buildings' occupants to do their work. The

facility manager generally has the most influence upon the quality of life within a facility. Facility management may range from the small scale (e.g. single small building custodial services) to the large scale or even to on an international scale.

The role of Facilities Management is the upkeep of buildings, grounds, and fixed equipment through general and preventive maintenance. Facilities Management is committed to providing the best possible learning environment for students and a safe, healthy, and comfortable working environment for the teachers, administrators, and other employees.

The primary purpose of the teaching and learning process is to bring learner desirable change in a learners' behaviour through critical thinking. This process does not take place in a vacuum but rather in an environment structured to facilitate learning. Stoner, Freeman and Gilbert (1996) described the environment of an organization as all elements relevant to its operation and they include direct and indirect action elements. School facilities constitute the major components of both direct and indirect action elements in the environment of learning. Several studies have shown that a close relationship exists between the physical environment and the academic performance of students.

The school facilities consist of all types of buildings for academic and non-academic activities, equipment for academic and non-academic activities, areas for sports and games, landscape etc. Others include furniture and toilet facilities, lighting, acoustics, security, transportation and special facilities for the physically challenged. These facilities play important role in the actualization of the educational goals and objectives by satisfying the physical and emotional needs of the staff and students of the school.

Knezevich (1975, p.563) emphasized that the physical needs are met through provision of safe structure, adequate sanitary facilities, a balanced visual environment, appropriate thermal environment, and sufficient space for work and play. Emotional needs are met by creating pleasant

surroundings, a friendly atmosphere, and an inspiring environment. All these physical and emotional needs are the main criteria for creative and innovative learning facilities.

Fenker (2004) stated that facilities management is a process that ensures that buildings and other technical systems support the operations of an organization. The International Facilities Management Association (2002) described facilities management as the practice of co-ordination of the physical workplace with the people and the work of the organization; it integrates the principles of business administration, architecture and the behavioural and engineering sciences. School facilities management is the application of scientific methods in the planning, organizing, decision-making, co-ordination and control of the physical environment of learning for the actualization of the educational goals and objectives. This involves among other things, collective decision making in relation to selection of site for the establishment of new schools, renovation and modernization of old plants, provision of equipment for academic and non-academic activities, maintenance of all facilities and review of management practices and processes.

2.1 School Facilities

Schools exist for teaching and learning purposes. School facilities are the material resources provided for staff and students to optimize their productivity in the teaching and learning process. The realization that the transfer of knowledge does not only take place in the four walls of the classroom from the teacher to the students but rather that learning takes place through discovery, exploration, and interaction with the internal and external environment has necessitated the creative and innovative development of teaching and learning facilities that reflect these changes.

Schools exist to serve the socio-economic and political needs of an ever-changing society consequently they are in constant interaction with their

external environment. They receive inputs from the external environment in the form of human and material resources, process them and return the same into society as finished products and services. The quality of the products has a direct relationship with the quality of the facilities deployed in the process of the production. This demands that state of the art facilities are provided in schools to prepare school leavers for life in the global village.

According to Propst (1972, p.107) useful types of resources to be considered by the planners and the management team are acoustical design engineering, audiovisual design engineering, behavioural sciences, building systems design, community and press relations, ecological studies, electronic data processing of hardware specifications, electronic data processing for programme development, use of facilities training and financial planning. Facilities management is a collective responsibility of the financers, staff and students of the school and the community where the school is located.

Unruh and Alexander (1974) emphasized that both teachers and students need places to search, read, write, confer, interact, view, listen, think, experiment, and record. Students need places to transact student affairs or to gather for social purposes. Teachers need office space, conference rooms for team planning, facilities for diagnosis of students needs, and facilities for preparing instructional presentation. New views of the teaching-learning process that move beyond memorizing of knowledge toward involvement of students in applying, analyzing, synthesizing, and evaluating knowledge stress the need for flexibility of space in the schools. The complexity of the learning environment requires flexibility in the design of the school facilities. Modern facilities are designed for diverse academic and social activities.

Multipurpose facilities used for academic activities during school hours may be available for community use during or after school hours. Such facilities may be used for continuing education programmes and social activities. Through appropriate scheduling multipurpose facilities may be accessible to

the community during school hours. This will eliminate the burden of duplication of such facilities as conference halls, gymnasium, library, theatre and sporting facilities. Such integrated effort is cost effective and brings the community closer to the school.

Some buildings, like the Ylitornion Yhteiskoulun Lukio are over fifty years old and therefore lack modern facilities for teaching and learning. Renovation and modernization of old buildings should be carried out to ensure that there will be facilities including office space, library, individual study area and physical education facilities. Teaching equipment and furniture are essential for acheiving educational goals and objectives.

2.2 Management of facilities services

Facilities and support services constitute large costs in most companies. The optimisation of these services therefore can make a huge impact on a company's total performance. Outsourcing of Facilities Management (FM) can be done for different reasons. A trend is that the upper management focuses on their core business and does not want to spend time on and be involved in support activities.

Generally quality is the most recognised criteria in service literature. Satisfaction with quality cab can be seen as one and possibly the major performance criterion in the management of facilities services (Heavisides and Price, 2001). This is also acknowledged by Varcoe (1996) who considers the three key performance criteria for FM to be cost, delivery and quality. The driving forces regarding services today are understanding and improvement of the service processes that bring value from customers' point of view. The service concept of a combination of events that flow together to form an experience, where production and consumption cannot be totally separated and where the clients often actively participate in the production process, is perceived as extremely complex (Grönroos 2000). Competitiveness is factor of two primary variables.

1. Understanding customer needs
2. Exceeding the needs of customers.

Term ‘monitoring’ will be discussed in the following chapter. Monitoring is defined as to watch, keep track of, or check for special purpose. Monitoring includes four steps:

1. Planning
2. Measuring
3. Analysis and evaluation
4. Implementation of quality improvements

Monitoring the quality determines how well, effectively and efficiently needs are met. However monitoring is not simple in reality. Monitoring provides information and information is the key to the proactive role that FM has, i.e. to predict change and thus optimise strategic decisions to meet the client’s needs. One of the major risks is that the FM function lacks the information to make it possible to execute a correct performance and planning function, which requires relevant monitoring systems that provide the essential information (Pheng, 1996). Therefore, in order to ease the planning and handling of change, the FM function should implement a system to monitor its performance. Lynch and Cross (1995) further stated that this system can become a catalyst for continual improvement and help motivate operations to continual improvements in customer expectations and to identify and eliminate waste of time and resources. In the same manner as the development of the FM concept during the last decades, the speed of technological improvements has been exceptional (Lunn and Stephenson 2000).

2.3 Four parts of the facility management

In any business, the clients are the most important factor for survival. This is put to extremes in FM where the core business should be to continually make the client more competitive by understanding his needs better than himself and providing the necessary services.

FM consists four parts (Van Wagenberg, 1997):

- Facilities services (discussed in the previous chapter)
- Space management
- Infrastructure (ICT)
- Management

According to Van Wagenberg (1997) a common view is that FM constitutes facilities services together with its management when it is just *facilities services management*. When discussing total FM, all four parts have to be included.

3 SERVICE QUALITY

Service is discussed in this chapter as a facilitity of the school. Quality and satisfaction are the most recognised criteria in service. Driving forces regarding the services today are: understanding and improving the service process that from the customer's point of view, bring value. In any business, the clients are the most important factor for survival. Existing literature indicates that there are various definitions of service quality. In this chapter service and quality are discussed separately.

3.1 Definition of service

Grönroos (1998, 49-50) has defined service to be “an activity of more or less intangible nature that normally, but not necessarily, takes place in interactions between the customer and service employees and/or physical resources or goods and/or the service provider, which are provided as solutions to clients’ problems”. Definitions often stress that there are both tangible and intangible sides of service, especially concerning the facility management (FM) services. There are many definitions of service. Mostly it depends on the viewers’ perspective when observing the activity. Service contains different degrees of interaction between the clients and the provider.

3.2 Definition of quality

Quality used to be more or less about how technical specifications were matched through the goods (Grönroos, 1998, 60). Parasuraman et al. (1990) defines quality as “exceeding what customers expect from the service”. In all definitions the common aspect is the customers’ needs and expectations.

As previously stated , service is performed to fulfil a purpose - the client’s need. What counts, as stated by Grönroos (1998, 62), therefore is the quality of the service perceived by the client.

3.3 Technical and functional quality

Grönroos (2001, 100-102) suggest that with the help of a model, which clarifies two different quality dimensions of the service, we can determine how quality is formed and how customers experience it. Figure 1 below shows the two fundamental quality dimensions: technical quality of the outcome, what a customer gets, and functional quality of the process, how

the customer receives it. Technical quality of the outcome can be determined, that when interaction between service provider and customer is over, of what the customer has. This proves that not only the quality of interaction determine completely the service quality. (Grönroos 2001, 100.)

How the service is provided also effects also in quality. The functional dimension is the quality that develops as a result of the process. However, it should be remembered that the quality is not completely determined by using only these two dimensions, since company's image has also a part in the process. Customers can see company's presence, observe operations, know company's history etc.

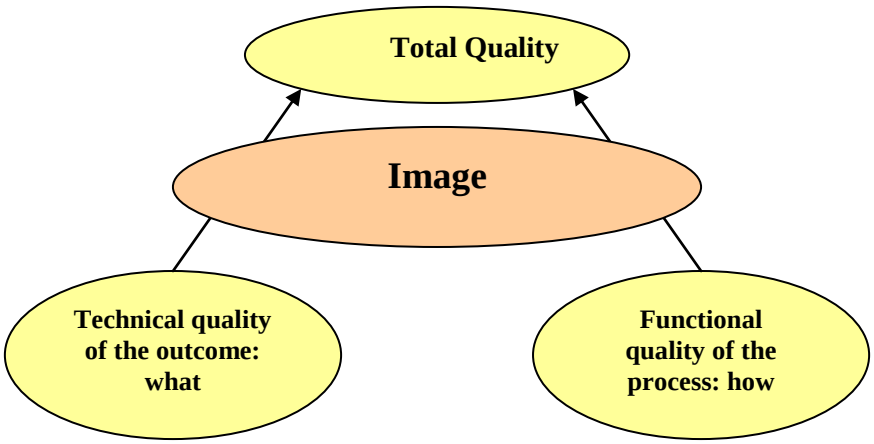

Figure1: Two dimensions of service quality (Grönroos 2001, 102.)

Grönroos (2001, 102) divides service quality into two dimensions. The first dimension is *the technical quality*, i.e. what is being produced or the technical outcome of the service production processes.

The second dimension, *the functional quality,* describes the function of the service production process and consumption. The technical quality is often evaluated more objectively since it consists of physical results.

Figure 1 describes the relationship between the technical and functional service quality, and how these dimensions together with image create total

quality. The image of the provider is also a perspective that affects the perceived total quality and it works as a filter towards the other perspectives. Image includes the clients' thoughts and evaluations of the provider.

Grönroos (1998, 109) mentions two other dimensions, *economic quality* and a *servicescape quality.* It describes the environment in which the service is performed and the client's perception of its shape. These dimensions are not used in this study.

Technical and functional qualities are strongly affected by how the client perceives them. It is generally agreed that service quality is an attitude or judgement about the superiority of the service, although the exact nature of this attitude is not agreed on (Robinson, 1999, 21-32). Instead of using total quality, it is better to talk about *total perceived quality* - how the client will judge the total perceived quality in a direct effect of the expectations. In order to achieve good total quality it is therefore essential that it corresponds to, or exceeds the gap between expectations and experience (Grönroos, 1998. 67,101).

3.4 Customer satisfaction and continuous development

Customer satisfaction is also determines the success or failure of the business. Organisations need to measure the efficiency of their services in order to deliver added value to the customers and value must be built in to every step. The company must know their customers and identify which are the factors that influence their decision making. Today's businesses evaluate customer satisfaction by using a variety of survey questionnaires. The aim of the surveys is to gather information for planning customer value in order to gain an initiative for planning effective service and communication, which in the long run leads to improvement of service quality. It is important to any organisation to carry out surveys to continually improve their services, thus leading to improved customer satisfaction, which will lead to growth and

profitability. Service providers are able to keep their customers satisfied by offering them services that will serve their needs. (Sipilä 1996, 166-170.)

Furthermore, it has to be remembered that when customers are satisfied with the service, they will recommend their service providers to others and this creates value for the service providers. References are always important. (Sipilä 1996, 41.)

When a service provider knows what their customers' needs and goals are, they may anticipate the future and also to develop their own operations into the right direction.

3.5 Service quality and costs

Many of today's businesses are still focused on costs and do not emphasise quality. A major reason to outsource facilities is to cut costs. Value is created when quality exceeds the costs.

When making decisions that impact on the learning environment teachers, administrators, and facility managers have more factors to consider than ever before. Good quality of equipment guarantees flexibility and functionality in the for long term. Business wise, small community schools face competition. At the same time, they are challenged by the needs to improve financial performance, maintain high-quality employees, and effectively market their facilities and services.

According to PhD Hinum. M. (1999) Strategies for Managing Educational Facilities Infrastructure steps towards keeping schools in good and up-to-date condition include:

1. Accurate information about the condition of the facilities and the scale of funds needed. Keep the condition of the building stock and resources under regular review.
2. Define priorities for expenditure (funding).
3. Ensure financing by convincing authorities (key people)
4. Establish resource and funding allocation mechanism.
5. Stick to planned maintenance schedules.
6. Act promptly to repair damage.
7. Give responsibility for the condition of the facilities to people who are close to the facilities concerned.
8. Involve the users in the management.

At the same time, managers of educational facilities must meet challenges such as maximizing space, integrating technology, and optimizing budget.

3.6 Research measurement objective

In order to perform measurement activities, appropriate tools and methods are needed. There are several types of different methods and tools the suitability of which varies. A tool (questionnaire) is often used as an instrument in certain methods, such as servqual. The most commonly used methods to measure service quality include asking customers' direct questions, listening to their wants, needs and complaints, and managing a proactive relationship between service and quality (Baggs and Kleiner, 1996, 36-39). To achieve reliable measurement, both objectively measured data and subjectively measured data needs to be considered regarding both the actual service and the general working environment (Kincaid, 1994, 17-20). Product quality needs to be objectively measured; however there should be a balance between objective and subjective measurements.

The best tool to gather information on people's experience is the interview. When conducting an interview it is easy to collect additional information such

as behaviour, which is especially important when experience of service quality is affected by various factors.

When the purpose of measuring requires a larger sample group, *a questionnaire* would be a more suitable tool than an interview. One disadvantage is that creating the questionnaire and collecting the data is more time consuming. The advantages of questionnaires have over some other types of surveys are that they are cheap, do not require as much effort from the questioner as verbal or telephone surveys, and often have standardized answers that make it simple to compile data.

3.7 Servqual

Servqual was originally measured on 10 aspects of service quality: reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding or knowing the customer and tangibles. It measures the gap between customer expectations and experience.

Servqual has been developed by Parasuraman at al. By the early nineties the authors had refined the model to the useful acronym rater. By using servqual it is possible to calculate mean scores for each of the five dimensions of service quality: (Parasuraman at al., 1998, 12-37).

- Reliability
- Assurance
- Tangibles
- Empathy
- Responsiveness

Servqual has its detractors and is considered overly complex, subjective and statistically unreliable. The simplified rater model however is a simple and a useful model for qualitatively exploring and assessing customers' service experiences. It is an efficient model to assist an organization define its

efforts in bridging the gap between perceived and expected service from the client's point of view.

3.8 Servpal

Luis Lages and Joana Fernandes in the article "The servpal scale: A multi-item instrument for measuring service personal values" suggests that consumer final decisions are taken at a higher-level of abstraction. Similarly to the servqual scale, the Service Personal Values (servpal) scale is also multi-dimensional. It presents three dimensions of service value as 1) peaceful life, 2) social recognition, and 3) social integration. All three servpal dimensions are associated with consumer satisfaction.

3.9 Post occupancy evaluation (POE)

POE involves the systematic evaluation of opinion about buildings in use, from the perspective of the people who use them. It assesses how well buildings match users' needs, and identifies ways to improve building design, performance and suitability for purpose. It is also used to close the information gap between the FM function and its' clients' and users, particularly when using databases to communicate results (Preiser, 1995, 19-28).

'Building users' are all those people with an interest in a building - including staff, managers, customers or clients, visitors, owners, design and maintenance teams, and particular interest groups such as the disabled.

Post Occupancy Evaluation differs significantly from conventional surveys and market research. It uses the direct, unmediated experiences of building users as the basis for evaluating how a building works for its intended use.

Post Occupancy Evaluation can be used for many purposes, including the fine tuning of new buildings, developing new facilities and managing 'problem' buildings. Organisations also find it valuable when establishing maintenance, replacing, purchasing or supplying policies; preparing for refurbishment; or selecting accommodation for purchase or rent.

When comparing the measurements methods, discussed in chapters 3.7 , 3.8 and 3.9 it was decided to use Post occupancy evaluation in this study. Its relevancy to the study makes it the most suitable method.

4 RESEARCH METHODOLOGY

This study is based on qualitative approach. Gathering results can be either essentially qualitative or quantitative; mix between these two is also possible (Strauss et al., 1998). Qualitative research fits the study subject, aim and the characteristics of the expected results, since it is possible to take thoughts and various sets of values into consideration, which quantitative research does not allow. The need is for smaller but focused sample group rather than for a large “random” group.

Value can be defined by both qualitative and quantitative measures. On the qualitative side, value is the perceived gain composed of an individual's emotional, mental and physical condition plus various social, economic, cultural and environmental factors. On the quantitative side, value is the actual gain, measured in terms of financial numbers, percentages, and dollars.

Qualitative research is one of the two major approaches to research methodology in social sciences. Qualitative research involves an in-depth understanding of human behaviour and the reasons that govern human behaviour. Unlike quantitative research, qualitative research relies on reasons behind various aspects of behaviour.

4.1 Research problem

The purpose of the renovation in Ylitornion Yhteiskoulun Lukio was to build and maintain, at reasonable cost, safe and user-friendly facilities which allow individuals to achieve the needs and goals of the Upper secondary School, as they interact socially within healthy living-learning environments.

The objective of the study is to find out the effectiveness of modern learning environment and which parts need some more investigation.

The research question can be formulated as follows: “Are students of Ylitornion Yhteiskoulun Lukio satisfied with the new learning environment and will it attract more students to study in Ylitornion Yhteiskoulun Lukio?”

The answer to the question will help to identify the criteria of the modern learning environment whether the renovation has fulfilled the expectations and needs of Ylitornion Yhteiskoulun Lukio students.

The purpose of the research is to find out how new and old students of Ylitornion Yhteiskoulun Lukio have reacted to new premises and whether the modernization approach the needs and wants of the students in this new learning environment. The main goal of the research and the questionnaire was to find out how students are adapting new environment and which areas or parts needs further development.

In this research Ylitornion Yhteiskoulun Lukio is described as the service provider and the students of Ylitornion Yhteiskoulun Lukio as the customers.

4.2 Data collection

Data was collected through a self-administered questionnaire and an interview with the principal.

It was decided to conduct the interview with the principal of the Ylitornion Yhteiskoulun Lukio before making the questionnaires, in order to find out the motives and main purposes for the modernisation. The interview was based on the questionnaire which consists of 11 questions regarding the topic (Appendix 1). Personal interviews for teachers (as planned at the beginning) were not possible because of the lack of time during the working day.

After the discussion with the principal of Ylitornion Yhteiskoulun Lukio, Sari Lantto, the decision was made to use separate questionnaires for both teachers and students, rather than interviewing either group.

The questionnaire consisted of 38 questions and it was divided to 6 parts, each classroom and area was separated.

The questionnaire survey was held at the Ylitornion yhteiskoulun lukio, Ylitornio and was given to teachers and students during the second week of April, 2007.

A total of sixty-seven questionnaires was collected. The results included eleven answers from personnel and fifty-six from the students. Only upper secondary school students and personnel were included in this questionnaire to get a more comprehensive view of the subject.

During the survey, the teacher were distributed the questionnaires to the students at the beginning of a lecture, the time allocated for filling the questionnaire was 15 minutes. The interview with the principal, held in the principal’s office, lasted approximately two hours.

The questionnaire is based on the pre-study of the case company, which was conducted by studying the history of Ylitornion Yhteiskoulun Lukio, reviewing pictures “before and now” and completed changes with the contractor M.Hanhirova Oy.

Selection of the interviewees was made together with the principal of Ylitornion Yhteiskoulun Lukio. Even though the school has also other student besides upper secondary school students it was decided that only upper secondary school student are included.

The basis of the theoretical evidence is the literature and journal articles mainly in the field of FM, quality management and service management. General literature and journals concerning the learning environment has also been studied. The theory and literature was mainly concerned with empirical research.

This research facilitates interview and questionnaire with a relatively small audience. Empirical data was gathered in three steps. First the pre-study of the case company in order to develop the interview form and the interview with the principal of Ylitornion Yhteiskoulun Lukio, which gave the basis for the questionnaire for the students and personnel of Ylitornion Yhteiskoulun Lukio. Secondly, two pilot interviews were conducted in order to test the questionnaire. Finally the main empirical study consisting of two separate questionnaires for students and personnel was carried out. Interview notes were compiled in empirical part and analysis.

5 RESULTS AND RELIABILITY OF THE RESEARCH

According to Laine, V. Nevala, N. & Perkiö-Mäkelä, M. (2006) A good learning environment results from the synergy of the physical environment, psychical factors and social intercommunication. Learning is affected by the students’ emotional life and mental health. During learning the student forms the picture of self image and own abilities, and whether they have the

capabilities demanded. A pedagogically sound learning environment gives each and every student the change to create an optimistic and realistic picture of themselves. A good learning environment creates good and valuable understanding and development in life.

We can rely on the result of this research; at the time of the research Ylitornion Yhteiskoulun Lukio had 100 students and 16 teachers. Fifty-six students and 11 teachers answered the questionnaire. The missing student were mainly graduates.

5.1 Data analysis

The following will represent the analyses of the results of each question stated in the questionnaire. The results of the questionnaires were analysed by using the program Ms. Excel for analysis.

In this study all the respondents are upper secondary school student, ages 16-20 years. The age of the teachers varies; the respondents' age was not included in the questionnaire. In the questionnaire each question had five "grades": 1 Strongly disagree, 2 Disagree , 3 can't say, 4 Agree, 5 strongly agree

The first six tables represents the results of the student questionnaire and tables from 7 to 10 the teachers' questionnaire. However I would like to point out that the analyses of the results of each table show that in most of the questions the average of the "grading" is 3 (can't say), "grade" 3 would have been better stated as "neutral".

Gender	Average/1	Average /2	Average/3	Average/4	Average/6	Average/7
Female	3,5	4,0	3,7	2,7	2,8	3,3
Male	3,4	4,0	3,8	2,7	2,7	3,1
Total	3,5	4,0	3,8	2,7	2,7	3,2

Table 1: Entrance

Table 1 represents the results of the first part of the questionnaire, which included questions concerning the entrance of the school. In question 1 (average/1) we can see that generally students are neutral about the outlook of the entrance, at the same time , in question two and three students think that studying in the new premises is flexible and enjoyable and individual needs have been taken into account. In questions four and five we can see that generally students think that the biggest problem is in the entrance area; the space is not big and clean enough (question 4) and there is not enough space to hang outdoor cloths (question 6). Question 5 was an open question, asking what students would like to change in the entrance. On the whole students want more space in the entrance. Only a small group of the students answered the open question. In response to question 7, students stated neutral attitude towards wearing separate shoes inside. In the results the difference between the genders of the respondents was not notable. There were no missing cases.

Table 2 below illustrates the result of what students thought of the computer class. In question 8 students were asked if the equipment in the computer class is modern and meets their needs, generally students are satisfied with the equipment, the difference between the genders of the respondents was not notable. In question 9, whether computers are always working, we can see a small difference in the results between the genders of the respondents. In question 10 female students think that available computers are generally found when male students lightly disagree on it. Question 11 and 12 shows that not all the programs meet the students needs and there male students slightly disagree about having enough programs in the computers, in the computer class. On the other hand, in the open question (question 13) students did not state what programs are needed. In questions 14 and 15 Students slightly disagree on being able to enter to the computer class and need for monitoring the class room. In the results the difference between the genders of the respondents was not notable. There were no missing cases.

Gender	Average/8	Average/9	Average/10	Average/11	Average/12	Average/14	Average/15
Female	3,5	3,1	3,7	2,8	3,2	2,5	2,7
Male	3,2	2,8	2,9	2,8	2,8	2,6	2,8
Total	3,4	3,0	3,3	2,8	3,0	2,5	2,8

Table 2: Computer class

Gender	Average/16	Average/17	Average/18	Average/19	Average/20
Female	3,9	2,8	3,6	4,6	3,6
Male	4,0	2,8	3,3	4,3	3,6
Total	4,0	2,8	3,5	4,5	3,6

Table 3: Lobby area

Table 3 above indicates responses to questions about the new lobby area of the school. In general, students are satisfied with all the aspects of the area. The lobby area is cosy and colourful (question 16), by adding lockers in to the corridor ensures that empty lockers can always be found (question 19) and they are useful and big enough (question 20). In the results the difference between the genders of the respondents was not notable. However, in a question 17 we can see that the students are not completely satisfied with the working hours of the cafeteria “Sumppi”. There were no missing cases.

The survey on the lobby area included two open questions: question 21 What are students using locker for and question 22 - Improvement proposals for the lobby area. Neither of the questions was answered.

Gender	Average/23	Average/24	Average/25	Average/26	Average/28	Average/29
Female	3,5	2,5	2,8	2,0	3,3	3,1
Male	3,3	2,3	2,6	2,7	3,3	3,1
Total	3,4	2,4	2,7	2,3	3,3	3,1

Table 4: Reading room

Table 4 Shows that students generally slightly disagree on questions concerning the reading room, even though most of the students are using it daily (question 23) for other purposes than e.g. reading email (question 24). Generally students think that there should be more computers and they

should definitely have more programs (question 25 and 26) at the same time students more or less agree on having available computer to use, when needed (question 28). After all, according to results we can consider reading room as peaceful studying area (question 29). Two open questions: (question 27 and 30) improvement proposals didn't receive any answers.

Table 5 below represents the satisfaction level in the class rooms. Generally, as can be seen, student are satisfied with the cosiness (question 31) and they agree on having individual needs taken into consideration in e.g. desks adjustability (question 32). There is a slight difference between female and male students when asking about modern equipment used in teaching. (question 33). There were no missing cases.

Gender	Average/31	Average/32	Average/33
Female	3,9	4,1	3,8
Male	4,0	4,2	4,3
Total	4,0	4,1	4,1

Table 5: Classroom

Table 6 below shows that generally students are not fully satisfied with the result of the shower/dressing room, in downstairs. Ventilation is not adequate (question 36), and shower and dressing rooms are not big enough (questions 34 and 35) .

Gender	Average/34	Average/35	Average/36
Female	3,0	2,7	2,8
Male	3,3	3,2	2,5
Total	3,2	2,9	2,7

Table 6: Shower/dressing rooms

The final two open questions (37 and 38); Improvement proposals for the shower/dressing room area and how improvements/renovation has impacted to students motivation and pleasure, didn't bring any answers.

In tables 1-6 we can see that students are generally satisfied with the result of the renovation. The results show that there is a need for a bigger area where outdoor clothing and shoes could be left. The reading room should have a couple more computers and the possibility of using them for playing games and other spare time activities. The computer room should be accessible more often and computers should be updated.

In general all the students think that the renovation has a great impact to their motivation and enjoy ability.The "Home like" atmosphere was successfully achieved.

Gender	Average/1	Average/2
Female	4,7	3,9
Male	4,8	3,5
Total	4,7	3,7

Table 7: Entrance

In table 7, the teachers' questionnaire, questions 1 and 2 includes the entrance of the school. The teachers are really satisfied with "outlook" of the entrance and they also think that all the individual needs are achieved. In the results the difference between the genders of the respondents was not notable. There were no missing cases.

Gender	Average/3	Average/4	Average/ 5	Average/6	Average/7	Average/8	Average/9
Female	4,3	4,7	3,9	4,3	4,7	4,3	3,9
Male	3,8	4,8	3,5	3,8	4,8	3,5	4,0
Total	4,1	4,7	3,7	4,1	4,7	4,0	3,9

Table 8: Teachers room

Table 8 above represents the facilities of the teachers' room. The results shows that teachers agree on their room being practical and meeting their needs, and that individual needs are also meet. (Questions 3 and 4) Teachers room is peaceful working area (question 5) and there is enough space the keep all the teaching equipments (question 6) Every teacher has his/her own computer (question 7) Teachers are generally satisfied also with the "social area" and the notice board for "information flow". (questions 8 and 9). Teachers don't have any improvement proposals for this area (open

question 10). In the results the difference between the genders of the respondents was not notable.

Gender	Average/11	Average/12	Average/13
Female	4,7	4,1	3,9
Male	4,5	3,8	4,0
Total	4,6	4,0	3,9

Table 9: Computer class

Table 9 illustrates the results concerning the computer class (teaching classroom). The equipment and programs are modern and relevant to teaching methods (questions 11 and 12), all though computers do not have enough programs needed for the teaching purposes (question 13). The open question : Improvement proposals (question 14) was not answered. In the results the difference between the genders of the respondents was not notable.

Table 10 below shows the result of the facilities of the class room as learning/teaching environment. It's agreed that students' cosiness and individual needs has been achieved. (questions 15 and 16) The teachers also agree on having modern teaching equipments. (question 17). All though in response to the open question (question 18) teachers pointed out that the classroom furniture should be easier/more ergonomic. Remedying the lack of modern teaching equipment was surprisingly one of the improvement proposals (projectors, DVD, connections between the teachers and classroom computers etc.)

Gender	Average/15	Average/16	Average/17
Female	4,7	4,0	3,6
Male	4,3	3,8	4,5
Total	4,5	3,9	3,9

Table 10: Class rooms

As previously stated , tables from 7 to 10 include the questionnaire answers of the teachers. In general teachers are satisfied with the result and think that renovation has positive impact in motivation and pleasure. (open question 19)

6 CONCLUSIONS

The classroom setting that most people remember has changed. Rigid rows of bulky desks and chairs have given way to lightweight, reconfigurable furniture that meets the needs of modern education.

A “one-size-fits-all” approach to instruction no longer works. Different subject matters, student proficiency levels, and a range of other factors require teachers to vary their tactics several times throughout the day.

Satisfied students guarantee the future of Ylitornion Yhteiskoulun Lukio. The students’ needs were taken to account when designing the new premises. Through this research Ylitornion Yhteiskoulun Lukio has a better idea of which factors need further development from user’s point of view.

In facilities management the customer (student) needs to be seen as a central to everything the organisation does. Management and facilities planners have to think in long-term and save customers and the service provider from the possible future problems. Students need to be listened to, and through this the needs and goals are recognized. For that reason, close co-operation between Ylitornion Yhteiskoulun Lukio and the students is essential and it serves both parties. When a service provider (school) is able to recognise their customers’ needs and goals, they may anticipate the future and also to develop their own operations in the right direction.

Based on the information gained from the research, the decision makers of the Ylitornion Yhteiskoulun Lukio are able to choose a couple of areas that are perceived by students, to need to be corrected..

Ylitornion Yhteiskoulun Lukio will get useful information that assists them to develop and fix the areas needed according to the needs of the customer (students).From the findings of the research, we can conclude that the biggest change needs to be made to the entrance, where all the shoes and outdoor clothing is left . Students are not satisfied with the possibility of using computers in study and spare time matters; lack of the needed programs is also recognized. From the teachers' point of view, new "flexible" furniture in the classrooms would be needed.

These issues can be addressed with the right type of furniture. Therefore, when evaluating furniture for the classroom, facility managers should seek solutions that provide the greatest flexibility for students, teachers, administrators, and staff. However this renovation mainly concentrated on the social areas of the school. A lack of the modern teaching equipment and classroom furniture was shown in the open questions.

Teachers need to be able to easily change their environment to use their preferred methods of instruction and students' many learning styles. Lightweight, portable furniture makes it easy for teachers and students to alter the layout or use of a classroom. Teachers have the option of configuring rows for tests, circles for collaborative assignments, and semi-circles for lectures or presentations.

Mobile desks and chairs also support active learning by allowing teachers and students to move closer together. For example, teachers can shift around the room from day to day or lesson to lesson. Students can be easily moved closer to the front of the room to improve their attentiveness and auditory experience.

Flexible furniture also offers more ergonomic advantages that can further enhance a student's performance potential. Facility managers can select desks and chairs with adjustable heights and depths to accommodate each

student's body type. Having furniture that easily adapts to the shape and weight of students makes them more comfortable and receptive to learning

In addition to enhancing the learning experience, portable furniture can help facility managers safeguard their infrastructure and personnel investments. Lightweight, mobile furniture, for example, protects flooring as it easily glides across the floor and virtually eliminates damage to the surface caused by traditional desks and chairs.

In my opinion, whether Ylitornion Yhteiskoulun Lukio decides to acts on these suggestions or not, the school management should in any case continue listening to their target audience and define how to fulfil or even exceed their expectations since that leads to customer satisfaction. As discussed in Chapter 3.4 service providers are able to keep their customers satisfied by offering them services that will serve their needs. (Sipilä 1998, 166-170.)

Students stated that the entrance area was the biggest problem. The school's management is aware of the problem and has plans for the further development of the area.

School facilities give meaning to the teaching and learning process. Facilities management is therefore an integral part of the overall management of the school and it will improve the quality of teaching and learning.

6.1 Suggestions for further study

The subject of this study is highly important in today's learning environment, and there are many issues one could focus on in further studies. To strengthen a competitive advantage, one currently essential research topic could be to determine the advantages that the competitors in the nearest cities have. Maybe as in interviews, the interviewer may continue the

question, simplify it and ask more if required. I also considered this option, but I dismissed it because of the lack of time and the distance to case company.

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Appendix 1. Principal interview in English

YLITORNION YHTEISKOULUN LUKIO QUESTIONNAIRE

PRINCIPAL SARI LANTTO

1. *Why Ylitornion Yhteiskoulun kannatusosakeyhtiö decide to have this kind of modernisation? What was the budget? And how it was divided?*

Ylitornion yhteiskoulun lukio has been applying for government funding for modernisation for the past 10 years, in 2005 we got the funding. The building was in really bad shape and needed repairing. The total budget for the modernisation was 2 000 000€ of which 100 000€ was used for furniture and new equipments. A school for retarded students is located in the "west wing". Ylitornio commune took up a 20 year lease on the premises. The advance payment of the rent covered the modernisation of the "west wing" and the modernisation was done according to their needs. The modernisation of the "west wing" and the class room in the "north wing" modernisation didn't receive government funding but it is also included in the whole budget. The "west wing" accounted for 15% of the total budget. Ylitornion yhteiskoulun lukion is leasing the the "north wing" class room annually for various uses. At the moment there is working a music school is there and a local band is using it for rehearsal.

2. *On what basis is the government funding is granted?*

The amount is based on the number of the students and demand

3. *What was the "motive" of the modernisation?*

We wanted to have a new, clean , cosy and attractive school. Ylitornion yhteiskoulun lukio is fairly small school and we need to get more students. We hope that the new image will attract more students, even from other

communities. Most of all we need local secondary school students to continue to upper secondary school.

4. Which were the biggest changes and why?

As we can see from the old and new ground plans, the biggest change was in the lobby area. We wanted to have modern lobby area which would work as the “heart” of the school. All the students gather in same area and “corners” of small groups of people would be avoided. The school cafeteria “sumppi” is also working in the lobby. The cafeteria is owned by student body of Ylitornion yhteiskoulun lukio. Meetings of the student body are organized inside the cafeteria room. The school wanted the teachers’ room, student counsellors’ office, and principals’ office to be one big entity. previously the teachers’ room and principals’ room were separated by the lobby area. The principals’ office has glass walls so that she can have contact with the lobby area. The school has decided to use separate shoes inside, outdoor cloths are left also in the lobby area. By these means the school hopes to create a “homelike” atmosphere in the school.

At the moment school has 16 teachers. The teachers’ room has 10 “workstations”. “Winding” teachers are share one of the “workstations”.

Main idea in the placement of the teachers’ room, principals’ office and student counsellors’ office is “information flow”. A closer entity provides faster and safer information flow.

5. Number of students at the moment?

At the moment school has 116 students + combination students.
About 20 of them are graduating this spring.

6. How many classrooms are in use at the moment?

At the moment 6+1 classrooms are in 100% use. Previously the school had 10 classrooms and two of them were empty almost all the time.

7. Classroom changes?

Modern ergonomic teaching equipment (e.g. data communication, television, video equipment) was the main criteria when designing the class rooms.
Each class rooms has ADP-connections, two of the class rooms have computers for teachers' use.

All the desks and chairs are adjustable according to students needs. Ventilation is also renewed.

8. Computer class

The computer class is mainly used for teaching purposes. It can also be used for supervised studying.

9. Reading room

The reading room is located in the lobby area. The reading room has two computers for "free time" use. The reading room is also a peaceful area for studying.
The reading room has data projector for video negotiations.
The school rents the reading room for distance learning.

10. Implementation of the modernisation.

The architecture of the school is designed by Markus Kangas, while colouring and furniture is mainly designed by students. Initially the architect designed the school's colours to be brown but students protested against it.

Now the colours are composed but refreshing. The lobby area, teachers' room, and counsellors' office were partly designed by the Principal; Sari Lantto. The contractor of the modernisation was M.Hanhirova Oy, local entrepreneur. The modernisation was carried out in two parts. First the "south wing" and second the "west wing" and other parts. Modernisations started on October 2005 and conveyance was at the end of the July 2006.

11. Is there something that you are not totally satisfied with?

In the floor below the sports hall, there are dressing rooms and showers rooms for students' use. Space is low and ventilation is not sufficient, which is making the air "stuffy".

Also, the entrance is too small and not all the shoes can fit in there. These two I would like include in the questionnaire.

Appendix 2. Principal interview in Finnish

YLITORNION YHTEISKOULUN LUKIO KYSELY

REHTORI SARI LANTTO

2. *Miksi Ylitornion Yhteiskoulun kannatusosakeyhtiö päätyi tällaiseen saneeraukseen? Mikä oli saneerauksen budjetti? Ja miten se pääasiassa jakaantui?*

Saneeraukseen on haettu valtion rahoitusta jo 10 vuoden ajan, vuonna 2005 saneeraukseen saatiin valtion rahoitus. Rakennus oli erittäin huonossa kunnossa ja se tarvitsi peruskorjausta. Saneerauksen kokonaisbudjetti oli 2 000 000€, joista laite ja kalustehankintoihin käytettiin n. 100 000€. Lukion tiloissa toimii myös Ylitornion kunnan harjaantumisluokka, lukio rakennuksen länsipuolen siivessä. Ylitornion kunta on vuokrannut nämä tilat Ylitornion yhteiskoulun kannatusosakeyhtiöltä seuraavaksi 20 vuodeksi. Kunnan maksama ”vuokraennakko” käytettiin tilojen kunnostamiseen, harjaantumisluokan oppilaiden tarpeita vastaavaksi. Tämän osan saneeraus on omarahoitteinen ja sen osuus kokonaisbudjetista on n 15%.

Rakennuksen pohjoispäädyssä on opetus tila joka on myös lukion omarahoitteinen, tilaa vuokrataan vuosittain. Tällä hetkellä tiloissa toimii musiikkikoulu ja sitä käytetään bändin harjoitustilana.

2. *Millä perusteilla valtion tuki myönnettiin?*

Saneerauksen määräraha määräytyi oppilaiden lukumäärän ja "tarpeellisuuden" perusteella.

3. Mikä oli saneerauksen ”motiivi”?

Lukiosta haluttiin tehdä siisti, ”nykyaikaa” noudattava, viihtyisä ja houkutteleva. Lukio on pieni ja sinne haluttaisiin kokoajan lisää oppilaita.
”Hyvä imago” voisi houkutella lisää oppilaita kauempaakin ja varsinkin paikkakuntalaisia, ylä-asteen päättäviä saataisiin jäämään enemmän paikkakunnalle.

4. *Mitkä olivat lukion suurimmat muutoksen kohteet ja miksi*?

Lukion nykyisestä ja vanhasta pohjapiirustuksesta näkee että konkreettisimman muutoksen on saanut aula-alue. Aula-alueesta haluttiin tehdä nykyaikaisen järjestelmän mukaan, koulun ”sydän” johon kaikki oppilaat kokoontuisivat ja ns. kuppikuntien omat nurkkaukset poistuisivat. Aulassa toimii myös lukion oppilaskunnan vastaamana kioski/kahvila. ”Sumppi”. Sumpin tiloissa on myös oppilaskunnalle kokousten järjestämiseen soveltuvat tilat. Opettajien huone, opinto-ohjaajan huone kanslia ja rehtorin huone haluttiin yhdistää yhdeksi kokonaisuudeksi. Aikaisemmin opettajainhuoneen ja kanslian ja rehtorin huoneen välillä oli ”sisääntulo” aula.
Nykyisin mm. Rehtorin huoneen seinä on lasitettu, täten rehtori saa ”kokonaisvaltaisen” kontaktin Oleskelutiloihin. Lukion sisätiloissa oppilaat käyttävät sisäjalkineita ja myös ulkovaatteet jätetään päivän ajaksi naulakoihin. Myöskin tällä halutaan luoda lukion tiloihin ”kotoisa” tunnelma.

Koululla on tällä hetkellä 16 opettajaa. Opettajainhuoneessa pöytiä on 10kpl. ”Kiertävät” opettajat jakavat yhden pöydistä ollessaan paikalla.

Opettajain, rehtorin kanslian ja opinto-ohjaajan huoneiden sijoituksen keskeisempänä ideana oli tiedonkulku. Läheinen sijoitus on tiedonkulun kannalta helpompaa ja ”varmempaa”.

5. Lukion tämänhetkinen oppilasmäärä?

Oppilasmäärä lukiossa on tällä hetkellä 116 + yhdistelmä opiskelijat.
Tällä hetkellä oppilaiden lukumäärä on noin 100 Abien päätettyä opintonsa.

6. Monta luokkahuonetta tällä hetkellä on käytössä?

Lukiossa oli aikaisemmin n. 10 luokkahuonetta, joista 2 oli melkein kokoajan tyhjillään. Tällä hetkellä lukion käytössä on 6+1 luokkahuonetta, jotka ovat 100 % käytössä päivittäin.

7. Luokkahuoneiden muutokset?

Luokkahuoneiden suunnittelussa on käytetty nykyaikaista ergonomiaa ja panostettu myös opettajien opetuksessa käytettävään laitteistoon, kuten; dataprojektorit, televisio, video.
Jokaisessa luokassa on myös atk liitännät, kahdesta luokasta löytyy myös tietokoneet opettajien käyttöön.

Kaikki pulpetit ja tuolit ovat säädettävissä opiskelijan mukavuuden mukaan. Kaikissa luokkahuoneissa on myös uusittu ilmanvaihtojärjestelmät.

8. TVT- luokka

Tvt luokka on pääasiassa atk-opetus luokka, jonka ohella se toimii myös valvonnan alaisena opiskelijoiden koulutehtävien ja muun opiskelun käytössä.

9. Lukusali

Lisäksi rakennuksessa on lukusali, joka on avoimena heti aulan vieressä.
Lukusalissa on 2 tietokonetta opiskelijoiden vapaassa käytössä. Lukusali toimii myös opiskelijoiden "rauhallisena" opiskelupaikkana.

Lukusalissa on dataprojektori ja täten mahdollisuus video-neuvotteluihin. Tilaa/huonetta myös vuokrataan tähän tarkoitukseen.

10. Saneerauksen toteutus

Lukion arkkitehtuurista on vastannut Markku Kangas. Mm. tilojen värityksessä ja kalustuksessa on otettu huomioon lukion omien oppilaiden toiveita. Esim. alunperin lukion väritysmaailma arkkitehdin suunnittelemana oli kauttaaltaan ruskea, mutta opiskelijat olivat ajatusta vastaan, nyt lukion värimaailma on hillitty, mutta iloinen. Aula- ja oleskelu tilojen, kanslian ja opettajainhuoneen ideoinnista vastasi osakseen myös rehtori itse. Saneerauksen urakoitsijana toimi M.Hanhirova Oy. Saneeraus tehtiin kahdessa osassa; 1. ”eteläsiipi” ja 2. länsisiipi ja muut tilat. Saneeraus aloitettiin kokonaisuudessaan lokakuussa 2005 ja lukion ”luovutus tapahtui heinäkuun lopulla, 2006.

11. Onko jotain mihin et ole tyytyväinen?

Liikuntasalin alapuolella, kerrosta alempana sijaitsee oppilaiden käytössä olevan pukeutumis- ja pesutilat. Tilat ovat matalia ja niiden ilmanvaihto on puutteellinen, mikä tekee tiloista ”tunkkaisen” oloisen. Lukion sisääntuloon/eteiseen en ole tyytyväinen ja haluaisinkin näitä kahta asiaa tiedusteltavan oppilailta. Sisääntulo on mielestäni liian pieni ja ahdas, eikä sinne mahdu oppilaiden ulkokengät.

YLITORNION YHTEISKOULUN LUKIO Questionnaire

Circle the grade beside the question that suits you the best.

	Strongly disagree	Disagree	Can't say	Agree	Strongly agree
ENTRANCE					
1 I'm satisfied with the "outlook" of the new premises.	1	2	3	4	5
2 Individual needs have been taken into account.	1	2	3	4	5
TEACHERS ROOM					
3 Teachers room is practical and meets your needs.	1	2	3	4	5
4 Individual need have been taken into account.	1	2	3	4	5
5 Teachers' room has peaceful working environment.	1	2	3	4	5
6 There is enough "cabinet space".	1	2	3	4	5
7 There are enough computers for teachers use.	1	2	3	4	5
8 The notice board is big enough.	1	2	3	4	5
9 Teachers "social area" is big enough.	1	2	3	4	5
10 Improvement proposals:					
COMPUTER CLASS					
11 Equipment is modern and adequate to teaching methods.	1	2	3	4	5
12 Computer programs are adequate for your needs.	1	2	3	4	5
13 Computers do not have enough programs.	1	2	3	4	5
14 Improvement proposals:					
CLASS ROOMS					
15 Students coziness has been taken to account in the class rooms.	1	2	3	4	5
16 Individual needs were taken into account in desks, such as adjustability.	1	2	3	4	5
17 Teachers are using modern equipment in teaching.	1	2	3	4	5
18 Improvement proposals.					

19 How improvements have impacted on your motivation and enjoy ability?

20 Have improvements have impacted on students' motivation and enjoy ability?

Gender: Male Female

THANKS FOR YOUR ATTENTION!!

YLITORNION YHTEISKOULUN LUKIO KYSELY

Ympyröi vaihtoehto joka vastaa mielipidettäsi parhaiten.

	Täysin eri mieltä	Eri mieltä	En osaa sanoa	Samaa mieltä	Täysin samaa mieltä
YLEISILME					
1 Olen tyytyväinen Lukion "yleisilmeeseen".	1	2	3	4	5
2 Lukion tiloissa on otettu huomioon yksilölliset tarpeet.	1	2	3	4	5
OPETTAJIEN HUONEET					
3 Työtilat ovat toimivat ja tarpeiden mukaiset.	1	2	3	4	5
4 Työpisteissä on otettu huomioon yksilölliset tarpeet.	1	2	3	4	5
5 Opettajien huoneessa on rauhallinen työnteko ympäristö.	1	2	3	4	5
6 Kaappitilaa on tarpeeksi.	1	2	3	4	5
7 Opettajien käytössä on tietokoneita riittävä määrä.	1	2	3	4	5
8 Ilmoitustaulutila on riittävä.	1	2	3	4	5
9 Opettajien sosiaalitilat ovat toimivat ja riittävät.	1	2	3	4	5
10 Parannus ehdotuksia:					
TVT-LUOKKA					
11 Laitteisto on "nykyaikainen" ja opetusmenetelmiäsi vastaava.	1	2	3	4	5
12 Koneiden ohjelmat ovat tarpeitasi vastaavia.	1	2	3	4	5
13 Koneiden ohjelmissa on puutteita.	1	2	3	4	5
14 mitä					
LUOKKAHUONEET					
15 Luokkahuoneissa on otettu huomioon opiskelijoiden viihtyvyys.	1	2	3	4	5
16 Pulpeteissa on otettu huomioon yksilölliset tarpeet, kuten istuimen säädettävyys.	1	2	3	4	5
17 Käyttämäsi opetus laitteisto on nykyaikainen ja vastaa tarpeitasi.	1	2	3	4	5

18 Parannusehdotuksia Luokkahuoneisiin:

19 Miten koet lukion muutosten vaikuttaneen opiskelijoiden motivaatioon ja viihtyvyyteen?

20 Miten koet lukion muutosten vaikuttaneen omaan motivaatioosi ja viihtyvyyteen työssäsi?

Sukupuoli: Mies Nainen

KIITOS AJASTASI!!!!!

YLITORNION YHTEISKOULUN LUKIO Questionnaire

Circle the grade beside the question that suits you the best.

	Strongly disagree	Disagree	Can't say	Agree	Strongly agree
ENTRANCE					
1 I'm satisfied with the "outlook" of the new premises .	1	2	3	4	5
2 Studying in the new premises is flexible and enjoyable.	1	2	3	4	5
3 Individual needs have been taken into account.	1	2	3	4	5
4 Entrance is clean and big enough.	1	2	3	4	5
5 What would you like to change in the entrance?					
6 There is enough space to keep your jacket and shoes.	1	2	3	4	5
7 In my opinion, using separate shoes inside is good idea.	1	2	3	4	5
COMPUTER CLASS					
8 Equipment is modern and adequate for your needs.	1	2	3	4	5
9 Computers always work.	1	2	3	4	5
10 Available computer can always be found.	1	2	3	4	5
11 Programs are adequate to your needs.	1	2	3	4	5
12 Computers do not have enough programs.	1	2	3	4	5
13 what?					
14 Computer class can be entered when needed.	1	2	3	4	5
15 Computer room "monitoring" is needed.	1	2	3	4	5
LOBBY AREA					
16 Lobby area is cozy and colorful.	1	2	3	4	5
17 Cafeteria is working according to your needs.	1	2	3	4	5
18 Lockers are useful.	1	2	3	4	5
19 Available lockers can always be found	1	2	3	4	5
20 Lockers are big enough.	1	2	3	4	5
21 What are you using the locker for?					

22 Lobby area improvement proposals:

	Strongly disagree	Disagree	Can't say	Agree	Strongly agree
READINGROOM					
23 I use the reading room daily.	1	2	3	4	5
24 I only use reading room for reading my email.	1	2	3	4	5
25 There are enough computers.	1	2	3	4	5
26 Computers have enough programs.	1	2	3	4	5

27 Improvement proposals: _____

28 There is always free computer to use.	1	2	3	4	5
29 Reading room is peaceful studying area.	1	2	3	4	5

30 Improvement proposals: _____

CLASSROOMS

31 Students coziness has been taken to account in the class rooms.	1	2	3	4	5
32 Individual needs were taken into account in desks, like adjustability.	1	2	3	4	5
33 Teachers use modern equipment in teaching.	1	2	3	4	5

SHOWER/DRESSING ROOMS

34 Downstairs shower rooms are big enough.	1	2	3	4	5
35 Downstairs changing rooms are big enough.	1	2	3	4	5
36 Downstairs ventilation is sufficient.	1	2	3	4	5

37 Improvement proposals: _____

38 How improvements have impacted on your motivation and enjoy ability?

Gender: Male Female

THANKS FOR YOUR ATTENTION!!!

Appendix 6. Students' questionnaire in Finnish

YLITORNION YHTEISKOULUN LUKIO KYSELY

Ympyröi vaihtoehto joka vastaa mielipidettäsi parhaiten.

	Täysin eri mieltä	Eri mieltä	En osaa sanoa	Samaa mieltä	Täysin samaa mieltä
SISÄÄNTULO					
1 Olen tyytyväinen Lukion "yleisilmeeseen".	1	2	3	4	5
2 Opiskelu uusissa tiloissa on joustavaa ja miellyttävää.	1	2	3	4	5
3 Lukion tiloissa on otettu huomioon yksilölliset tarpee.	1	2	3	4	5
4 Lukion sisääntulo on siisti ja tarpeeksi iso.	1	2	3	4	5
5 Haluaisitko muuttaa jotain sisääntulossa, mitä?					
6 Ulkovaatteille ja kengille on järjestetty tilaa tarpeeksi.	1	2	3	4	5
7 Sisäjalkineiden käyttö on mielestäni hyvä ratkaisu.	1	2	3	4	5
TVT-LUOKKA					
8 Laitteisto on "nykyaikainen" ja tarpeitasi vastaava.	1	2	3	4	5
9 Tietokoneet ovat "aina toiminnassa".	1	2	3	4	5
10 Vapaita koneita löytyy aina tarvittaessa.	1	2	3	4	5
11 Koneiden ohjelmat ovat tarpeitasi vastaavia.	1	2	3	4	5
12 Koneiden ohjelmissa on puutteita.	1	2	3	4	5
13 mitä					
14 Luokkaan pääsee aina tarvittaessa.	1	2	3	4	5
15 Luokan "valvonta" on mielestäni tarpeellinen.	1	2	3	4	5
OLESKELU TILAT					
16 Oleskelu tilat ovat viihtyisät ja värimaailmaltaan piristävät.	1	2	3	4	5
17 Aulan kahvila toimii tarpeittesi mukaan.	1	2	3	4	5
18 Käytävän säilytyslokerot ovat tarpeellisia.	1	2	3	4	5
19 Säilytyslokeroita on aina tarvittaessa vapaana.	1	2	3	4	5
20 Säilytyslokerot ovat kooltaan riittävän suuria.	1	2	3	4	5
21 Mihin tarkoitukseen itse käytät lokeroa?					

22 Oleskelutilojen parannusehdotuksia:

	Täysin eri mieltä	Eri mieltä	En osaa sanoa	Samaa mieltä	Täysin samaa mieltä
LUKUSALI					
23 Käytän lukusalia päivittäin.	1	2	3	4	5
24 Käytän lukusalia ainoastaan lukeakseni sähköpostini.	1	2	3	4	5
25 Tietokoneita on riittävästi.	1	2	3	4	5
26 Tietokoneet sisältävät tarpeelliset ohjelma.	1	2	3	4	5

27 puutteita _____

_____

_____

28 Tietokone on vapaana aina tarvittaessa.	1	2	3	4	5
29 Tarvittaessa saan opiskelurauhan lukusalissa.	1	2	3	4	5

30 Parannusehdotuksia Lukusaliin

_____

_____

_____

LUOKKAHUONEET					
31 Luokkahuoneissa on otettu huomioon opiskelijoiden viihtyvyys.	1	2	3	4	5
32 Pulpeteissa on otettu huomioon yksilölliset tarpeet, kuten istuimen säädettävyys.	1	2	3	4	5
33 Opettajien käyttämä opetus laitteisto on nykyaikainen.	1	2	3	4	5
PUKU/SUIHKUTILAT					
34 Alakerran suihkutilat ovat riittävän suuret.	1	2	3	4	5
35 Alakerran pukeutumistilat ovat riittävän tilavat.	1	2	3	4	5
36 Alakerran tilojen ilmanvaihto on riittävä.	1	2	3	4	5

37 Parannusehdotuksia Alakerran pukeutumis- ja peseytymistiloihin:

_____

_____

_____

38 Miten koet lukion muutosten vaikuttaneen opiskelumotivaatioosi?

_____

_____

_____

_____

_____

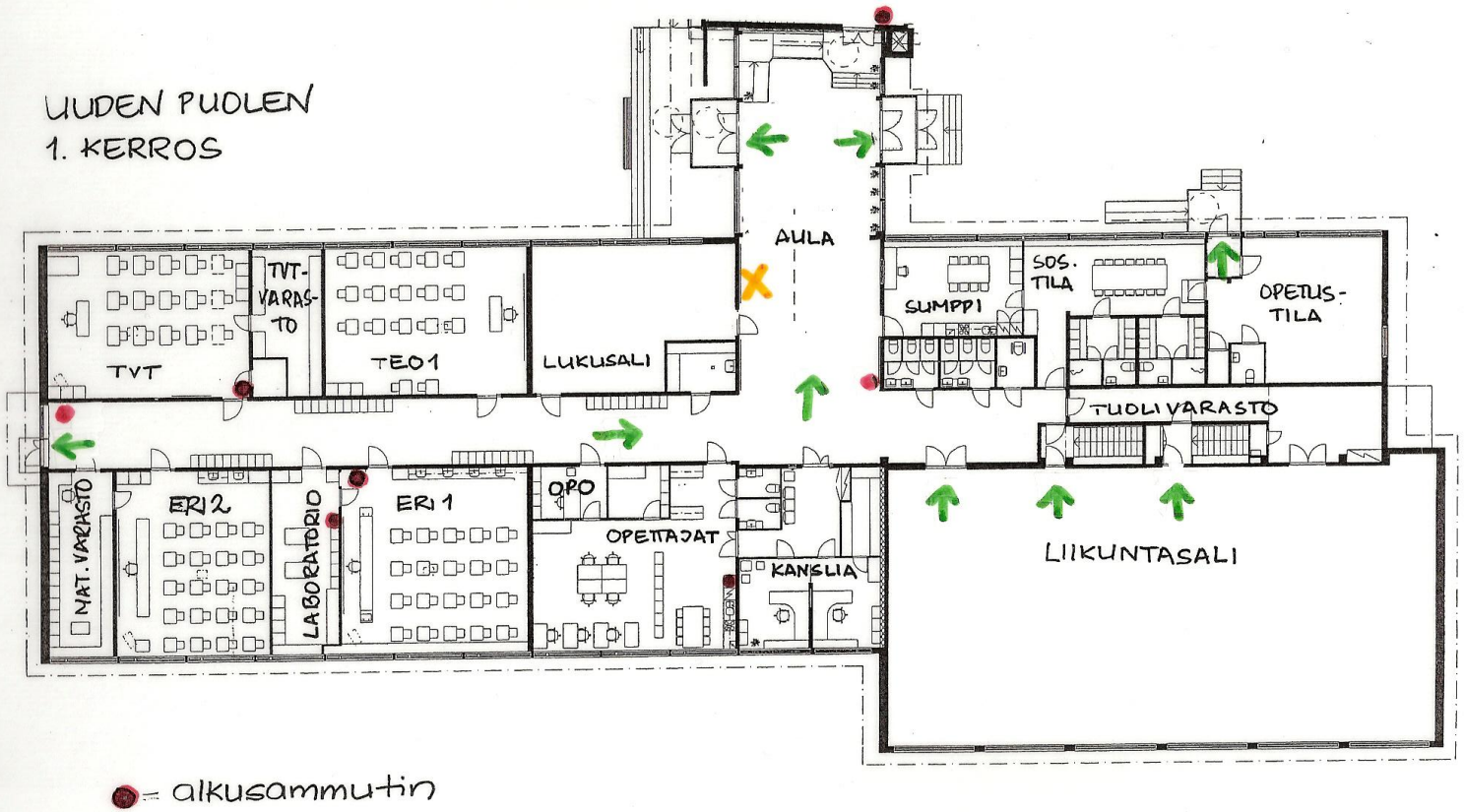
_____

_____

_____

_____

Sukupuoli: Mies Nainen

YLITORNION YHTEISKOULUN LUKIO

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