Applying new ways of working in university working environment. A case study: Laurea University of Applied Sciences

Khasu, Sunil

2015 Leppävaara

Laurea University of Applied Sciences
Leppävaara

Applying new ways of working in university working environment. A case study: Laurea University of Applied Sciences

Sunil Khasu
Degree Programme in Facility Management
Bachelor's Thesis
May, 2015

The objective of this thesis is to identify New Ways of Working (NWoW) or new work concepts that are applicable for the Laurea University of Applied Sciences working environment. The research focused on the perspective of two different stakeholder groups, which are the employee perspective and management perspective. At present, opportunities offered by modern technologies have reduced importance of time and location with respect to ways of working. Universities or organizations not offering a suitable working environment have to create alternative ways of working for their employees. In this situation, the enhancement of working environment through new ways of working can lead to increased employee performance, productivity and satisfaction.

The theoretical framework of this thesis consists of a basic introduction to new ways of working and the four main focus areas concerning NWoW, namely information technology (IT), physical workplace, organization and people.

The research was conducted using mixed-method approach, consisting of survey (quantitative phase) and interview (qualitative phase). The survey was distributed via an e-form among employees through Laurea intranet, Laurea "Live", while the interview was conducted with management team. The data obtained from survey were analyzed with SPSS (Statistical Package for the Social Sciences) program through cross tabulation method.

The result from the employee perspective indicates that age does not affect the application of new ways of working in the Laurea University of Applied Sciences working environment, but the number of working years does affects. The positive attitudes of management towards new ways of working as revealed in the interview provided a clear picture that new ways of working are applicable to the Laurea University of Applied Sciences working environment.

Keywords, New ways of working, employee, management

Table of contents

1   Introduction

The nature of the work has been changing in recent working environment due to rapid chang-es in technology (information and communication), economic completion among different countries, globalization as well as individualization. All these trends have made contents of working environment more complex and hence it has forced them to adopt changes through simplification of working methods, processes and activities. This leads to work in more loca-tion rather than one and anticipate on new working environment 'New ways of working' where time and place are no longer relevant for working and getting results.

New ways of working is becoming norm of the 21st century. Many organizations especially uni-versities face difficulties in providing suitable learning and working environment to their stu-dents and employees. Some organizations are re-evaluating their nature of work, information technologies and objectives in order to adopt new ways of working. It is really important for knowledge workers like teachers as well as to the students, therefore organizations have to take into consideration and execute with care. Also, management can play important role and bring changes in ways of working inside organization which helps them to avoid unwanted re-sult.

Since the term NWoW itself is so hot and new that most of the people are familiar with it. For the thesis researcher, the term NWoW was known and more knowledge about it was gained during International Facility Management Program 2011 Summer School which was held in Fin-land (Espoo), Netherlands (The Hague and Groningen) and Germany (Hamburg). During the program, knowledge about NWoW was gained not only through lectures from hosting universi-ties, guest lecturers and experts in NWoW field but also through visit, observation and field research in different organization where NWoW are in use for example Microsoft office in Am-sterdam, Netherlands and Espoo, Finland. It helped to see in practice the possibilities to work flexibly and using different modern technologies. As the student of Laurea UAS, these scenar-io motivated researcher to find the possibilities to implement new ways of working in Laurea UAS.

This study consist the working situation in Laurea University of Applied Sciences (UAS), leppävaara unit in Espoo, Finland. The main objective of this thesis is to identify new ways of working or new concept that are applicable for the Laurea UAS working environment. The research focused on the perspective of two different stakeholder groups which are employee perspective and management perspective. This study consider all these two aspect equally which helps to find possible ways that favor New Ways of Working in Laurea UAS working envi-ronment.

The theoretical framework consists of four main focus areas concerning new ways of working namely information technology (IT), physical workplace, organization and people which were most important areas for this thesis topic. These four areas are interrelated where individual and worker collaborate in order to get work as well as possible. Different literature, previous research and various web-based sources were the main reliable sources for theoretical framework.

Taking the objective into considieration, both quantitiative (survey) and qualitative (interview) methods were conducted. For quantitative method, questionnaire survey in e-form was executed among employees through Laurea intranet called "LIVE". In order to get as much responses as possible, both English and Finnish languages were used in questionnaire survey. For qualitative method, interview was conducted with the management team. The data obtained from quantitative method was analyzed with the help of SPSS (Statistical Package for the Social Sciences) program through cross tabulation method.

For the convenience of the readers, the thesis divided into the five main parts. The first part focused on theoretical framework relating to main four areas of NWoW. The second part contained research methodology that was used for the research. Third part was data presentation and analysis. The fourth part focused on both qualitative and quantitative results and finally conclusion was made.

2   New Ways of Working (NWoW)

The term "New ways of working" is used as synonym to the terms like telework or telecommuting, remote work, distributed work, distance work, multi-locational work, mobile work, virtual work and global work (Lönnblad & Vartiainen 2012, 9). This term focuses on three environments physical, virtual and social. In addition there are different factors within these three environments that define NWoW. As this term is widely used, many organizations both private and public have started to follow some principles of NWoW in their working life. (Aaltonen, Ala-Kotila, Järnström, Laarni, Määttä, Nykänen, Schembri, Lönnqvist, Ruostela, Laihonen, Jääskeläinen, Oyue & Nagy 2012, 8)

According to Baffour and Betsy (2000), telework or NWoW is defined as, "working outside the conventional office using telecommunication related technologies to interact with supervisors, co-workers and clients."

Bijl (2011) explains NWoW as "a vision that makes work effective, efficient, pleasure and valuable for both employee and organization. This vision is achieved placing employee in the

centre and giving them the space and freedom within limits to determine how they work, where they work, when they work, what they work and with whom they work".

Over thirty years ago, new ways of working meant telework. Through it, employees were able to work apart from office. According to telework, work was carried out in different place which was remote from central offices or workplaces where employee had no personal contact with their co-workers but they were able to use new technologies for communication and interaction with others when needed. It shows that ways of working differently in different locations has increased gradually with the development of modern information and communication technologies (Lönnblad & Vartiainen 2012, 10).

2.1 Focus areas of New Ways of working

According to Bijl (2011), NWoW can be successfully implemented in work environment through focusing into four areas: information technology (IT), the physical workplace, the organization and the people. These four areas are interrelated where individual and workers collaborate for work done. All these areas will be discussed below separately.
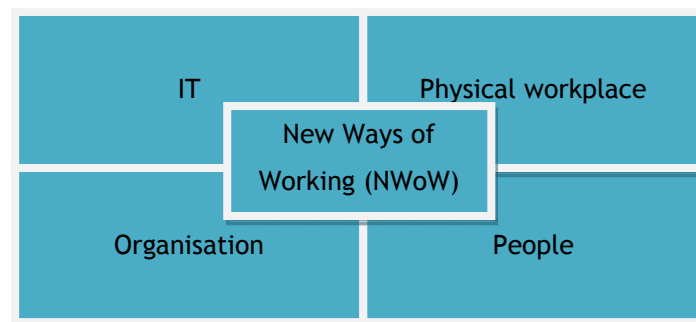
Figure 1: : The environment of New Ways of Working (Based on Bijl 2011)

2.1.1 Information Technology (IT)

Development of information technology in the past as well as at present has made easier to start and enjoy NWoW. During 1970, there was availability of new technologies that made telework as an attractive alternative during high transportation costs and petroleum shortage/crisis. At present, modern information technologies are available through continuous and huge improvement in their shape, size, speed, durability and reliability. In addition there is reduction in the cost of electronic equipments. Hence many organizations are introducing NWoW (Martino & Wirth 1990).

According to Meerbeek, Randolph, Rasmus, Wilgenburgh, Meer, Witkamp and Kompier (2009), IT improve tangible and practical work and in return improve ways of working of people like

participation or communication in meetings because organizations tries to take full advantages from those new IT and teach their employees to integrate it into daily work routine. Therefore those organizations where NWoW are introducing, they improve both IT and office area as well. The following areas also have to be focused so that they support one another.

The virtual workplace

The virtual workspace refers to an electronic working environment for instance, internet which provides working platform for both simple communication tools like e-mail and complex like video conferencing, chat and document management. The importance of virtual spaces will increase when people start to communicate each other using different IT from different places. In virtual workplace, modern information technologies tools can be used for collaboration according to their needs, purposes and functionality (Vartiainen, Hakonen, Koivisto, Mannonen, Nieminen, Ruohomäki & Vartola 2007, 30).

As information technologies are improving continuously, physical interaction and face to face meeting are becoming less important. It is possible to call or chat, email, do video meeting and videoconference and work together in same project from different remote area. It means IT has made us free from necessity of office space and office fixed time. Also regular travel to and from work, meeting and conference is waste of time and energy through both physical and mental troubles. NWoW, therefore helps to eliminate these unnecessary troubles through virtual workspace so that less time and energy can be waste (Bijl 2011).

The global organization

Early and Gibson (2002) state that internationalization of business activities and information technologies have made world like a small village. Organization's success depends on expanding its activities through globalisation. When they go globally they meet challenges as nature of work is complex. Today much modern work needs high degree of interaction, communication and interdependence of people. In order to provide such environment, deployment of advance technologies plays vital roles which further support people to work virtually wherever they are and whenever they want.

The global organization also put positive impact in our organization through offering new opportunities. There are so many roles, duties and responsibilities in organization that we cannot do everything individually. Back to the 20th century where people tried to do everything themselves has been transformed into new trend where we focus ourselves into one core competence and the rest is outsourced. In this way, we and our organization are shifting towards interrelated global network of organizations. In addition to this, organization can actively participate in social media like Twitter and Facebook in order mention about organiza-

tion, new products and services and getting feedbacks and responses from customers in re-turn. These social media can also be used to find and recruit new employee (Bijl 2011).

Productivity

According to Bijl (2011), there is positive relation between IT and individual and organiza-tional productivity. Individual productivity is improving with the help of IT because individual can work through his/her Smartphone or tablets or iPad anytime at anyplace like making presentations, writing reports, checking meeting times, changing agendas and finding lots of information. In organization, productively is improving through "smart" automation in pro-duction process through replacing manual process. It helps to organize better operational administration. With the help of modern IT, employees are able to employ their skills, capa-bility and creativity.

In case of knowledgable worker and make them more productive, the right type of work which suit them has to be assigned along with responsibility. In order to make them more productive, change in attitude of both knowledgable worker and whole organization is im-portant. When the change is made, it has to work on that steadily but consistently. In this way, it helps to find new ways of working, handle resistance and move forward until the tar-get is achieved (Drucker 1999, 90-92).

2.1.2   Physical workplace

The second focus area of NWoW is physical workplace which refers to the physical environ-ments that are used by employees for working such as home, office, car or plane, hotels or restaurants and customer's premises (Aaltonen et al. 2012). Since people are free to work either from within or outside the organization, physical workplace focuses on flexible work-ing. Flexible working saves time travel between home and work and reduces the costs. It helps to keep proper balance between work and private life of the employees as well as bring environmental benefits to the organization by reducing carbon footprint which brings im-portant competitive advantage to the business.

Meerbeek et al. (2009) state that work is not tied with office anymore in NWoW as people can work from different places like home, hotels, trains and customer premises. Many organiza-tions are trying to understand to utilize their existing office as best as they can which inspire and motivate their employees towards better performance. For this, space flexibility to use, space cost per square meter, space capability to meet the needs and technology in space are important factors.

An example can be taken from Microsoft Netherlands where company solved shortage of office space problem through NWoW. It had leased floor area 16.4 sq meters (176 sq feet) per person and only 25 percent employees only shared work desks. They were unable to provide work desks to all employees. In 2008 April, they opened new building where no one was assigned with work desk and it required only 8.82 sq meters (95 sq feet) per person. During work, employees were/are free to work from anywhere in office using laptop, webcam and Smartphone which was connected through wireless or plugging in at desk. Videoconference was also available in meeting rooms. Implementation of this plan saved more than $640,000 per year (Meerbeek et al. 2009).

In adopting changing style of working and enhancing NWoW, following areas also need to be focused:

Activity-based working

Activity based working is a concept that describe ways of working based on information technologies and physical environment which are use in working environment (Space to work 2012). It allows employees to perform at their best and increases organization efficiency through freedom, empowerment and trust because there is more interaction, connection and communication in the work. Activity based working solve the needs of the user in working environment by providing right space for right activity/task. It pays attention towards the health benefit of employees with ergonomic approach consideration like better monitor set up, comfortable chairs or tables and height adjustable workstation. These all helps and supports new ways of working (The rise of activity based working 2014).

Today's works are getting difficult, richer and more complex. It is not easy for workers to make a right decision at the right time. They need to consult and discuss formally or informally for a certain period. In some case, they need to read, write and make important documents or decisions carefully and communicate physically or virtually while working. These different activities invites necessity of different suitable workplace like formal or informal chat/meeting room, silence areas for concentration, rooms for the discussion on confidential matters and conference room with or without videoconference facility. The NWoW makes possible to avail such facilities because no one has their own workplace and they will use the workspace in right time when needed. Also wireless network in their laptops, tablets and Smartphone makes it easier to work and switch place if necessary. Activity based working therefore helps workers in working environment and decreases the costs for organization (Bijl 2011).
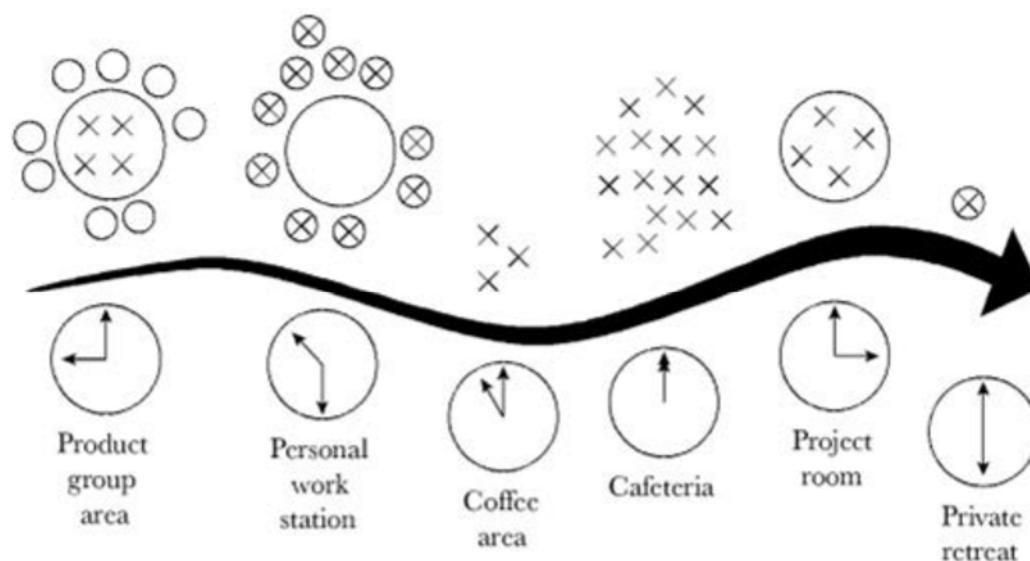
Figure 2: Activity-based working space (Backer 2004)

Based on the figure above, Backer (2004) states that activity-based working provides varieties types of spaces for concentrate, formal or informal discussion and confidential matter discussion without any interruptions for employees where they can select place to work alone or with group of peoples according to need, style and nature of work.

Meeting place

It is true that modern information technologies have made employees to work wherever they are, whenever they want/need and with anyone. On the other hand, people are social and emotional beings, who want to see, contact, be in touch, share their feelings and keep bonds with their friends, co-workers and organization. NWoW creates such working or meeting place which is not only attractive and flexible but also motivating and inspiring to meet the people.

Working outside the office

Vartiainen et al. (2007, 31-32) argue that working outside the office enables employee to use many places to work. Since they work from different places with collaboration, they do not have to be present inside the office in same place. There might be many reasons to design working outside the office and favour NWoW by implementing possibility to work from various location such as to avoid transportation problem, to balance work-home life and for the convenience of disabled workers. However implementing NWoW through working outside the office should provide win-win situation to both organization and employees.

Development of information technology for example internet has made possible to work anytime or anywhere through communication and discussion (Working away from the office 2012). According to Bijl (2011), NWoW worker work less in office and more outside the office if they are given an opportunity to work outside the office. Today, many hotels and fast food

restaurants are offering free Wi-Fi which not only makes easier but also encourage people to work from outside the office. Availability of fast internet connections like 3G and use of this technology in smart phones and tablets makes possible to work from any place at any time.

Physical Spaces	Home	Main Work-place "Office"	Moving places example Trains, Airplanes, Ships	Other workplaces example client's and supplier's places	Third places examples hotel, café, congress venue
Virtual spaces	PC, phone, internet, broadband	Intranet, com-munication and collaboration system	Mobile devices	Intra- and extranet, Internet	Laptop, in-tranet
Social spaces	Tranquility, well-being family	Shared goals and values, peers	Change and solitude, strangers	Trust, part-ners	Interruptions, mostly strangers

Table 1: Types of multi-location workspaces for working outside the office (Vartiainen et al. 2007, 31)

2.1.3 Organization

Among four focus areas of NWoW, this area remains the most important because other three areas revolve around it. However it is a bitter truth that organization is the most ignored area during NWoW implementation and practices. Though nowadays new advanced IT resources and well equipped offices are easily accessible in organization but it needs to be understood that changes in mentality of management of organization is required in order to work effectively, efficiently and with joy. According to Volberda (1999, 17), because of competitive environment, it is hard to find an organization as stable, orderly, non-flexible and non-changing though majority of organization followed (or still following) top-down structure with strong command and control management style where employees are managed and controlled by physical presence and close supervision which in return creates mistrust relationship between employees and management.

As the world is changing, the nature of work in organization is also changing from simple to complex and repetitive actions to dynamic knowledge work. Organization need to find ways so that fast action or reaction can be made in order to support employees in NWoW. Also in NWoW, changes made by organization do not always support the work of employees because

of the different nature of work. Thus the nature of work along with work environment and analysis of work must be taken into consideration so that it supports in performing the work. In the absence of consideration, work and employees both will be affected (Vartiainen et al. 2007, 139-140).

In organization, therefore, NWoW aims that employees performs their work by using their skills, minds, talents and so on rather than following systems and structures always. In NWoW, it is necessary to understand that systems and structures should act as tools from where employees can take advantage rather than making them slavery.

Culture

The term culture is complex as single definition is not enough to define it (Thomas 2008). Hofstede (2005) states "culture is the collective software of the mind that distinguishes the members of one group or category of people from others". This definition explains that people learn, behave, think and perform differently from each other.

According to Adler (2008), an important framework to understand complex of culture and how it influences employee/people in different stage which will affect NWoW organization can be seen in following figure:
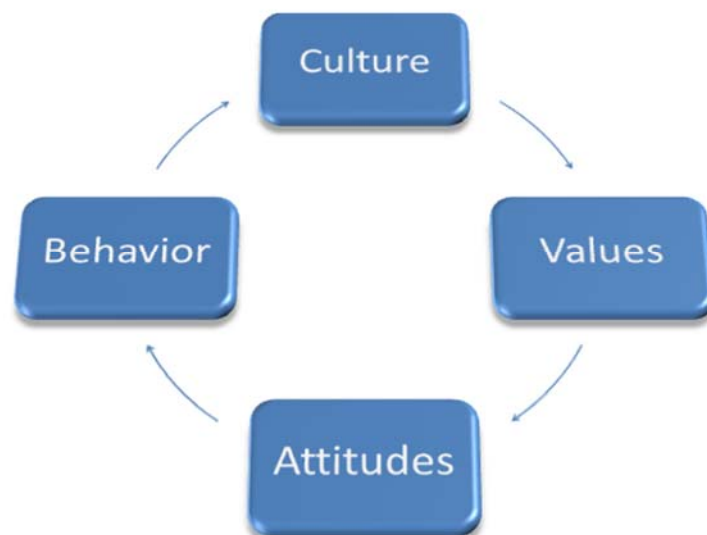

Figure 3 : Influence of culture (Adler 2008)

The above figure helps an organization to understand and be aware about how people are influenced in different stages of culture. According to the figure above, values of people is observed from their culture. These values determine the beliefs and norms of people. The values that people have or hold affect the attitudes of people through creating some specific behaviour which are observed in different situation by different people. In organization/society, people are influenced in same way as individual like above culture circle and this influence is repeated. NWoW organization therefore should be aware and keep in mind about the above circle that each employee is influenced in same way.

In organization, culture can range from conservative to innovative where conservative and innovative culture restrict and favor to practice NWoW respectively (Volberda 1999). Changing a culture or adopting new culture is the difficult and challenging task but it is not impossible as it takes time. Since organizational culture takes place at practice level, it is easier to change. Also organizational culture is learned and adopted by people, they can learn new things slowly like new behavior (Bijl 2011).

Maitland and Thomson (2011, 42) state that success of NWoW is not only based on setting rules of result oriented work but also change in organizational culture and ways of employee treatment where employees feel trusted, respected, encouraged, supported, empowered and free. Organizational culture should be motivated where employees motivates themselves to learn continuously so that desired results can be achieved. There should be trust relationship in organizational culture between management and employees which motivates employees to achieve target goal without being monitored, observed and forced. In NWoW culture, it is believed that employees will make good use of their freedom to get things done in right time in right way.

Leadership
Leadership plays a vital role for creating a culture that favor and enhance NWoW within organization. It is human nature that employees will not easily change their behavior. In this situation leaders can play a role model by adopting NWoW in organization which in return changes employee's behavior because they trust and respect their leaders. The ability of leaders to create and develop supportive environment, values, perspectives, planning and attitudes helps employees to work safely and comfortably in NWoW organization (Volberda 1999, 169-170). It is not only employees, leader himself/herself has to live in the NWoW organization and culture that he/she want to establish (Bijl 2011).

Comparing to past leadership, today's leadership is more challenging because leaders or managers need to well equipped with skills and knowledge to work in new world with new generation people because these peoples do not want to work in dominate and strict organization.

Money is less motivated factor for them and hence come to work if they are inspired, encouraged and trusted. Old rules and ways of working therefore need to be replaced with new rules and NWoW through new leadership. Successful leaders in NWoW organization are those who avail opportunity to their employees to use their creativity rather than controlling what they do/will do (Maitland & Thomson 2011, 10-11).

2.1.4 People

Meerbeek et al. (2009, 8) state that people remains at the heart of NWoW organization. The working environment that organization creates should support people to work flexibly and freedom. Today's people/workforce has different expectations of their organization in comparison to older generation had in the past. They look forward for flexibility, accountability and work-life balance as well as inspiring, positive attitudes and better management and leadership skills from their managers or leaders. These mentioned points also important when organization tries to attract and retain best people in organization so that it helps to achieve organizational goal.

Bijl (2011, 61-62) argues that people being the centre of NWoW environment decide themselves where, when, what, with whom and how they work when they are given freedom (not fully but within limit). People will do their best at work when organization creates NWoW environment but everyone might not perform best because they differ from each other and they have certain way of doing since they have done so in their whole life. In addition, while creating NWoW environment, organization also needs to understand that providing more freedom to people means more risk, insecurity and responsibility which all the people do not want to take it. Whatever the reason might be, organization just needs to find ways so that people can change their old perception, thinking, skills and competence in order to well-equipped with the new ones so that they can enjoy NWoW environment.

Trust
Implementation of NWoW highly depends on when and how work can be done. It is necessary to describe the needs/objectives that is going to be achieved so that management can come up with new, fresh and creative ideas/ways to perform work by getting rid of old working methods. While performing the work, management need to understand that work can be done not only inside the office and during office hour but also outside the office and at anytime beyond office hour. In NWoW, management have to trust their people and design ways of performing work in different ways according to suitability of time and place. When there is trust from management, it encourages people to control time and place which result to perform at their best. Hence, trust is two ways process between management and people and it really works in NWoW (Maitland & Thomson 2011, 129-130).

Freedom and accountability

In NWoW environment, people get more freedom to perform work as well as accountability to become more responsible. People can achieve freedom and accountability through self-awareness, self-leadership, self-management and experimenting with NWoW environment. Self-awareness helps people to be aware of their own behaviour and communication. Self-leadership helps people to set priorities and direct their life towards right direction. Self-management helps people to plan effectively and learn to perform right work. For example, manager agreed when employee asks him that he will finish his report at home. When employee was at home, he went to play football with his friends instead of finish his report. However he started to do his report in evening and finished it before he went to bed. Next day he handed report to his manager and manager found it was completed and done properly. In this example it can be seen that employee has freedom in his work as well as he was accountable towards his work. This is how freedom and accountability works in NWoW organization (Bijl 2011).

3   Case studies: Laurea University of Applied Sciences, Leppävaara

Laurea University of Applied Sciences (UAS) operates in seven campuses in Hyvinkää, Kereva, Leppävaara, Lohja, Otaniemi, Porvoo and Tikkurila areas which are also known as the greater Helsinki region. Laurea UAS, Leppävaara is one of the main and biggest campuses among the seven campuses. There are about 142 employees and 2405 students. It offers five bachelor's degree programmes in Business Management, Hospitality Management, Restaurant Entrepreneurship, Business Information Technology and Security Management in both Finnish and English language. Furthermore it offer five master's degree programmes where two degree programme Service innovation and design and Customer-centered service development are in English language and the other three degree programmes Tietojärjestelmäosaamisen koulutus, Tulevaisuuden tietojohtaminen sosiaali- ja terveysalalla –koulutus and Turvallisuusjohtamisen koulutus are in Finnish language (About Laurea, no date).

According to Finnish University of Applied Sciences Act 2003/351, pedagogy, regional development and research and development are the main tasks for all University of Applied Sciences (UAS). Laurea UAS integrated these tasks and made teacher's new role as pedagogue, regional developer and researcher and developer. In addition, Learning by Developing (LbD) model was used as Laurea's pedagogical strategy for learning environment which defines the model's concepts related to learning, guidance, teaching, competence evaluation and development of learning environments. As a regional development which is stated in UAS Act, Laurea work with real working life companies and organization where teachers act as facilitators and students work together. Laurea also participate in research and development activities

for both society and business development domestically and internationally creating students motivated and eager through developing their competences, innovation and making them aware of intercultural and international environment (Raij, 2014, 13).

According to Raij (2014), the characteristic of LbD model is presented and discussed in the following figure which also represents learning and working environment in Laurea UAS:

Figure 4: The characteristics of LbD model (Raij 2014,16)

Creativity: In Laurea UAS, creativity is achieved through continuous development where students continuously involved in creating and improving new, efficient and effective work methods. It helps students to be more creative, curious and competent in the changing world.

Partnership: Partnership means cooperation among students, teachers, working life partners and users. There is peer support in projects and learning between students. Experienced students help inexperienced and younger students. Laurea staff members also act as partners and provide guidance, support and advice to students for learning. Since partnership is always built on trust, it helps for continuous interaction in the learning environment.
Authenticity: It refers to genuine working life projects. A genuine working life projects as well as research and development environment provides an opportunity to learn new knowledge, competence and actions where students could build strong connection and network with other peoples.

Experiencing: In Laurea, students experience through independent activities. Since Laurea students involve in genuine working life projects, they will experience both positive as well as negative situation while learning and hence it support them to develop new cooperation skills and actions.

Research orientation: In Laurea, research orientation is achieved through knowledge based decision making. For this, students need to possess sufficient or new knowledge so that they can choose best solution in different situation and use it for continuous development by using different research methods.

Learning and working spaces available in Laurea UAS are presented in the following diagrams:
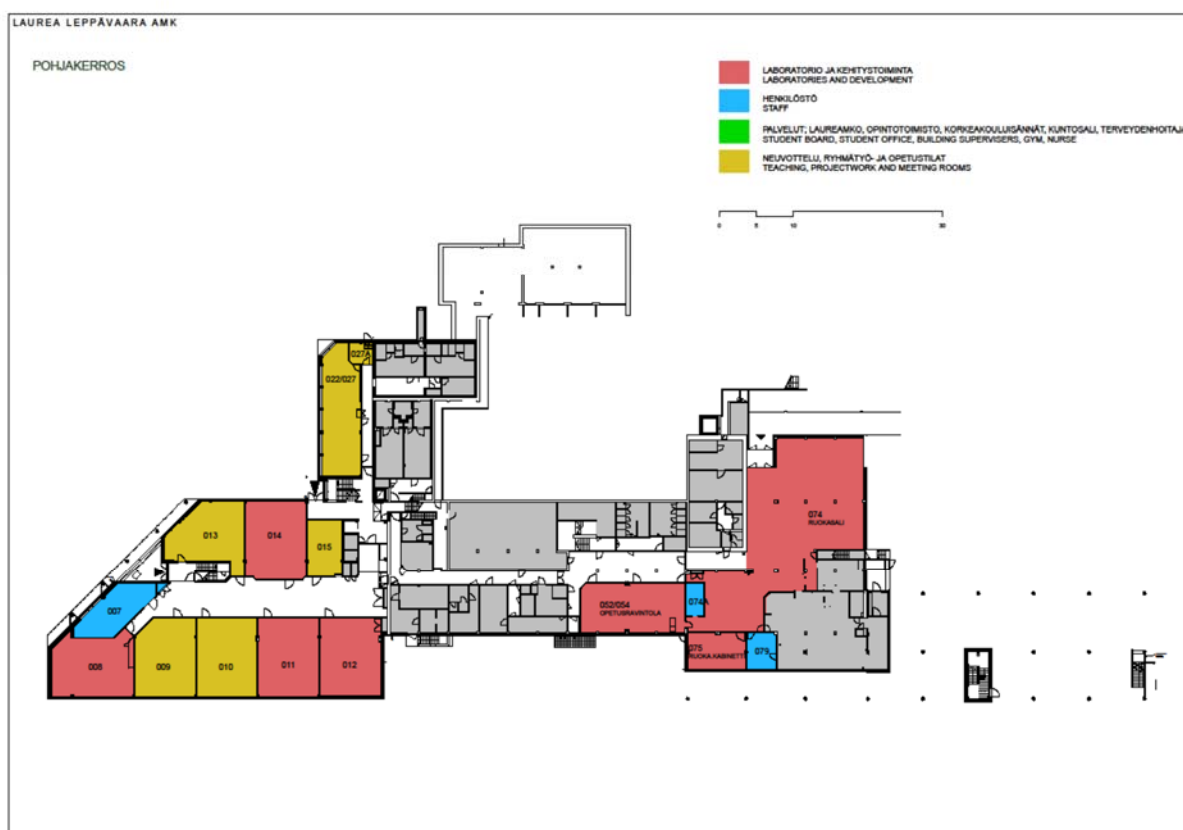
Figure 5 : Spaces available for learning and working in ground floor

According to above figure, there are six rooms available for lecturing. For employees, there are four rooms where some rooms are used as open office. There is one computer room available for students which is used for doing assignments and group work for example preparing power point presentation especially when they need computer. This room is also occupied by thesis students who are writing their final thesis.
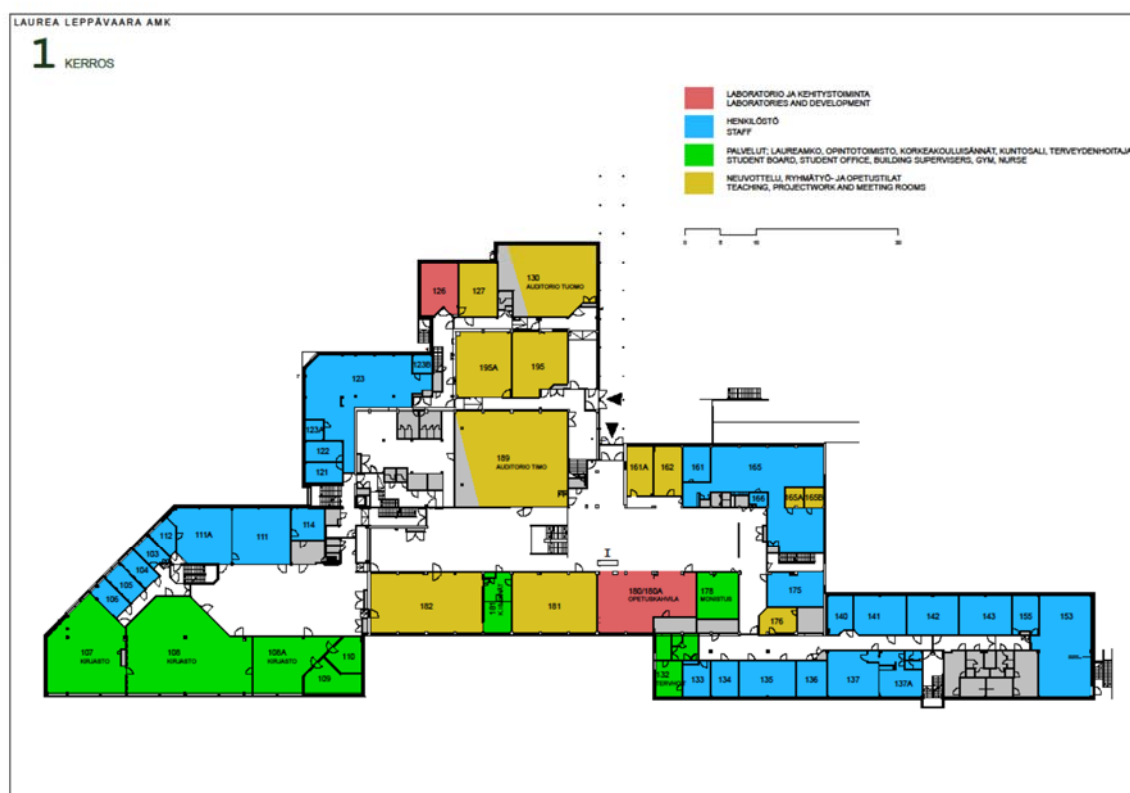
Figure 6 : Spaces available for learning and working in the first floor

In the first floor, seven rooms are used for lecturing. This floor contains large number of rooms for employees. Altogether there are twenty-six rooms available for them. These rooms are used for different purposes by different employees like lecturers, management, librarians, student affairs officers, nurse, facility management staffs, psychologist and research and development staffs. There are five rooms available for student which includes library and reading rooms.
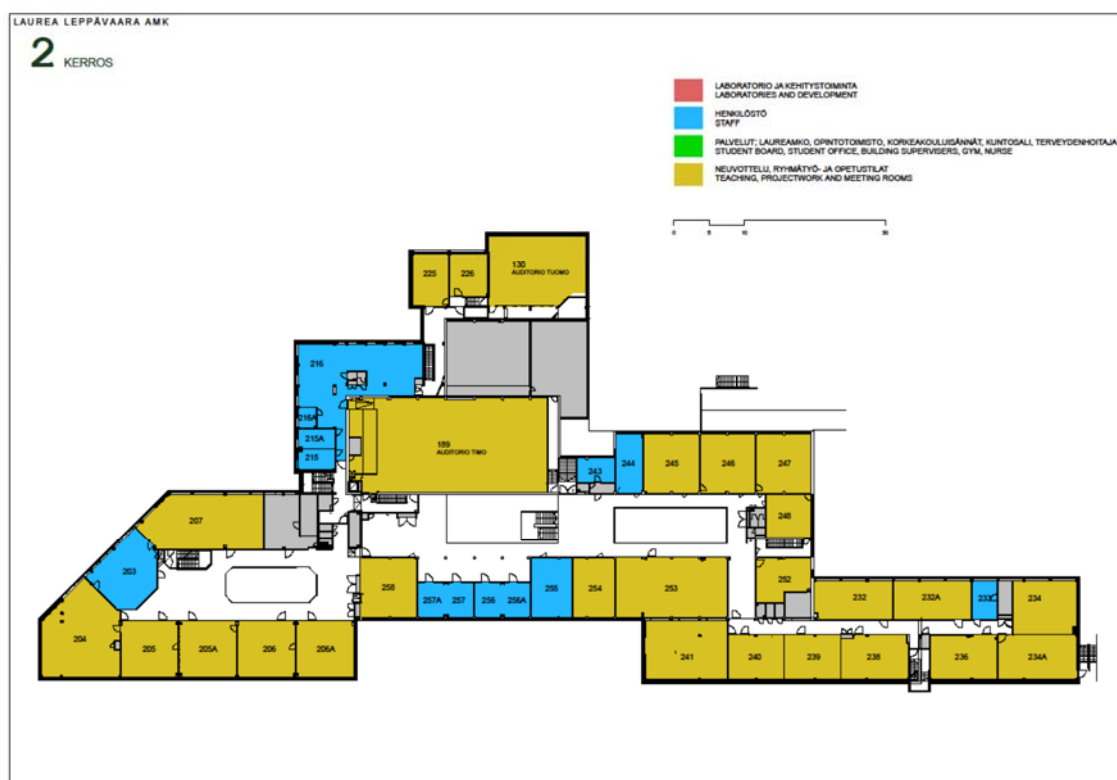
Figure 7 : Spaces available for learning and working in the second floor

The second floor is especially used for lecturing purposes. There are twenty-three rooms available for lecturing. Some of these rooms contain computers and are used when lecturing need to used computer. These rooms are more often used by business information technology students. However when these rooms are not being used, students are free to use according to their needs. There are eight rooms available for employees and three rooms for students for group work or studying purposes.

4   Research methodology

Research is systematic and in-depth study or search of new information on certain topic through study, experiment, observation, comparison and analysis. Research methodology is a technique used for conducting research. It provides an idea about different methods for the collection, presentation, interpretation and analysis of data (Rajasekar, Philominathan & Chinnathambi 2013). For this, various financial and statistical tools were used to analyze the data. Also different research methods were used to get familiar with both the topic itself and the attitude of managers and employees of Laurea UAS towards NWoW. In order to obtain necessary information, survey method was used with the employees and interview was conducted with the management of Laurea UAS.

4.1   Survey (Quantitative phase)

A survey is one of the most common types of quantitative research that provides population's characteristics, attitudes and opinions through studying a sample of that population. The survey research used different methods for collecting quantitative data like telephone, online questionnaire, face to face interviews or combinations of these (Creswell 2014, 155). The thesis focused on survey to group of people named employee perspective. The survey was executed among the employees of Laurea UAS, Leppävaara.

The survey performed with employees measured their current ways of work as well as their future needs and hopes. The purpose of this survey was to gather information about daily working styles and feeling of employees in their work environment. In addition, this survey also helps to know the possibility of implementing NWoW at Laurea UAS from employee perspective. Most of the questions contain different answer where employees had to choose most suitable answer according to their preference from the scale ranging from "strongly agree" to "strongly disagree". There were some questions where they had to choose only one option between "Yes" or "No". The survey questionnaire are attached in appendix 1.

The information obtained from survey was analyzed with the help of SPSS (Statistical Package for the Social Sciencces). SPSS consists of computer programs through which data from surveys or other sources converted into statistical analysis or reports that enable user to read the data. Correlation in SPSS makes possible to see relation between different variables or information which makes easier to conclude the relation to any research (SPSS User's Guide 2007).

4.2   Interview (Qualitative phase)

Interview can be defined as the process of data collection through asking questions then listening carefully, noting down in paper or recording the responses of the interviewee. Interview method has become a simple and easy way of collecting information which helps to know people as well as their experiences, knowledge, behaviours, attitudes and opinions according to research purpose. It can take place anywhere, at anytime and with different people like managers, employees, policy-makers or customers (Altinay and Paraskevas 2008, 107).

Interview can be structured, semi-structured and unstructured. Under structured interview, interviewer prepared questionnaire and read out each question during interview time. When the interviewee response the questionnaire, response is either recorded or noted in paper. Semi-structured interview is combination of both structured and unstructured interview

where interviewer has some questions related to particular topic. During interviewing, interviewer has greater freedom in modifying and sequencing the questions on the basis of conversation take place. Unstructured interview is flexible way of interviewing which helps to know interviewee's opinions and experiences. Skills like good communication, observing and listening conversation and asking question carefully makes unstructured interviews interesting, challenging and successful (Altinay and Paraskevas 2008, 112-114).

Interview method was used in order to collect data from management team. Before starting an interview, structured questionnaire were prepared in order to meet the theme of the topic term NWoW. Interview questionnaire mainly focused on five areas of NWoW that is topic introduction; Barriers or resistance or problems; Vision, future and needs; personal attitudes or view and job oriented questions. One main question was asked from each area to all managers and other optional questions were asked on the basis of demanded situation. The interview questionnaire are attached in appendix 3.

During the interview, the information was received carefully and noted down. In order to support written notes and pay more attention to interviewee, interview was recorded in voice recorder. Each interviewer of the management team was interviewed separately using the same set of main and optional questions. This made easier to see, compare and analysis the given answers by the management team of Laurea UAS.

The collection answers from the interview were shown orderly with the help of an excel chart which made easier for comparing and analyzing the data. An excel chat with finding results is attached in appendix 4.

5   Data presentation and analysis

The data obtained from employee prespective through survey and management perspective through interview are presented and analysed below:

5.1   Employee perspective

The employee perspective at Laurea UAS Leppävaara was administered through survey among employees focusing on their working environment. The survey was distributed via an e-form through the Laurea Leppävaara intranet, "Live", where employees could see Laurea Leppävaara news, events and different happening that will take place or took place. Total two weeks were assigned as a deadline in order to fill out and return the survey. Since enough reply from the employees was not received, an additional two weeks were extended to increase the response rate. In the end, altogether 38 responses were received.

As mentioned earlier, the information obtained from survey was analyzed with the help of SPSS program. In SPSS program, cross tabulation method was used for the analysis of data. According to SPSS User's Guide (2007, 353), cross tabulation is a technique that examine relationship between two categorical variables. It shows two way tables and provides different types of tests and measure for two way tables. For example, showing age in row variable and gender in column variable, cross tabulation creates two dimensional tables showing number of male and female under gender in each age category.
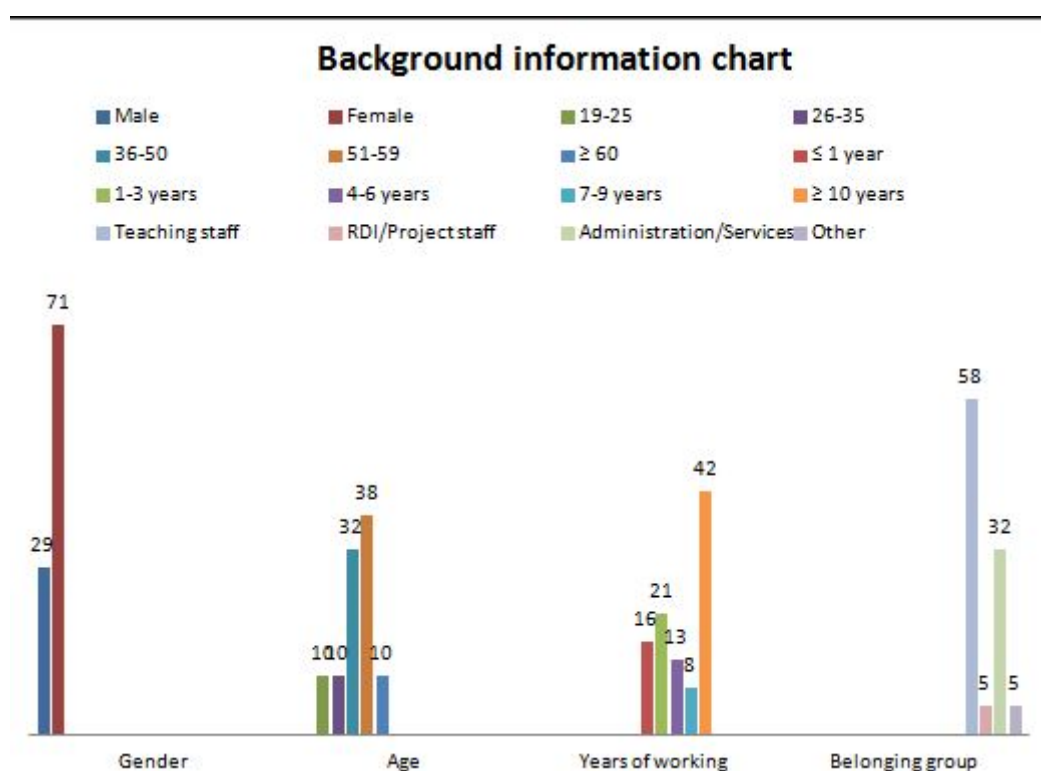
Figure 8 : Background information

Through the background information of the survey, it was discovered that the majority of the participants were female with 71% and male with 29%. The age range varied from 19-25 years to more than or equal to (≥) 60 years. The age range 51-59 years dominated with 38% of the participants which were steadily followed by age range 36-50 years with 32%. The rest three ages ranges 19-25 years, 26-35 years and more than or equal to 60 years were equal with 10% of the participant. The starting year of working varied from less than one equal to (≤) one year to more than or equal to (≥) 10 years. The highest participants were 42% who worked in Laurea more than or equal to (≥) 10 years. 16% of the participants had worked between less than or equal to (≤) 1 year; 21% had worked between 1-3 years; 13% had worked between the 4-6 years and 8% had worked between 7-9 years.

Regarding the working group where they belonged to, 58% of the participants which was the highest, mentioned they work as a teaching staff. 5% of the participants reported that they belonged to RDI/Project Staff group; 32% belonged to administration/services group and 5% belonged to other group such as trainee or assistant.

	Mean	Std. Deviation	Gender	Age	Working year	Belonging group
Possibility to work from home	1.74	.891				.444**
Use of telephone conference for work	1.58	1.030	-.607**			
Possibility of lighting in working environment now	1.03	.162		-.333*		
Possibility of flexibility of place in working environment now	1.34	.481		.327*		
Importance of ergonomics in working environment	2.32	1.435				.499**
Importance of temperature in working environment	2.26	1.554				.340*
Importance of silence in working environment	2.55	1.224				.321*
Satisfaction with availability of equipment in workplace	2.24	1.364			-.467**	
Importance of fixed working station	2.368	1.567			-.426**	
Need of flexible working place to improve work	3.45	1.589			.588**	
Awarding system to increase work efficiency and motivation	3.00	1.115				-.437**
Flexibility of workplace to increase work efficiency and motivation	3.26	1.408			.392*	

Table 2 : Correlation Matrix

When the data was put into SPSS program, there were only few variables that were correlated to each other. Those variables which were correlated to each other is presented in the above table 2. Since different variables did not correlated to each other, only correlated variables were taken into consideration and cross tabulation method was used for analysis. All the results of correlated variable that has been explained below from cross tabulation were attached in appendix 2 along with more detail version of correlation matrix table.

The participants were asked if they have possibility to work from home or not. In variable "possibility to work from home" who said "yes", there were 21 participants out of them 17 which is same as 81% were teaching staff in variable "working group". On the other hand in the variable "possibility to work from home" who said "no" there were 6 participants out of them 5 which is same as 83.3% were administration/services staff in variable "working group". This result revealed that most of the teaching staff have possibility to stay home and work where as administration/services staff do not have such possibility.

Considering the use of different programs at employee's work which were asked in the questionnaire like telephone conference, Skype, adobe connect pro, Lync, LinkedIn and Facebook, it was interesting to see that there was no correlation between the variables except telephone conference. In variable "use of telephone conference for work" who said "never", there were 26 participants out of them 22, which is same as 84.6% were female in variable "gender". Similarly, in variable "use of telephone conference for work" who said "more than or equal to (≥) twice a week", there were 5 participants out of them 5 which is same as 100% were male in variable "gender". From this result it can be concluded that majority of female never use telephone conferences and almost all male use telephone conference more than or equal to (≥) twice a week for their work.

In the questionnaire it was asked for the participants that how it is important for them to have effect on different aspects which affect the working environment. Different aspects included in the questionnaire were lighting, visual environment, ergonomics, temperature, silence, place flexibility and time flexibility. In the questionnaire it was also asked if the participants have possibility to effect on these aspects at the moment.

At the moment it seems there is very good possibility of lighting in Laurea Leppävaara working environment. Almost all the participants of different age group which is 97.4% of total replied "yes" that they have possibility of lighting in working environment now. Only 2.6% of total participants do not agree on it.

In addition, at the moment more than half of the different aged participants (65.8% of total) have possibility of flexibility of place in Laurea Leppävaara and 34.2% state they don't have. In variable "age groups" there were 12 participants in the option "36-50 years" from where 10 which is same as 83.3% which said "yes" for the variable "possibility of flexibility of place in working environment now". But in the variable "age groups" there were 4 participants in the option "≥ 60 years" from where 3 which is same as 75% which said "no" for the variable "possibility of flexibility of place in working environment now". The result showed that participants who are "more than or equal to (≥) 60 years" do not have possibility of flexibility of

place in working environment at the moment in compare to other age groups participants for example 36-50 years participants.

Ergonomics is related to design of equipment used in work place which will increase the performance of employees through creating satisfaction and comfortable. It is also related with meeting health and safety regulation standards of certain organization or country (Ergonomics 2011). The participants were asked to evaluate about importance of ergonomics in working environment on a scale 1 to 5 (1 = I strongly agree, 5 = I strongly disagree). In the variable "importance of ergonomics in working environment" who said "I strongly agree" there were 16 participants, out of them 13 which is same as 81.3% are teaching staff in variable "working group". On the other hand, in variable "importance of ergonomics in working environment" who said "I strongly disagree" there were 4 participants, out of them 3 which is same as 75% are administration/services staffs in variable "working group". From this it can be interpreted that majority of teaching staff think it is very important to have an effect on ergonomics and vice versa for administration/services staff.

Almost 68.5% (21.1% and 47.4%) of total participants agree or strongly agree that it is important to have an effect on temperature in working environment. Only 7.9% of total party agrees and 23.6% (5.3% and 18.3%) of total disagree or strongly disagree. To have an effect on importance of temperature in working environment seems to be more relevant for the teacher staff working group rather than other working group because in variable "importance of temperature in working environment" who said "I strongly agree", there were 18 participants out of them 13 which is same as 72.2% are teaching staff in variable "working group".

Silence work as a powerful weapon help people to think and act accordingly. In silent environment, people slow down their mind and concentrate on their work. There can be different types of disturbance around the workplace like people chatting nearby or around, noise from television or different devices in the room/office that distract the concentration that makes employees uncomfortable (The power of silence 2015). About half of the participants 50% of total (26.3% and 23.7%) agree or strongly agree that it is important to have silence at workplace where as 28.9% of total partly agree and 21.1% of total (13.2% and 7.9%) disagree or strongly disagree. In variable "importance of silence in working environment" who said "I strongly agree", there were 9 participants out of them 8 which is same as 88.9% are teaching staff in variable "working group". However in the same variable who said "I disagree", there were p participants out of them 3 which is same as 60% are administration/services participants in variable "working group". It means majority of teaching staff participants would like to have silence in their work place in compare to administration/services participants.

An open-ended question about satisfaction with their work environment got about 75% response rates. The most common comment presented was concerned with good peers or friendly work staffs, peace/nice working environment and good tools and equipments. Some participants mentioned that it is great to have peer to talk about work-related as well as personal issues.

More than half with 68.8% of total (34.2% and 34.2%) participants are agree or strongly agree about satisfaction with the availability of equipment at their workplace. Only 7.9% of total participants partly agree and 23.3% of total (7.9% and 15.4%) participants disagree (7.9%) or strongly disagree (15.4%).

The importance of fixed working station was one of the centre questions for examining the main research question because fixed working station is against in NWoW world. The participants therefore were asked if fixed working station is importance for their work or not. In the variable "working year" there were 16 participants in option "≥ 10 years" from where 12 which is same as 75% which said "I strongly agree" for the variable "importance of fixed working station". Moreover in variable "working year" there were 6 participants in option "≤ 1 year" from where 4 which is same as 66.7% which said "I disagree" for the variable "importance of fixed working station". From this it can be discovered that majority of participants who have been working more than or equal to (≥) 10 years are in favor of importance of fixed working station rather than participants who have been working less than or equal to (≤) 1 years.

In order to improve the work, the participants were asked about the need of flexible working place which is also one of the important questions related with main research question. In variable "need of flexible working place to improve work" who said "I strongly disagree", there were 15 participants out of that 12 which is same as 80% have been working more than or equal to (≥) 10 years in variable "working year". On the contrary in variable "need of flexible working place to improve work" who said "I strongly agree", there were 8 participants out of that 4 which is same as 50% have been working between 1-3 years in variable "working year". The result again revealed that the majority of the participants who have been working more than or equal to (≥) 60 years think that the flexible working place would not improve their work where as 50% who have been working between 1-3 years against it.

In order to make employees feel safe and joy towards their work so that work productivity will be increase, motivation and efficiency plays a vital role. Different kinds of aspects like awarding system, bonus, feedback from superiors and colleagues, environment, time flexibility, place flexibility, ergonomics, food and beverages, health and fitness and self development were asked to the participants that would increase their work efficiency and motivation

but it was surprise to see that only two variables awarding system and work place flexibility were correlated with increasing work efficiency and motivation.

According to result obtained from the participants, there were almost same opinion in total percentage between agree (including strongly agree), partly agree and disagree (including strongly disagree) which were 31.6%, 34.2% and 34.2% respectively regarding awarding system that would increase their work efficiency and motivation. In variable "awarding system to increase work efficiency and motivation" who said "I disagree", there were 10 participants out of them 7 which is same as 70% were "teaching staffs" in the variable "working group". Similarly in variable "awarding system to increase work efficiency and motivation" who said "I partly agree", there were 13 participants out of them 8 which is same as 61.5% were "teaching staff" in variable "working group".

About 44.7% of total (18.4% and 26.3%) participants disagree or strongly disagree that flexible work place would increase their work efficiency and motivation. 26.3% of total participants partly agree and 29% of total (13.2% and 15.8%) participants agree or strongly agree. In variable "flexibility of workplace to increase work efficiency and motivation" who said "I strongly disagree", there were 10 participants out of them 9 which is same as 90% have been working more than or equal to (≥) 10 years in variable "working year". But in variable "working year" there were 6 participants in option "≤ 1 year" from where 5, which is same as 83.3% which said "I partly agree" for the variable "flexibility of workplace to increase work efficiency and motivation". From this result, it can be discovered that majority of participants who have been working more than or equal to (≥) 10 years disagree that workplace flexibility would increase efficiency and motivation at work and vice versa for participants who have been working less than or equal to (≤) 1 year.

At the end of survey, suggestion or comment was asked from the participants. There were only few comments like there should be more social contacts during the day and the survey would help in the development of office in Laurea Leppävaara.

5.2 Management perspective

The management team of four was interviewed from 26th March till the 4th April 2013. The interview took place at Laurea University of Applied Sciences, Leppävaara, Espoo. The questionnaire and answer from interview are attached in appendix 3 and 4 respectively.

The term NWoW was known term for all the interviewees at Laurea UAS, Leppävaara. Through interview, it was known that out of total working time, teachers have possibility to use 25% of their time to work from anywhere and anytime independently. Easily available without set-

ting any appointment was an ideal situation of NWoW for most of the managers. Furthermore, they would like to bring more use of virtual channel like adobe connects pro or Microsoft link and more flexible meeting rooms as desired situations.

Almost all managers thought implementation of NWoW will cause resistance from employees because they might not like to leave their permanent place/table or they are used to what they are doing. In order to handle resistance, it was important for management to give information and talk with employees about the implementation of NWoW. For instance, one manager said:

"In order to handle resistance, we have to inform them well early enough and may be let them influence on how it is going to be. It is very important to encourage them so that they feel good and positive through making working environment pleasant. We also, of course have to point out positive sides, benefits and new possibilities that the change will create……." (Anonymous 2013. Personal communication.)

It is proven that management will adopt different approaches, methods and ideas in order to handle resistance from employees.

The future action for the management team of Laurea UAS Leppävaara was clear and NWoW will fit to the vision of the university. Laurea UAS has internationalization strategy where virtual is real. The university uses more virtual learning environment which means there is no need of many spaces or traditional lecturing rooms and hence it favor NWoW. In 5-10 years, management sees the university as constantly reacting to change, less traditional classroom with less tables/desks and more connected with region, different companies and partner institutions inside the country and abroad. In addition, one manager explained that:

"In 5-10 years, hopefully we will have chance to move to new building where we can create totally different types of space. There would be different offices and companies in the same building which make easier to communicate and do project work with those companies. There would be more flexible spaces for employees to work and for students to study and do group work. There would be some kind of wall that can be open and close. Our furniture would be movable and adjustable easily……….." (Anonymous 2013. Personal communication.)

This statement shows clear vision and picture of management regarding ways of working in the future. In addition this statement also shows that management have positive attitude towards NWoW and will support to implement it.

Taking help from external company for the implementation of NWoW seems possible for the management but cost expensive for the university. One manager argued, "Why not to use own resources for example talented or interested students like you who can/will do project concerning NWoW rather than hiring external company". For XY generation, the university sees more virtual work, more free space for study and group work and better connection and application for virtual or semi-virtual meeting/discussion/seminar as the future study. One big open workspace with small private room for private meeting, discussion, phone or negotiation could be desired workspace for future working for the management. On the other hand, open office with no fixed place but with small room for phone call or quite work could be future working space for the employees.

Motivation plays a vital role not only to improve the performance level of employees but also reduce resistance to change. The management in Laurea UAS motivates their employees through personal or team meeting, to be present to listen, discuss and help if needed, giving challenging or right types of work and being interested what they are doing. This is clear as one of the managers narrated that:

"We try to make clear what is goal for each employee and we have development discussion every year. During the discussion we evaluate the goal if it has been fulfilled or not. if it is fulfilled, I personally say, "well done" or "good work". If it is not fulfilled and I am not happy, I give them feedback. Beside this, we also have team meeting. During the meeting I try to say thank you whenever I feel there is place for thanking a person as it is one way to motivate people to do good work now or later on. As we get study unit feedback from students, I try to give feedback to teachers saying "good job" when the feedback is good. If there is something wrong, we discuss how it could be make better or improve for the next year and so on……" (Anonymous 2013. Personal communication.)

It is evident that management really support, motivate and take care of their employees. It shows management have good leadership quality who inspire, encourage and motivate their employees to perform their task and achieve the goal.

The satisfaction of employees as well as students in Laurea UAS is measured through different types of survey. For students, feedback is asked after every course or study unit is finished. For employees, there is well being questionnaire/survey in every second year which helps to measure their satisfaction. Management also gets direct feedback from employee which helps them to improve things.

Depending on future working situation, if needed, all the managers were ready to give up their room. However being management, they might have to face difficulties when they need

to discuss personal or confidential matter with students/employees/third parties if they give up their room and share with someone in the same room. Taking financial situation of the university into consideration, it is not possible for the management to supply new technical devices to the students. Since most of the students do have their own laptop and iPad, university has some application and program that makes possible for student to use virtual tools. Also there are many classrooms with IT equipments like computers and projectors as well as some cameras and laptops that can be used by renting, providing more new technical devices would not be possible for the university.

The interaction of students/employees with management was frequent, direct and easy. Management people were easily reachable if students/employees wanted to meet and discussed. There was not any power distance or hierarchical system between management and employee. For example, one manager mentioned, "I always have my door open whenever I am here (in office) and anyone would be well come to talk with me".

The management thought the trend of 24/7 might be possible but it will be expensive for the university. However some of the managers opposed with the trend because NWoW favor virtual learning and new ways of utilizing electrical devices and therefore it is not necessary to open all the time. Those managers confirmed this by saying that:

"Since we are getting more and more virtual, people are not so eager to stay here till late or if anyone would like to come here at night. If there is trend of 24/7, it will bring lots of expenses for example security issues as we cannot simply leave the door open and we should have some kind of card system to activate and so on. Also we need to pay salaries who will work during evening and night like building superintendent. If we are open, we should provide some services like cafeteria and so on which again require service staffs. And if it is for few customers, it is not worthwhile……………." (Anonymous 2013. Personal communication.)

Above statement proves that 24/7 might be possible in theory but in practical it seems difficult because its all about cost that the university has to bear if it is implemented. Instead of putting lots of money which seems not useful for university, management could use that money in developing educational programs like study trips or field visit to students as well as employees.

The management would like to focus on improvement of education rather than cutting costs. Since ministry of education has cut down the money that the university was entitled to, the university has to create more turnovers or need to find new ways of getting income like networking with different companies so that there is no need to cut cost. The Laurea has got very good figure in case of application who had applied for studying. The trend of applying

students was slightly rising in comparison to last year. However trend of applying students varies according to degree program or field of study.

In Laurea, most of the funding comes from ministry of education. Besides government, they also have funding from other funding instrument like external funding projects. But there has been big change after year 2014. This can be seen as managers state:

"At the moment, it is very simple that we get 70% of finance from government based on the number of students who have been selected and will start study here and 30% of funding comes from graduate students. We also get some part of our funding especially Leppävaara unit is research, development and innovation funding which comes from external sources like European Union (EU). After year 2014, there will be new model for funding which will be based on results..........."(Anonymous 2013. Personal communication.)

"............ It means 85% of the funding from year 2014 comes from education process and 15% of the funding comes from research and development actions. The education process and research and development actions consists of different factors like graduate students, number of students who get 55 credits per year, graduate students who will gets employed, credits that are done through open university study, student feedback, internationalization of the education, arranging seminar, master students who will graduate, publication, research and development and exchange of personnel........." (Anonymous 2013. Personal communication.)

From these quotations, it is clear that university funding totally depends on education process where each and every process and actions of education plays a vital role and they contribute more or at least some percentage of money so that funding amount of university will bigger and better. In addition university could offer students very flexible way of getting done or finish their degree in short period where implementation of NWoW might play vital role.

6   Results

6.1   Summary of quantitative results

At the moment almost all the participants have good possibility of lighting and more than half of total participants have possibility of flexibility of place. Majority of "teaching staff" working group participants think it is important to have an effect on ergonomics, temperature and silence in working environment.

Most of the "teaching staff" working group participants enjoy the possibility to work from home in comparision to other working group of participants. For example, teaching staff have

to be at university just for lectures and it is possible for them to work from home during other time but administration or services people cannot do so because this group of peoples belongs to service sector, therefore they have to be present at workplace in order to serve their customers like students, other employees and different visiting peoples.

Majority of the participants who have been working "more than or equal to (≥) 10 years" think the flexible working place would not improve their work. Again majority of same group of participants who have been working "more than or equal to (≥) 10 years" are in favor of importance of fixed working station. They think they need own place to work.

Since participants have friendly work staffs, peace atmosphere and availability of different modern tools and equipments, they are satisfied with their working environment. Most of the female participants "never" use telephone conference where as almost all male participants use telephone conference "more than or equal to (≥) twice a week" for their work.

Surprisingly "awarding system" and "flexibility of work place" were only two variables which were correlated regarding work efficiency and motivation. There were almost equal percentage of participants in total who agreed (including strongly agree), partly agreed and disagreed (including strongly disagreed). Nearly about half of total participants disagree about flexible work place would increase their work efficiency and motivation.

6.2   Summary of qualitative results

The term NWoW was not a new topic for management as they were known about it. The university has already practiced NWoW especially teachers who have possibility to work from anywhere and anytime independently from their 25% of total working time. In addition management would like to be available any time without appointment for everyone and would like to bring more use of virtual channel.

Managememement thought implemention of NWoW could bring resistance from the employees. However according to them, resistance could be handle through informing them well earlier, finding doubts beforehand as well as ways to solve them, encourage them to feel good and pointing out benefits from the change.

In the future, the management team sees the university as major developer in the greater Helsinki area, more flexible spaces, maintain "prime mover" tag among university of sciences in the future too and more connected with region, different companies and partner institutions inside the country and abroad. In order to take help of an external company for the implementation of NWoW seems possible but will cost expensive.

Management motivates their employees through sharing information, discussing and evaluating goal through yearly development discussion, giving feedback (sometime critical too), giving challenging or right types of work and being interested what they are doing .

Depending on future working situation, if needed, all the managers were ready to give up their room. However being management, they might have to face difficulties when they need to discuss personal or confidential matter with students/employees/third parties if they give up their room and share with someone in the same room. The trend of 24/7 might be possible but it will be expensive for the university.

7   Conclusion

Since the result obtained from SPSS program through cross tabulation method is not enough and strong as it was expected to answer the objective of this thesis, conclusion will be made on the basis of correlated variables as well as interviewed answer through combining the four focus areas of NWoW.

Considering the first focus area of NWoW "Information Technology (IT)", there was less use of virtual communication device "telephone conference" by female participants. It was surprise to see that provided other different virtual programs like Skype, Adobe Connect Pro, Lync, LinkedIn and Facebook were not correlated. Since Laurea has international strategy where virtual is real, management would like to use more virtual learning environment through more virtual communication, workplace and devices.

Referring the second focus area of NWoW "Physical workplace", there has been possibility to work from home to most of the "teaching staff" working group participants. Also management support Finnish law for the teacher which states 400 hours of work out of 1600 hours of working hours can be done independently from anywhere and at any time. The most important aspects concerning working environment for the participants are lighting and place flexibility at the moment, ergonomics, temperature and silence. As there is already better equipments like projectors, computer, camera and laptops, management will avail better connection without cable which support virtual or semi virtual meeting/discussion/group work/seminar.

Relating the third focus area of NWoW "Organization", participants are satisfied with working culture and environment. There are mix thought about motivating and not motivating through awarding system. Flexibility of workplace would not increase work efficiency and motivation for the participants who have been working more than or equal to (≥) 10 years. Management motivates their employees in order to improve their performance and achieve the goal.

Taking into consideration the last focus area of NWoW "People", more than half participants do not want to take freedom and accountability through flexible working place. Majority of the participants who worked longer are in favor of importance of fixed working station and do not support the flexible working place would improve their work. Management trust their employee and give freedom to stay at home and work. They also provides challenging work and critical feedback to their employee which helps them to be more accountable towards their work.

It would be interesting to conduct further research to this study from student perspective regarding their learning environment and ways of working or studying. It would also be interesting to compare the results from employee and management perspective with student perspective to see how it could influence applying NWoW in Laurea UAS working environment. This could be researcher next research study.

Last but not least to answer the objective of thesis research, the new ways of working (NWoW) or new concept that are applicable for the Laurea UAS working environment, it can be concluded from the result of the employee perspective that age does not affect the application of new ways of working in the Laurea University of Applied Sciences working environment, but the number of working years does affects. This result discover that when people worked longer in one place, it become used to for them and quite difficult to leave that place. The positive attitudes of management towards new ways of working as revealed in the interview provided a clear picture that new ways of working are applicable to the Laurea University of Applied Sciences working environment. In addition, it is very important to understand the fact that Laurea UAS Leppävaara is complex company owned by several cities and communities, it is not easy to bring a change in short time and implement NWoW. Despite of having lots of limitation like lack of space and cutting costs, it has to focus on improvement of education always. Laurea UAS hence can be compared with big ship which needs lots of time and energy to change the direction. In this sense, the ship has to turn its direction very slowly at first, slowly then but continuously.

References

Printed sources:

Aaltonen, L., Ala-Kotila, P., Järnström, H., Laarni, J., Määttä, H., Nykänen, E., Schembri, I., Lönnqvist, A., Ruostela, J., Laihonen, H., Jääskeläinen, A., Oyue, J. & Nagy, G. 2012. State-of-the-art report on knowledge work: New ways of working. Espoo: VTT.

Adler, N. 2008. International dimensions of organizational behavior. Mason OH: Thomson.

Altinay, L. & Paraskevas, A. 2008. Planning research in hospitality and tourism. New York: Routledge.

Baffour, G.G. & Betsy, C.L. 2000. Human resources management and development in tele-work environment. New Orleans.

Becker, F.D. 2004. Offices at work: Uncommon workspace strategies that add value and im-prove performance. San Francisco: Jossey-Bass.

Bijl, D. 2011. Journey towards the New Way of Working. Zeewolde: Par CC.

Creswell, J.W. 2014. Research design. California: Sage.

Early, P. & Gibson, C. 2002. Multinational work teams – A new perspective. New Jersey: LEA

Hofstede, G. 2005. Cultures and organizations. New York: McGraw Hill.

Lönnblad, J. & Vartiainen, M. 2012. Future competences – competences for new ways of working. Turku: University of Turku.

Maitland, A. & Thomson, P. 2011. Future work. London: Palgrave Macmillan.

Martino, V. & Wirth, L. 1990. Telework: A new way of working and living. International labour review, Vol 129, No. 5.

Meerbeek, M., Randolph, K., Rasmus, D., Wilgenburgh, J., Meer, H., Witkamp, J. & Kompier, H. 2009. A new way of working – The 7 factors for success, based on Microsoft Netherlands experience. Microsoft corporation.

Raij, K. 2014. Learning by developing action model. Espoo: Laurea University of Applied Sciences.

SPSS User's guide. 2007. Base 16.0 User's Guide. Chicago: SPSS Inc.

Thomas, D. 2008. Cross-cultural management essential concepts. Sage.

Vartiainen,M., Hakonen, M., Koivisto, S., Mannonen, P., Nieminen, M., Ruohomäki, V. & Vartola, A. 2007. Distributed and mobile work – Places, people and technology. Helsinki: University Press Finland.

Volberda, H.W. 1999. Building the flexible firm. New York: Oxford University Press.

Electronic/Online sources:

About Laurea. No date. Accessed 02 March 2015.
https://www.laurea.fi/en/about-laurea/campuses/leppavaara

An introduction to research methodologies. No date. Accessed 08 March 2015.
https://www.b2binternational.com/assets/ebooks/mr_guide/04-market-research-ch4.pdf

Business dictionary. 2015. Accessed 10 March 2015.
http://www.businessdictionary.com/definition/field-research.html

Drucker, P. 1999. Knowledge-worker productivity: The biggest challenge. California management review. Vol 41. No 2. Accessed 25 April 2015.
http://www.forschungsnetzwerk.at/downloadpub/knowledge_workers_the_biggest_challenge.pdf

Ergonomics. 2011. Accessed on 11 April 2015.
http://www.posturite.co.uk/posture-learning-resources/what-is-ergonomics

Rajasekar, S., Philominathan, P. & Chinnathambi, V. 2013. Research methodology. Accessed 10 March 2015.
http://arxiv.org/pdf/physics/0601009.pdf

Space to work. 2012. Accessed 29 August 2014.
http://au.goodman.com/~/media/Files/Sites/Australia/about%20us/GMG_O_STW%20Customer%20info%20pack_120702.pdf

The power of silence. 2015. Accessed 12 April 2015.
http://advancedlifeskills.com/blog/the-power-of-silence/

The rise of activity based working. 2014. Accessed 17 January 2015.
http://www.konekt.com.au/news/newsletters/issue-4/the-rise-of-activity-based-working/

Working away from the office. 2012. Accessed 16 October 2014.
https://www.cusys.edu/itsecurity/docs/Module12-WorkingAwayFromOffice-Newsletter.pdf

Interviews:

Anonymous. Laurea University of Applied Sciences. Interview with the author. 26 March 2013.
Espoo. Personal communication.

Anonymous. Laurea University of Applied Sciences. Interview with the author. 27 March 2013.
Espoo. Personal communication.

Anonymous. Laurea University of Applied Sciences. Interview with the author. 28 March 2013.
Espoo. Personal communication.

Anonymous. Laurea University of Applied Sciences. Interview with the author. 3 April 2013.
Espoo. Personal communication.

Figures

Tables

Appendixes

Appendix 1 Employee perspective

Ways of Working questionnaire of the employee perspective/ Työskentelytavat kysely työntekijoille

Background information/Taustatiedot

Gender/sukupouli
  □ Male/Mies   □ Female/Nainen

Age/Ikä
  □ 19-25   □ 26-35   □ 36-50   □ 51-59   □ ≥60

I have been working for the Laurea UAS/Olen ollut Laureassa töissä
  □ ≤ 1 year   □ 1-3 years   □ 4-6 years   □ 7-9 years   □ ≥10 years

I belong to the following group:
  □ Teaching Staff/Opetushenkilöstö
  □ RDI/Project Staff/Tki-henkilöstö
  □ Administration/Services/Palvelut & Hallinto
  □ Oth-
er/Muu:_____

1. I have the possibility to work from home/Minulla on mahdollisuus työskennellä kotoa käsin
  □ Yes/Kyllä   □ No/Ei   □ Sometimes/occasionally/Joskus

  A. If you use it; why do you like to work from home?/Jos työskentelen kotoa, teen niin koska:
  □ Travel time/Säästän matkustusaikaa
  □ Work-Life-Balance/Työ ja muu elämä ovat paremmin tasapainossa
  □ Get more peace to concentrate/Saan paremman työsken telyrauhun
  □ Other/Muu syy, mikä: _____

  B. If you don't use it; why not?/En työskentele kotoa koska
  □ Social environment/Kaipaan sosiaalista ympäristöä
  □ Office environment (Equipment)/Työpaikka tarjoaa paremmat välineet työn-tekoon
  □ Other/Muu syy, mikä:
  _____

2. In my opinion the possibility to work from home is/would be necessary/Mielestäni on tarpeellista tarjotaan mahdollisuutta työjkennellä kotoa käsin
  □ Yes/kyllä   □ No/Ei

Scale use/Vaihtoehdot:
  1= I strongly agree/olen täysin samaa mieltä,   2= I agree/samaa mieltä,   3= I partly agree/osittain samaa mieltä,   4= I disagree/olen en mieltä,   5= I strongly disagree/olen täysin en mieltä

Please choose the most suitable option for you!Valitse sinnulle sopivin vaintoehto

3. In my opinion, following factor plays a vital role in the working environment. /Mielestäni seuraavilla tekijöillä on tärkeä merkitys työympäristossä
                                                      Possibility now
  A. Lighting/Valaistus

□1 □2 □3 □4 □5   □ Yes □ No
B. Visual environment (colors, etc.)/Visuaalisuus (Värit)
□1 □2 □3 □4 □5   □ Yes □ No
C. Ergonomics (adjustability of furniture)/Ergonomia (nuonekalujen
säädettevyys)
□1 □2 □3 □4 □5   □ Yes □ No
D. Temperature/Lämpötila
□1 □2 □3 □4 □5   □ Yes □ No
E. Silence/Hiljaisuus
□1 □2 □3 □4 □5   □ Yes □ No
F. Flexibility of place/Työpisteen joustava vaihtaminen
□1 □2 □3 □4 □5   □ Yes □ No
G. Flexibility of time (24/7)/Työajan joustavuus
□1 □2 □3 □4 □5   □ Yes □ No
H. Other/Muu?_____

4. I am satisfied with my work environment/Olen tyytyväinen työskentely- ympäristööni
□Yes   □No

If "Yes", why?/Jos kylla, miksi? _____

If "No", why?/Jos ei, miksi? _____

6. I need to use the following programs for my work/Tarvitsen seuraavia
ohjelmia työskennellessäni
A. Telephone Conference/Kokouspuhelu, puhelinkonferenssi
□ never/ei koskaan   □ ≤once a week/≤kerran viikossa   □ once
a week/kerran viikossa   □ ≥twice a week/≥2x viikossa

B. Skype
□ never /ei koskaan   □ ≤once a week/≤kerran viikossa   □ once
a week/kerran viikossa   □ ≥twice a week/≥2x viikossa

C. Adobe Connect Pro
□ never/ei koskaan   □ ≤once a week/≤kerran viikossa   □ once
a week /kerran viikossa   □ ≥twice a week/≥2x viikossa

 d. Lync, LinkedIn, Facebook or Other (websites & chats/nettisivut & chatit)
□never/ei koskaan   □ ≤once a week/≤kerran viikossa   □ once
a week /kerran viikossa   □ ≥twice a week/≥2x viikossa

5. The communication is well facilitated in my working place/Kommunikaatiota tuetaan
hyvin työpaikallani
□Yes/Kylla   □No/Ei

If "No", why?/Jos ei, miksi _____

6. The communication could be improved by (choose one or more opti-
ons)/Kommunikaatiota voitaisiin kehittää seuraavasti (valitse yksi tai useampi vaihto ehto)
□ Creating social meeting places/Luomalla sosiaallsia kontaamppaikkoja
□ Expanding the virtual environment/Laajentamalla virtuaalisia mahdillisuuksia
□ Encourage team spirit/Kehittämällä yhteishenkeä
□ By offering communication workshop/Tarjoamalla mahdollisuutta kommuni-
kaatio-workshoppiin
□ Other/Muu, mi-
kä:_____

7. I am satisfied with the equipment available at my workplace/Olen tyytyväinen työympäristöni tarjoamaan välineistöön

□1 □2 □3 □4 □5

8. A fixed working station is necessary for my work/Pysyvä työpiste on työlleni välttämättömyys

□1 □2 □3 □4 □5

9. A Flexible working place would improve my work/Joustava työpiste parantaisi työtani

□1 □2 □3 □4 □5

10. The following aspects would increase my work efficiency and motivation/Seuraavat asiat parantaisivat työtehoani ja motivaatiotani

A. Awarding system (worker of the month, etc.)/Palkitsemissysteemi, ei rahallinen tunnustus

□1 □2 □3 □4 □5

B. Bonus (money)/Raha

□1 □2 □3 □4 □5

C. Feedback from my superiors/Palaute esimiehiltäni

□1 □2 □3 □4 □5

D. Feedback from my colleagues/Palaute kollegoiltani

□1 □2 □3 □4 □5

E. Environment (lights, colors, etc.)/Työympäristön kehittäminen (valot, värit….)

□1 □2 □3 □4 □5

F. Flexibility of time/Työajan joustavuuden kehittäminen

□1 □2 □3 □4 □5

G. Flexibility of work place/Työpisteen joustavuns

□1 □2 □3 □4 □5

H. Ergonomics (adjustability of furniture)/Työergonomian kehittäminen

□1 □2 □3 □4 □5

I. Food & Beverages/Ruuan ja muun Ruoka ja junma

□1 □2 □3 □4 □5

J. Health and fitness (Gym)/Terveys ja Fitness

□1 □2 □3 □4 □5

K. Self-development (attending seminar, training)/Koulutus ja kehittymimahdolli-suuksien lisääminen

□1 □2 □3 □4 □5

L. Other/Muu: _____

11. Any suggestion/comment?/Muuta _____

Thank you for your collaboration!

Kiitos vastauksistasi!

Appendix 2 Result from crosstabulation

Table 1: working group * possibility to work from home Crosstabulation

			possibility to work from home			Total
			yes	no	sometimes/occasionally	
working group	teaching staffs	Count	17	0	5	22
		% within working group	77,3%	0,0%	22,7%	100,0%
		% within possibility to work from home	81,0%	0,0%	45,5%	57,9%
		% of Total	44,7%	0,0%	13,2%	57,9%
	RDI/project staff	Count	1	1	0	2
		% within working group	50,0%	50,0%	0,0%	100,0%
		% within possibility to work from home	4,8%	16,7%	0,0%	5,3%
		% of Total	2,6%	2,6%	0,0%	5,3%
	administration/services	Count	3	5	4	12
		% within working group	25,0%	41,7%	33,3%	100,0%
		% within possibility to work from home	14,3%	83,3%	36,4%	31,6%
		% of Total	7,9%	13,2%	10,5%	31,6%
	Other	Count	0	0	2	2
		% within working group	0,0%	0,0%	100,0%	100,0%
		% within possibility to work from home	0,0%	0,0%	18,2%	5,3%
		% of Total	0,0%	0,0%	5,3%	5,3%
Total		Count	21	6	11	38
		% within working group	55,3%	15,8%	28,9%	100,0%
		% within possibility to work from home	100,0%	100,0%	100,0%	100,0%
		% of Total	55,3%	15,8%	28,9%	100,0%

Table 2: gender * use of telephone conference for work Crosstabulation

			use of telephone conference for work			
			never	≤once a week	≥ twice a week	Total
gender	Male	Count	4	2	5	11
		% within gender	36,4%	18,2%	45,5%	100,0%
		% within use of telephone conference for work	15,4%	28,6%	100,0%	28,9%
		% of Total	10,5%	5,3%	13,2%	28,9%
	female	Count	22	5	0	27
		% within gender	81,5%	18,5%	0,0%	100,0%
		% within use of telephone conference for work	84,6%	71,4%	0,0%	71,1%
		% of Total	57,9%	13,2%	0,0%	71,1%
Total		Count	26	7	5	38
		% within gender	68,4%	18,4%	13,2%	100,0%
		% within use of telephone conference for work	100,0%	100,0%	100,0%	100,0%
		% of Total	68,4%	18,4%	13,2%	100,0%

Table 3: age groups * possibility of lighting in working environment now Crosstabulation

			possibility of lighting in working environment now		
			yes	no	Total
age groups	19-25	Count	3	1	4
		% within age groups	75,0%	25,0%	100,0%
		% within possibility of lighting in working environment now	8,1%	100,0%	10,5%
		% of Total	7,9%	2,6%	10,5%
	26-35	Count	4	0	4
		% within age groups	100,0%	0,0%	100,0%
		% within possibility of lighting in working environment now	10,8%	0,0%	10,5%
		% of Total	10,5%	0,0%	10,5%
	36-50	Count	12	0	12
		% within age groups	100,0%	0,0%	100,0%

			yes	no	Total
		% within possibility of lighting in working environment now	32,4%	0,0%	31,6%
		% of Total	31,6%	0,0%	31,6%
	51-59	Count	14	0	14
		% within age groups	100,0%	0,0%	100,0%
		% within possibility of lighting in working environment now	37,8%	0,0%	36,8%
		% of Total	36,8%	0,0%	36,8%
	≥60	Count	4	0	4
		% within age groups	100,0%	0,0%	100,0%
		% within possibility of lighting in working environment now	10,8%	0,0%	10,5%
		% of Total	10,5%	0,0%	10,5%
Total		Count	37	1	38
		% within age groups	97,4%	2,6%	100,0%
		% within possibility of lighting in working environment now	100,0%	100,0%	100,0%
		% of Total	97,4%	2,6%	100,0%

Table 4: age groups * possibility of flexibility of place in working environment now Crosstabulation

			possibility of flexibility of place in working environment now		Total
			yes	no	
age groups	19-25	Count	4	0	4
		% within age groups	100,0%	0,0%	100,0%
		% within possibility of flexibility of place in working environment now	16,0%	0,0%	10,5%
		% of Total	10,5%	0,0%	10,5%
	26-35	Count	2	2	4
		% within age groups	50,0%	50,0%	100,0%
		% within possibility of flexibility of place in working environment now	8,0%	15,4%	10,5%
		% of Total	5,3%	5,3%	10,5%
	36-50	Count	10	2	12
		% within age groups	83,3%	16,7%	100,0%
		% within possibility of flexibility of place in working environment now	40,0%	15,4%	31,6%

				26,3%	5,3%	31,6%
	51-59	Count		8	6	14
		% within age groups		57,1%	42,9%	100,0%
		% within possibility of flexibility of place in working environment now		32,0%	46,2%	36,8%
		% of Total		21,1%	15,8%	36,8%
	≥60	Count		1	3	4
		% within age groups		25,0%	75,0%	100,0%
		% within possibility of flexibility of place in working environment now		4,0%	23,1%	10,5%
		% of Total		2,6%	7,9%	10,5%
Total		Count		25	13	38
		% within age groups		65,8%	34,2%	100,0%
		% within possibility of flexibility of place in working environment now		100,0%	100,0%	100,0%
		% of Total		65,8%	34,2%	100,0%

Table 5 : working group * importance of ergonomics in working environment Crosstabulation

			importance of ergonomics in working environment					
			i strongly agree	i agree	i partly agree	i disagree	i strongly disagree	Total
working group	teaching staffs	Count	13	5	1	2	1	22
		% within working group	59,1%	22,7%	4,5%	9,1%	4,5%	100,0%
		% within importance of ergonomics in working environment	81,3%	62,5%	25,0%	33,3%	25,0%	57,9%
		% of Total	34,2%	13,2%	2,6%	5,3%	2,6%	57,9%
	RDI/project staff	Count	1	0	1	0	0	2

		% within working group	50,0%	0,0%	50,0%	0,0%	0,0%	100,0%
		% within importance of ergonomics in working environment	6,3%	0,0%	25,0%	0,0%	0,0%	5,3%
		% of Total	2,6%	0,0%	2,6%	0,0%	0,0%	5,3%
administration/services	Count	2	3	2	2	3	12
	% within working group	16,7%	25,0%	16,7%	16,7%	25,0%	100,0%
	% within importance of ergonomics in working environment	12,5%	37,5%	50,0%	33,3%	75,0%	31,6%
	% of Total	5,3%	7,9%	5,3%	5,3%	7,9%	31,6%
Other	Count	0	0	0	2	0	2
	% within working group	0,0%	0,0%	0,0%	100,0%	0,0%	100,0%
	% within importance of ergonomics in working environment	0,0%	0,0%	0,0%	33,3%	0,0%	5,3%
	% of Total	0,0%	0,0%	0,0%	5,3%	0,0%	5,3%
Total	Count	16	8	4	6	4	38
	% within working group	42,1%	21,1%	10,5%	15,8%	10,5%	100,0%

	% within						
	importance of ergonom-ics in work-ing envi-ronment	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
	% of Total	42,1%	21,1%	10,5%	15,8%	10,5%	100,0%

Table 6 : working group * importance of temperature in working environment Crosstabulation

			importance of temperature in working environment					
			i strong-ly ag-ree	i agree	i partly agree	i disagre e	i strong-ly disagre e	Total
wor-king group	teaching staffs	Count	13	5	1	0	3	22
		% within working group	59,1%	22,7%	4,5%	0,0%	13,6%	100,0%
		% within importance of tempera-ture in working en-vironment	72,2%	62,5%	33,3%	0,0%	42,9%	57,9%
		% of Total	34,2%	13,2%	2,6%	0,0%	7,9%	57,9%
	RDI/project staff	Count	1	0	0	1	0	2
		% within working group	50,0%	0,0%	0,0%	50,0%	0,0%	100,0%
		% within importance of tempera-ture in working en-vironment	5,6%	0,0%	0,0%	50,0%	0,0%	5,3%
		% of Total	2,6%	0,0%	0,0%	2,6%	0,0%	5,3%
	administrati-	Count	4	3	1	1	3	12

on/services	% within working group	33,3%	25,0%	8,3%	8,3%	25,0%	100,0%
	% within importance of temperature in working environment	22,2%	37,5%	33,3%	50,0%	42,9%	31,6%
	% of Total	10,5%	7,9%	2,6%	2,6%	7,9%	31,6%
Other	Count	0	0	1	0	1	2
	% within working group	0,0%	0,0%	50,0%	0,0%	50,0%	100,0%
	% within importance of temperature in working environment	0,0%	0,0%	33,3%	0,0%	14,3%	5,3%
	% of Total	0,0%	0,0%	2,6%	0,0%	2,6%	5,3%
Total	Count	18	8	3	2	7	38
	% within working group	47,4%	21,1%	7,9%	5,3%	18,4%	100,0%
	% within importance of temperature in working environment	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
	% of Total	47,4%	21,1%	7,9%	5,3%	18,4%	100,0%

Table 7 : working group * importance of silence in working environment Crosstabulation

			importance of silence in working environment					
			i strong-ly ag-ree	i agree	i partly agree	i disagre e	i strong-ly disagre e	Total
wor-king group	teaching staffs	Count	8	5	7	1	1	22
		% within working group	36,4%	22,7%	31,8%	4,5%	4,5%	100,0 %
		% within importance of silence in working en-vironment	88,9%	50,0%	63,6%	20,0%	33,3%	57,9%
		% of Total	21,1%	13,2%	18,4%	2,6%	2,6%	57,9%
	RDI/project staff	Count	0	1	0	0	1	2
		% within working group	0,0%	50,0%	0,0%	0,0%	50,0%	100,0 %
		% within importance of silence in working en-vironment	0,0%	10,0%	0,0%	0,0%	33,3%	5,3%
		% of Total	0,0%	2,6%	0,0%	0,0%	2,6%	5,3%
	administrati-on/services	Count	1	3	4	3	1	12
		% within working group	8,3%	25,0%	33,3%	25,0%	8,3%	100,0 %
		% within importance of silence in working en-vironment	11,1%	30,0%	36,4%	60,0%	33,3%	31,6%
		% of Total	2,6%	7,9%	10,5%	7,9%	2,6%	31,6%
	Other	Count	0	1	0	1	0	2
		% within working group	0,0%	50,0%	0,0%	50,0%	0,0%	100,0 %

		i strongly agree	i agree	i partly agree	i disagree	i strongly disagree	Total
	% within importance of silence in working environment	0,0%	10,0%	0,0%	20,0%	0,0%	5,3%
	% of Total	0,0%	2,6%	0,0%	2,6%	0,0%	5,3%
Total	Count	9	10	11	5	3	38
	% within working group	23,7%	26,3%	28,9%	13,2%	7,9%	100,0%
	% within importance of silence in working environment	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
	% of Total	23,7%	26,3%	28,9%	13,2%	7,9%	100,0%

Table 8 : working year * satisfaction with availability of equipment in workplace Crosstabulation

			satisfaction with availability of equipment in workplace					
			i strongly agree	i agree	i partly agree	i disagree	i strongly disagree	Total
working year	≤1 year	Count	0	1	3	1	1	6
		% within working year	0,0%	16,7%	50,0%	16,7%	16,7%	100,0%
		% within satisfaction with availability of equipment in workplace	0,0%	8,3%	100,0%	16,7%	33,3%	15,8%
		% of Total	0,0%	2,6%	7,9%	2,6%	2,6%	15,8%
	1-3 years	Count	2	3	0	2	1	8
		% within working year	25,0%	37,5%	0,0%	25,0%	12,5%	100,0%
		% within satisfaction with availability of equipment in workplace	15,4%	25,0%	0,0%	33,3%	33,3%	21,1%
		% of Total	5,3%	7,9%	0,0%	5,3%	2,6%	21,1%
	4-6 years	Count	2	2	0	1	1	6
		% within working year	33,3%	33,3%	0,0%	16,7%	16,7%	100,0%

		% within satisfaction with availability of equipment in work-place	15,4%	16,7%	0,0%	16,7%	33,3%	15,8%
		% of Total	5,3%	5,3%	0,0%	2,6%	2,6%	15,8%
	7-9 years	Count	1	1	0	0	0	2
		% within working year	50,0%	50,0%	0,0%	0,0%	0,0%	100,0%
		% within satisfaction with availability of equipment in work-place	7,7%	8,3%	0,0%	0,0%	0,0%	5,3%
		% of Total	2,6%	2,6%	0,0%	0,0%	0,0%	5,3%
	≥ 10 years	Count	8	6	0	2	0	16
		% within working year	50,0%	37,6%	0,0%	12,5%	0,0%	100,0%
		% within satisfaction with availability of equipment in work-place	61,5%	41,7%	0,0%	33,3%	0,0%	42,1%
		% of Total	21,1%	15,8%	0,0%	5,3%	0,0%	42,1%
Total		Count	13	13	3	6	3	38
		% within working year	34,2%	34,2%	7,9%	15,8%	7,9%	100,0%
		% within satisfaction with availability of equipment in work-place	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
		% of Total	34,2%	34,2%	7,9%	15,8%	7,9%	100,0%

Table 9 : working year * importance of fixed working station Crosstabulation

			importance of fixed working station					
			i strongly agree	i agree	i partly agree	i disagree	i strongly disagree	Total
working year	≤1 year	Count	0	0	2	4	0	6
		% within working year	0,0%	0,0%	33,3%	66,7%	0,0%	100,0%
		% within im-portance of fixed working station	0,0%	0,0%	50,0%	57,1%	0,0%	15,8%
		% of Total	0,0%	0,0%	5,3%	10,5%	0,0%	15,8%

1-3 years	Count	4	1	0	2	1	8
	% within working year	50,0%	12,5%	0,0%	25,0%	12,5%	100,0%
	% within importance of fixed working station	21,1%	33,3%	0,0%	28,6%	20,0%	21,1%
	% of Total	10,5%	2,6%	0,0%	5,3%	2,6%	21,1%
4-6 years	Count	2	0	2	0	2	6
	% within working year	33,3%	0,0%	33,3%	0,0%	33,3%	100,0%
	% within importance of fixed working station	10,5%	0,0%	50,0%	0,0%	40,0%	15,8%
	% of Total	5,3%	0,0%	5,3%	0,0%	5,3%	15,8%
7-9 years	Count	1	0	0	1	0	2
	% within working year	50,0%	0,0%	0,0%	50,0%	0,0%	100,0%
	% within importance of fixed working station	5,3%	0,0%	0,0%	14,3%	0,0%	5,3%
	% of Total	2,6%	0,0%	0,0%	2,6%	0,0%	5,3%
≥ 10 years	Count	12	2	0	0	2	16
	% within working year	75,0%	12,5%	0,0%	0,0%	12,5%	100,0%
	% within importance of fixed working station	63,2%	66,7%	0,0%	0,0%	40,0%	42,1%
	% of Total	31,6%	5,3%	0,0%	0,0%	5,3%	42,1%
Total	Count	19	3	4	7	5	38
	% within working year	50,0%	7,9%	10,5%	18,4%	13,2%	100,0%
	% within importance of fixed working station	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
	% of Total	50,0%	7,9%	10,5%	18,4%	13,2%	100,0%

Table 10 : working year * need of flexible working place to improve work Crosstabulation

| | | | need of flexible working place to improve work | | | | | |
			i strongly agree	i agree	i partly agree	i disagree	i strongly disagree	Total
working year	≤1 year	Count	1	2	3	0	0	6
		% within working year	16,7%	33,3%	50,0%	0,0%	0,0%	100,0%
		% within need of flexible working place to improve work	12,5%	66,7%	50,0%	0,0%	0,0%	15,8%
		% of Total	2,6%	5,3%	7,9%	0,0%	0,0%	15,8%
	1-3 years	Count	4	0	1	1	2	8
		% within working year	50,0%	0,0%	12,5%	12,5%	25,0%	100,0%
		% within need of flexible working place to improve work	50,0%	0,0%	16,7%	16,7%	13,3%	21,1%
		% of Total	10,5%	0,0%	2,6%	2,6%	5,3%	21,1%
	4-6 years	Count	2	1	0	3	0	6
		% within working year	33,3%	16,7%	0,0%	50,0%	0,0%	100,0%
		% within need of flexible working place to improve work	25,0%	33,3%	0,0%	50,0%	0,0%	15,8%
		% of Total	5,3%	2,6%	0,0%	7,9%	0,0%	15,8%
	7-9 years	Count	0	0	1	0	1	2
		% within working year	0,0%	0,0%	50,0%	0,0%	50,0%	100,0%
		% within need of flexible working place to improve work	0,0%	0,0%	16,7%	0,0%	6,7%	5,3%
		% of Total	0,0%	0,0%	2,6%	0,0%	2,6%	5,3%
	≥ 10 years	Count	1	0	1	2	12	16
		% within working year	6,3%	0,0%	6,3%	12,5%	75,0%	100,0%

	% within need of flexible working place to improve work	12,5%	0,0%	16,7%	33,3%	80,0%	42,1%
	% of Total	2,6%	0,0%	2,6%	5,3%	31,6%	42,1%
Total	Count	8	3	6	6	15	38
	% within working year	21,1%	7,9%	15,8%	15,8%	39,5%	100,0%
	% within need of flexible working place to improve work	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
	% of Total	21,1%	7,9%	15,8%	15,8%	39,5%	100,0%

Table 11 : working group * awarding system to increase work efficiency and motivation Crosstabulation

			awarding system to increase work efficiency and motivation					
			i strongly agree	i agree	i partly agree	i disagree	i strongly disagree	Total
working group	teaching staffs	Count	0	4	8	7	3	22
		% within working group	0,0%	18,2%	36,4%	31,8%	13,6%	100,0%
		% within awarding system to increase work efficiency and motivation	0,0%	50,0%	61,5%	70,0%	100,0%	57,9%
		% of Total	0,0%	10,5%	21,1%	18,4%	7,9%	57,9%
	RDI/project staff	Count	0	0	1	1	0	2
		% within working group	0,0%	0,0%	50,0%	50,0%	0,0%	100,0%

	% within awarding system to increase work effi-ciency and motivation	0,0%	0,0%	7,7%	10,0%	0,0%	5,3%
	% of Total	0,0%	0,0%	2,6%	2,6%	0,0%	5,3%
administration/services	Count	4	3	4	1	0	12
	% within working group	33,3%	25,0%	33,3%	8,3%	0,0%	100,0%
	% within awarding system to increase work effi-ciency and motivation	100,0%	37,5%	30,8%	10,0%	0,0%	31,6%
	% of Total	10,5%	7,9%	10,5%	2,6%	0,0%	31,6%
Other	Count	0	1	0	1	0	2
	% within working group	0,0%	50,0%	0,0%	50,0%	0,0%	100,0%
	% within awarding system to increase work effi-ciency and motivation	0,0%	12,5%	0,0%	10,0%	0,0%	5,3%
	% of Total	0,0%	2,6%	0,0%	2,6%	0,0%	5,3%
Total	Count	4	8	13	10	3	38
	% within working group	10,5%	21,1%	34,2%	26,3%	7,9%	100,0%

% within awarding system to increase work effi-ciency and motivation	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
% of Total	10,5%	21,1%	34,2%	26,3%	7,9%	100,0%

Table 12 : working year * flexibility of workplace to increase work efficiency and motivation Crosstabulation

			flexibility of workplace to increase work efficiency and motivation					
			i strongly agree	i agree	i partly agree	i disagree	i strongly disagree	Total
working year	≤1 year	Count	0	1	5	0	0	6
		% within working year	0,0%	16,7%	83,3%	0,0%	0,0%	100,0%
		% within flexibility of workplace to increase work efficiency and motivation	0,0%	20,0%	50,0%	0,0%	0,0%	15,8%
		% of Total	0,0%	2,6%	13,2%	0,0%	0,0%	15,8%
	1-3 years	Count	2	2	0	3	1	8
		% within working year	25,0%	25,0%	0,0%	37,5%	12,5%	100,0%
		% within flexibility of workplace to increase work efficiency and motivation	33,3%	40,0%	0,0%	42,9%	10,0%	21,1%
		% of Total	5,3%	5,3%	0,0%	7,9%	2,6%	21,1%
	4-6 years	Count	2	1	3	0	0	6
		% within working year	33,3%	16,7%	50,0%	0,0%	0,0%	100,0%
		% within flexibility of workplace to increase work efficiency and motivation	33,3%	20,0%	30,0%	0,0%	0,0%	15,8%
		% of Total	5,3%	2,6%	7,9%	0,0%	0,0%	15,8%
	7-9 years	Count	0	0	1	1	0	2
		% within working year	0,0%	0,0%	50,0%	50,0%	0,0%	100,0%

		% within flexibility of workplace to increase work efficiency and motivation	0,0%	0,0%	10,0%	14,3%	0,0%	5,3%
		% of Total	0,0%	0,0%	2,6%	2,6%	0,0%	5,3%
	≥ 10 years	Count	2	1	1	3	9	16
		% within working year	12,5%	6,3%	6,3%	18,8%	56,3%	100,0%
		% within flexibility of workplace to increase work efficiency and motivation	33,3%	20,0%	10,0%	42,9%	90,0%	42,1%
		% of Total	5,3%	2,6%	2,6%	7,9%	23,7%	42,1%
Total		Count	6	5	10	7	10	38
		% within working year	15,8%	13,2%	26,3%	18,4%	26,3%	100,0%
		% within flexibility of workplace to increase work efficiency and motivation	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%
		% of Total	15,8%	13,2%	26,3%	18,4%	26,3%	100,0%

Table 13 : Correlation matrix table

Correlations

		possibility to work from home	use of telephone conference for work	possibility of lighting in working environment now	possibility of flexibility of place in working environment now	importance of ergonomics in working environment	importance of temperature in working environment	importance of silence in working environment	importance of fixed working station	need of flexible working place to improve work	awarding system to increase work efficiency and motivation	flexibility of workplace to increase work efficiency and motivation	gender	age groups	working year	working group
possibility to work from home	Pearson Correlation	1	-,271	,236	,027	,278	,227	,261	,149	-,144	-,109	-,137	,007	-,385*	-,236	,444**
	Sig. (2-tailed)		,100	,153	,874	,091	,170	,114	,373	,389	,515	,411	,967	,017	,154	,005
	N	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
use of telephone conference for work	Pearson Correlation	-,271	1	-,094	-,138	-,017	-,098	-,218	,032	-,096	-,071	-,164	,607**	,167	-,151	-,287
	Sig. (2-tailed)	,100		,576	,409	,918	,559	,189	,850	,564	,674	,326	,000	,316	,366	,081
	N	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38

possibility of lighting in working environment now	Pearson Correlation	,236	-,094	1	-,119	-,153	-,135	,197	,173	,047	-,149	-,031	,105	-,333*	-,249	,183
	Sig. (2-tailed)	,153	,576		,478	,360	,418	,236	,298	,780	,371	,853	,531	,041	,132	,271
	N	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
possibility of flexibility of place in working environment now	Pearson Correlation	,027	-,138	-,119	1	,153	,202	,129	-,028	,183	,050	-,017	,216	,327*	,362*	-,104
	Sig. (2-tailed)	,874	,409	,478		,361	,224	,439	,866	,270	,764	,920	,193	,045	,025	,535
	N	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
importance of ergonomics in working environment	Pearson Correlation	,278	-,017	-,153	,153	1	,810**	,483**	,452**	-,336*	,439**	-,229	-,022	-,102	-,076	,499**
	Sig. (2-tailed)	,091	,918	,360	,361		,000	,002	,004	,039	,006	,166	,898	,540	,649	,001
	N	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38

importance of temperature in working environment	Pearson Correlation	,227	-,098	-,135	,202	,810**	1	,675**	,392*	-,246	,374*	-,156	,034	,083	,003	,340*
	Sig. (2-tailed)	,170	,559	,418	,224	,000		,000	,015	,137	,021	,350	,840	,622	,984	,037
	N	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
importance of silence in working environment	Pearson Correlation	,261	-,218	,197	,129	,483**	,675**	1	,257	-,089	-,317	,054	,148	,009	-,066	,321*
	Sig. (2-tailed)	,114	,189	,236	,439	,002	,000		,119	,596	,053	,745	,375	,956	,694	,049
	N	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
importance of fixed working station	Pearson Correlation	,149	,032	,173	-,028	,452**	,392*	,257	1	,817**	-,294	-,743**	-,148	-,178	-,426**	,364*
	Sig. (2-tailed)	,373	,850	,298	,866	,004	,015	,119		,000	,073	,000	,375	,285	,008	,025
	N	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
need of flexible work-	Pearson Correlation	-,144	-,096	-,047	,183	-,336*	-,246	-,089	,817**	1	,229	,804**	,182	,264	,588**	-,247

ing place to im-prove work	Sig. (2-tai-led)	,389	,564	,780	,270	,039	,137	,596	,000		,167	,000	,274	,110	,000	,134
	N	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
awarding system to increase work efficiency and motivation	Pearson Correlation	-,109	-,071	-,149	,050	-,439**	-,374*	-,317	-,294	,229	1	,103	,053	,321*	,153	-,437**
	Sig. (2-tai-led)	,515	,674	,371	,764	,006	,021	,053	,073	,167		,537	,753	,049	,359	,006
	N	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
flexibility of work place to increase work efficiency and motivation	Pearson Correlation	-,137	-,164	-,031	-,017	-,229	-,156	,054	,743**	,804**	,103	1	,288	,176	,392*	-,081
	Sig. (2-tai-led)	,411	,326	,853	,920	,166	,350	,745	,000	,000	,537		,080	,291	,015	,631
	N	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38

Gender	Pearson Correlation	,007	-,607**	,105	,216	-,022	,034	,148	-,148	,182	,053	,288	1	-,161	,225	,126
	Sig. (2-tailed)	,967	,000	,531	,193	,898	,840	,375	,375	,274	,753	,080		,333	,175	,450
	N	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
age groups	Pearson Correlation	-,385*	,167	-,333*	,327*	-,102	,083	,009	-,178	,264	,321*	,176	-,161	1	,623**	-,645**
	Sig. (2-tailed)	,017	,316	,041	,045	,540	,622	,956	,285	,110	,049	,291	,333		,000	,000
	N	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
working year	Pearson Correlation	-,236	-,151	-,249	,362*	-,076	,003	-,066	-,426**	,588**	,153	,392*	,225	,623**	1	-,515**
	Sig. (2-tailed)	,154	,366	,132	,025	,649	,984	,694	,008	,000	,359	,015	,175	,000		,001
	N	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
working group	Pearson Correlation	,444**	-,287	,183	-,104	,499**	,340*	,321*	,364*	-,247	-,437**	-,081	,126	-,645**	-,515**	1
	Sig. (2-tailed)	,005	,081	,271	,535	,001	,037	,049	,025	,134	,006	,631	,450	,000	,001	
	N	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Appendix 3 Management perspective

Topic introduction

1. Can you tell your idea of the new ways of working?

2. How would be your ideal situation of the nWOW?

Barriers/ Resistance /Problems

1. What do you think that are the problems that will come up after the implementation?

2. According to the resistance few years ago, when you first tried to implement the nWOW, how will you handle it now to avoid staff resistance?

Vision, future and needs

1. How does the nWOW fit to the mission, vision and strategy of your company/university?

2. How do you see the university in 5-10 years? And would you use the help of an external company for the implementation?

3. The new XY generation has certain skills so how do you see the future studying? And what kind of rooms do you need for that? And what kind of equipment? (Facilities)

4. How do you see the future working for the employees and the management? And what kind of rooms do you need for that? (Workspaces)

Personal attitude/view (at the moment)

1. How do you motivate your employees? (Feedback, personal attention, relationship)

2. How do you measure the student and employee satisfaction at the moment?

3. Would you give up your own room? Why, why not? (Do you see any problems when you work in the same setting like your employees?)

4. Do you think it is appropriate to supply all students with new technical advices? (Examples ipads, interactive whiteboards, 3D cameras, second life)

5. How is the interaction between students/employees and managers?

6. Do you think for our university the trend of 24/7 is suitable?

Job orientated questions:

1. Do you think that your strategy has to focus rather on cutting costs or on investing in improvement of education?

2. Are there any statistics about the trend of applying students?

3. How do you finance your university?

4. Are there any legal restrictions? (Insurance, home office; Am I insured while working at home)

5. Now we are talking about nWOW, we would like to ask you as a head of finance, if there is any budget left for this implementation? And if yes, how much?

Note: Gray marked questions will be asked to everyone. Other questions are optional.

Appendix 4 : Result from management perspective

	A	B	C	D
Idea NWoW (Topic introduction)	> more flexible ways of learning	> flexibility in time and place	> flexible attitudes	> working in multiple different ways
	> e-learning methods	> no strict to stay everyday from 8.am to 16 pm	> more space for each individual to decides where and when to accomplish task	> result is important not time and place
	> time virtual learning methods	> employees defin how they want to work	> more freedom as well as more responsibility	> e-learning and virtual contact
	> also follow laws for eg. Finnish and trade union	> in Laurea, teachers have 25% of their time to work from anywhere and anytime		> social contact also important in NWoW as it helps in networking with different professional
	laws for working			
	> in Laurea for teachers, out of 1600 hours, 400 hours can be			
	done independently of time and place			

Ideal situation (Topic introduction)	> computer and more light	> creating new ways of using available space	> well functioning connection	> easily available without setting appointment
	> flexibily available	> flexible room	> good virtual meeting equipment	> concentrate at work by presenting at workplace rather than at home
	> more use of virtual channel like adobe connect pro or microsoft link		> easily available	
			> flexible meeting rooms	
Problems implementation (Barriers)	> changes will always cause resistances	> there will be resistance for sure	> there might not be resistance	> there will be change resistance
		> people might not like to leave their parmanent table or place	> sometime resistance because of old building structure and new facilities and program	> people are used to what they doing
Handle resistance (Barriers)	> talk with employees about positive side of change	> giving an information		> inform well early enough
	> find doubt beforehand and different kinds	> communication in every steps		> encourage to feel good

	of ways to solve them			
				> point out the benefit from change
Vision, Mission, Strategy (Vision)	> it will fit	> pedagogical strategy is based on LBD ways of working	> it will fit well	> have to make it fit
	> internationalisation strategy where virtual is real and it fit to this strategy	> space have been used in flexible way	> can't function in very traditional way	> have to think about laurea values and vision while building NWoW environment
		> not necessary of many traditional lecturing rooms		
		> internationalisation strategy where virtual is real		
		> use of more virtual learning environment and no need of many space		
5-10 view (vision)	> prime mover among UAS and maintain same in the future	> new building where different offices and companies located	> more connected with region, companies, partner institutions inside and abroad	> less traditional classroom

	> adopting NWoW to reamin stronger	> more flexible spaces	> constantly reacting to change if it takes place	> less tables and desks
		> movable and adjustable walls and furnitures	> be on major developer in the Helsinki greater area	> everybody with their own laptop or tablet
Hiring external companies (vision)	> in theory "yes"	> not sure as it is a matter of costs	> may be but it is better to use own resources like talented or interested students	> yes but it is a question about money
XY generation (vision)	> its about personal quality and interest rather than generation	> more free space for study and group work	> no traditional computer rooms	> people have high tech devices already
	> more room for group rather than single	> space where no body has to wait someone to come and open the door	> more virtual work	> avail better connection without cable and better equipments like projector, screen
				> applications for virtual or semi-virtual meeting/discussion/group work/seminar

Future room (vision)	> for management, room for private meeting, discussion, negotiation	> flexible space	> for management, one bigger room with small room for private discussion	> one big open office with some space for private discussion or meeting or phone call
	> for employee, open office with no fixed place		> for employee, open office with small room for quite work	
	> common library or shelf to keep books			
Motivate employees (personal attitude)	> sharing information	> motivating financially	> being interested what they do	> giving feedback, sometime critical
	> personal or team meeting	> discussing goal through development discussion	> through yearly development discussion	> giving challenging or righ types of work
	> discussion (formal or informal)	> evaluating the goal and giving feedback	> to be present to listen, discuss and help	
	> being interested what they are doing	> team meeting		
	> through yearly discussion target	> discussing to improve or make better		

Measure satisfaction (personal attitude)	> have many types of survey	> well being questionnaire/survey in every second year for employee	> sharing and discussing the result	> quality system questionnaire
	> one larger survey in every two year for employee	> feedback for internal service		> feedback collection
	> direct feedback from employees			
Give up room (personal attitude)	> if there is shortage of room, yes I would	> absolutely yes	> yes i could but need some place to store some information which is not public like work contract papers	> yes i would
	> but own room makes easier to discuss personal or confidental matter		> if no own room, difficult to focus or concentrate on work for example planning	> i can't be selfish as i have to see other too
Technical devices (personal attitudes)	> at the moment, challenging financial	> less money every year	> not enough financial	> can't afford

	situation		resources	
	> many students have their own laptop n ipad	> there are enough IT equipments		> since it is free education, they need to have something
	> there are many classrooms with computers and projectors			> possible to provide some application or program to use virtual tools
Interaction student/employees and management (personal attitude)	> frequent interaction	> easily reachable	> quite direct and easy	> can reach in the same day
	> easily reachable	> my door is open and everyone is well come	> not hierarchical system	> no any power distance
		> team meeting every month		
		> development discussion every year		
24/7 trend (personal attitude)	> in theroy its possible but need good security	> possible but cost money	> possible but people are not eager to stay longer	> not suitable
	> it would costs more		> getting more virtual	> bring lots of money, security issues
	> this trend is not necessary because of new ways of utiliz-		> expensive and more security	

	ing electrical devices and virtual learning			
Cost cutting/improve education (job orientated)	> creating more turnover so that no need to cut costs	> quality of education	> developing education is always important	> focus on improvement of education but in cost efficient way
	> offering students flexible way to finish their degree in short time		> also need to think about how to get more money	> need to find new ways of getting income
			> planning is needed if there is cost cutting	
Trends of applying students (job orientated)	> public data that the ministry is collecting	> english program has bit higher	> slightly rising in number of application	> depends on several things and field of study
	> got very good figures	> in overall, a bit higher than last year		
	> depends according to degree program			
Finance university (job orientated)	> most funding is from ministry of education	> finance from government	> it is state finance	> mostly funding comes from ministry
	> offering project to companies	> funding from external sources eg EU	> applying fund in some pro-	> external funding projects

		jects		
	> depends on number of studying right place	> selling our services	> changes in the future	> barlaurea environment
		> a big change after year 2014		