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DIMENSIONS OF SUCCESSFUL ONLINE LEARNING: *EXPERIENCES FROM THE TIME OF UNEMPLOYMENT*

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ABSTRACT

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Online learning has become increasingly popular as means for continuous learning and skills development. Transformation of work and changing skills needs may often require adults to acquire new, or update existing, knowhow in order to have relevant skills in the job market and upkeep their employability. Today, learning can often take place online. This thesis explores different online learning quality dimensions specific to unemployed adult learners through investigation of prior research and specifically conducted semi-structured interviews. The main objective is to survey what dimensions or qualities of online learning make it successful or unsuccessful for the needs of unemployed adults, and to recognize means and ways of planning and organizing online learning that support a successful implementation and positive experience for learners. Previous research in the field is researched and applied in discovering the main quality indicators. Together with the recounts of online learning experiences of the unemployed adults, some results about quality indicators are shared. Quality dimensions include educational quality, system quality, content quality, communication quality, service quality, perceived usefulness, learner satisfaction, and personal capabilities of learners. Learners recognized aspects such as quality of instruction and guidance, instructor teaching and communication skills, relevant and up-to-date materials, and prospects of increasing their employability as important factors. These and other notions of the study can be applied in planning to create useful and meaningful online learning experiences for the unemployed. In this thesis dimensions for consideration of the user experience for the target audience are most importantly pragmatic.

Keywords: online learning, e-learning, online education, unemployment, adult education, qualitative case study

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Verkko-opiskelusta on tullut suosittu tapa oman osaamisen kehittämiseen sekä jatkuvan oppimisen tukemiseen. Työelämän muutokset ja vaihtuvat osaamisvaatimukset voivat vaatia työttömiltä aikuisilta tarpeen hankkia kokonaan uutta osaamista tai päivittää aiempaa osaamistaan, jotta tiedot ja taidot ovat työmarkkinoiden ja työllistymisen kannalta relevantteja. Nykyään oppiminen voi tapahtua myös verkossa. Tässä tutkielmassa tutkitaan verkko-opiskelun erilaisia laatu-ulottuvuuksia erityisesti työttömien aikuisopiskelijoiden näkökulmasta pohjautuen aiempaan tutkimukseen sekä heidän aiempiin kokemuksiinsa verkossa opiskelusta. Aiemman tutkimuksen ja käyttäjähaastatteluiden pohjalta tarkastellaan kuinka erilaiset laatu-ulottuvuudet vaikuttavat verkko-opiskelun onnistumiseen ja käyttäjien kokemuksiin. Tarkastelun avulla voidaan tavoittaa erilaisia tapoja ja suosituksia onnistuneen verkko-opiskelun järjestämiseen työttömille aikuisille. Laatu-ulottuvuuksia ovat opetuksellinen laatu, järjestelmien laatu, sisällöllinen laatu, viestinnän laatu, palvelun laatu, koettu hyödyllisyys, oppijan tyytyväisyys, sekä oppijan henkilökohtaiset kyvykkyydet. Oppijat tunnistivat verkko-opiskelun tärkeiksi teemoiksi muun muassa ohjeistuksen ja ohjaamisen laadun, ohjaajan opettamisen ja viestimisen taidot, materiaalien tarkoituksenmukaisuuden ja ajantasaisuuden, sekä mahdollisuuden parantaa omia työllistymismahdollisuuksiaan. Näitä ja muita tutkielman havaintoja voidaan hyödyntää verkko-opiskelun suunnittelussa työttömille aikuisille. Tutkielman lähestymistapa on ensi sijassa pragmaattinen ja tarkoituksena on tunnistaa asioita ja tapoja, jotka vaikuttavat onnistuneen verkko-opiskelukokemuksen suunnitteluun ja saavuttamiseen.

Asiasanat: verkko-opiskelu, verkkokoulutus, osaamisen kehittäminen, työttömyys, aikuiskoulutus, haastattelututkimus

VOCABULARY

Adult learner: An adult person studying other than compulsory education studies. Might often also exclude those under the age of 25 who have not completed vocational education and are obliged to apply for a study place. Studies might be self-motivated/-initiated and/or learner might receive backing from employer or employment services.

Blended or hybrid learning: Learning style or method which includes both distance and face-to-face learning. Distance learning is often conducted online and referred to as *e-learning*. In Finland many studies directed at adult learners simultaneously working and studying are organized as *multiform* studies which often mean hybrid learning for the students.

E-class or online class: Teaching such as a lecture held online. Meeting is supported by online meeting software through which participants can attend the meeting. Depending on the learning method and software qualities, e-classes can entail interactive elements, group work and commentary by participants.

E-learning or online learning: Studying and teaching online. Learning online requires the use of information technology and often internet connection. Learners and instructors alike participate using a computer and often information systems which support the learning process such as online meeting software or an online learning system. In this study e-learning (*electronic learning*) is referred to as *online learning* which as a concept appears broader. When studying is organized in a physical facility it can be called for example classroom or contact learning.

E-Learning or online learning system or platform: An application which allows virtual learning. System qualities or the extent of their use varies and may parallel learning objectives or methods. Often online learning systems support for example content sharing and discussion.

Employment services: Organized by government and/or municipality to support primarily unemployed jobseekers to find employment or other support services they might need in their situation. From 2025 onward organized entirely by municipalities.

Instructor: In this study, instructor is a teacher or other person responsible for carrying out the online learning process. Instructor can for example plan the contents and program of the learning unit or course, give instructions, conduct lessons, offer support, and assess learning tasks.

Self-motivated studies: Independent full-time studies. Learner has been granted a study place by an educational institution. Studies can aim for an entire degree or be a study module or vocational unit. Learner can receive governmental financial support for a maximum of 48 months.

Training: A process in which theory is applied in practice and necessary skills of a task or a job are learned by on the job. Often carried out in a workplace or simulation and guided by a mentor or other professional.

Unemployed jobseeker: An adult person who is not in an employment relationship, is laid-off or otherwise outside of labor force. Generally, unemployed jobseekers have obligations to actively seek employment to receive unemployment benefits and are eligible in receiving employment services and guidance aimed for the unemployed.

CONTENTS

1 INTRODUCTION

The working life has changed remarkably in the past few decades and is constantly evolving. According to the Ministry of Education and Culture, occupations demand higher levels of knowledge and training and because of the speediness of the change, the education of younger generation alone will not meet to satisfy the demand for new knowhow. On estimate 80% of new jobs will require higher level knowledge and training as simultaneously jobs with lower-level knowledge and training are diminishing. Currently there are approximately 300,000 people aged 30 to 60 working on basic level education only. Companies also recognize the difficulty of hiring skilled employees and name it as the most common obstacle for growth. (Ministry of Education and Culture, 2019.)

Acquiring further education would therefore be most needed for groups with lower-level education and training, and statistically these groups are least likely to participate in adult education. Also, the transformation of work has affected the ways of working and there is an increasing amount of people working for example as freelancers or as part-time workers, which means these individuals do not have the reskilling support from the employer. (Ministry of Education and Culture, 2019.) Positive changes in the national economy require strengthening the education level which could imply that education and upskilling need to be made more flexible to be accessible to many. Approximately one third of the population remains outside of labour force and compared to other similar economies, Finland has fallen behind in development of education level. (Sitra, 2021.) Thus, life-long learning and updating own skills and knowhow is in growing demand for today's society. The capacity for skills renewal may also be crucial for maintaining one's employability. The labour market operates in faster work cycles, skills needs of employers are multifaceted, professions require broader skill sets, demand for flexibility is increased, and need for predicting difficulties of coming skills and labour needs continuously exists. Also, the ineffective matching of open jobs and qualified workforce has become a significant issue. (Nyman et al., 2020.) This is why different ways of improving and increasing skills must be considered in solving the asymmetry of labour market needs and the unemployment of persons.

There is a growing provision of educational materials and learning opportunities available online and many educational institutions are making use of online learning possibilities and providing teaching and courses online in addition to on-site contact learning. Distance education can utilize all forms of information technology to support learning, but the practices and elements can vary from one institution to another. Although the learning experience is mediated and secondary, and not immediate and direct, learning has become free of many boundaries (Jarvis, 2010). Web developers, institution management and end-users are the three key stakeholders who contribute to the success of an e-learning system. Both technical and non-technical aspects need to be considered when developing online learning systems. (Bringula, 2013.) Online learning offers students resources and services online, with possibility to exchange information and collaborate at distance. Learning online offers particular capabilities or benefits for learners such as effective delivery of teaching and knowledge building, interactivity, immediacy, mobility, and irrelevance of time in learning, and increased autonomy in organizing and directing learning (Mohammadi, 2015). However, online learning consists of many interrelated elements and processes which are to be regarded in order to ensure good teaching and learning experiences.

As stated in reports by Finnish Government, work in many fields will become increasingly less dependent on time and place but the shift between fields may not be harmonious. Individual responsibility for work, learning and career will grow, and essential support should be offered for the individuals to be able to learn to manage themselves and develop their skills. (Finnish Government, 2018.) In a report for the Finnish National Agency for Education Leveälahti, Nieminen, Nyyssölä, Suominen and Kotipelto (2019) present that the challenges in the availability of skilled work force are especially the lack of compatibility between the skills acquired through degrees and qualifications and the needs of working life, challenges regarding seasonal work force, the attractiveness of some industries and careers, and the regional narrows of skilled workforce. This phenomenon has also been noticed in studies regarding recruitment in Finland (e.g., Peltonen, 2021). Production and working processes in all areas of working life are increasingly digitalized and automated which poses more requirements for adaptability and learning skills of the working force. The skills development of people will integrate more closely to creating added value where technological solutions cannot replace a human actor. (Leveälahti et al., 2019.) For people out of employment, online learning could offer an interesting opportunity for increasing their employability through skills expansion and development.

In a 2017 study, 42% of the working age people felt they needed education or training to improve their professional skills or to further their career. Among unemployed the rate was higher, more than every second person. 60% of respondents reported improving career outlook, improving chances of employment, making a career change, and improving skills and knowledge about an interesting subject as reasons for attending degree or qualification studies (formal education). Also, receiving a degree or qualification certificate was reported to affect decision to participate of approximately half of respondents. (Niemi &

Ruuskanen, 2018.) People remain or fall out of employment for various reasons and for some, learning online could provide a valuable, more adjustable, and economically more approachable chance of studying. For example, studying remotely at flexible pace or hours could be a convenient option for different individuals. However, online learning can also involve challenges. Online learners need to be consistent with self-management (Thompson & Porto, 2014) and possess sufficient technical skills, and appropriate equipment and connections to work online (Sun et al., 2008). They also need to be prepared for motivational issues and consider the level of independence required by the online learning process (English & Mayo, 2012). Common benefits associated with online learning, include aspects such as cost and time savings, flexibility and autonomy and increased skills (Mohammadi, 2015). Online learning, its efficiency and usefulness, has been studied widely. This thesis explores different online learning quality dimensions specific to unemployed adult learners through investigation of prior research and specifically conducted 10 individual semi-structured interviews. The research question of the study is *What are the quality indicators of successful online learning for unemployed adult learners?* Simultaneously, means and ways of planning and organizing online learning that supports a successful implementation and positive experience for learners are discussed.

The quality indicators of successful online learning were investigated by interviewing unemployed adults about their recent online learning experiences. Interviewees were unemployed and studying on either unemployment benefit or earnings-related benefit. Their studies were conducted entirely or mostly online and were more often formal than informal education. Various assumed quality indicators were included to evaluate their experiences in online learning. The possible indicators are evaluated based on previous research and the findings of our research interviews. Support for several previously identified online learning quality indicators (e.g., Mohammadi, 2015; Hassanzadeh et al., 2012; Alsabawy, Cater-Steel, and Soar, 2016 etc.) was found. These indicators included for example perceived usefulness, service and system quality, and quality of materials, communication, and guidance. Quality indicators affect the success of online learning and predicted a positive learning experience for the learners. This research aims to present current popular and successful practices for planning and organizing online learning in relation to the views and experiences presented by the interviewees.

This research is important for understanding the current state of learning opportunities available for unemployed adults, challenges often faced with online learning and implications for re-employment. The information can be applied to developing meaningful online learning for the unemployed. Unemployment and adult knowledge building and education are current matters in the Finnish society, and there is need for new means in making learning more attainable and democratic for everyone to participate in. Findings about online learning success included perspectives about the influence of instructor communication skills, availability of support and guidance during studies, comprehensive-

ness of provided instructions and their suitability for adult learners, up-to-dateness and attainability of learning materials, mixing learning modalities, and absence of technical difficulties. Many of these findings could be used e.g., to improve learner support and guidance practices, to increase multi-modality and practicality in adult learning, to ensure sufficient instructions for the participation, and to establish working feedback processes and instructor resources.

The first part of the thesis will present the current employment situation and unemployment services in Finland and accompanying Finnish labour force policies. Next, adult education and online learning are presented. This section consists of research on adult education and adults as online learners, investigation of online education methods and models, and theories and practices of designing learning systems and organizing online education. After the presentation of general information and theoretical background and frameworks, the research method is described. This is followed by the findings of the research in relation to the suggested quality dimensions for online learning. Next, the implications of the research as well as the proposed measures for designing meaningful online education are discussed. Finally, limitations of the study are discussed, and final conclusions drawn.

2 UNEMPLOYMENT

The working life is continuously changing. Simultaneously there are different economic and societal challenges of the global and local scale. The working age population, organizations and nations are expected to adapt as required and keep up with the transformation of work. According to the working group appointed by the Ministry of Education and Culture which studied the effects of continuous learning, Finland will need on estimate 60,000 new employees after 2035. (Ministry of Education and Culture, 2019.) In an OECD report from 2020, it is stated, that the skill development system in Finland currently is not meeting with the demands of the labour market. OECD also recommends providing working adults, especially those who are affected by the labour market changes, with upskilling and reskilling opportunities to support them in the transition – and to help the Finnish economy and its competitiveness. (OECD, 2020a.) This chapter presents an overview of the employment situation in Finland, our labour market policies and service system, and aspects which can affect individual employability.

2.1 Labour market policy and employment services

The law on unemployment benefits (1290/2002 chapter 2, section 1, subsection 2) defines an unemployed person as a person who is currently not in an employment relationship or self-employed or is fully laid-off. According to the labour force survey, in May of 2023 the employment rate of persons aged 20 to 74 was at 79.5% (men 79.7%, women 79.2%) and the unemployment rate at 9.0% (men 9.8%, women 8.2%). According to this statistic, at time of examination there were 266,000 unemployed persons (men 149,000, women 117,000) in Finland (margin of error ±27,000). (OSF, 2023 2022.) According to the statistics presented by the Ministry of Economic Affairs and Employment and based on the registry data and customers' employment status there were 232,900 unemployed jobseekers (men 57%, women 43%). The number of long-term unemployed was at 89,900. Long-term unemployment is defined as uninterrupted unemployment for at least 12 months. Number of young unemployed jobseekers under 25 years of age was at 24,100. At time of examination there were 171,500 open vacancies in Finland. (Ministry of Economic Affairs and Employment, 2022a.)

Public employment and business services or TE Services and local government pilots in municipalities aim to provide guidance and support services for the unemployed. Because employment services are currently (2023) organized in some municipalities by both TE Offices and the local government pilots they are from here on conjointly referred to as "employment services" regardless of the organizing party (government or municipality). Help and support is largely

based on personal service for the unemployed jobseekers. Advise, further services and responsibilities are discussed with an employment expert and written down in a personal employment plan. (Job Market Finland, 2022a.)

In Finland, especially important topics to consider regarding domestic labour market and transformation of work are the change in the structure of our population and labour migration. By the year 2030 Finland will have 75,000 less working age people because of the ageing population structure and population growth is slowing down. Depending on the estimation of the needed labour force in coming years, the estimate of needed foreign workers fluctuates somewhere around some 20,000 people. (Finnish Government, 2018.) The availability of work force directly affects the prerequisites of production, cost of recruitment, wage rates and wage inflation. The employment rate is only an indicative value and does not provide a full picture of labour availability and its price. It is possible for labour shortage and high unemployment rate to exist simultaneously. (Koistinen, 2014.) Matters like diminishing economic growth, ageing population, and decreasing current account surplus have weakened public finances. Low profitability and low employment rate compared to other Nordic countries, and inability to attract investments or labour migration have also affected the current state of national economy. (Finnish Government, 2022.)

The act on public employment and business service (916/2012) states that the government together with other labour market actors, has responsibility to advance labour market functionality and supply of labour force, and acts to balance labour market fluctuations (916/2012 chapter 1, section 1, subsections 1 and 2). The institutions which offer this operation are the public employment and business services and local government pilots which aim at ensuring availability of capable labour force and offer work opportunities to jobseekers (916/2012 chapter 1, section 2, subsection 1; 1269/2020 chapter 1, section 1). To maintain their status as unemployed jobseekers and receive unemployment benefits, jobseekers must comply to different conditions assigned to them such as presenting required documentation or attending evaluations which are considered mandatory for determining service needs (916/2012 chapter 2, section 1). Employment services seek and offer suitable work for jobseekers based on their professional capabilities, working background, education and training, and fitness to work. (916/2012 chapter 3, section 2, subsections 1-2.) Unemployed jobseekers receive personal assistance from experts at the employment services who provide them with information about benefits, potentially suitable services, and their responsibilities. In Finland employment services are offered by the public sector and they are free of charge for employers and jobseekers.

There are different opportunities when considering future possibilities for career change, skills development or any additional training or education. Active labour market policy services that aim for enhancing employment opportunities include subsidized employment, vocational labour market training, job-search or career training, work and training try-outs, job alternation leave substitution, rehabilitative work activities, and self-motivated studies supported by unemployment benefits if there are no suitable labour market training choices. (Tuomaala,

2019.) The total amount of people in active labour market services has been around 120 000 people in recent years (Tuomaala, 2021). It is also possible to complete comprehensive education, attend entrepreneur training, attend integrations training aimed for immigrants, engage in apprenticeship training to attain a vocational qualification, or acquire additional skills by completing separate qualification modules. Historically the core services of employment agency such as labour force training and career counseling have remained in the service portfolio. (Koistinen, 2014.) In recent years, the number of people attending in self-motivated studies on employment benefit has increased (Tuomaala, 2021). The duration of self-motivated studies supported by employment benefit is approximately 58 weeks which has remained quite stable over the years (Tuomaala, 2019). In 2019 a total of about 21 000 people attended self-motivated studies and around half of participants found employment within 3 months after completion. Around 20 % were unemployed. (Tuomaala, 2021.)

Demographic attributes like age and previous education also have some effect on employment. Placement on open labour market is significantly lower for those over 55 years of age after attending most of the offered services. Only in self-motivated studies and coaching services, the difference was not significant. Also, those with higher level education seem to find employment easier than those with lower-level education. Only 14 percent of those having finished basic level training find employment within three months after attending labour services. (Tuomaala, 2021.) It has also been shown in research that demand of workforce with higher level education does not fluctuate as much as the demand of individuals with basic level education or lower vocational training in economic conjunctures. (Koistinen, 2014.)

There are however many service paths, organized by various service providers, which unemployed jobseekers can pursuit. The government is preparing a reform of TE Services which will transfer the organizing responsibility of employment services to municipalities permanently after 2024. (Ministry of Economic Affairs and Employment, 2022b; 1269/2020 section 3.) In municipalities the service selection can be broader and include services from e.g., municipal social and health care services. This could mean that individual and personal life situations could be better taken into consideration when mapping suitable service paths.

2.2 Unemployment in the Finnish economy

People fall out of work or working life for various and often individual reasons. There are however some common denominators or reasons for unemployment which may be caused by external factors like changes in the operating environment, local or global economic shifts, or changes in demand of products and services. For example, unemployment can be caused by some jobs and industries being dependent on the time of the year, cyclical changes in the economic climate, changes in the structure of the population, or technological development of

working fields. Also, some unemployment ay not become apparent in the statistic and is referred to as hidden unemployment. (Koistinen, 2014.)

Frictional unemployment is the delay in transitioning from one job to another. It is caused because of the trouble of applicants and open positions not coinciding. This may be because of registries not being up to date, using inappropriate information channels or potential employees not being aware of the channels. (Koistinen, 2014.) Frictional unemployment has been recognized as an issue in the Finnish labour market to affect matching difficulties caused by skills gaps, geographics or other reasons. A growing selection of resources for finding appropriate work may also cause friction since not all channels are known to applicants. Also studying or improving skills between jobs or on unemployment benefits can be considered frictional unemployment or result of structural changes. Studying keeps potential workers unavailable to the job market. However, workers may not find employment with their existing skills set because of structural changes and may benefit from further education or training to increase their employability. Employment services intend to help job seekers in finding suitable work but because of structural changes, reskilling may be more appropriate. In this case the employment services grant the jobseekers with a statement allowing them to engage in studies for labour force policy causes. Of the open vacancies in 2020 more than half of the positions were filled with transferring work force and 19 % with unemployed jobseekers. (Peltonen, 2021.)

The European Council has given recommendations to Finland in 2019 which have to do with for example sustainability of public economy, improving the cost-efficiency of social and health care services, improving the services aimed at the unemployed and those outside of the working force, and improving incentives for work (Ministry of Finance, 2020). Additionally, OECD suggests measures to increase employment and strengthen work incentives in Finland. OECD recommends streamlining administrative processes to decrease complexity and uncertainty about the unemployment benefits in changing situations, to attune working-age benefits with earnings (OECD, 2019), and for earnings-related unemployment benefits to be made more inclusive via an insurance fund set up by the government. (OECD, 2021.) OECD (2021) also has concerns of the high unemployment rate of older workers compared to other Nordic countries and suggests the practices of hiring, retiring, and taking benefits to be reviewed (OECD, 2021). In 2020 OECD reported a fall into recession with significant decrease in exports and consumption, high unemployment, high national debt and high numbers of layoffs and bankruptcies. Simultaneously, economic faith and consumer confidence had also collapsed. (OECD, 2020b.)

Financial growth requires labour force, often an increase in working hours and investments to boost growth and create jobs. For Finland to prosper in the global markets and competition, continuous renewal and developing and employing new innovations is required. Financial growth and the functions of the labour market also have a strong connection to societal wellbeing through people's livelihood and the public services. To enhance the conditions for financial

growth and functionality of the labour market taxation of labour has been adjusted, investments into education have been made and labour policies and law developed. Political parties and groups, and labour organizations all participate in the multifaceted labour market politics. (Finnish Government, 2018.) Each member state has also placed corresponding national goals. Finland's goals are to increase the employment level to 78 percent, use 4% of the GDP for research and development expenses, achieve the climate and energy objectives as agreed in the EU, to maintain the percentage of 30-34-year-olds with a higher education degree at 42 percent, reduce the percentage of those 18-24-year-olds who have ended their studies prematurely to 8 percent, and to reduce the number of those in risk of poverty or social exclusion. (Ministry of Finance, 2020.) Simultaneously, the transformation of the labour market challenges us to ponder about new solutions for educational system, skills development, and learning. Personal study plans and learning paths will become increasingly important. Based on the principles of continuous learning, learners should be offered a chance to plan their individual learning path as early on as early childhood education. (Leveälahti et al., 2019.) However, skills development isn't age dependent and people in different situations can benefit in varying ways of different services.

2.3 Employability of the unemployed

Working life has become a lot more volatile for workers compared to the times when many careers were secure and progressed vertically. Today, different ways of working can lead into increased uncertainty and periods of unemployment. Commonly the concept of employability has been viewed as the capability of finding and maintaining work. Employability encompasses adaptability, career identity, and human and social capital, constituting a psycho-social construct. (McArdle, Waters, Douglas & Hall, 2007). This means individuals themselves could, to certain extent, influence and improve their employability. It can also help in managing the situation and reinforcing personal development. (McArdle, et al., 2007.) Individuals could be able to choose suitable directions for themselves in respect to improving their chances of re-employment. Hanski and Järvensivu (2020) studied people who were left unemployed after dismissal and concluded that each person falling out of employment has their individual path through redefining themselves and moving forward towards better wellbeing and re-employment. Losing one's job and staying involuntarily out of employment influence one's perception of themselves, their orientation about future, and their motivation to return to working life. Giving up working has been characterized as a traumatic experience followed by feelings of hopelessness, devaluing self-esteem, and at worst seclusion from the surrounding society. When falling out of employment and later reorienting back to returning to working life, it is important to understand definitions of self, processes of identity building, and the formulation of one's inner story. (Hanski & Järvensivu, 2020.)

There are many aspects to an individual losing their job and how it affects them. Losing one's job can be a traumatic experience if an individual has placed very high value on their job and even built their identity around their work. Also, many or all meaningful and empowering social relationships can be lost, and in the absence of other compensating social relations the situation can be very challenging. Loneliness and remaining in a sort of waiting space can be incapacitating and leave a sense of not being able to get out of the situation. Individuals may feel like their own agency and control over their life is diminished. (Hanski & Järvensivu, 2020.) Although people fall out of employment for a variety of reasons and life situations vary, it is important to remember that sometimes these experiences can be damaging to a person. Some traits are seen to increase employability, encourage employment or help in coping with unemployment.

2.3.1 Helpful traits during unemployment

Adaptability is considered an important factor of employability. Adaptability is a person's ability and readiness to alter their behavior, thinking and emotions according to the needs of their surroundings which has been considered important for success in today's unstable working life. (McArdle et al., 2007.) This could mean modifying one's attitude or perception of self or career identities or being able to learn new skills or trades. Typically, adaptability is linked to high resilience, and sustaining comfort in new situations or positions. Proactivity is also often associated with adaptability. Proactivity indicates the person's ability to recognize and react to opportunities, to lead themselves, and to act efficiently. (McArdle et al., 2007.) Proactivity could also be linked to exploring alternative career paths in case of changes in the industry or the economy. Similarly, efficiency, self-management, and ability to resolve and cope with difficulties, were found important personal factors in research about job loss and finding employment. (McArdle et al., 2007.)

There is also a systemic point of view to adaptability. Jobs with lower skills requirements have diminished in Europe since the beginning of the 21st century as number of jobs with higher skills requirements has increased. The trend is predicted to continue in the 2020's. This means employment without occupational training or education, or without strong skills acquired at work, will become increasingly harder in the open labour market. The labour market however has become more skills intensive, and the labour force has not been entirely able to respond to the skills requirements of vacancies. (Ministry of Finance, 2016.) It is important to examine whether people are being educated sufficiently for today's skills demands, if there is enough training available for skills development or career transitions, and if there are enough student places in the industries that require labour to meet with the demand.

Career identity is another important dimension related to employability. It is the way individuals identify themselves in work context. It also reflects their personal values and motivation and guides them amidst employment opportunities. Recognizing and understanding own career identity can help especially

when people are outside of employment, as they are more capable of setting career related objectives and making choices suitable for them. (McArdle et al., 2007.) Career identities develop along a person's lifetime and may even change course as new interests and motivations arise. It may be easier to steer towards suitable employment opportunities if individuals can recognize their own career strengths and wishes.

Losing one's job can cause an identity crisis which can lead to reshaping and renegotiation, rediscovery, and redefinition of self in a challenging situation. This process is called rebuilding one's identity. (Hanski & Järvensivu, 2020.) The process can lead to newly fortified identity and give the individual self-confidence and sense of control which are important resources in individual psychological and social wellbeing (Hanski & Järvensivu, 2020). If desired career paths are envisioned and identities solidified, the unemployed individual could possibly recognize their own needs for additional or supplemental training or education. Many persistent misconceptions and stereotypes about aging, unemployment, and even being dismissed or laid off that affect a person's conception of their own employability. These ideas could also be encountered on the labour market. These stereotypes have an impact on people's inner stories and identities in form of failure, disappointment, shame, labeling, and loneliness where at some point a person may give up or rebel without intending to actively employ themselves. (Hanski & Järvensivu, 2020.) These misconceptions can act as negative stereotypes that cause discrimination and self-doubt. It would be important to pursue alternative stories and encourage people to reshape their identities and develop their skills.

Human and social capital also form a factor in employment processes. Human capital entails the previously acquired skills and knowledge of a person that influence their careers (McArdle et al., 2007). Continuous learning and skills development for example on-the-job-training, work or education try-outs or participating in various third sector activities could be an important means for improving human capital and employability. Career planning skills have been viewed as an important accelerator in working lives and job seeking. These include skills in visioning own career paths and future, retrieving information about the labour market, professions, and studies, and staying up to date about the current developments in the labour market. Acquiring good career planning skills is not linear although they have been mentioned as one of the main skills related to lifelong learning which include not only recognizing own skills and strengths but also how to communicate and demonstrate them to others. (Finnish Government, 2020.) For improving employability in chosen career path, career-related continuous learning and skills renewal could therefore be perceived especially significant.

Interpersonal relationships are referred to as social capital. Social capital entails primarily a person's career networks and connections, and the personal support network. Social networks affect a person's professional self-image and can offer insights to career resources, although there is indication that individuals may lessen their social connections as their period of unemployment extends.

(McArdle et al., 2007.) It would be important to help individuals maintain their networks during times of unemployment as social capital can provide mental support and encouragement to improve opportunities of gaining employment. When losing or cutting off social connections and networks, individuals can thereby harm their own resilience towards the mental load and pressures of unemployment and end up without support of others.

Extending careers, increasing employment rate, and postponing retirements have become common goals in the society. Working rate has increased in the older age groups of labour force and the average retirement age has risen. This is also due to a rise in life expectancy, development of health care, models supporting wellbeing at work, and rehabilitation and labour market policies. (Kurvinen et al., 2018.) Careers have become longer but aging employees are still at high risk of prematurely ending up outside of labour force or retirement. A study by Kurvinen, Jolkkonen, Koistinen, Lipiäinen, Nummi and Virtanen (2018) investigated if a difference existed between careers of those aging employees who were dismissed because of mass labour terminations or because of termination of operations, and those who avoided these procedures during their careers. (Kurvinen et al., 2018.) They found, that losing one's job at the later end of the career does on average decrease the chances of re-employment. Re-employment may be hard and loss of income severe, if the skills developed on the job, social capital and the salary accruement are all tied to a single workplace and similar skills are not in demand anywhere else. Job loss can also affect accruing of pension and long-term income. If the skills and long experience can be transferred to other fields and tasks, they can also be beneficial for the worker. (Kurvinen et al., 2018.) It may be that re-entering the job market after dismissal at the later end of career decreases employment chances. It has been shown in earlier studies that elderly employees are more likely to be dismissed in labour reductions in Finland than in Sweden. In Sweden employees have higher dismissal protection. According to the study however, almost every second person over the age of 44 who has lost a job, re-enters the labour market and continues their career almost without interruptions. This speaks of the operability of the labour market. (Kurvinen et al., 2018.) It is however alarming, if employees at later end of careers face systemic discrimination in hiring and reduction situations in Finland. There would be significant need for support for those older jobseekers who intend to stay on the labour market for longer. Especially in case of terminations, tailored labour market activities should be developed for older people that could allow flexible ways of working and exiting the labour market. (Kurvinen et al., 2018.) If hiring older employees seems like an elevated financial risk, employers could be offered some incentives to support inclusive hiring practices.

According to McArdle et al. (2007), the dimensions contributing to an individual's employability are largely factors that can be self-influenced and further developed based on individual needs and desires. Founded on this, learning new skills, or developing or improving existing skills is highly beneficial for all individuals whether they are currently employed or out of employment. How the unemployed person is able to organize their lives and believe in their abilities

and in re-employment largely depends on the experiences of otherness ja dispossession, financial situation, belief in ability to develop their skills, existing social relationships and the situation of the local labour market, and the perceived meaningfulness of work in their lives. (Hanski & Järvensivu, 2020.)

2.3.2 Services and employability

Can different services increase employability? Why is it hard to measure the impact of different services on employment? Gathering information and making conclusions about usage and employment impact of services is challenging mainly because of the scattered data. Also, ongoing, and upcoming changes in the employment and health care services will affect selection, provision, and availability of services. (Rinne & Blomgren, 2021.) In 2016, a working group appointed by the Ministry of Finance investigated the possibilities for increasing employment and shortening the length of unemployment periods in Finland. Possibilities for improving occupational skills and employability include taking part in labour market training or self-initiating studies. An unemployed person can receive unemployment benefits for the duration of the studies if the studies meet the legal conditions. (Ministry of Finance, 2016.) In 2020 53 % of employer locations had looked for permanent or temporary employees in a 12-month period. The vacancies were most commonly with large operators for example in social and health care, and public services and training. 40 % of employer locations had experienced difficulties with recruitment. Most common reasons for this in 2020 were related to skills and competence of applicants like prior education and work experience, social and language skills, or other necessary skills for the job. (Peltonen, 2021.)

Although self-motivated studying is not officially a labour market service, its employment impact is calculated to the total activation rate. Self-initiated studying on unemployment benefit has been possible since 2010 and it has become increasingly popular (Aho et al., 2018) and in 2021 there were around 30,000 people receiving benefits for self-motivated studies (Kela, 2022). Studying must be full-time in nature and benefits are provided for a maximum length of 24 months per each degree or qualification. Unlike in occupational labour force training where the employment services solicit the training and educational institutions coordinate the student selection, for self-initiated studies, the employment services officials must give clearance for studying. The employment services evaluate whether the studying is necessary in improving skills and employability of a person. (Aho et al., 2018; Job Market Finland, 2023.) It may be, that more commonly a person is not eligible for receiving unemployment benefits for the duration of the studies, and full-time students are referred to applying study benefits and some housing benefit to help support the studies. The individuals are eligible for unemployment benefit if their education or training needs can be verified by the employment services, and it is found that supporting studying is the most viable option for the individual to substantially improve their professional skills and employability (916/2012 chapter 6, sections 1, 2). The services

have a varying impact on the employment, and some services like rehabilitative work activities do not primarily aim at direct employment impact (Tuomaala, 2019; 2021).

Producing accurate statistical analysis of the employment effects of services is currently challenging. For example, data of costs exists but it is not systematically monitored or utilized in steering operations (Alasalmi et al., 2022). The broadest employment impact could be achieved by targeting training and education for those individuals who lack occupational training, or whose training is outdated. Based on prior experiences a universal system in which training and education are based on the perceived educational need of the individual themselves, does not target training to those who have least acquired it previously. Through professional guidance and assistance for the unemployed, it is possible to attain information about further occupational skills development opportunities and how income can be secured for the duration of the training or other studies. (Ministry of Finance, 2016.) However, investigating employability effects of services can be challenging: many variables need to be considered for example availability and integrity of the data, quality of data in measuring long-term impacts and multitude of the data in investigating effects of other services which are not statutory. In this regard more research of the employment effects of services is needed.

3 ADULT EDUCATION

Adult education commonly refers to education that is organized specifically to people aged 18 onwards. Adult education typically differs from education within the regular education system due to its times and means of instruction. This could mean for example that the education may apply blended learning practices or is organized after working hours. Education can be organized publicly or privately for example by open universities, adult education centers or organizers with appropriate licenses. (Niemi & Ruuskanen, 2018.) It seems the number of adult learners, need for adult education, and its relative significance may increase due to an ageing population, industrial changes, increased skills requirements, and shortened and less linear working cycles and careers (Mikkola, Vaahtera & Sepponen, 2019). Unpredictability of changes in working life challenges our capability for change. This means our capability in producing skilled workforce must be more efficient and meet with the real skills needs or gaps in our society. Also, individual capabilities for upskilling and transitioning from one position to another should be reinforced. (Sitra, 2021.) This chapter introduces state and ways of adult education in Finland, concepts of lifelong learning and skills development, and discusses adults as learners and how to arrange learning for adults.

3.1 Adult education in Finland

Predicting changes in working life and surfacing of new innovations is often difficult or even impossible. It seems however, that higher levels of knowledge will be required in the future. (Ministry of Education and Culture, 2019.) For example, open university education and training has increased significantly since 2018 after legislative changes. Universities of applied sciences have since organized additional or partial vocational training and offered options for completing study modules and passage studies leading to degree studies. (Official Statistics of Finland, 2019.) According to the OECD estimate, automation will affect 6.5% of Finnish work tasks and 21% of work tasks will significantly transform in the next 10-20 years. Also, the Finnish National Agency for Education the Finnish predicts that industries are experiencing the greatest structural change in decades. (Ministry of Education and Culture, 2019.) In 2017 1.6 million people aged 18 to 64 participated in adult education. This entails almost half of the age segment. (Niemi & Ruuskanen, 2018.) In the constant production pressure and competition, organizations have a difficult time finding time for development and learning. In Finland, the most significant reason for adults not engaging in learning and studies, is the lack of time. Simultaneously those in short- or fixed-term jobs receive less training from employers, and employees of small organizations or those with lower level of education rarely participate in adult education. In the increase of

platform economies where the employer model is non-traditional it may be harder to assign liability for further learning and skills management. A risk exists, that costs of skills development may be left for the society or the individual to cover even more than before. (Prime Minister's Office, 2018.) It has also been noted that individuals with higher educational qualifications are more likely to seek further education. In 2017 two out of three people with higher education background and two out of five with mid-level education attended adult education. Whereas only every third person with basic education background attended. This trend has remained similar since the year 1990. (Niemi & Ruuskanen, 2018.)

In 2017 1.2 million working age (ages 18 to 64) Finnish people participated in work or profession related education or training which is every second person of the age group. This type of education and training is considered to attend for work-related purposes. According to the survey more than half of the adults between ages 25 and 44 and approximately half of adults between ages 45 and 55 attended this type of education or training. Most common educational background for work- or profession-related studies was a higher degree education. More often the people attending were employed (53% of the group) than out of employment (19% of the group). Also, 14% of working age adults attended general or hobby-related studies in which the objectives of study were not work or profession related. (Niemi & Ruuskanen, 2018.)

Based on these statistics most participants of adult education were between ages 25 and 44. Also, in the age group of 45-to-54-year-olds more than every other person attended studies. Variables such as gender, age, level of education, labour market status, socio-economic status, and municipality of residency, all impact participation statistically significantly. Out of these variables socio-economic status impacted participation most significantly, followed by labour market status and level of education. (Niemi & Ruuskanen, 2018.) Among the OECD countries, Finland has the widest divide in adult education participation between adults with higher and lower education. This is worrying as jobs with lesser skills qualifications are declining. (OECD, 2020a.) The participation rate of unemployed persons in adult education in the latest survey was at 25% and of those outside the labour force at 35% among the working age population. Those employed at the time of inquiry participated the most in adult education at 57%. The relation between these segments has remained similar since 1990 with people with employment participating twice as likely. (Niemi & Ruuskanen, 2018.) It would be important to offer special guidance services to people who have been shifted outside of labour force because of partial working capability or outdated skills (Sitra, 2021).

When examining the nationwide attendance in adult education and training, it seems like the publicly supported measures and funding models have not made a difference in the attendance rates. Although in situations where majority of the adult training consists of company provided employee training, the impact of the public measures somewhat dissolves. Employee training is relatively volatile and prone to economic changes, which can affect the overall attendance rates.

(Ministry of Education and Culture, 2019.) This means the current political atmosphere, labour market policies and available services as well as economic trends could also affect the overall attendance rates. It would be important for the unemployed persons that the labour market policies could offer adaptable choices for acquiring further skills and competencies. It is however more common for the policies to aim at quick re-employment and overlook reskilling opportunities. Also, it seems that enlisting and encouraging unemployed persons for further education and training opportunities has been rather challenging. (Council of the European Union, 2016.)

3.2 Lifelong learning and skills development

The concept of lifelong learning, or lifelong education, has been discussed in Europe since the 1960's and 70's with UNESCO promoting its cause and emphasizing its humanistic foundations (English & Mayo, 2012). Right to education and life-long learning are part of fundamental social rights in the EU and part of equal rights in opportunities and entry to labour market. The European Pillar of Social Rights states in its first chapter that

> "Everyone has the right to quality and inclusive education, training and life-long learning in order to maintain and acquire skills that enable them to participate fully in society and manage successfully transitions in the labour market." (European Commission, 2017)

European Commission presented six main areas of focus for lifelong learning which were guaranteeing universal access to learning to acquire or renew important skills, making investments in human resources, developing ways of teaching and learning to support lifelong approach, valuing also non-formal and informal learning as a way of skills development, make sure that everyone has access to information and counseling about their learning possibilities, and establish learning opportunities closer to learners, in their communities or online. (European Commission, 2000.) Investing in human resources could mean for example setting up individual learning accounts, offering subsidized study, confirming right to study, and employers providing employees more flexible opportunities for upgrading skills. (English & Mayo, 2012). A central principle in continuous learning is to take into consideration different learning needs and skills, abilities and starting points, equally. Assisting services to support continuous learning are needed for different parts of the labour force and for the employment sectors. Also, seeking and attending training or education should be more flexible and allow individual solutions. (Leveälahti et al., 2019.)

Many professions and tasks are influenced in the transformation of work and changes in the economy. It has become increasingly hard to predict which skills will be high in demand and how many professionals are needed for certain industries. Not many qualifications or degrees remain relevant throughout one's working career and even many industries are under the transformation pressure

and the employees must continuously re-train their skills. (Prime Minister's Office, 2018.) Continuous learning covers both formal learning in the educational system and learning outside of the educational system, such as at-the-job learning. It would also be important to offer guidance and support in skills development to individuals in all circumstances, especially in transition phases, and that skills acquired through various means could be better made visible and utilized. (Ministry of Education and Culture, 2019.) Adults could be guided to or have access to a wider selection of acceptable and suitable services.

Skills which have been considered generally important for accessing the job market are adequate levels of literacy, numeracy, generic skills, and digital competences. It is estimated that 20 to 25 % of adults in Europe with low qualifications are less likely to engage in learning activities and partake in the digitally guided society and are therefore at higher risk of many social risks. Same phenomenon of adults with tertiary qualifications or degrees partaking more likely in adult education than adults with lower education, is observed among all Europeans. This suggests, inclusion should be increased. (Council of the European Union, 2016.) Finland places in the average of other OECD countries in preparedness in adult education to face future challenges for example because of a generally well educated public and a functioning dynamic in the labour market. Compared to other OECD countries, Finland seems to use a lot of resources in training working age population with only average results. Also, the differences in participation between groups with different level of education and groups with different wages are among the highest in OECD countries. (Ministry of Education and Culture, 2019.)

Asplund, Kauhanen and Vanhala (2019) evaluated employee statistics from 1995 to 2009 concerning adults who were working in fading industries and declining occupations and were facing a challenging labor market situation. It was observed that people in these situations attended education rather seldomly, and that it was more commonly younger age groups and people with higher educational background who attended degree studies. For older age groups and people with lesser education the most typical form of education was labour market training. (Asplund, Kauhanen & Vanhala, 2019.) It is not clear in totality what are the reasons for the unemployed and those outside working life not participating in adult education as much, since those are the populations that would potentially benefit from further education – for example by improving their employment potential. (Niemi & Ruuskanen, 2018.) One explanation could be that studying on unemployment benefits is not always straightforward. Different forms of social security and benefits can create obstacles or incentives for skills development, depending on the situation (Sitra, 2019). Attendance among adults with less education is lower, which could be because there aren't sufficiently guidance and support services, outreach activities or training offered or available for low-skilled adults, of whom, half do not want to take on any studies. It may be for example that benefits of additional learning are not recognized, or that previous negative experiences with the educational system or other operators, and influ-

ence of their social sphere affects motivations. (OECD, 2020a.) Council of the European Union has recommended acquiring a minimum qualification or upper secondary level or similar to guarantee a safe transition from education to working life or further studies for young people (Council of the European Union, 2016). A law responding to this issue in extending compulsory education was put into effect in 2021 which means the compulsory education in Finland will be extended to upper secondary qualification level which in practice means completing general upper secondary qualification or vocational qualification, and school leaving age is thereby raised to 18 years of age. The aim of the reform is to increase equality, prevent learning gaps and improve chances of finding employment. (Ministry of Education and Culture, 2020; 1214/2020 chapter 1, section 2.)

Common challenges for participating in adult education are work and family responsibilities, the latter affecting especially adults with lower education level. This could be because statistically adults with lower education also earn less and family responsibilities are not easily transferred to outsiders in lower income families. Financial questions also form a key obstacle. (OECD, 2020a.) Studying could impact income level negatively, there might not be any savings to secure a decent standard of living during the study period, or support from family and friends is not available. Adults within the target group could be given voluntary skills assessment, and consequently a tailored learning offer according to their needs as well as the labour market needs. Offers are to be considered together with relevant economic actors. Additionally, it is recommended to arrange outreach measures, guidance on available education and training, and support services for the learning path. (Council of the European Union, 2016.) What has also been discovered is that in Finland, compared to other Nordic and OECD countries, adults with lower education report lacking employer support or employment conditions as an obstacle to partake in adult education. This can speak of the poor bargaining position of the less educated in relation to their employers and the inflexibility of working life. Employer reluctancy to invest in skills development in lower-skilled positions is shown by a 30-percentage point difference in upskilling activities compared to medium level positions. Adults are also experiencing difficulties in navigating the service system and have little knowledge about the educational possibilities. There are however gaps and deficiencies in offering and organizing support and guidance services. (OECD, 2020a.)

Developing, and transforming skills and knowhow is rather slow whereas the demand for certain skills in the labour market can change rapidly. In the future, it might be beneficial to reorganize and readjust number of study places and study subjects more efficiently to better correlate with the demand of labour force, facilitate passing into studies, and extend the selection of conversion and supplement studies for underrepresented areas and fields. Also, more modular studies and alternative study paths should be introduced, the working life orientation of study contents strengthened, and new educational concepts and products developed to broaden the selection of studies that meet with the demand of labour force in the market. (Leveälahti et al., 2019.) Continuous, or life-long learning could help in tackling the transformation challenges. The present thinking about

continuous learning emphasizes independency and self-management of individuals. Updating skills or developing new skills, or acquiring a qualification or a degree, requires significant motivation at the later end of one's career. (Prime Minister's Office, 2018.)

Learning meta skills and new specialized skills is important for both individual and organizational development. (Prime Minister's Office, 2018.) Developing skills during careers and working life is important for the entire working population. It enables availability of skilled workforce, increases productivity and is necessary for maintaining competitiveness internationally. Furthermore, the benefits of implemented continuous learning will reflect on relieving pressure on national economy e.g., in lowering number of unemployment benefits and other benefit outgoings. On individual level, improved skills-set will increase both wellbeing at work and future employability and improve chance of advancement at work. It will also prevent individuals of flowing outside of workforce or into unemployment. (Ministry of Education and Culture, 2019.) For example, although some of the employees working in declining positions from 1995 to 2009 were able to continue in the same or similar position or transfer to another position in the public or private sector or as entrepreneurs, for 40% of these employees, careers drifted into long-term unemployment and eventually being outside of labour force. Out of these people, many were in older age groups and were less educated. (Asplund, Kauhanen & Vanhala, 2019.) However, skills development requires substantial investments of resources from the employer sector, and sometimes the long-term benefits of continuous learning for organizations and individuals themselves can remain ignored or overlooked as a bad or futile investment of time and money. Still, about a third of Finnish people remain outside of labour force and the developments in level of education have stalled compared to other similar economies (Sitra, 2021). Maintaining and improving competitiveness in a changing environment requires ability to adapt and reform. This is important since skills and competencies reflect on all economic structures and the currently existing mismatch between the supply and demand of different skills. The mismatch causes simultaneous labour shortages and relatively high unemployment. (Sitra, 2021.)

3.3 Adults as learners

Humans learn in a cyclic pattern as they process information, internalize it, and externalize learning socially. Humans receive social and sensory inputs throughout their lives, which also influences how they learn and process information. Additionally, general and individual attributes impact learning, such as beliefs, attitudes and obtained skills. A typical quality for adult learning includes increased motivation when the studied matter conflicts with the learner's own perception and experiences of the world. Adults also enjoy participating in the teaching processes and enjoy participatory practices. (Jarvis, 2010.) One way to make a distinction between the concepts of "training" and "education" is to perceive

training as learning skills that are tied to labour market needs, and education being understood as part of lifelong learning. Especially in adult learning, training might typically have a more hands-on orientation of learning skills whereas education can be of longer term and can consist of theoretical rather than concrete learning content. (English & Mayo, 2012.)

Adults also typically assimilate previous experiences and meaning systems in learning, and these experiences should if possible be utilized in teaching and teaching methods should support combining new and previous knowledge. Teaching should also, if possible, include applied methods and be personalized so that the relevance is better understood. To adult learners, self-assessment may also feel more meaningful than teacher-assessment. Adults have often developed their own studying styles and strategies, and it is important for educators to acknowledge different existing styles and encourage learners to find their optimal study methods and pace. (Jarvis, 2010.) Some assumptions about adult learners can be made, although adults typically are a challenging mass to target as they comw from varying backgrounds with different sets of skills, education, and knowledge. Evaluating impacts of adult learning and its investments is hard because of the multitude of different learning paths adults take (Sitra, 2019).

Commonly, adults conducting studies have also other responsibilities. Other responsibilities and roles can cause challenges in scheduling and too many simultaneous duties can also cause stress and affect study performance (Thompson & Porto, 2014). Online learning and blended learning offer flexible opportunities for adults for skills development (European Parliament, 2021). In the future further contributions for utilizing and developing digital platforms to produce skills assessments and recognize skills deficits of individuals might be expected. However, it must be noted that some of the groups of the population might not be able to benefit from all new digital services and require personal assistance to help improve their skills. (Leveälahti et al., 2019.) Simultaneously however, digital learning opportunities can provide more flexibility and easier access for people that might otherwise have poor access to learning (English & Mayo, 2012). It is evident, that the online environments are challenging the traditional classroom and theory-based teaching. Although learning-on-the-job, different digital platforms and other learning environments compliment and partially replace some functions, basic skills needed in working life should be secured with sufficient contact teaching. Also, teachers will nonetheless have an important task in reviewing, recognizing, and guiding individual learning needs. (Leveälahti et al., 2019.) Online learning might have been preferred by students who had geographical reasons (hard to reach institution), who could not commit to full-time daytime contact studies for family reasons or similar responsibilities, were working part or fulltime simultaneously, or other reasons. Adult learners can find benefits in online learning which allows learning more flexibly, might expand their choices and be more cost-efficient (Thompson & Porto, 2014). In online learning interaction between instructor and learner is often lesser. Interaction is considered an integral part of a dynamic learning process, where knowledge is formed and reconstructed through co-investigation (English & Mayo, 2012). Nowadays

online studies have become a viable option for anyone preferring to conduct their studies in this manner for whatever reason. One way to describe adult online learners is as students who are typically 25 years old or older and enrolled in studies that are conducted mostly online. They are often lifelong learners or reentry students or have chosen online studies for other reasons, such as flexibility. Commonly study work is completed individually, and studies might only include asynchronous communication via email or online message boards. (Thompson & Porto, 2014.)

3.4 Organizing learning for adults

Adult students come from various backgrounds. Some students might also be working simultaneously or have other responsibilities which is why acceptable workloads and flexibility are important to consider. If the content and direction of the training has a strong connection to working life, flexibility to changing needs of the employers need to be taken into account in the course of the training. (Nyman et al., 2020.) Some challenges or inconveniences adult online learners might face in online learning are that interaction between peers or instructors is of different nature and often lesser than in contact studies and leaners may experience loneliness (English & Mayo, 2012). Instructors can contribute to students' wellness for example by supervising performance and progress, endorsing breaks and physical activity. Peer-to-peer support can also be meaningful for adult wellness and learners, or learner groups commonly communicate through social networks or online message boards. (Thompson & Porto, 2014.) It is recognized however, that adult learners in general are less healthy than younger learners. Some common concerns for adult health are managing too many responsibilities, high stress, emotional difficulties, imbalance in physical activity and nutrition, and poor ergonomics at home. Online learning can be time-consuming and usually requires adequate self-management skills and scheduling or studies may otherwise easily feel overwhelming. (Thompson & Porto, 2014.)

Skills development during careers requires learning opportunities which are flexible to participate in while working, organized in suitable modules, and where the content responds to skills needs of the position to benefit both the individual and the organization in the best way. (Ministry of Education and Culture, 2018b). For example, short-term training can be organized as multiform learning which can contain contact learning, distance learning, independent study, online learning in groups and on learning platforms. Multiform learning caters people of various life situations as it offers the chance to adjust their studies around their lives flexibly. If students have poorer readiness to adapt to multiform model of learning in short-term training programmes, they can feel in need of more support to manage the training. (Nyman et al., 2020.)

In a report of 2020, the effectiveness of short-term training to boost employment was investigated. The causes for such training can include for example la-

bour shortages in the respectful fields; constantly developing, growing, and fragmenting skills needs and requirements of the job market; and demand for organizing continuous learning and skills expansion opportunities. (Nyman et al., 2020.) Additionally, adult workers are needed to compensate the worker needs, as intake numbers in vocational training for young adults do not suffice to cover the needs in many fields. There are several examples in industries like hotel and restaurant business, sanitation and property maintenance, nursing and care, and transportation. For example, in transportation services, the employee needs outweigh the current intake numbers by almost 80 percent which is why the significance of adult education in the transportation industry is substantial. (Hanhijoki, 2020.) In general, the short-term labour market training and qualifications can significantly improve the employability and labour market positioning of adults and participants find the training beneficial for necessary skills development. Participants have also deemed important that their knowledge of the field is updated and boosted, that they receive official qualification, and could change careers, improve their employability, or find employment. (Nyman et al., 2020.) Adult learners are also required to cover for employee losses in career transitions. As many former employees in social and health care services have transferred to other industries, adult learners have been able to compensate for needs caused by transitions. For example, there has been almost same amount of qualification graduates as there were adults with competence-based qualifications in practical nursing. It is wise to distribute and target student intake in young learners in industries where employee needs are expanding. (Hanhijoki, 2020.)

Different employment relationships and changes in contents of work make systematically integrating studies and work challenging. It is also important to validate and document previous skills and knowledge, for example foreign degrees and qualifications and skills acquired via liberal adult education. (Ministry of Education and Culture, 2018b.) In organizing learning for adults, sufficient support services should also be in place. Wellbeing of students needs to be considered also when learning is organized online and especially with the "nontraditional students" whose studies are being conducted while also managing other life's responsibilities such as family or working life. Student support can include support for wellbeing and prevention of poor academic success, increased retention, and building satisfaction. (Thompson & Porto, 2014.)

Skills advancements in the Finnish population have stalled in the recent years which means that participation in training and education must be increased in all age groups. There are also a lot of people without upper secondary education who might be at risk because of lacking qualifications. This means that need for general and vocational upper secondary education will continue to exist. (Hanhijoki, 2020.) Needs for short-term training exist in the future to be able to respond to labour market changes. This requires predictive needs evaluation measures across the fields, as well as national-level and local cooperation between different actors. To actualize such labour market trainings of both partial attainments and entire qualifications, legislative and financial conditions are to be considered. (Nyman et al., 2020.)

4 LEARNING ONLINE

Education and other learning opportunities are organized in a variety of ways. Individuals can engage in learning in contact form at a physical location, as a blended combination of both contact and distant studies, or entirely online. Studies can be completed independently, with limited instructor support, or with active and interactive instruction. Learners can participate in mass implementations, studies can be done in learning groups, or independently - different institutions may apply different practices when organizing distant learning opportunities. Online learning platforms, different tools and facilitation methods have also evolved in recent years and online learning can offer many kinds of learning experiences for learners. By definition, distance education is a form of education where individual students are offered preorganized learning opportunities separate from the teacher in time and place, using a technical medium (Jarvis, 2010). It is also due to the widespread utilization of internet in the education field and as a learning resource in general, that the concepts of learning and education have started to divert from one another because of the multitude of self-learning opportunities (Jarvis, 2010). This chapter explores transformation in the field of teaching and learning, practices and methods of online learning, and how to assess or measure online learning.

4.1 Transforming ways of education

In recent years there has been a significant shift to platformization in education and some other fields. Educational institutions have taken into use different online learning and teaching services and portals which may for example entail communication, assignment submission, material sharing and editing, and progress follow-up functionalities. Most educational platforms are owned by businesses and operate on some algorithmic sequences and business models. (Dijck et al., 2018.) Pedagogically online education is changing learning and teaching processes, impacting for example materials, curriculums, school administration and the entirety of governance of education. Platformization may also mean socioeconomic equality in education, increasing affordability and autonomy for educators, as well as creating new flexible opportunities for education. (Dijck et al., 2018.) Online learning can increase chances for adults in different situations and make availability of education more democratic in some sense. The purpose of e-learning (*electronic* learning) systems is for educational institutions to provide educational services to learners online. Investments in online learning technologies are significant and the e-learning systems are increasingly advanced and essential for modern educational institutions. IT infrastructure services are proposed to add organizational value in shorter response time, flexibility, increased

productivity, organizational learning, evidence-based decision making. (Alsabawy et al., 2016.) Higher education institutions typically use different course management systems (CMS) such as Moodle or similar for sharing, posting, and communicating in online learning. The proficiency to use their core functionalities eases instructors in operating in these environments. (Palloff & Pratt, 2013.) Learning should be organized with an unambiguous aim and plan of action, and commitment and functioning infrastructure for course and learner support should be established (Palloff & Pratt, 2013). Institutions organizing distance education do not require buildings and are not limited by geographical constraints. The products of distance education offer a learning promise, which includes teaching and other learning components. Learners must be able to rely on the efficiency and quality of the product as they commit to it. It is therefore important how the learning products are produced, packaged, marketed, and processed, and what types of support services are offered to buyers. (Jarvis, 2010.) Learners should be able to expect responses to their questions, feedback on course work, a well-functioning and user-friendly platform system, and high-quality teaching and materials. There are also other accounts which promote creating unambiguous materials supporting self-learning, and tasks that generate intellectual pleasure to the learner. Messages sent to the learner should be kind, easy to understand and remember. Also, education must be well-guided and organized to provide a systematic assembly. For distance learning to work, learners must be capable of directing themselves and managing their own work. (Jarvis, 2010.)

Massive Open Online Courses or MOOCs are one way of offering online learning. Coursera for example, is a for-profit platform which focuses on platform commodification, offering educational content to mass audiences, and gathering mass data, all the while collaborating with educational institutions who provide the actual educational expertise and content. (Dijck et al., 2018.) The provision of MOOCs is diverse, and they also vary in learning and teaching methodologies. Some main motivators for attending these types of online courses are to enhance previous knowledge, to learn new skills in the design process, and to employ the methodologies. High discontinuance rates however remain a common issue. (Salmon, Pechenkina, Chase & Ross 2017.) In addition to formal types of education organized and available online, there are also other types of learning resources like open educational resources (OER), podcasts, multimedia content such as audiobooks and video tutorials that are sought out online and have become increasingly popular in education (Bacsich & Pepler, 2014). Research has found that students often conduct searches based on assessment requirements, and when they come to find suitable information, they sometimes fail to evaluate the origins and quality of the resource (Bacsich & Pepler, 2014). In the time of limitless information, it is not hard to realize that differentiating reliable content from the rest has become increasingly challenging.

Using e-learning environments and different educational online platforms has become popular and it is increasingly common to be able to attend courses remotely through different platforms. Offering online studies also means changes in the institution's practices in administration and pedagogies (Dijck,

Poell & Waal, 2018). It is likely impossible for educational institutions to reverse or prevent the change into more technology-aided teaching practices. Chapter 4.1 considers possibilities of online learning for institutions and learners. Chapter 4.2 presents ways of assessing online learning and learning systems.

4.2 Teaching and learning online

Traditional education and pedagogical models cannot straightforwardly be transferred into online environment. They require much reconsideration to provide meaningful learning experiences online. In online classrooms, it is important to apply practices that promote cooperation and communication, openness, reflective techniques, and create some sense of community among the learners. Participants should feel encouraged to collaborate on tasks and jointly learn about the topics. Still, teachers and institutions can often be ill-prepared for the shift to online environment, courses may be poorly composed, student engagement and learning outcomes are unsuccessful, and feelings of frustration and solitude are high. (Palloff & Pratt, 2013.) Since online education already is a pertinent part of the educational system, it is rational to focus on learning and investigating how to achieve successful learning outcomes in online environments, and subsequently how online education should be organized and designed in order to meet the desired outcomes.

There are many benefits to organizing distance education. The educational institution makes savings in property costs, and teaching can be organized without borders. This naturally means that for example communication between students and tutors must be enabled through online systems. Online education will always partially lack a humanistic approach characteristic to traditional means of education. Still, especially mixed-mode delivery systems have been developed to combine different modes of teaching, and to make online education as efficient and empowering to meet its potential, new pedagogical models need to be developed (Jarvis, 2010). Course design and effective facilitation are two things considered to be vital for offering quality online education. When designing learning principles for online learning, collaboration and reflection in the course should be promoted. It has been found that collaborative processes enable deeper learning through shared objectives and methods of meaning making. (Palloff & Pratt, 2013.)

Online learners are not just passive receivers of information. Reflective learning is the contemplation and investigation of information and practices and updating them as new information arises. Because of great autonomy of online education, it is important that online learners are not only reflective learners but also critical towards the materials given to them. (Jarvis, 2010.) This also means, the students should be able to trust the expertise of the instructor and trust the provided materials. Also, as mentioned before, students are expected to evaluate the validity of the provided information and have a good set of information retrieval skills. (Jarvis, 2010.) In nonsynchronous environments learners can adjust

their own learning schedules. This allows more time for reflection and meaning making, and ability to choose when to participate in discussions. For variety, asynchronous parts of learning are complemented with synchronous parts such as mutual virtual sessions and collaborative assignments. This also facilitates interaction, such as seeking immediate guidance either from other participants or the instructors. The possibility for seeking guidance and help with even short notice has been viewed helpful by many learners. (Palloff & Pratt, 2013.) Instructor competence and readiness is therefore important. Instructor commitment in online courses, facilitation and empowerment of learning is imperative. Online teaching, however, does take up more time for conducting, communication and assessment than traditional class teaching, although new asynchronous teaching technologies are unlocking new opportunities for learning processes. There are several frameworks and guidelines developed to ensure quality in online education. However, online education quality is a complex concept, often contextual and depending on the point of view and with different priorities and needs for different stakeholders. This makes creating common terminology and criteria challenging. (Shraim, 2020.)

What has also been found important for organizing online learning, are the organizational capabilities for offering online services. ICT infrastructure services are integral in providing high quality information and strengthening system quality and service delivery quality.

The perceived usefulness is influenced by IT infrastructure services, system quality, and information quality, with the moderating factor being the quality of service delivery (Alsabawy et al., 2016). Therefore, assuring that sufficient infrastructure is in place when offering learning online is important. Same goes for methods of evaluation. Every educational institution is different, and when considering suitable evaluation practices and processes, the special conditions of an institution need to be recognized. This includes general atmosphere and attitudes towards online education. Also, governance related issues are paramount to consider. Organizational structure for example affects online teaching governance and distribution of responsibilities within the institution, and the approval, budgeting, and adoption of the selected evaluation methods. (Tobin, Mandernach & Taylor, 2015.) Technological choices and ways of use are various. Still, information technology should only serve as an instrument in attaining the learning outcomes (Palloff & Pratt, 2013). It may also not be useful to incorporate too many different technological elements in the online environment as this may only create confusion in the online environment and serve against the learning goals. We'll discuss information systems success and online learning quality in the following chapters.

4.3 Assessing online learning

Online or e-learning offers flexible and cost-effective learning and broader access to educational services for learners. Typical gains students anticipate from e-

learning are academic accomplishments, professional growth, and social benefits, and that they are provided with beneficial and high-quality educational services. Whereas disturbances in network connections and media may negatively affect user satisfaction. (Alsabawy et al., 2016.) There are some challenges in evaluating online teaching compared to traditional classroom or contact teaching evaluation. Firstly, the scope of performance is harder to define and observe, as instruction, communication and course contents exist in various locations and formats. Secondly, the time used in face-to-face teaching is not comparable to online teaching, and it may be hard to make evaluations based on time. Therefore, evaluation should consider several aspects which could be more encompassing in total than traditional time-based criteria. (Tobin et al., 2015.) Most educational institutions have web-based e-learning systems in use. They can be used as a complementing working platform for sharing and accessing learning material, for hybrid studies (a mixture of contact and online learning) or online-only studies. E-learning systems are usually introduced to offer different ways of teaching and to reduce obstacles of contact learning (Harrati, Bouchrika, Tari & Ladjailia, 2016). It could be that if students' requirements are met and they are provided with useful new experiences and skills, it were to motivate them to re-use educational services. (Alsabawy et al., 2016.) To provide learners with working systems and high-quality education and experiences, it is important to assess the ways learning is organized and how the learning systems support achieving learning goals.

There is also a business opportunity planted in the field of online education as different platform providers compete for institutions and users. Online learning could also be regarded as a commodity, where it is important to provide consumers with sufficient information about the content and workload of the learning service, quantity of fees, and what can be achieved with their investment (Jarvis, 2010). Some learners may be accustomed to personalized digital services where personalized qualities also increase gradually and help the user to navigate to relevant content (Dijck et al., 2018). Finnish educational institutions also operate increasingly similarly to private organizations in terms of business model and management. Even if not all online education operates based on profitability, all online education should meet with the design and operational demands of the users. Commercial products can have better resources and stronger incentives in investigating end-user needs and desires, but it is as important for public providers to guarantee services of good quality.

Comparative studies between different learning solutions can be made to evaluate their suitability for the task. In a study by Aydin and Tirkes (2010) several opensource e-learning platforms were evaluated and compared in their suitability for distance learning. For example, Moodle platform had many useful features and tools essential to an e-learning system. (Aydin & Tirkes, 2010.) Comparing, benchmarking and service designing different features and system requirements can provide valuable insights into what the users prefer. Also, for example personalization of applications has been found to have positive impact

on customer satisfaction. Cookies and other user data collection methods are normal for digital solutions. With data collection and site analytics user experience can be enhanced and site usability improved. Also, personalization is possible through user data collection and predictive data analytics. In online learning personalized online service can be used for system adaptation according to learner needs and performance, and to encourage motivation. Personalization can also indicate what kind of tutoring may be needed, keep track of scores, behavior, and performance, and offer personalized schemes accordingly. (Dijck et al., 2018.)

Learner experiences can be evaluated via student ratings or literal feedback on the teaching and course, or teachers can report observations. Also learning systems often include or can be integrated to analytics tools which can collect data help to evaluate use. The data collected by using systems and tools can be versatile and limited only by the available analytic functions of the system. Data that can typically be utilized in analytics include the recurrence of user logins; time spent in the learning system; number of threaded, and threaded and commented posts; nature, quality, and timeliness of platform interaction; nature, quality and timeliness of (course) feedback; amount of time or number of days allocated to task; amount of time or number of days used to perform task, et cetera. (Tobin et al., 2015.) It is however important to identify what data are relevant to the evaluation objective and what are not, and the same applies to any chosen data collection method. When evaluating the online modality of teaching and learning, the focus on the front end is typically on workload and effort, and on the back end on analysis and effort assessment (Tobin et al., 2015). Usability and user experience can be assessed through user testing and different metrics based on how the users navigate in the system as they do different tasks. For example, Harrati et al. (2016) used task duration, number of clicks, completion rate and cursor distance as usage metrics to measure the usability of an e-learning platform. Demographics can potentially influence the results and might be good to take into consideration when evaluating systems acceptance, use, or success.

Often in the field of information systems research, studies are conducted via different quantifiable surveys. Evaluating user experience of e-learning systems is crucial because the quality of use will impact learning outcomes of students. Because experiences in using a product are subjective, it is recommended that survey responses from a rather large sample of users is collected. (Santoso, Schrepp, Isal, Utomo & Priyogi, 2016.) Technology use and acceptance can be surveyed through different statements presented to users. Statements can relate to performance expectancy, effort expectancy, attitudes toward technology use, behavioral intention), and perceived self-efficiency (applied in e.g., Venkatesh et al., 2003). In many studies the data has been gathered in a similar questionnaire manner to provide quantifiable figures to propose statistically significant findings in systems use and success. The question formation and sets vary based on the phenomena or experience which is being surveyed. Surveys can be complemented with user interviews or interviews can even be used as standalone data for research.

Teaching practices and behaviors also need to be evaluated separate from the course materials and design-related components of teaching. In online environments teacher participation can be measured as communication engagements in discussion and course contents either as design components or behavioral components. Also, if the course is conducted several times, the instructor or teacher may change, but all or some of the materials might remain same which would support evaluating these aspects separately in some cases. Measurement instruments also vary, but some common principles for evaluating teaching remain. (Tobin et al., 2015.) These evaluations are important to acquire data for summative evaluation of the teacher's capabilities and skills and efficiency of teaching by surveys or similar, and for formative evaluation to improve current teaching and learning processes based on feedback. Both help in understanding and developing the quality and strategies of online teaching, depending of course on the data contents and emphasis and goals of evaluation. (Tobin et al., 2015.)

Similar reasons apply to other aspects of online learning to constantly develop ways of teaching and learning online. Evaluation should be treated and implemented as a cyclical process where purpose of collecting data is in extracting new valuable knowledge for continuously improving and developing online teaching practices and processes (Tobin et al., 2015). User participation in the design process should be encouraged, quality of content assured, sufficient service and interaction offered for users, and attention given to planning easy-to-use systems and proper instructions to improve user's intention to reuse the e-learning systems. (Li et al., 2012.)

5 SUCCESSFUL ONLINE LEARNING AND SYSTEMS

Early papers on information systems success and acceptance still have validity today when planning and developing systems, including learning systems. The technology acceptance model (TAM) by Fred D. Davis was first presented in the late 1980's and considered relationships between system design, perceived ease of use, perceived usefulness, attitude toward using a system, and system usage behavior. Technology acceptance and information systems success has since been studied broadly. This chapter presents a review of early and significant research in the field of information systems and their findings. Some online learning research, central for establishing a theoretical framework for this study is then presented. Online learning is examined from both learning systems perspective and through other factors.

5.1 Information systems success and technology acceptance

Perceived usefulness is typically described as "*the degree to which a person believes using a specific system would enhance their (job) performance*" (Davis, 1989, pp. 320) or bring some advantage, and ease of use as "*the degree to which a person believes using a specific system would be free of effort*" (Davis, 1989, pp. 320). It is proposed that a system is more probably accepted by users if it is perceived to be easier to use than a competing system. (Davis, 1987; 1989.) The results of the study display that although designing user-friendly interfaces is important, the perceived usefulness of systems and ability to complete useful tasks are shown to be the most important factors for users. (Davis, 1987; 1993.) The technology acceptance model has since been specified and applied for various purposes by several researchers of different fields.

Davis, Bagozzi, and Warshaw analyzed theory of reasoned action (TRA) and Davis's adaptation of the same model, TAM, to investigate user acceptance and intentions in their 1989 study. The theory of reasoned action (TRA) was originally presented for the field of social psychology which has since been validated as a successful model in predicting and understanding human behavior for many uses. They found that perceived usefulness was the strongest indicator for intention to use, perceived ease of use had a significant impact which decreased by time, and that attitudes only influenced intentions partially. The results of their study also indicate that computer usage can be forecasted fairly reliably. (Davis, Bagozzi & Warshaw, 1989.)

In the early 1990's, DeLone and McLean presented their model (later referred to as the D&M model) for examining information systems success. They introduced system quality, information quality, use, user satisfaction, individual impact, and organizational impact to be the six interrelated indicators of systems

success. In their research they concluded that system and information quality impact use and user satisfaction, and that user satisfaction and the amount of use correlate and precede individual impact directly. Individual impact will then generate organizational impact. (DeLone & McLean, 1992.) One of the most cited extensions of the D&M model is Peter Seddon's paper from 1997. He extended the model to include four new indicators for IS success, which were expectations, consequences, net benefits to society, and lastly perceived usefulness motivated by Davis and others. Also, relations between indicators were respecified. It is explained that systems use itself cannot be considered a success measure and that system use has various consequences which are value judgments made by users of the system use. Expectations are included in the model as attitudes that are constantly revised with new use experiences. System use affects perceptions of the system, which influence expectations and creates positive or negative learning feedback loops that lead to amount of system use. (Seddon, 1997.)

DeLone and McLean revised their D&M model in a ten-year update published in 2003 and introduced some further points to their original success model. The indicators they propose for IS system success in the revised model are system use, system quality, and information quality, which were evaluated in their association to individual impacts. As new indicators, service quality, and net benefits were added. System use and individual impact were shown to have strong relation. Individual impacts were typically evaluated by job and decision-making performance. Also, system quality, evaluated by for example system reliability, ease-of-use, information quality, and functionality, had strong association to individual impacts, which were evaluated as job performance and quality of job environment. Information quality, evaluated by for example its accuracy and relevance, as well showed significant association to individual impacts. Impacts were evaluated as decision-making performance, job efficiency, and quality of job. (DeLone & McLean, 2003) Service quality was seen increasingly important and common indicators for IS service quality were things like support service reliability, responsiveness, and empathy. Resulted use and satisfaction are net benefits, which were included in the updated IS success model. Net benefits are the combined total benefits of individual and organizational impacts. The use causes feedback loops which can be positive or negative and therefore lead to either continuing or increased use, or alternatively to decreased use or even use termination. (DeLone & McLean, 2003.)

In 2000 Venkatesh and Davis proposed an extension to the original technology acceptance model (TAM). Perceived usefulness has been found a significant determinant of usage intentions in research, whereas perceived ease of use had not received as much empirical support. In the extended version Venkatesh and Davis investigate the construct of perceived usefulness and its relationship with increased experience and passage of time. In TAM2 they have included social influence and cognitive instrumental processes to determine technology acceptance. Social influence processes on technology acceptance consists of subjective norm, voluntariness of use, and image. (Venkatesh & Davis, 2000.) Subjective norm in their study is described as how individual users perceive system use is

considered either positive or negative by the people, they find important to themselves. They theorize that subjective norm has influence on mandatory but not voluntary system use intention. They also suggest that internalizing the ideas of a person, who is perceived important, regarding system use, means users make these views a part of their own belief system and system use can also be a part of identity forming. System use can also be considered important for image and status reasons and to receive acceptance from peers, which in turn can increase one's productivity. (Venkatesh & Davis, 2000.) Different accounts and personas can guide consumer behavior by promoting or using different technologies.

Venkatesh and Davis (2000) found however that the effects of subjective norm on usage intention might decrease over time as experience increases. Cognitive instrumental processes are job relevance, output quality, result demonstrability, and perceived ease of use which also affect perceived usefulness. Job relevance is defined as the perceived importance and applicability of the system to support and facilitate job performance and goals. Output quality refers to the perception of users on how well the job tasks are performed by the system. Result demonstrability is described as the ability to demonstrate tangible benefits from system use, which has a direct impact on perceived usefulness. Perceived ease of use of the system has been shown to have significant effect on use intention by way of perceived usefulness. It is predicted that passage of time itself would not have influence on perceptions of system usefulness as people constantly make value judgements on system job relevance. (Venkatesh & Davis, 2000) In conclusion their study finds that perceived usefulness was the primary indicator and perceived ease of use secondary indicator of usage intention. Perceived usefulness influenced all its indicators. Subjective norm influences intention to use directly, whereas perceived usefulness through internalization and identities. Social influence becomes less significant when experience with system increases although status gains from system use still increased perceived usefulness. It was also stated that perceived usefulness was influenced by job relevance and output quality, which have an interactive nature with each other. Also, it was found that cognitive instrumental processes had significant effect over time. (Venkatesh & Davis, 2000)

Unified Theory of Acceptance and Use of Technology (UTAUT) was presented in 2003 by Venkatesh, Morris, Davis, and Davis, in which they have combined integral elements from prior eight models, including TAM, to develop a unified model. The perceived benefits on job performance from system use is described by performance expectancy. It is shown to have the most dominant effect on intention to use and be associated with elements of job relevance and output quality, perceived usefulness, and job performance (e.g., Davis, 1989; Davis et al., 1989; Seddon, 1992). Similarly, effort expectancy was found to have impact on intention to use. Effort expectancy is perceived ease of system use. Its significance was shown to decrease over time. It is related to proposed elements of other models like ease of use from TAM. Social influence, like subjective norm presented in TAM, is how system use is perceived to be valued by important others and ultimately how system use will influence the way others perceive the user. Social

influence did not seem to have meaningful impact in voluntary use situations. For determinants of usage behavior, facilitating conditions is the perceived supporting context of the environment for system use. (Venkatesh et al., 2003.) Performance expectancy, effort expectancy, and social influence were elements that directly affected intention to use, and intention and facilitating conditions elements that directly influenced usage behavior. Gender, age, voluntariness, and experience of the user were identified as affecting elements. They also considered self-efficacy, anxiety, and attitude toward technology use to influence intention but were shown not to have a direct influence. UTAUT finds assessing the context and environment of system use necessary when planning IS implementation. (Venkatesh et al., 2003.)

In 2012 Venkatesh, Thong, and Xu proposed UTAUT2 in which they added three determinants of technology acceptance and use to the earlier UTAUT model. The study was interested in how the theory could be applied especially when examining consumer technologies. For example, performance expectancy is the perceived benefit of technology use to a consumer. The elements integrated to the UTAUT are hedonic motivation, price value, and habit, which are proposed to be influenced by individual differences such as age, gender, and experience. Hedonic motivation is the enjoyment caused by system use and it is shown directly to affect technology acceptance and use. Hedonic motivation in consumer context was found to be more significant determinant of intention to use than performance expectancy. Price value is the cognitive tradeoff from paying the cost of system use and receiving benefits from it. If the price value is positive, it influences the intention to use positively as well. Habit is automated behavior caused by most commonly learning. The study found that both hedonistic and utilitarian interests encourage technology use in consumer technology context. (Venkatesh, Thong & Xu, 2012.) These prior notions on systems success, use and acceptance have much validity and applications in systems research. Studying online learning and learning systems success and acceptance is a specific domain in information systems studies which incorporates pedagogical elements although many elements and indicators are transferable.

5.2 Learning systems technical success factors

An online learning system, or electronic or e-learning system is learning technology based on the internet and uses its browsers to interact with learners and other tools and systems. (Hassanzadeh, Kanaani & Elahi, 2012.) This makes e-learning learning via the internet. Educational institutions as well as corporations have spent a multitude of resources in developing online training and learning platforms (Wang, Wang & Shee, 2007). The learning system, or more specifically its user application, is flexible to access and is planned to facilitate learning for example by supporting content sharing features. Learning systems are information systems which comply to many of the indicators identified in previous research. However, the learning and teaching realm bring unique characteristics to the

evaluation. Similarly, adults as learners and system users, and unemployment as a life situation, all can be seen to affect systems use and success. Seddon (1997) defines information systems success as evaluated achieved benefits for the user group from system use but bearing also political and emotional aspects. Already Davis et al. (1989) concluded that user behavior can be predicted by users' behavioral intention, and perceived usefulness and ease of use of the system. Users can sometimes be resistant to using systems even though they could improve personal efficiency and create business advantage, which creates strong incentive for organizations to create systems that please users (Davis, Bagozzi & Warshaw, 1989). Can learning systems ever be free of value judgements relating to the institution, teaching, and learning content, for example?

Traditionally, technical system quality encompasses factors such as ease of use, consistency of the UI, and absence of bugs. It can also refer to quality of system documentation and program code. (Seddon, 1997.) Also, meeting user requirements, integration capabilities and sophistication, and system accuracy in using (Alsabawy et al., 2016) are important system quality aspects. Li et al. (2012) found that perceived ease of use of the system has effect on behavioral intention and that there is a positive connection between perceived ease of use and perceived usefulness. This advocates for developing user friendly e-learning environments to encourage reuse. Also, user's self-efficacy or competence for computer use has a significant impact on intention to use and consequently perceived ease of use. (Li et al., 2012.)

It has been found that usability as system quality closely links to user acceptance. System usability is often defined as perceived ease of use for achieving tasks with satisfaction and efficiency. The realization of the graphical interface plays an important role and interface complexity can cause barriers in e-learning systems adoption and hardships in task completion. (Harrati et al., 2016.) As end-users of the system teachers and students can participate in the system design process and help determine which functionalities and features best facilitate e-learning and meeting learning goals (Li et al., 2012). It can be wise to involve the end-users in designing user-friendly and easy-to-use systems. Users can for example participate in defining system requirements or testing the system and its features. It has been found that instructors face difficulties in use and interaction when websites contain many graphical widgets and choices. Task completion has been proven easier by usage metrics in more minimal graphical interfaces with fewer elements and less complexity. (Harrati et al., 2016.) However, when assessing information system success, the special nature of e-learning must be considered. The evaluation cannot be carried out with single-indicator approaches, but rather a multi-dimensional model should be applied. For example, incorporating all dimensions of the revised D&M model when studying e-learning systems success is recommended. (Wang, Wang & Shee, 2007.)

The study by Santoso et al. (2016) introduced six scales for evaluating user experience of e-learning students which were attractiveness, efficiency, perspicuity, dependability, stimulation, and novelty. Attractiveness is the overall perception of, and emotion towards the product. Efficiency refers to the efficient use

and feel of the product, whether the interface seems well-coordinated, and the usage is fast and practical. Perspicuity represents the unambiguity of the system, and intuitiveness and ease of its use. Dependability illustrates the user's control over the system, its predictability, and a secure feel of use. Stimulation and novelty are hedonic features which refer to user's motivation and interest towards using the product, and if the design seems creative and innovative to users. (Santoso et al., 2016.) These scales or features comply with other research papers.

To engage and motivate participants several factors for open online course design have been suggested which may be applicable to other types of online learning as well. These include e.g., participatory environments, relevance and generating satisfaction, and measuring individual success. It is also noticed that higher amounts of course engagement are related to ultimate course completion. (Salmon et al., 2017.) In comparative studies between learning platforms, some features and system requirements for e-learning platforms have been identified. The system should be compatible with other learning systems, have content management tools, ability to create and reuse learning content, have content distribution, integration, and authorization tools, have support for other necessary tools, have multi-language support, and the platform should perform well and be extendable upon need. (Aydin & Tirkes, 2010.)

In the study by Santoso et al. (2016) pragmatic system qualities were found important, whereas hedonic qualities received more neutral responses. The benefits learners recognized to be the most important in the system were the ease of accessing and distributing materials, possibility for online discussion, ease of submitting assignments and ease of gathering or distributing academic information (Santoso et al., 2016). User satisfaction could increase if the learning system is found reliable in sharing material and announcements, the communication means are functioning, and all participants receive material and messages with certainty (Bringula, 2013). Also, previous knowledge and confidence with selected technology has been seen to affect motivation. Motivators such as professional growth and career opportunities, curiosity and pleasure or high personal motivation have been found to be important for participation and success. (Salmon et al., 2017.)

Educational institutions and other education service providers have been transported into considering online learning methodologies, practices, and platforms more carefully in order to provide students with quality education and learning experiences online. Readiness of institutions may have varied in the quick transformation but assuring good learning outcomes and satisfying the learning needs and expectations of students is likely at the core of any education provider. Simultaneously, there are many different target groups with varying skills, needs and expectations, and online learning should be easily accessible and easy to use to accommodate many learner scenarios.

5.3 Other online learning success factors

Mohammadi (2015) investigated user perspectives of online learning and discovered that intention to use and user satisfaction impacted use of online learning positively. There, system quality and information quality were the central drivers of intention and satisfaction, with perceived usefulness affecting intentions as well. (Mohammadi, 2015.) In their study, Hassanzadeh, Kanaani, and Elahi (2012) presented a model for measuring success of online learning systems in universities. They note, however, that no single factor alone can measure the success of an online learning system, or any system. Assessing acceptance of e-learning using quality indicators like information, service, system, and instructor qualities collectively has more comprehensive explanatory emphasis (Cheng, 2012) and as mentioned before single indicators can often only partially explain e-learning acceptance. Much similarly to Mohammadi (2015), the model for measuring e-learning systems success by Hassanzadeh et al. included indicators of technical system quality, educational system quality, content and information quality, service quality, user satisfaction, intention to use, user loyalty to system, benefits of using system and goals achievement. (Hassanzadeh et al., 2012.) Intention to use a system is a decision to use a system beforehand and associates with user attitudes (Hassanzadeh et al., 2012). Intention has been defined as a central dependent factor in technology acceptance and refers to the probability of system use (Mohammadi, 2015). For example, in a study by Li et al. (2012) service quality, learning content quality, perceived ease of use and self-efficacy were found to be significant indicators for learner reuse intentions.

The higher the user satisfaction, the higher the success of learning systems. Content and information quality has the most direct impact on satisfaction and can also indirectly affect intention to use. Technical system quality and educational system quality also influence user satisfaction. Also, service quality through educational system quality affects satisfaction as more possibilities for support and collaboration exist. Satisfaction with systems also increases loyalty and incentive to recommend it to others, realization of benefits of system use, and lastly achieving personal or learning goals. (Hassanzadeh et al., 2012.) In those lines, Alsabawy et al. (2016) propose indicators of system quality, information quality, IT infrastructure services, service delivery quality, and perceived usefulness, which were found to impact systems success and usefulness.

This study has been mainly motivated by the research of Mohammadi (2015) in finding and evaluating different quality aspects of online learning systems. Mohammadi (2015) found educational quality, service quality, technical system quality, content and information quality, perceived ease of use, perceived usefulness, satisfaction, and intention to use to be the key factors to affect perceptions and intention to use e-learning. The background drivers of Mohammadi's work are in the IS success Model by DeLone and McLean (2008) and the Technology acceptance model (TAM) by Davis and Bagozzi (1992).

In their meta-analysis of existing research on e-learning technology acceptance, Šumak, Heričko, and Pušnik (2011) discovered that attitudes toward online learning technologies are influenced by factors such as perceived usefulness, perceived ease of use, learner type, and learning system settings. They also conclude that the technology acceptance model (TAM) provides a good model to examine online learning acceptance. (Šumak, Heričko, & Pušnik, 2011.) Mohammadi (2015) found educational quality, service quality, technical system quality and information quality all to positively impact system use. The impact was found significant but indirect through user satisfaction and intention. (Mohammadi, 2015.) As Al-Fraihat, Joy, Masa'deh, and Sinclair (2019) state, it is important to remember that e-learning systems success incorporates both human and non-human aspects. Both aspects and their implications need to be evaluated when studying e-learning success for example learner attitudes, course interaction, and system functions. E-learning systems success cannot be assessed with single constructs or indicators as it requires multidimensional evaluation (Wang, Wang and Shee, 2017).

When examining e-learning success and experiences of learners many indicators used for measuring IS success need to be modified for the e-learning context. In this study, an important part of examination were the thoughts and perceptions of the adult learners. This includes also other success measures than those, which are directly related to the e-learning system such as perceptions of the teaching, learning materials and other content, instruction and service quality, ways of organizing, and effect of self-managed and independent study on overall learning experience. This thesis focuses on examining what type of e-learning provides quality learning experiences and outcomes and is most suitable for the learning needs and expectations during the time of unemployment. This thesis is adopting and synthesizing some of the evaluation indicators presented in previous research and applies them as an evaluation framework for measuring learner satisfaction in relation to learning expectations and needs. The indicators are compared to the responses of the research interviews to identify indicators which are perceived to provide most value for the learner and what is the relationship between the other indicators and the learning experience. Also, other sub-indicators that have not directly been included in the framework will be discussed.

6 RESEARCH METHOD

Online learning has been widely studied from information systems and educational perspectives. In this research, these perspectives and findings are utilized to investigate the more specific use and learning experiences of the unemployed adults through individual interviews. More specifically, this research aims to investigate e-learning experiences of unemployed adults and identify factors which may influence e-learning success or failure. This includes considering how the target group of unemployed adults should be included in planning of online education and training. This chapter presents the data collection and analysis methods used in this research and describes background information related to the study participants.

6.1 Data collection and analysis

The research was conducted as semi-structured interviews for 10 unemployed adults by video chat or phone call in the Fall of 2020. Interviewing was selected as the research method because it was the intention to enrichen the previous research and the e-learning success and acceptance indicators identified. Previous research formed a theoretical frame, based on which the interview questions were formulated, and the data examined. Interviews were also chosen as data collection method to bring a voice to a specific target group of unemployed adults encaged in online studies and explore their experiences and perceptions of online learning in the light of the priorly identified indicators as well as analyze possible target group specific success factors.

Semi-structured interviews are a versatile method and have an advantage of having a structured focus on the phenomenon but also allowing participants to reflect on the phenomenon and give possible new meanings or views to the topic. This means that by combining open-ended and theory-driven questions we can explore the phenomenon though lived experiences and theoretically motivated concepts of the discipline. (Galletta & Cross, 2013.) The structure of the interview in this study was parted into segments starting with background information and gathering insight of the participant's understanding, moving forward with theoretically motivated questions, and finishing off with general feelings about the subject matter. The main advantage of semi-structured interviews is how participants' real experiences and theoretically driven interests can be addressed conjointly (Galletta & Cross, 2013). The interview questions were thoroughly planned beforehand using prior studies in the field as a basis and modifying the questions to suit the topic of online learning and the initial research question. The reciprocity of the research method allows for the researcher to inquire more information about each topic and ask for clarifications from the participant upon consideration (Galletta & Cross, 2013). Even though the method

allows some improvisation, the same basic interview structure is used for each participant for ensuring consistency and comparable data (Flick, 2018).

Semi-structured interviews were viewed as a fitting approach because it was important to capture the unique nature of the target group and their individual situations, expectations, and experiences of online learning as unemployed adult learners. By interviewing, the experiences of the learners could be captured in deeper detail and open-ended questions allowed the interviewees to reflect on their online learning experience more broadly and from various viewpoints. Some benefits of interviews as information collection method are that individuals are seen as subjects who are allowed to reflect on matters regarding themselves freely and create meanings. The answers can be transferred to a wider context, and through interaction between the researcher and interviewee answers and opinions can be expanded, to clarify and elaborate the information. (Hirsjärvi & Hurme, 2008.) Interviewing also bears some challenges. It is time-consuming, the interviewer should have sufficient skills and training, and many errors or misunderstanding can easily slip into the data. (Hirsjärvi & Hurme, 2008.) Many previous studies have evaluated information system success and online learning success and acceptance criteria and indicators via quantifiable methods such as surveys. The findings of this study could be utilized for question formation to gain more insight into the phenomenon. Interviewees were informed about the interviewing process and data processing and storing and asked for consent to use their answers for the purposes of investigating the research question. Reviewing the consent and going through the purpose of the interview together is important. The relationship between the researcher and the interviewee is clarified and the researcher declares responsibility in ensuring confidentiality (Flick, 2018). The interview consisted of basic background questions, some general questions about perceptions and views of online studying, and specific questions about online learning experiences. The questions were asked in the same order for every interviewee but allowing the researcher to ask specifying questions if it was seen useful for the purposes of the research question. This created necessary fluidity to the interviewing process but also tended to expand the interviewing time to longer than what was originally agreed upon. If the maximum time of 45 minutes exceeded, interviewees were asked if they still wished to continue. All interviewees agreed to longer interviewing time if it was necessary.

Based on previous research (e.g., Mohammadi, 2015; Hassanzadeh et al., 2012; Venkatesh et al., 2003; Seddon, 1997) some formerly identified e-learning success and acceptance indicators were adapted and applied to the array of interview questions of this research. The interview questions (see appendix 1) were formatted to produce insights to learner experiences about course quality, satisfaction, service quality, technical system quality, content quality, ease of use, perceived usefulness, teaching quality, and guidance quality. The interview contained four demographic background questions, including interviewee's age, level of education, and duration of unemployment altogether and before studies. They were also asked four questions about the studies and initial motivators: the type and duration of the studies they attended and what motivated them to start

studies in general and why these particular studies. They were then inquired about the expected and realized usefulness of studies, satisfaction in studies, their opinion about the quality of learning content, teaching and materials, what kind of guidance and counseling services were offered or included, and suitability of studies for their purpose or expectation. Similarly, they were asked about the technical system quality, platform usability and possible technical challenges, and if any of that affected their use experience and how, and the use of technical support. They were also asked about what they expected to be easy or challenging about online studying, and what the reality was like compared to their expectations. Lastly, they were asked to compare experiences of online studying to classroom studying, rate their learning experience, contemplate if unemployment influenced the decision to study or choice of subject, and vision what kind of studies would be interesting for them in the future. There were altogether 29-32 questions depending on the replies and potential additional clarifying questions. Generally, these questions provided thorough answers about the topics. The time allocated for each interview was 30-45 minutes and the average duration was closer to 45 minutes. Interviewees were pleased to explain their views further and provide additional information about their experiences. The interview structure can be found in appendix 1.

A preliminary plan was made for analyzing the interviews. The data analysis plan guides the documentation and analyzing process, like reading, re-reading, identifying themes and patterns, and reflecting ideas (Galletta & Cross, 2013). The interviews were transcribed and totaled into 114 pages of interview transcriptions (Arial, font size 12, before paragraph 0 pt, after paragraph 6 pt). When analyzing interview transcripts, coding, and categorizing the data are notable means of analyzing. The process is repeated where the researcher intends to find relevant parts, compare them, and theme and code the data – and ultimately attain understanding of the phenomenon. (Flick, 2018.) When the data is segmented thematically, categories can be formed if the themes share common elements. The categories might then have interconnections or possess some insight into the research question by dimension which can create a framework for the analysis. The qualitative research consists of a process of interpretation and synthesis of the data. (Galletta & Cross, 2013.) The interview data was thematically portioned and organized into potentially meaningful categories. If there were several similar mentions about a topic of the same tone and meaning, they were put together for later analysis. Prior research and findings guided the theming of the data and its analysis. Some prior and suspected indicators received validation and some target group specific notions were made related to some quality and acceptance factors. The conducted interviews were finally themed around and evaluated according to nine quality dimensions and their different indicators which will be discussed in the following chapters.

6.2 Background information about the study participants

The interviews were conducted with 10 unemployed adults. When conducting qualitative research participants are not selected through statistic means but by setting specific criteria for participation which supports investigating the research question (Galletta & Cross, 2013). A call to participate was posted in Facebook and LinkedIn from personal accounts of the author. Nature or reasons for unemployment was not specified but studies had to be conducted online and person did not have any working relationship during the time of studies (for example job alternation). One person responded via Facebook, nine people via LinkedIn (two of which had to be declined because they did not meet the criteria) and two people were discovered through personal networks. Participants were first presented the research permit and data privacy statement. All participants agreed to the conditions presented.

Average age of the interviewees was 44 years with youngest interviewee being 29 years old and oldest 57 years of age, which provided a good age scale for the research. Seven of the interviewees were women and three were men. Three interviewees had a vocational qualification (upper secondary level education), three had a master's degree level, and four had a bachelor level background education. Only one of the interviewees was attending studies which were not in any direct way related to their previous or desired working professions. This means interviewees had mostly gravitated towards studies which were seen to directly benefit them professionally. Six of the interviewees were studying at open university (one later applied for degree studies), one studied in a MOOC organized by a major online learning provider, two attended studies in a community college and one in a vocational institution. One interviewee was also simultaneously participating in studies provided by a private provider. Studies at the open universities and certificate studies are typically paid studies whereas degree and qualification studies and community college studies in Finland are commonly free of charge. Participants may be entitled to unemployment benefit or study benefits. The demographic information of the interviewees, their type of online studies and main motivators for studies can be found in table 1.

Table 1. Research interviewees.

No and profession	**Age, gender, educational background**	**Type and duration of study, included fees**	**Work- or profession-related studies**	**Main goals or reasons of study**
H1, product specialist	33, F, Bachelor's degree in business administration	Courses in HR, Open university of applied sciences, paid	Yes, complimentary	To get back to the pace of working life and aid re-employment; Hopes to work with similar things in future work

P2, unemployed nutritional therapist	55, F, Master's degree in natural sciences	Course in adult digital skills, Community college, free of charge	Yes/no, general	Updating necessary skills for personal and working life
P3, project planner	29, F, Master's degree in environmental sciences	Course in wellbeing, Coursera platform/Yale university, free of charge	No, general	Personal interest and wellbeing; To have meaningful activity during unemployment
P4, teacher	52, M, Master's degree in economics	Master of economics degree studies, Open university and later admitted to degree student status, paid/free of charge	Yes, new degree	To attain master's degree, personal interest in subject matter and possible pay grade increase, financial situation allowed studies (earnings related unemployment allowance)
P5, salesperson	55, M, vocational qualification	Vocational studies in procurement, Open university of applied sciences, partial attainment, paid	Yes, new qualification	To attain professional competence; Hopes to gain employment in studied field
P6, unemployed specialist	42, F, Bachelor's degree in business administration	Courses in technical engineering, Open university of applied sciences, paid	Yes, new field of working	Personal and professional development; Testing personal capabilities after illness
P7, unemployed engineer	44, M, Bachelor's degree in engineering	Course in environmental engineering, Open university of applied sciences, free of charge for unemployed	Yes, complimentary	To have meaningful activity during unemployment; Improving professional skills (upskilling)
P8, laid off travel agent	57, F, vocational qualification in travel	(1) Vocational studies for travel services at community college, free of charge; (2) Certificate training in interior design, Private organization, paid	(1) Yes, complimentary; (2) Yes, new field of working	To have meaningful activity during unemployment; to learn and improve practical skills
P9, in work tryout	31, F, bachelor's degree in pharmacy	Studies in health and social services administration at open university, paid	Yes, new field of working	To attain master's degree and later doctoral degree; To have meaningful activity during unemployment and learn new things
P10, testing specialist	42, F, vocational qualification	Vocational qualification studies in IT services at vocational institution, free of charge	Yes, new qualification	To attain professional qualification; To change field of work

Most of the interviewees participated in studies that were seen to upskill and expand their current professional knowledge and skills. Work-related reasons of

participation could be seen as an indication of motivation to improve own employability. When examining the direct effects of studies on finding employment the results were harder to evaluate. Many perceived that the studies would increase their professional skills and that way aid employment. It was also important to show employers that skills development was done during unemployment. Some interviewees had more challenges in describing the direct or undirect benefits of studies to personal or professional development or finding employment whereas some were sure that studies would impact their employment outlook positively. Some things interviewees looked for in the studies were usefulness for employment, usefulness for professional development and upskilling, potential for salary increase and potential for career change. Adult learners often appreciated flexibility, practicality and discussive nature of the studies. The fees of the studies can guide the selection of studies depending on the financial or general life situation. Sometimes unemployment can limit the choice of studies or participation overall because of legal constraints in employment status or receiving of benefits. Table 2 presents possible employment impacts of studies of the interviewees and more detailed information about the duration of studies and their study history.

Table 2. Interviewee study and unemployment history and status.

No and profession	**Duration of unemployment before start of study**	**Duration of studies**	**Current labour market status**	**Previously attended studies**
P1, product specialist	9 months	2 courses, one semester	Employed, after studies	10 years ago
P2, unemployed nutritional therapist	24 months	One course in 4 months	Unemployed, during and after studies	Several studies during unemployment
P3, project planner	0.5 months	One course in 10 weeks	Employed, during studies	Less than a year ago
P4, teacher	3 months	Degrees studies over the period of 6 years	Employed, during studies	Studies while working before start of full-time study
P5, salesperson	6 months	one semester (online for 3 months)	Laid off, during and after studies	Vocational training 20 years ago, vocational unit studies one year ago
P6, unemployed specialist	4 months	2 courses in Summer, 1 course in Fall semester	Unemployed, during and after studies	17 years ago
P7, unemployed engineer	6 months	One course, 3 months in Summer	Unemployed, during and after studies	Bachelor's studies 20 years ago

P8, laid off travel agent	3 months	(1) one semester lecture series; (2) 1 year	Laid off, during and after studies	Vocational training over 20 years ago; has attended courses throughout the years
P9, in work try-out	6 months	39 credits, 1.5 years	In work try-out, after studies	Bachelor's studies 3 years ago
P10, testing specialist	1.5 months	1.5 years	Employed, after studies	Vocational training over 20 years ago, some higher education studies over the years

7 RESULTS

Niemi & Ruuskanen (2018) described how people with work experience had evaluated the general impact of the work-related training they had attended. More than three out of four felt the studies increased their work motivation, almost two out of three had received new work tasks, about half of respondents had moved to a more challenging working role, about half also felt they were able to retain their jobs, third of respondents had received more pay after studies, and a third felt it helped them land a permanent job. (Niemi & Ruuskanen, 2018.) Similar findings could be made from the interviews of this study. The online learning quality dimensions, learner motivations, relation to previous studies and conclusions are presented in this chapter.

The results are presented below. The content in each subchapter has been sectioned for clarity and the results are supported and demonstrated with interviewee quotes. Text bits inside brackets in the quotes are sometimes added to clarify the messages. Removed parts are marked with two hyphens inside brackets (--) but these missing parts do not alter the original message. Interviewees and their background information have been collected into a table, and all interviewees have a designated id. The table (Table 1) has information on gender, age, educational background, type, and duration of study and if studies were profession related and what were interviewees main motivators for study. Following designators are used to differentiate the answers. Designator consists of gender, age, and type of online learning. F stands for female and M for male.

P1: F 31, courses in human resources (P1)
P2: F 55, course in digital skills (P2)
P3: F 29, course in wellbeing (P3)
P4: M 52, economics degree studies (P4)
P5: M 55, vocational studies in procurement (P5)
P6: F 42, courses in technical engineering (P6)
P7: M 44, course in engineering (P7)
P8: F 57, studies in travel services and interior design (P8)
P9: F 31, courses in health administration (P9)
P10: F 42, qualification studies in ICT (P10)

The research applies a "combined model" based on earlier studies because of the common denominators identified in this study. The research indicators chosen for this study align with previous research in e-learning success. These indicators include educational quality, service quality, technical system quality, perceived ease of use, learner satisfaction, perceived benefits, as well as content and information quality. Additionally, indicators of communication quality, learner personal capabilities, and perceived usefulness for the target group are introduced. This chapter presents the results of the interviews. The interviews will be evaluated according to the identified quality dimensions and each dimension forms its

own subchapter. Interviewees are commonly referred to as “learners” instead of “users” because they evaluate the system mainly from a learning perspective.

7.1 Educational and course quality

Educational quality from system perspective is range of system features that facilitate learning and enable valuable learning environment, and choice of how these features are utilized to support the learning process (Mohammadi, 2015). According to Hassanzadeh et al. (2012) educational quality relates to the scope of system management tools that set up the learning environments. Educational quality refers to system quality of available system features which can be seen to aid learning and the system’s ability to provide a collaborative and guided learning environment (Mohammadi, 2015). Interactivity and active participation, instructor skills and attitudes, applied platform features, evaluation and feedback processes, and discussions in the e-learning process, were all found important by the interviewees.

7.1.1 Instructor expertise and attitude

Instructor expertise and attitude can be a strong influencer on the learner experience and affect the perceived quality of education. Instructors who have broad knowledge of their subject are often able to better relay their teaching to learners. Noteworthy in higher education is the significance of gained practical knowledge and experience. Instructors understand their topic and its practical implications more thoroughly and can select and arrange the learning content, pedagogical choices, and curriculum in most beneficial ways and provide quality teaching. (Martin, 2021.) The way the instructor conducts the classes, presents the content, and treats their subject can affect the perceptions of the learners. Instructors who were experienced in their field and genuinely interested in their subject matter, were those who gained most positive reactions among the interviewees. For example, P4 accounts having appreciated most teachers who had a lot of knowledge and experience in the matter. Expertise could be observed for example by the provided real-life practical examples in the lectures. This also made the lectures livelier and more interesting and made applying theoretical information to practice more understandable to learners.

> For most part of teachers there was the knowledge and skills in place. For those who were present and actually giving lectures, the know-how was apparent. --- and also, in classroom studies the best part was the teachers who mastered their substance. Like this lady who had had an accounting office, it was admirable, the substance know-how. (P4)

P5 also points out, that he felt the chosen topics and materials were relevant to the learning subject and the teaching was "adult appropriate": friendly, trustworthy, and easy going and the atmosphere overall was good. The lessons were prepared in instructor pairs, which may be a good way of reviewing the suitability of materials and accuracy of information and assuring versatility.

> Yes, the teachers had orientated themselves. They prepared one course always in pairs. And the pair was changing, so the content wasn't the same. They clearly had understanding and experience, not just book smartness - and I thought that was the best part. (P5)

Among the interviewees, motivated instructors often created a positive response in students. P8 found it a preferable learning scenario when instructors were motivated and interested about their own subject matter and had prepared the teaching and materials well and in a versatile manner. This also created trust in instructor abilities.

> I think for the most part the teachers and the training instructors had prepared for the courses, or prepared high-quality teaching. Sometimes they show video, sometimes showing something else… They could do it. (P8)

When instructors seem uninterested in their matter, it can cause negative emotion in students. This means, the instructor has somehow failed in providing a high-quality learning experience for the learners.

> I would rather say surprised than satisfied. There were many practical things that came as a surprise. Completely. Like this one teacher. --- Even though I guess study programmes are generally well constructed, like what is included in the study. Well, the quality management course, the teacher clearly did not take it to heart. All the materials and the course structure, it was clearly made by someone else. That also affected the course assignments and grading. In the other course, it was clearly a passion for the teacher. The materials and presenting were different ---. (P6)

Also, P4 remembers, that the courses sometimes felt as if they had no instructor involvement and that the learners were left to guide themselves through the studies. Insufficient instructor involvement also affected the satisfaction and experienced quality. In addition to "insufficient" written materials, insufficient teaching was also an issue recognized by P10. Although perhaps a rare occasion, P10 had the experience of a teacher only handing out exercises and leaving rest of the learning process for students to take care of. This left students in an unequal position, as some were able to apply previous knowledge, whereas others were more at lost.

> Well, there was one type of teaching and another type. There was one teacher who never recorded his online lectures. I think it was because the so-called-lecture only lasted for 15 minutes, and he just basically gave us an assignment. Never taught anything because he thought we should all learn ourselves. I don't know if I could've done

> if the subject was completely unfamiliar. Like I already knew some things, some from working life. --- But I did have to advice my study mate a lot. (P10)

At least partially homogenized teaching practices in the institution could serve especially in online learning. Learners would for example learn to use the chosen learning system, prepare assignments in a desired manner, and do exams and access additional information in a harmonized manner.

7.1.2 Evaluation and feedback processes

Providing evaluation and feedback can be important for learning. According to some interviewees, it can be challenging to evaluate own learning and progress when final evaluation and feedback are not provided for learning activities such as exams. Simple good grading might not necessarily guarantee good overall learning results if learners are not told what the basis for grading is, where mistakes were made and what could be improved in their understanding of the topic. Well-defined and communicated pre-requirements for participation, learning goals, ways of working, and appropriately chosen learning models and methods for the purpose of the study can support meaningful evaluation and feedback processes.

> The actual exam was only open that day for a certain time. --- and I would have wanted to know the correct answers and the professor told me to email him and he would send them. Which is… Normally those Moodle [online learning environment] exams just show how many answers were correct or incorrect. But his exam had questions like… there was one bigger task with several fields. --- it had calculations and other things. So, then the professor messaged me that he could not give me the answers because other students might benefit from getting the correct answers. So, then I realized he must use the same exam for every new course. --- I got a good grade but personally I think it would be better for learning to see which mistakes I make to know where I need to improve. I would have really needed it, but he didn't see it that way. (P9)

Among methods applied to evaluation of assignments, presentations and other learning tasks is *peer reviewing*. However, students peer reviewing each other might, according to an interviewee, lead to inequal and inadequate evaluation.

> I don't know if it has anything to do with how the online studies are organized but a phenomenon could be observed that students were put to evaluate each other's work and I don't think that's professional. What if there's a student that does their assignments really well. And then there's another student evaluating their work that doesn't know anything. And in that case, they don't appreciate or in worst case criticize or judge the assignment based on their inadequate skills and knowledge. --- we commented on it many times online that this can't be the case - but it was. It's a trend ---. I would leave those things out. (P4)

It is a rightful consideration, whether reviews or evaluations made by other students yield the best results when it comes to learning. As P4 puts it: "The teacher

has at least technically the qualifications and understanding of the subject. So, they should be evaluating students' work". There might be discrepancy among learner skills, capabilities, and motivation to carry out peer reviewing tasks. At least if peer reviewing is applied in the learning process, it might be better to go over the results together with instructor involvement.

7.1.3 Discussions as a part of learning process

Many interviewees considered discussions and changing of thoughts with other learners a good and beneficial addition to the adult learning process. Many enjoyed the discussions in e-class and found it insightful to hear real stories and experiences regarding the learning matter.

> I really liked it when there was material. So that it is not just slides but that we can watch video clips and -- matters could be discussed and considered in small groups. -- It would be good if it were possible to incorporate multiform elements in online learning and not just have lectures. (P8)

Learning which includes different learning methods and interactive modalities was considered better than mere one-way lectures and materials among many interviewees.

> It was sometimes tiring. --- so one-sided. You just listen to that jabber and can't participate in any form. It becomes this lecture-like state and just to sit there for one and a half hours doing nothing else, it's a pretty long time. --- And other times the chat is muted. There isn't any kind of social interaction or talking. I am used to working in social environment, so I guess I miss some kind of chatting and exchanging thoughts. (P8)

Although, "forcing" participation by direct questioning during online lectures was not considered bothersome to interviewees of this study it is nevertheless sometimes a contradictory way to gather responses. Participation and interaction can also take place in online discussion boards, live surveying during lecture, or placing participants in breakout rooms for small group exercises. Any forms of engagement in class should be in line with the context, such as the topic, group size, lecture time, and individual teaching styles. Some found however, that including discussion in the learning process was good because a lot can be learned from peers and their experiences about the subject.

> If you already have practical experience with the subject like the teachers, you might have a hunch of the common underlying issues. And they had clearly gotten practical examples and could apply that knowledge into questions in class. Of course, by asking questions by our names they would then get answers from people with different backgrounds. --- I liked it [the teaching]. It was the kind adults can have. Kind of relaxed, friendly, and trustworthy. We had a good atmosphere. (P5)

Practical experiences of instructors and other learners was appreciated. It was seen that sometimes participants with real-life knowledge of the subject can ask more precise questions, make well-informed comments, and discuss the matters on practical level which can be interesting to others as well. For example, P8 found that storytelling and practical examples made the matters easier to remember and gave them shape. If class discussion is incorporated in the learning process, it is however important to plan for the use of shared learning time so that it does not outplace the formal learning contents. Discussions in e-class with the instructor and other learners were mentioned by some interviewees as an important and insightful addition to the learning experience.

> What I thought was absolutely good [about the learning experience] was that you could talk with the teacher. Especially in our accounting classes, practical examples were given in classes and then we discussed about them – that was the best. (P4)

Sometimes enticed participation did not yield good results among interviewees. Especially if the learner does not have practical experience or is not familiar with the subject the least. Sometimes giving concrete examples might prove useful to indicate what the instructor is looking for. Some course modules even placed large emphasis on participation in discussion, which to some learners can feel more challenging, especially without any work life context or prior studies to support the discussion.

> I felt really good about the course. And then a complete plummeting. --- the final nail in the coffin was that -- each one had to select a topic for themselves to cover in exercises and to discuss with others over the course of the study. And that will form the individual grade. And the instructor emphasized that without active participation in discussion modules you could not pass. That he will place a lot of emphasis on that. I still haven't chosen a topic for myself. --- I haven't been able to complete even a single assignment. (P6)

Some form of learning support could perhaps be offered to adult learners. Especially if they have not participated in learning for a while and some learning methods or customs are unfamiliar to them. If the content or learning assignments mandatory for passing are too challenging, there should be advice or instructions available for example for receiving help, more time for completing tasks, or even how to terminate studies.

7.1.4 Learning platform pedagogical choices

Most modern learning management systems or learning platforms contain a multitude of features, add-ins, and qualities that can support the online learning process. However, the instructor or institution has the responsibility of utilizing these features and components in building the online learning experience. This is why, although the system technically enables these features, they are not examined as system quality features but rather pedagogical choices that the system provides the opportunity for which can then be utilized or left unused. Some

qualities can support the learning process and aid the learner in achieving their learning goals. Whereas some qualities whether they are poorly designed or poorly used, can feel disturbing or hindering the learning process. The interviewees had experiences with both.

> The Yale course was well constructed. It was planned… or the learning schedule was given in advance and the Coursera app defined, based on when you logged in, your own deadlines. So, it was really flexible to carry out the studies at your own pace but at the same time the app encouraged you to keep to the schedule. --- the platform had good incentives and support via the app to complete the studies on schedule. --- I found the platform fairly clear. It suggested many different options. Like if you want to listen to an audio of the material or read it. And it had many links to other sources if you wanted to know more about the topic and… Like, you could choose based on your own interests, how to report an assignment for example. --- Like, you could personalize the carrying out of the course how you wanted. (P3)

P3 reports that the LMS in their studies supported the learning process well for example by making the study schedule visible and giving different options for completing learning tasks. However, as P6 describes, in their study platform, the materials uploaded were of varying quality which complicated studying.

> Well, links were put there [on Moodle LMS] and you could access the materials that way. --- It was apparent that different instructors had uploaded the different materials because the links always opened differently. In one format, you couldn't hear the speech even if you set the volume to maximum, and in the other videos you set the sound at 10% and it felt like loud screaming. (P6)

The platform might entail many sophisticated qualities, but the instructor has to take them into use for the learning purposes and evaluate their purposeful use. They need to be aware of the different qualities and features and know how to utilize them to support the learning process. The system provider is also accountable for supplying a reliable and well-functioning system, and instructions for use. Also, when planning the course outline and structure, the system can partially guide the user to make meaningful choices.

The learning management system or learning platform can have many inbuilt features that assist the learner and make learning processes leaner. P3 reported having used the Coursera application where learning content had been chunked into smaller parts to make content user-friendly and easily attainable. Chunking content can also include giving subheadings, using accordion elements, or dividing content into more than one tabs. On the other hand, P3 mentions this can make the overall visual structure of the course look "messy" with too many chunks.

> I thought it [the platform] was very clear on the surface. --- I mean all the content was divided into really small chunks which was… Well, if for example there was a one-hour long recorded lecture it had been chunked under several titles on the platform. Like into three or five clips to make it user-friendly and to be able to listen to small bits at a time. --- But then I found it a bit messy because there were these small bits here

> and there. But then again it was rather easy to follow the content. The system checked with a marker everything that had been opened or a lecture that had been watched or an exam finished, or material read. So, in that way it was really easy to follow own progress and the chunks that had already been completed. (P3)

As P3 mentions, the online learning system can also help the learner to follow their progress by giving visual cues such as check marks when a section has been completed. Modern learning systems that are continuously developed and improved have qualities that can assist in re-structuring and chunking the course content into a more comprehensive entity instead of one large chunk with only some accordion elements at best. They can also support system interactivity in following learning progress and allow personalization.

7.2 Technical system quality and perceived ease of use

Technical system quality commonly refers to accurate, efficient, and error-free information systems with desired features (Mohammadi, 2015). Systems indicate good perceived ease of use when learners can focus on the learning instead of spending time to learn system use which also increases satisfaction (Sun et al., 2008). Among the interviewees, technical difficulties did not form a dominant issue. Rather, challenges occurred with accessing and obtaining online materials and using other external or required systems. This was often caused by not having a full-day student status or rights and not having sufficient instructions on how to obtain or use these systems. Some common errors also occurred on the learning platform like having the course area opened for learners tardily and having the course materials in disarray. Among the interviewees of this study technical factors affecting the learning experience included general perceived ease of use, and usability of the learning platform, online meeting software, and other additional digital tools used in the learning process. Generally, it seems, the technical inaccuracies or difficulties were often not the source of major dissatisfaction, perhaps because they seemed rather uncommon, and issues often were rather user-related or having to do with how the learning was organized.

7.2.1 Platform usability and perceived ease of use

A commonly used indicator in measuring system quality and success is the perceived ease of use. Perceived ease of use of the learning systems can be applied to the e-learning context as well. Perceived ease of use is often described as the perceived effortlessness of using a system to achieve some goals (Davis, 1989). Many of the interviewees who had good technical capabilities or previous experience with learning management systems and platforms expected the use of the system to be easy. These learners had few if any technical challenges, and in the face of challenges often knew what to do and were not defeated by obstacles. For

example, P3 had previous experience in organizing and planning online courses and P10 admitted having strong IT-skills acquired before the start of study.

> I didn't really have any challenges with the IT because I already had a strong skillset at that point. The only technical issue came up because I didn't have the needed access rights [to the learning platform]. But that is something I couldn't control myself. It was right at the beginning. – if there were more issues it would have undoubtedly affected my view negatively. (P10)

> Well, I expected that using the online learning platforms, and understanding how they work would be easy. Mostly because I had already used course platforms for my work. I didn't think it would a major issue for myself to study online as supposed to attending a traditional classroom course. --- I had already some use experience that there really were not many surprises. I have not participated in many online courses myself before, so from that perspective it was interesting to attend as a learner. (P3)

> The internet connection at my home is a little slow which caused some challenges occasionally. But the software in the course or the learning system ran properly, you just had to learn to use it. --- Okay, so if you participate in this type of training without any ICT skills… I mean, I am engineer and have worked for a big company with meeting software and different digital tools, so it's easy to take a view of just trying things out. Using it and making progress. But if someone doesn't have any prior experience, it's possible they might have needed more guidance. (P7)

Those who did not have as much experience, felt some insecurities before the start of study and during study. When asked what type of challenges were expected in online studies some interviewees mentioned uncertainty about own skills with IT and how to overcome this hesitation.

> Well, many these new IT related things are a bit unclear. So, I was very uncertain about how it was going to go. And especially when the teachers weren't in pro shape either – they were learning too. Learning how to use the tools, first with some snags and then excellence. (P5)

> Then another [challenge] was that I wasn't sure how these systems work. So, it was really a big challenge for me to even start with the beginner's things to even get the learning started. (P6)

For P5, overcoming obstacles and the learning curve with the needed IT solutions proved successful and they were happy with the result. As for P6, the initial hesitation and insecurity was more overwhelming and at the time of the interview, the online learning still wasn't progressing well.

Although most of the interviewees had neutral feelings toward the e-learning system, some interviewees had also seemingly positive usability experiences.

> We used Moodle. All the videos and other materials could be found there. It was handy. Our primary vocational instructor uploaded everything there. It was nice to know that it was possible to return to Moodle later and view the recordings afterwards also. --- I thought it [the learning platform] was really good. I can't think of anything

> to improve or… It was very clear, and it was easy to use. Like, if you ever used any online service you could learn to use this too. (P10)

> Well, probably like in general it was fairly clear what the deadlines --- were and what sources to use and so on. Like… using the platform was easy. There was nothing hard about it. --- It was fairly easy and clear. I didn't find any challenges. It was okay. (P1)

> I thought the platform was functional. I can't really compare it to other similar solutions because I don't have experience. But I think it was functional and user-friendly. At work I have used SAP resource planning system, and it is not user-friendly, but it works. But this system was both. (P7)

The interviewees were asked to reflect on their most recent or ongoing online studies but were also allowed to compare them to previous online experiences. In general experiences with Moodle learning management system seem positive but as P3 reports, platform quality alone does not guarantee a high-quality learning experience. The professionals and instructors working with the course have a responsibility in how they organize the content and utilize the platform features.

> I have nothing to complain about the [Coursera] platform. --- There was nothing I would have been dissatisfied with. I thought it was fine. --- But the Moodle platform I used for the employment services course was often confusing and wasn't built visually cohesive. You could see from the way it was organized that they had just uploaded loads of things one after another. When you opened the course view, you felt like you couldn't even begin to digest all the stuff there was, and what would be useful for yourself. And I feel like for many jobseekers participating in that course, it can be a bit… or I think you would need instruction to use that content. Like which link to open and which exercise to do. I don't think it really encouraged independent study. (P3)

> It [Moodle learning system] is a bit stiff. It looks like 80's tax administration software or whatnot, but it worked without a problem. I bet it just looked outdated to me, but it doesn't really matter. It worked and very well. In all three institutions I attended, it worked very well. --- There were very little technical difficulties. The stiffness of the user interface or the complexity, that's not a problem. It's more like a feature. But if I had to say if I had any technical difficulties with it, then no. (P4)

> There were no problems. Sometimes I saw a message in our WhatsApp chat that someone had issues with logging in to the system. But usually those were fixed. I never had any difficulties. (P5)

In most cases the institution and the instructors had a common learning system in use for organizing online learning. Those interviewees who used more than one solution in use in their studies, expressed confusion and sometimes dissatisfaction with the use multiple platforms. Focusing the learning process on one platform makes it easier for the learner to assume the structure and access and use the content. Centralizing the operation in single system location can help in agreeing about common practices and guidelines in organizing online learning

in the institution, giving instructions and training about system use more efficiently to instructors, allowing continuous development of best practices, and ultimately providing a better experience for learners.

Challenges with the learning platform or other tools can cause challenges and dissatisfaction. Challenges with the chosen technologies can affect the overall learning experience.

> I had so many technical challenges. Different installed bases, different operating systems, sufficient internet connections… Absolutely I had technical challenges. It was frustrating, tiring and aggravating. (P2)

7.2.2 Online meeting software and e-classes

Online meeting software technical quality also affects modern online learning experiences. Online studying might often incorporate online lectures or similar online meetings. What was noticed to affect this experience among the learners of this study were in particular the varying participant skills in using the software, varying instructor skills and capabilities in using the software, and often lack of online meeting etiquette and best practices.

> Our group was very diverse and unstable. Meaning some took a while to find which button to click, and some were more experienced users. The heterogeneity of the group disturbed the studying to some extent. And I think we should have had a longer introduction into the principles and logic of the different platforms ---. Occasionally I think things could have been explained to us more clearly step by step, what to do and where. Especially because our group was so miscellaneous and when there's a lot of information it's simply not possible to adopt and remember everything. --- And if the person teaching is digital native, they might not realize that one small move can be enough for someone to fall behind in class. (P2)

A challenge in e-learning can be identifying the sufficient skill level of instructors and learners in using tools and systems necessary for e-learning. As P2 reported, their group of learners was very miscellaneous which caused challenges even during the e-classes as some learners were uncertain about the technology. This may cause hindrance to other participants and in repetition even pose a challenge to overall course schedules. The learning experience might also vary depending on instructor pedagogical and ICT skills in using different tools online. When organizing online learning it may be often assumed that instructors have good capabilities. However, teaching online is very different from contact learning and online learning might require skills that instructor has not needed before.

> What most bothers me in the [online] sessions is, when the instructor doesn't know how to use the different buttons like "oh, how do you get the sound on" or "how do I get the video to play" ---. And they talk out loud and you can see they are insecure. Not everyone is so fluent with the tools. And then you as learner lose the learning focus a bit when you're just staring and waiting for something to appear on your screen, and nothing comes up… --- I think more attention should be placed on the

> sufficient training and abilities of instructors when conducting online studies and meetings. (P8)

Users gain experience and confidence in commonly used software which would encourage cohesiveness in learning practices at the institution to make learning experiences good by ensuring decreasing learning threshold for additional software by encouraging use of same software in teaching. Choosing appropriate tools for online study seems also an important factor, and intuitive and easy to use software are no doubt preferable. At the beginning of the course, common practices in e-class and functionalities of the used software should be explained briefly to participants to avoid confusion and distractions in teaching. As the use of online meeting software has surged and they are widely used in the learning context, assuring sufficient skills of instructors and learners is important for them to access and utilize these tools.

> They [the institution] had never used Moodle or similar [LMS], which was surprising. We used Zoom [online meeting software] and I was also a bit surprised that it was sometimes hard to access the meetings. That the links didn't always work even though we had the meeting IDs and passwords and all. --- The other instructor didn't have any trouble organizing the meetings and they were easy to access. But when the other instructor organized the meetings, we needed the IDs, and it was harder overall. It was a big difference, and it felt a bit inconvenient. -- But I guess the instructors were also learning. (P2)

One challenge that the interviewees mentioned was the lack of common practices among instructors when using this type of software, as well as instructors having difficulties in operating the software or using its features, such as scheduling online meetings. It would be important to ensure that instructors have received sufficient training and instructions for the use of the platforms and other tools. Varying practices and uncertainty in accessibility can cause negative emotions and confusion among learners. It is important to notice that adult learners may also find varying teaching practices and changing software a bigger challenge if they do not have much experience with digital tools. Common teaching practices and ways of organizing online learning across the organization could benefit especially adult learners. The institution could organize the required training for its employees. Learners of this study also often brought up the situation created by the Covid-19 pandemic which forced learning institutions to organize their operations online.

> When the Covid pandemic began, I mean, the instructors needed to make a big digital leap. So, we were all learning to operate online in a group, and discuss online and behave online in a group, and use all the tools. And how to break out into smaller teams, and return to main meeting, and how to do all the group work online. So, there were many bigger and smaller digital changes. --- [I was satisfied that] we learned how to use the digital tools rather well, at least those we were using. I'm not saying we used *all of them,* but they were good tools and I could live with them. (P5)

Switching the ways of learning and teaching from physical classrooms into virtual ones has been a big effort from both students and teachers. Some learners have gotten the chance to get to know a new way of learning which they might have found fitting for themselves. However, there are many unemployed adults with lacking digital skills. It should be acknowledged that learning online is not the most suitable or realistic option for all adult learners. Most of the interviewees of this study had knowingly participated in online studies and some had to switch to online form because of the pandemic which prevented classroom studies for a long period. In general, however, the interviewees seemed pleased with their own learning performance, the efforts done by the instructors in switching to online environments, and the joint achievements in learning new tools and ways of working.

7.2.3 Additional tools and software

Often online studies might require additional or supporting tools and software such as tools for accessing learning materials like media players, browser with certain qualities, or software to open some file types. Sometimes materials can be accessible in external locations and learner access rights must be arranged. If learners need additional tools, or rights to access information in order to achieve their learning goals, necessary preparation should be made before the start of the course. This could include ensuring learner access or providing needed instructions beforehand or on the learning platform. It would also be important to communicate the need of additional tools or software before students enroll, so they can better assess the course content and requirements. And, before the start of the studies, it is important to confirm that all necessary supporting systems and tools are functional and accessible. If the use of the tool is essential for the successful completion of the study or can potentially affect learner performance, it is critical to ensure their operability. Having issues accessing learning resources can not only leave a negative feeling but also affect learning performance negatively.

> The only issues I had, was with the online library. I couldn't access the materials. I had to go to the physical school library to collect a student library number. And then at the library I tried to print something, but I couldn't. So that was a kind of technical challenge although not directly related to the online courses. Anyway, there I couldn't use the printer which I normally know how to do. (P1)

> Well, just yesterday I had to use Dropbox and it was horrible. --- My own IT skills could definitely be better. Because of Teams, Zoom and some others, and this Dropbox and everything. Even if the operating principle was the same, there is always something different. I have not had any training on how to use these programs and how to participate online. I don't know if it would have been necessary, maybe a short introduction? --- It could be good to have a quick training on what to do in the system and where to find everything etc. It wouldn't have to be very thorough; the use is quite simple after all. Maybe only a minute or two, like efficiently. --- I have a lot of these kinds of issues because I haven't done anything like this in years. (P8)

For P1, the needed materials were accessible in the online library as e-materials but the access to materials was not ensured before start of the study. Also, in order to gain access a visit to the institution was mandatory but there was no mention of this in the pre-requirements. This means the materials should have been accessible in another way or the situation resolved without a visit to the school library. P1 also mentioned many practices disregarded adult learners as a specific learner group and were intended for full-time students. Instead of only adding learners as users of resources or granting them access, learners also need instructions and possibly support with the needed tools.

> I feel I have benefited from online studies in many ways and also these learning tasks. --- I have really had to challenge my technical skills, which have been like stuck. --- I have to use these systems to complete the learning tasks, but the lectures do not prepare you for their use. So, you have to learn by yourself through trial and error. (P8)

P2 participated in studies that focused on learning better use of new digital tools and for ease of instruction and version and user interface compatibility, it was recommended that all participants use devices with same operating system and devices were even given for them for home use. According to P2 this was partly because of lack of time to go through the ambitious course plan and may cause difficulty when trying to manage same systems on different devices in the future. However, P2 agrees, it was a good solution in the end and supported learning. What resources are available to the learner may also affect how the learning resources can be utilized.

> I was happy with the instruction in class. But sometimes there were issues. For example, when we were training with Photoshop the instructor didn't realize that I had a different type of laptop and a different version of the software. So, I was stuck with the same problem and the instructor didn't realize what the problem was. --- We could also borrow laptops from the school. --- And we noticed that in practice it was easier to use similar devices. (P2)

> Well, when I started the course, I had my old phone, and I had no space for new applications. --- The learning got easier when I got a new phone and downloaded the app. Before that I used the browser on my mobile phone which was okay. But the app was better. --- it was clearer that way and it is easier to remember to open the course regularly due to the existence of the app. (P3)

If for example downloading a mobile application is recommended, like in the case of P6, it should be mentioned in the pre-requirements for participation. Even if it's not a mandatory requirement, it is good for learners to know that use of the application is recommended to support learning and for this purpose the learner needs a smart phone. For some learners it was challenging to find out what type of tools were required overall for the completion of the studies and how to acquire them for learning use for the duration of the studies.

> And the information system. And the library was closed. And you need this and that tool in order to complete the course, some computer software. I found that information.

> Even I noticed it before the instructor went on holidays, I got it sorted out with the IT department. But gladly I took a screen capture of the instructions because I couldn't locate them ever again. I don't even know how I stumbled upon them in the first place. (P6)

For P6, IT department helped with getting the necessary software. Finding the information on required additional tools was not easy and learners we not informed thoroughly beforehand. P6 participated in online studies during the Summertime which also exposes a common challenge in summer studies: instructor was on holidays and services at the institution were similarly unattainable, excluding the IT support. Regardless of the season of the study, availability of learner support should be ensured.

7.3 Learning content and information quality

Information quality has been often recognized an important e-learning success measure in previous literature (e.g., Hassanzadeh, Kanaani & Elahi, 2012; Ozkan & Koseler, 2009; Mohammadi, 2015 etc.). Learners recognized aspects such as combining different learning formats, importance of practical examples and practically driven teaching, up-to-date materials, appropriate amount of materials and resources, and having easy to access materials.

7.3.1 Combining different learning formats

When asked about the quality of the materials and the execution of the learning experience, many report hoping for more versatility in the learning process to make it more engaging and interesting.

> The content was interesting and… well, actually suitable for online learning. So, there was no problem there. The materials were really fact based, literary sources of the legal field and a lot of different law texts. Not much other types of materials. In the other course there were some books you could borrow online [e-books] and maybe some PowerPoint presentations made by the instructor. Overall good content and sensible. --- it would have suited to the course, some online lecture or something by the teacher. It would have improved the course, and it would have been more versatile. (P1)

> I would say a combination of learning methods would be good. Some content that can be explored independently and occasionally some collective lectures. In our Moodle learning platform, all the lectures were pre-recorded, and we could do the course whenever we wanted. But then… I think distance studying with a combination of independent assignments and recorded materials, and whatever tasks, but also live lectures online. Like on Zoom. Like a little bit of everything possible. (P2)

> I think it was a quality implementation, there were a lot of PowerPoints and other things. Some teachers or lectures had added video recordings or similar. It wasn't just

> URL links after another and "look here for more information". Effort was put into making that material. (P7)

Like P2, also P5 reports having enjoyed the learning implementation with a combination of individual assignments and study and mutual classes, some group work and discussion – a kind of mixture of learning methods. For the purpose of the study and achieving learning objectives, learners often need to complete different kinds of learning assignments. Assignments could be perceived as learning outputs created by the learner, enabled by the content and materials provided. The versatility of the content can affect the learning experience of the student. As P1 accounts, weekly learning assignments in the studies were often repetitive, uninteresting, and ultimately therefore of poor learning value.

> I think they [the materials] were just fine. Well, of course in the labour law course, --- every week it was the same assignment. But something little had been changed. So, that was kind of monotonous. First there was an assignment like "Martta has started working in a new workplace" and we had to find out things from the law books. And then next week it was like "Now Martta has been working for a week and the employer suggests something". So, every week Martta's story was moving forward but it was sometimes very boring. It could have been something else sometimes. Then on the other hand it was quite educational that we had to find out the correct legal answers ourselves without any help. --- I think the materials were good in both of my courses. Nothing to complain in that sense. (P1)

Assignments, presentations, and lectures constitute an important part of the learning effort and content. Most interviewees mention lectures and/or lecture recordings to be an essential part of online learning experience. For example, P9 was satisfied with lecture recordings that she was able to view at the time most suitable for self. This was a common benefit of recordings mentioned by the interviewees. P9 also enjoyed being able to have all the learning materials at hand when completing a web examination. A combination of different learning methods and formats increases versatility of the implementation. For example, P4 reports, he did not appreciate mere uploaded slide shows that only had minimal information which was the case in some courses. On the contrary, offering information in the form of lecture recordings was preferred.

> Yes, there was this approach in the pedagogical on-site studies to have a PowerPoint presentation with just a few bullet points per slide. So little text and then a lot of speech. But how can you do that online. For us it was the lack of recordings. We were just staring at slide shows and pdfs. It would be better to have more recordings and talks to watch and listen. I don't know if it were any different because you can't really pause the recording and ask a question. But still, pedagogically I would find it a better approach to have speech and recordings. (P4)

There are individual differences and different preferences among learners in their preferred learning methods. However, PowerPoint presentations uploaded to learning platform without additional explanation, can remain unclear to learn-

ers if no manner of inquiry is provided. Many interviewees had enjoyed the recorded materials that could be explored in their own time and provided a sense of human connection to the learning experience compared to written materials. For example, P1 reported having been satisfied with learning materials. She found the materials good, interesting, and suitable for online study. All materials were accessible online. However, she states,

> The lectures were good addition to studies. Without the lectures the learning experience would have been more boring. (P1)

> I thought it [e-learning] would be just like classroom learning. There is the teacher or educator and they have prepared the class. And the course follows a study plan with different themes. So… students can't really affect the themes, but I figured the plan supports us to finish on time and learn the things as expected. What I noticed though is, that in adult studies the topics are sometimes very generalist. --- I have enjoyed the lectures a lot. Because before I didn't know that much about these topics, only shallow facts. (P8)

This means the other materials alone might have constructed a less interesting learning experience overall. Often e-learning is criticized for its one-sidedness and lack of interactive components. For example, P8 states she would prefer studies with a combination of lectures, group discussion and other well-thought-out materials. Video lecture recordings or other types of videos as format of the learning materials was often liked, because of their permanent nature and, like P6 mentions, their suitability for certain learning styles.

> The good thing about the materials was-- Because my personal learning technique is terrible… That in these types of recordings, of those that were working correctly, it was possible to pause the video and write down the notes in peace. It would not have been possible in a classroom. But then again for a 45-minute lecture recording I could spend many hours watching it. (P6)

7.3.2 Combining theory and practice

Applying the recently or previously learned information can be an effective learning technique. Also, it can aid some learners to grasp different and even new topics when they are accompanied with related practical examples.

> --- the mixture of sort of theory and practice was well balanced in the clear way things were explained and presented. I think the course was planned so, that practically anyone could do it, regardless of their background. I think that was well achieved. Like I didn't have any prior experience or knowledge from the field of psychology, but concepts were presented through real-life use cases. -- I think it moved forward that way quite nicely. (P3)

Sometimes adult learners' previous knowledge helps when receiving and going through learning content, as they can apply the information to previous real-life situations in working life or otherwise.

> It [the learning content] was not easy at all. Maybe in the human resources course I noticed that some of the content was fairly easy for me. Like it was familiar from working life and therefore quite easy. (P1)

Similarly, *not* being able to apply new information to practice at current working place or previous knowledge, was also sometimes found challenging. For example, P6 found it hard and discouraging, not having a real-life context where to put the theory into use or prepare assignments.

> I found it really hard in these adult online studies which has been generally hard in unemployment, was not having a job. Because of the course contents. Like for example I felt that it would have been easier and more motivating to do the quality management project work in own working environment. And now I just have to make up a case. I find it really challenging. (P6)

7.3.3 Appropriate amount of available learning content

Providing appropriate amount of learning content for the duration of the study, for the requested passing requirements and achievable number of credits, and to match with the pre-requirements or starting level, is one challenge when planning and constructing online courses. Generally, the workload was approximated in expected study hours where certain hours constructed the overall study credits. In the case of P2, the study plan was too ambitious and not all planned content was covered during the course.

> Well, the content. What it says about the content in our course certificate is much broader than what we covered in practice. The instructor had planned a much broader curriculum. I can't honestly claim to have a master level understanding. The original plan promised too much. Compared to what it was in reality. And when we moved to distance learning that too took some time to learn and adapt. --- So, there was a lot of good content but the curriculum promised much more than the learning we really achieved. (P2)

P2 also mentioned that the planned content was too vast to cover in proper detail and the time too short for learners to really digest the quantity of information. Simultaneously the learners were shifted from classroom studies into distance learning. Everyone needed to adapt to a new form of learning and P2 suspects it was more challenging to teach and learn new digital tools, which was the purpose of their course, in an online environment as opposed to in a classroom setting. Change in arrangement may have partially caused the fact that the original learning goals were not met in full. Whichever way, the learners may have benefited from also reviewing and cutting the amount of learning content when the setting of the course changed suddenly.

Sometimes the amount of content in an online learning implementation can be estimated incorrectly. However, with experience and common guidelines, the implementation can very well meet with the learner expectations and learning goals. P5 recalls his learning experience having succeeded to match with the set goals and expectations.

> I was satisfied with the whole implementation. It [the learning content] was planned to be as broad as 30 ECTS can be. The next learning part is more individually emphasized. And it can be done for the working place. And it's around 20 ECTS. It can be about how to develop your work. (P5)

It can also help to understand the outline and plan own studies if the content can be accessed beforehand or at least in conjunction with the course of the study. This way it may be easier for the learner to arrange their own studies and estimate the effort needed. Sometimes the available learning content may seem superficial or inadequate when aligned with the desired learning goals. P7 and P3 recall having missed reliable additional materials to complement the learning content provided by the instructor and gain further understanding of the subject matter or theme.

> Well, the content was mostly self-made and there weren't many links to additional materials if you wanted to know more about a subject. But then it kind of motivated to search for additional information independently and find it. --- Of some topics I would have hoped for more information or references. But it is quite easy to find more information online these days. And it's not even possible to fit everything into one course. And every student takes interest into different things and teachers have different teaching styles. (P7)

> There were recorded lectures to listen to before every section, and they were pretty short. There could have been more material in that course. And more of the scientific base. And there were these multiple-choice tests as part of the overall attainment which often felt even too easy. --- There were links to extra materials, articles, books, or videos if you wanted more information. But I don't often open those. I'm sort of lazy if they're not mandatory or part of the multiple-choice test materials, I often skip them. It could have encouraged to study and learn more if the test questions were based on also the additional materials and not just the lectures. (P3)

Depending on the situation, providing additional materials to learners to deepen their knowledge of a subject or topic could be important for some learners. Learners going through additional materials could even be rewarded for their additional effort in some manner. Small online tests or similar based on the additional learning material could provide extra points for the final exam or some other small motivator. This way additional materials might not get skipped so easily and learners could gain deeper insight into subject matters of interest to them – and possibly reward them with extra points. As P7 mentions, learners also take further interest in different topics. This means keeping the learning content core similar and mandatory for all and the additional materials optional would likely be suggested.

If additional materials are not provided or some areas are very shallowly covered, learners must independently find additional resources. The instructor might be better suited for finding relevant information regarding the topic than the student. This could also increase the chance of the learner finding outdated or otherwise misleading information. Materials inspected and verified by the instructor can often be considered trustworthy learning sources. Some learners like

P8 and P9 used YouTube for finding more information. Although sometimes, even materials provided by the instructor were not correctly referenced as P10 accounts.

> There was a fundamental problem [with the content and materials]. There was information that had been taken for example from someone's master's thesis, and the source had not been referenced. It was as if the teacher wrote it themselves. But I found out this one case because for some reason I took a snippet of the text and googled it and found this master's thesis that was written by my former coworker. --- Also, some materials were uploaded as PDF files, and I feel like they didn't want to - or couldn't - update them. Because they found it too challenging. (P10)

Common guidelines for preparing learning materials should be advised to all instructors and teachers to provide accurate information in the most transparent manner possible. This might include for example referencing and copyright practices enforced in the institution.

7.3.4 Up-to-date materials and their attainability

A somewhat shocking matter, discovered by P9 for example, was the instructors rotating same materials semester after another. She enrolled on the same course for a second time, and the materials were the same. She also accounts having received outdated information in the reused recorded lectures.

> --- they [the lectures] were recorded but there was no date *when* they were recorded. --- Then I found out that one video was recorded in 2017 but it didn't come clear until the end of the video. --- Like maybe if they intend to use a video for the course, they should inspect if the content needs to be updated. And to correspond to what is happening in the world currently. --- and the videos are 3-4 years old and nowadays information turns old in less than six months. And even that the students in that course are paying for it. They should get at least that in exchange for their money, for the information teached to be up to date. (P9)

P10 speculated the materials hadn't been changed or updated due to laziness or instructors not having updated their knowledge on the subject matter. She mentions this required having some previous knowledge or initiative to do some personal research which she pondered, not all younger students may have.

> Well, I felt the knowhow of teachers was partially outdated. And also, some materials could be 10 years old. And the explanation was that it had been done so for 10 years, so it will remain so. --- One really needs to take initiative in these studies, also regarding the learning materials. --- I wish the teachers had that little time, to keep track of current events. Of course, as an adult learner, I knew and understood of some things and kept eyes and ears open. But if a younger person was in the same situation, they wouldn't necessarily know how to do that and would get a false impression from the teachers. And especially in this field [ICT] it is very important to stay informed. --- I thought it was shocking that we for example studied laws that we knew were about to change. That didn't make any sense. (P10)

Up-to-date materials and learning content are an important quality indicator in online studies. Based on the interviews, if the same content is used repeatedly, it should be evaluated regularly and updated accordingly. Even more so, when open university learners are paying for the studies or if the studies do not involve much instructor involvement to correct the information. If materials are not updated to match most recent information, it might be recommended to at least mention potentially outdated information to learners.

Another important aspect in online studies is assuring that materials are attainable online and providing instructions on how to access the materials for learning use. Content should also be presented in a form that is comprehensible to learners and sufficient introduction to the theme and terminology used should be given for the content to assure consistency. As P6 reports, some of her learning materials were not available online and were also hard to obtain in their physical form.

> Some materials that were chosen for this course were books that were not available as e-books. --- In the capital area where I live, there were only 20 copies in the public library and with a queue of more than 60 people before you in line to borrow it. --- I think it was misleading to advertise online studies like you can study anytime and from anywhere when it's not the reality if you can't attain the study materials. (P6)

It is of primary importance to assure attainability of materials for learners as they make up the core of the learning process. Especially if studies are advertised as online studies, it may be misleading if studying cannot be truly conducted independent of place and time - if materials cannot be accessed online. Also, access rights to materials need to be assured for each learner. As P1 accounted in previous chapter, as an open university student she had not been granted all similar access rights and had therefore difficulties obtaining certain materials. Similarly, providing clear and sufficient instructions and if necessary, guidance for accessing the materials can be important for adult learners with not as much experience in using different platforms as the terminology alone can be confusing.

> What pain! I didn't understand when the teacher was talking about "your Drive" and suddenly "OneDrive". Very similar names but two different systems. How can you know if you never used them? --- So probably for one the terminology to myself was confusing. Like yesterday I was supposed to delete some files from OneDrive. But damn I couldn't find it anymore. --- Also, the accounts and logging in was one of those things, with many different accounts. I really had to think when I was in Google, when in email, or something else. (P2)

According to the interviews it seems advisable to focus all learning content on only few platforms and instruct their use properly. This may increase conciseness and ease of use, especially if the learning group is somewhat heterogenous and learners possess varying skills. Also, constructing the course outline and structure in a clear manner, and choosing or creating purposeful content is advisable to improve learner satisfaction:

> In the unemployment office course, if I had completed it, there was not much to commend. I thought the Moodle site was confusing and the materials there not very inspiring. So… I can't think of many positive things to say about that. (P3)

> --- It's not always clear what we're studying, and the contents are a bit strange. --- If I was studying for a profession, I'd be terrified. The quality is not very good. I'm not saying it should all be classroom studies but there is something missing there. It really affects motivation, doing these tasks online because… I don't think studying online is the problem, rather the content it's just very insubstantial. --- I enjoy learning all kinds of things but if I really needed to go work based on this information… Well, I'd have some discomfort. --- If I had paid [for the studies] I would've been extremely dissatisfied because the execution was very poor. (P8)

One thing mentioned was the languages used in organizing the online studies. It was common to use English language materials, such as videos and scientific articles, as course content. However, as P6 recalls, learners were given the choice to complete the same course either in Finnish or English with only a single difference in the implementation:

> I thought one thing was especially interesting. You're offered a chance to attend a course either in Finnish or in English. Well, it doesn't really matter which one you choose because the materials are in English anyway. The only difference is you need to do the final exam in Finnish. --- It would've been easier to enroll in the course in English. At least then you could've used the same books and terms, which are in the material. --- Translating and using the terms. I found it very difficult. (P6)

It is common to use English materials especially in higher education. However, if examinations or assignments are done in Finnish, it may be advisable to provide learners with correct corresponding Finnish terms and translations to use and apply in their homework and exams.

7.4 Service quality

From information system perspective service quality often refers to provided and available user support and training (Mohammadi, 2015). IS service quality can typically be regarded as an independent factor or as part of overall system quality. However, in e-learning context, system support might be harder to separate from learning support. Service quality for the interviewees entailed technical support services and learning counseling and guidance.

7.4.1 Technical support quality

In this study, technical support is considered to be *learner-initiated*. In order to receive help with technical issues the learners need to contact a specific technical support unit of the institution or other technical provider. Mohammadi (2015) also identified service quality as an important success indicator in e-learning. It

is quality of the support in the system such as instruction in the user interface and service from the helpdesk (Mohammadi, 2015).

Some interviewees found they could use the system and accomplish the studies without having to reach out to system service desk for support. This often also meant they did not face any major challenges during studies or that they could figure out the obstacles independently or might have requested help of other people. They speculated that if they were to face trouble, they could either contact the course instructor or could easily find the contact information for service desk. It seemed that contacting the instructor was the preferred or assumed primary point of contact instead of service desk in case of technical difficulties.

> Most likely I would have had to first contact our supervising instructor and then they would have contacted the IT department. (P10)

> I think there might have been a *help* button. But I would have probably searched for a point of contact and sent a message. Or via the instructor. But I'm pretty sure there was some help section ---. I would have probably asked via the instructor. (P1)

> I have a few friends who do similar things professionally. If I had had trouble I would have asked them. But the teachers were prepared to help too… That we could ask them if we had any confusion. (P5)

Some learners had received help from IT support upon request. For P6 the support really made a difference for their learning experience.

> The IT department --- I called them – he said he will be there for the whole Summer, that he will help me anyway he can. The IT department saved my butt in the Summer for example by connecting me via a network to school servers so that I could use a special expensive computer software required in the course. --- First the IT told me it was okay that they had the program at some school computers. Then I asked what their opening hours during Summer are. And they were closing doors in late May. Well, it was a summer course. So, I would have hoped for a little better communication… like there internally. (P6)

It would be important to pay attention to the availability and accessibility of services during the course of adult studies. Oftentimes adults can attend studies in "unconventional" times such as weekends, evenings, and holiday periods. It would be advised to offer some support service during these times or advise learners of the service accessibility in other times. This also relates to the matter of unattainable materials because of insufficient or lacking access rights or lack of instruction as presented in previous chapter.

Also, if for some reason the online learning system would have malfunctioned or have been otherwise unattainable, learners presumed some of the course tasks could have been completed through other means, such as email. P4 recalls having used email for exchanging course content and assignments, and phone calls to receive help in course related matters.

> Well, [if we had had issues with the online learning platform] we would have gotten the assignments to email and recordings links too. Because I remember that in some cases I have returned assignments via email. I don't remember why. --- I also make a lot of calls [if I need assistance]. To sort things out. (P4)

For the learner as an end-user, it might be unclear which issues in the learning system for example are issues the instructor can fix and which issues require root user role or system development. For example, user access to the system or course area, visibility of materials or ability to download or upload materials are examples of issues that may arise in online learning. Whether the root cause of these issues is something the course administrator can simply modify in the course area settings or if the issue relates to a system bug, is not obvious to the learner. Often it might be easiest for the learner to contact the instructor who can then help with the issue directly, advise where to find more information on the matter, share FAQ page or contact information of the help desk, or forward the message to accurate advisors.

7.4.2 Learning support and its availability

For the instructors, online teaching is generally more time consuming than classroom teaching and requires commitment and good facilitation skills. Collaborative and asynchronous online environment can also facilitate interaction between learner and peers or instructor when in need of guidance or advice. (Palloff & Pratt, 2013.) Providing appropriate support for learners also requires selected staffing and working infrastructure – which in online environment requires more time for instruction, communication, and evaluation than in conventional classrooms. Instructors are advised to also take part in discussion and monitor it regularly. (Palloff & Pratt, 2013.) Findings of the previous chapter also concur with this, as the instructor often seems to be the preferred first point of contact for learners with technical or other challenges.

A somewhat common experience among the participants was that availability of instructor support and availability of other services was poorly communicated to learners. Many were unsure of who or which unit to contact in different situations and what to expect service-wise from the instructor or the institution.

> Being a distant student working alone at home… Suddenly the studies start, and you don't know who to contact for questions. It took me four days to figure out who to contact and where to find certain kind of information. And the next day the teacher informs they are leaving for holidays. And the next notice is that the library is closing. --- The biggest issue was the start and lack of communication. --- I felt like I was treated like a seasoned degree student who knows where to find information and so on. Some kind of starter pack would have been nice. --- Also, it would have been nice to know beforehand that the teacher will not be available during the course for questions. (P6)

> There was one longer break during the 3-month course. It affected the course, but we could manage. --- Something had to be cancelled because of a case of illness and no-

> one was found to substitute them because of the holidays. --- there was the opportunity to contact the instructors at certain times or message them for instructions. And they would have most likely given advise on other times as well. But as I was doing most of the learning tasks in the evenings or at night and the questions pop to your head at those times. And if you don't contact them there and then, you kind of forget and find some way around it. (P7)

According to the interviewees, instructor support was not always easy to reach. Some commented that getting help with issues could go unnoticed on discussion platforms, wasn't available before due dates or there was delay in answering questions. This caused some dissatisfaction and feelings of loneliness in studies.

> Yes, there is discussion [on the discussion forum] but the discussions are sometimes that kind that they require the teacher. Some students can have technical difficulties like an online exam that isn't working correctly. --- Often some people can't even enroll in the course because there are technical issues and for the entire semester, they're on the discussion forum trying to figure it out. And the teachers of the course don't really supervise the learning platform. --- I also think it's foolish that if an assignment is due on Sunday, there is no way to reach the teacher on a Sunday. Or Monday evening. You can't get a hold of the teacher if you have questions, or you need advice. (P9)

> Well, the downside is that you're all alone. And getting help, if you need it, takes time. It's not immediate. For example, if you have trouble with an assignment and you can't reach the instructor, you can't finish the assignment until you get an answer. (P10)

Service hours and means of contact need to be clearly expressed to learners for them to know when support is available. Understandably providing learners with 24-hour support isn't sensible but information about service hours should be visible. Also, the instructor can typically set the deadlines for learning tasks and in adult studies the deadlines could be set within the general working hours, or the learning task equipped with a disclaimer of instructor availability regarding questions and concerns. Instructor and support availability also affected the learning experience. Unsurprisingly, the impact was positive when learners received instruction and help upon request and negative if support was not easily available.

> The teacher always answered the emails really quickly if I had some questions. That was a nice plus. (P1)

> Well, you would just email the teacher and they give you advise, or you can add your questions in your learning assignments. --- She replies really quick to emails. (P8)

> It did have an impact. Especially when it's been a long time since previous studies. -- and then suddenly you're all alone without any kind of help or support. And you have to work with systems you've never heard of. --- I am quite hands-on and used to working alone. But I would have felt safer if the teacher was easier to reach. Like I said before, our teacher did occasionally send us emails but it's not quite the same. (P6)

7.4.3 Guidance and counseling

Guidance in general is the instructor or some designated persons of institution providing the learner with appropriate guidance before, during and after studies concerning any matters related to the overall learning process e.g., attainments, study plans, requirements et cetera. In the service quality category guidance quality was the most commonly occurring indicator among the participants. Instructor attitude, inclination to serve or help, technical issues during the studies, providing counseling if necessary, and providing sufficient instructions were all quality features recognized by the interviewees.

> Well, on the other hand, that was following the basic principles of online studies: "go and find out for yourself." (P10)

In this study studies-related guidance was separated from quality indicator of communication quality. Guidance is regarded to be more connected to service quality than communication quality in nature, although given guidance can surely be assessed based on both of these quality traits. The answers from the study participants indicate that learners did consider guidance an essential part of the learning process and that it was often missing in their e-learning experiences. If an element which is important to learners but disregarded by the institution or instructor is in many parts missing from course curricula, surely its communication quality cannot be assessed as anything but poor or missing. Whereas as part of the service quality realm it can be said that the learners were dissatisfied and would have wanted better service. Many presumed guidance activities to be an integrated part of the studies although this seemed rarely to be the case. Communicating about guidance levels and activities or instructor personal communication skills can be evaluated as a separate matter. In this study, guidance is evaluated more in its surveyable sense (time allotted to guidance, premeditated guidance processes, instructor attitude and willingness to help), as actual given guidance which can be perceived as service provided to learners - as an integrated part of studies or per request.

On the other hand, general lack of guidance before, during and after studies was a common phenomenon recognized by most interviewees.

> [The provided guidance] was very inadequate. There wasn't any. We were never made a personal study plan. --- I couldn't choose studies which I felt would have benefited me in the future. I wish we would have had at least once or twice a check-up with the counselor. Like someone to even ask "How are you doing?". --- And we didn't even review the basic things. Like the structure of the degree studies? No, we had to sift through the learning management system to find that information. Well, on the other hand, that was following the basic principles of online studies: go and find out for yourself. (P10)

> And if there are tasks that we do during the lectures, sometimes there are no instructions or guidance. If you are insecure about your abilities. In contact learning you just

> have to ask for the teacher to come and you would receive help. But it's not so simple in distant learning. (P8)

Sometimes the impression was that the online courses were not conducted by anyone, and things were left running independently. This also indicated that instructors were either not very interested in running the course and providing help or that they simply had not been allotted enough time for guidance activities. In the case of P9, the learners could converse with each other on the platform about the subject matter, but this did not provide enough help or reliable answers to inquiries.

> No, there were no online meetings just the Moodle discussion forums where we could post. But then there's the issue, or I feel like in this subject or in the entire study module the instructors hadn't been allocated any guidance time. So, learners are replying to each other's questions… So, the instructors can't actually be reached through the online environment at all. (P9)

There was also understanding towards the workload of instructors who had multiple courses or responsibilities.

> We were only about 10 people in our class where I started. --- And I really understand it because the teachers also teach the daytime students. So, if there were heaps of online students the teachers would never have any time off. (P10)

Also, instructor attitude and their willingness to help was sometimes questioned. A poor experience in getting support from the instructor did affect the learning experience negatively.

> The teacher seemed grumpy. I had to email them a few times. Because I had enrolled and had been accepted in the course, but I couldn't sign in [to the learning platform] or anything. So, I started a week later than others and the teacher seemed irritated by that. So that has affected my experience. --- so that the teacher is already displeased even though you have done nothing wrong. It was a technical bug. I mean, it is not very encouraging. (P6)

Regardless of whether the guidance was provided online or at the institution, the impression was that there was not enough time allocated for the instructors to provide guidance. Poor guidance and counseling caused dissatisfaction and disappointment. Proper written or video instructions or providing guidance sessions for groups or for the entire class could prevent or diminish the need for individual guidance service. In case of challenges the learners should know who to contact, how to contact them, and when they can expect a response.

Guidance can also be given in the e-classroom during classes or in separate guidance sessions. If instructors are to give guidance during the classes, it must be taken into account in course and session planning so that learning schedules are not negatively affected.

> And then of course because the schedule is quite tight, classroom time must be spent efficiently and there is no time for any chit-chat. If something was unclear to someone, they would continue talking about that topic after the class. But then there's a downside if you also wanted to know but couldn't stay, you'd never get that information unless you asked. (P10)

Information that could be beneficial to all learners could be shared with everyone during the class, in discussion areas, Q&As, or other means available to all learners. Learners can also be advised to send questions for example via the course platform or email and answers can be collected to a shared location. Sometimes the learning goals must be readjusted if need for additional support is recognized. Intensity of support can vary, and sometimes even somewhat personal assistance can be possible.

> I had never done those types of exercises and many others neither. They [the instructors] had to accept that we can't start off like this. We had to go back to the starting point, almost taking by the hand to guide. They had to because people didn't understand what was going on. It was personal guidance in a group setting. (P5)

7.5 Communication quality

Communication, presentation, and interaction are no doubt integral to any learning process. Ultimately courses are planned, held by, and attended by real people with varying skills in these areas which can all impact the learning process and experience for all partakers. In this study experiences of the learners were investigated and here communication quality relates to instructions given to learners, interaction channels and possibilities during courses, and communication skills of instructors or other faculty responsible for course communication. It is recommended that teachers aim for consistent communication, tutoring and support, and provide course content of high quality and fair assessment of course work, to impact intention to reuse positively. (Li, Duan, Fu & Alford, 2012.)

Some aspects brought up by the interviewees were quality and timeliness of instructions and interaction before and during studies. This could include for example instructions about course requirements, tasks and exams, and usage of systems and tools, and communication on the platform or other means with the instructor or peers.

7.5.1 Quality of instructions and impact on studies

Online learning like any studies require instructions for learners. Instructions explain what is required and expected of the students, how the course and its tasks are to be completed, instructions regarding interaction and seeking support, and online learning system user instructions. Instruction giving already starts before enrollment as potential learners evaluate the suitability for themselves and come

to know the participation process based on available information. The available pre-enrollment information can be meaningful when assessing if participation during unemployment is sensible, or even possible. Instructions are also given throughout the course or module as a part of the process.

A phenomenon that was found bothering and even hindering the course of the study, were insufficient instructions for the preparation or completion of the study. For example, if new technology was used, common instructions of use might have been beneficial for learners.

> Well now that I've been investigating different courses and studies. The titles are often interesting but when you dig a little and find more information about the content and what the training or course actually entails, there are big quality differences. And sometimes the titles are misleading, and the content is much more comprehensive than what the title implies. (P7)

> In the certificate degrees studies the materials have been of high quality and well prepared. However, completing assignments has been challenging because they have required the use of new digital tools and there have not been many instructions, so learning has been achieved through trial and error. (P8)

A general guide for the start of the study for a new student might have been useful introduction to general guidelines, including important contact information and necessary or provided software and communication channels. As P1 recalls, she even missed some information because of lacking orientation.

> I didn't even know that the institution had created an email address for me. And they had sent some information to that email address. --- The institution didn't really send any general info like "hey welcome to study as an open university student". That you will receive an email address for the duration of your studies and the right to use some software like Microsoft Word if you didn't have it. So that was not well done. Poor instructions. (P1)

As suggested before, a starter pack of sorts for the studies could be useful to many learners. P6 remembers having spent a lot of time for information retrieval and figuring out how online learning is conducted in general.

> There are no instructions so finding information and materials can be somewhat challenging. And even the beginning of these studies, there was these default emails for students. There were several emails with links to different places but no-one told what they were for. --- That was slowing me down a lot. I thought I needed books and the institution will provide other information and materials. And then there are weird links that say Pakki or Moodle or Finna and you don't know what they are. There were no such things 17 years ago. There was a school library with books. What is a freaking e-book? How does it work? Do I need a library card for it? (P6)

Sometimes learners found that online courses were left running independently and that given instructions were mechanical and produced with not too much effort.

> Students doing online studies are guided mechanically. There's an introduction and assignment instruction in a PDF document. And the instructions are as good as the teacher has been able to produce them. Unavoidably there are often too brief and vague instructions… --- You could contact someone by email if you had questions and get a response at some point. It was very, like conservative, the guidance in online studies. (P4)

Other times given instructions were considered sufficient for their purpose.

> The instructions were always sufficient. And of course there was advise to ask for more instructions if you got anxious. But well, I thought it was sufficient for the purpose. (P5)

As can be deducted from the answers, the experiences and needs of individuals and how online studies are conducted vary. What is important to notice however, is that learners that are new to (online) studying or have had a break from studies or are new at the institution might need more guidance and orientation especially at the beginning. Some things mentioned by the interviewees were for example: who to contact if learner has questions regarding the studies or technical difficulties; questions with user accounts and access; how to access online learning resources like e-books and articles; which software is required for the studies and how to acquire them; in general what resources or information can or should a(n adult) learner familiarize themselves with. These somewhat common guidelines could be collected before start of any new online course or module. Learners who know the guidelines from beforehand can flip through the information or ignore it. For those to whom common guidelines and starter information is new or they are not accustomed to online learning can find the information very useful. Learners can also return to the "starter package" later if needed.

Any learning tasks included in the course also need instructions for completion. Interviewees mentioned learning tasks such as individual or group learning assignments like essays or reports, smaller tests or segment-based tests, and more comprehensive exams like final exams. In order to complete these tasks, learners need instructions. If the course does not include live sessions or many chances to interact with the instructor about the learning tasks, the importance of written instructions is emphasized. Some interviewees recall incidents where the instructions were hard to understand.

> Usually before I start working on an assignment, I think a lot about what the assignment means. --- What should I write here? And you don't really know until you've sent your first finished assignment and gotten some kind of review. --- And that's a bit dull if the reviewers expected a certain kind of answer and it wasn't clear in the instructions. Like expected length or something. --- In classroom studies you could ask for clarifications straight away. And you could also ask the group or peers how they've done or understood the assignment. But when you're alone, you really do all things alone. Which can also be a good thing. (P1)

Misunderstanding instructions or struggling with vague or lacking instructions could also cause learners to receive a poorer grading.

> The exam instructions are made with varying success. Sometimes they are easy to understand but sometimes they require multiple reads and they still remain unclear. Once it turned out I got a poorer grade because I had not understood the wording they used. --- Which is also a problem. That the professors expect everyone to have a similar educational background and they don't explain the terms. (P9)

> For example, I had some Instagram sources but there were no referencing instructions for online or social media sources. --- But I don't think it can be part of grading if students are not instructed how to do it. (P9)

Sometimes given instructions were deemed comprehensive and good overall. P3 was doing the studies as MOOC (massive open online course) which often means that the courses are completed completely independently. Thorough and clear instructions are especially needed when the studies do not include any contact with the organizing party and/or limited access to the teacher.

> There was a few-minutes-long video recording for each weekly assignment where the teacher explained the purpose of the assignment. And the same information was also given in written form. So, it was easy to revise it. And different methods for completing the assignment were also suggested. --- I thought the instructions were good and comprehensive and the directions were clear. And when they were given both in video and text format. So, there was not much room for misunderstandings. (P3)

These accounts of the interviewees highlight the importance of clear instructions regarding participation, school policies, requirements, assignments, and information retrieval. The need for clear and thorough instructions for every phase of the studies seems to be more important in online studies. This may be because help may not be accessible or available as readily, and learners may participate with varying skills and backgrounds.

The examples given by the interviewees show that it may be unclear to learners how assignments are to be completed and rely on the feedback. However, some interviewees told, that very little feedback was given during the studies which meant it was hard to assess their own success or knowledge truthfully at any point. Misunderstandings of instructions could also make assessment of achieved learning more difficult. Also, if reviewing or grading is based on some mutual guidelines, like faculty instructions for referencing, their up-to-dateness and completeness must be revised. Furthermore, providing rather too specific than vague instructions may be especially helpful to learners who are new to the institutions or have not studied in a while. This also applies to used domain specific terms in learning that may be unknown to some learners and require explanation. If potential heterogeneity of learners is not known, it would be good to provide also basic user instructions to needed tools, such as online learning platform and online library. Another thing, which was pointed out by most interviewees were the feelings of loneliness in online studies. Many felt like there was no help or group support, although social and peer support were considered important factors. How do you understand this assignment? Do you think it means this? How are you planning to address this question?

7.5.2 Instructions for the adult learner

Many interviewees pointed out in some context that rather than more profound learning content or teaching they would have hoped for more guidance and direction. Many also felt like the instructions were not aimed at adult learners who may be unfamiliar with the used systems, methods, and guidelines.

> In some matters I would have hoped for more teaching but actually even more so some kind of guidance. Like, how a task should be done or why something is done in a certain way. The given instructions were pretty unclear in the courses. It was written more for degree students who can ask the teacher anytime or contact them in some way. --- It should be considered in the instructions that people have different starting levels. It might be someone's first course because they can be completed in any order, so you shouldn't assume... (P9)

> Well, especially when you've been away from working life for some time and haven't studied in a while. At the beginning I wasn't even sure I was doing the correct task. --- I was studying in an open institution so apparently there are also normal full-time students studying the same courses. And you would notice that the instructions and all that were written like the reader was a full-time student. --- It's not so easy to understand these things. For example, something like "go get this e-book from there and there" and you're like excuse me? I think it was a bit tricky. The school should definitely invest in providing the instructions and such to non-full-time students as well. --- Also, they could have paid attention to explaining the basic stuff. (P1)

Answers show that many practices were unclear to some interviewees or their peers in the studies. When missing common guidelines or knowledge of e-classes practices, the teaching might be disrupted needlessly because of unawareness or lacking system skills.

> Well, the learning material in classes... --- There is not a lot of time for discussion or questions, even spontaneously. And generally, in e-classes I feel like the "netiquette" is a bit unclear. Like, if you want to say something how do you ask for a turn so that not everyone is talking simultaneously. --- I think that's the most challenging aspect in online learning. For small groups it's easier but with larger groups… --- I think the instructor could say that we do the discussion at the end. Or if someone wants to make a comment, instruct how to ask for right to speak. (P8)

It may also be worth considering if for courses or modules which are available to also others than qualification or degree students should have separate participation and task instructions for the two segments. Although it may be that in some cases the instructor has no way to differentiate the "outside" participants from degree students as P1's experience shows.

> I had some technical difficulties with MS Word and it was so long since I last used that program. We had to return this final assignment for the course and it had to be a specific Word format. And I asked the teacher what it meant because I didn't have this kind of a template. And the teacher was asking if I didn't have it from some ICT course. And I said no, because I wasn't a full-time student. And they were like okay, you can

> download some final project template. --- I really struggled to complete that final assignment. (P1)

It is important to notice that interviewees generally considered the teaching and often also the learning materials to be good and of high quality. However, the same courtesy did not seem to extend to experiences of provided guidance and available counseling. For some interviewees, lacking instruction and guidance caused insecurity and consumed time because of the missing information they had to locate and interpret themselves. Sometimes the experiences showed that the available instructions were directed mainly at degree students. This is important to notice because adult students can often participate also only for one course or module, depending what options the institution offers. This would indicate that the instructions are not reviewed to read well to this "outsider" segment which makes them harder to understand for an "outsider" and might be lacking some essential information that the adult learner has not been previously provided with. Some interviewees also accounted negative experiences with instruction and guidance availability. It can be assumed that for example in summer studies there might be less faculty available for giving guidance and opening hours might be limited. It can also be assumed that qualification or degree students are generally somewhat aware of availability of teachers and other services during the school or academic year, whereas adult students only taking part for a single course, or a module are not. Adult students might not receive the information otherwise provided to students via mailing lists, student applications, or bulletin boards.

The interviewees expected some guidance to be included in the studies and that other necessary services like ICT support and library service, are available for the duration of the studies. Their experiences were negatively affected by the discovery that instructor guidance was not as easily or at all accessible and that they had to do so much information retrieval and other independent (and lonely) tasks by themselves. Degree students o the other hand might have a better grasp what online studies at their institution are typically like, and this level of guidance and instruction might even be normal. Same knowledge cannot be expected from adult students who are not familiar with varying practices of the institutions.

7.5.3 Interaction with peers and instructors

Online learning can include a varying amount of interaction with peers, instructors, or other faculty. Generally, it seems based on the answers of the interviewees, interactivity in studies was found to be a positive thing. Interaction with others might alleviate feelings of solitude, allow new viewpoints to surface, and even support learning goals. Some interviewees told they enjoyed the discussive nature of their studies and some hoped for more interactive techniques to have been applied in theirs. Ways of interaction between peers were typically com-

municating through the online learning system (e.g., discussion boards) and mobile messaging applications especially for group work outside of e-classes. Instructors typically communicated through the online learning system and email.

Of those interviewees whose studies included any kind of group work or class discussions, all regarded learning from other student peers a good thing. Sharing or hearing experiences from various different personal pasts was considered an interesting and enriching addition to other course content.

> --- being in those learning groups and it was the same people in every course. So, we also exchanged experiences. People came from different backgrounds. Some worked in banks, or at a school, some in elderly care, some at a kiosk. So, you always learned something. –-- As a teacher you need to lead the conversations and make people want to share their experiences, especially because some have more than others. --- I really like peer learning, exchanging experiences and talking with others. The learning events with a lot of discussion, those have been the best. (P4)

> Someone was a lawyer, someone worked for the government, someone at the hospital, someone for private sector. --- We had people from different backgrounds, but I regarded it as a richness rather than something unpleasant. When people discussed about some issue or practice cases, the examples and comments were something I would have never thought about myself. I really liked it, it suited me well. (P5)

> I was expecting for more group exercises. --- Because some of the learning tasks you could just finish by using Google. If they were group tasks, we might have talked about the question and gotten new ideas from the discussion. Some tasks were like these, and you notice how much or little you engross. (P7)

Some courses only included peer interaction over the online learning system's discussion boards. This was a way to interact with other participants and create threads but was seen as a poor way to contact the instructor.

> --- we didn't have any online meetings. There were only these Moodle discussion areas where you could post and ask questions. And other students reply to those threads. You can't really reach the instructors through the online learning environment. (P9)

> You do miss the social contacts so that you could talk to others. Because if you look at the discussion forum and people are trying to figure something out and the answer from others is "I don't understand it either". And then the replies can be delayed so that once I had to wait for two weeks which wasn't good. (P4)

Discussion boards in the online learning system might seem faceless and participating in discussions or starting one might feel overwhelming or uninteresting. Even though discussions might have seemed interesting, some interviewees still chose not to take part because of insecurity about system use or because talking with strangers did not feel compelling.

> Our course had a discussion forum and a separate space for each week, I think. Anyway, it would have been totally possible to discuss and there actually was some active discussion. But I didn't have a group or anything and they were just these random

> people from all over the world. I just didn't feel like it, no need or temptation to talk. And lack of that discussion is of course a downside. You could get ideas and exchange thoughts with different people if you actively participated. (P3)

> We had a discussion board but no one was using it. So it wasn't that kind of a course. Which has been a shock because the other course I'm now taking part in… the discussion board is used a lot. I went to see the discussion in August when the course started. But I got a little frightened because I'm not sure where to write so that the replies go to correct persons. Because there are no instructions. (P6)

Based on the interviewee accounts the methods in which discussion boards are used in online learning varies greatly. Discussion boards were used at least for open or pre-determined peer or group discussion about course topics or tasks, learning group formation, and asking for help from others or the course instructor. P10 tells their study module's discussion board was originally meant for general peer discussion but the learners chose to use mobile instant messaging instead because the group was rather small, and it was considered more practical.

> We had a discussion board in Moodle but we used WhatsApp in fact. We were only about 10 people in our class where I started. Fairly small groups for the online study classes. (P10)

Sometimes learners would feel like the course or module was left unattended and running with minimal instructor effort. Instructors of the courses would not communicate with the learners or would communicate very scarcely which some learners found was odd.

> --- you wouldn't hear from the teachers unless there was some kind of a problem. They weren't really interested in asking how you are doing. I did my studies quite fast and all assignments according to the study schedule. I don't know if I would have heard more from them if I didn't do something? (P10)

> I witnessed so many courses where the teacher would make an appearance 2 or 3 times during the entire course. It feels like manufacturing courses. In Moodle or other online learning systems you can just set everything up. When the assignments and folders and delivery folders are published or opened. And it does not require much. Then students who don't know much about anything review each other's work? That's not really university-level, I think. (P4)

One thing already mentioned before, was the inadequate information and communication at course enrollment and at the beginning of studies.

> I think, as an open university student, that when enrolling in courses such as these summer courses, the education provider should communicate more clearly about teacher availability and library accessibility. These are very basic things affecting studies. It came as a surprise to me. Open university students can be anyone, they are accepted in enrollment order. (P6)

For many of the interviewees lacking instructor or institution communication at any phase of the learning process seemed to impair the learning experience. P4 suggests automated messages that could be sent to learners if time is short or the instructor even contacting learners personally if possible.

> They could perhaps add some calendar automated message for students. Some spontaneous messaging from the teacher could have been included. Like outside the course plan. Calling or emailing the students, "rounding", and asking how it is going for them. It could be a positive surprise for many. A feeling that someone is out there and cares. --- Some students are really in trouble. --- They might need that help. (P4)

Receiving messages from the instructor makes the course attainment seem more active and not self-running. Even, if further instructions or communication is not necessary, some form of personal communication could be a positive thing, increase motivation, make the instructor seem more approachable, and help the students feel less alone.

> The number of participants in that course must have been massive, so I did not expect any kind of contact from the teacher. But in fact, at some point --- some sort of an email came from the professor. It was something like "here's new material about current matters" ---. He had made a new video about the subject which was like extra material for the course. I think the course materials had been up for a year or two, so it was nice to receive something newer. And it felt nice, almost as if the professor was sending us personal emails about some current things. But no, I wasn't expecting it otherwise. (P3)

Instructor's personal communication skills also matter greatly. If instructor's tone in speech or messages is impolite it can raise the threshold for learners to make contact or even create a negative impression of the person and affect the learning experience in whole.

> Well, I must have been naïve thinking all the courses would be organized in a similar manner. But my two courses were completely different, it depends on the teacher. --- The emails from the teacher have been so rude. I don't know if I'm foolish but if a person communicates like that, I don't really feel like asking for advice. (P6)

7.6 Personal capabilities and other social factors

Learner personal capabilities and learning group social factors also affect the learning experience. Some considered factors which may affect the experience of online quality are learner's personal capabilities and existing social factors of the environment. In this study factors such as learner previous experience in online learning, previous knowledge, level of self-efficacy and motivation, and influencing social circumstances were seen to influence the experience.

7.6.1 Previous experience and self-efficiency

A common experience was that previous learning or working experience was perceived useful in the studies. On the contrary if the learners did not have much learning or working experience or time had passed since their last experiences, they often had feelings of insecurity or nervousness. Ultimately even experience from a different field was found beneficial.

> Although I had thought that my previous experiences in working life would be insignificant in university studies… because it was like blue-collar experience. And I thought sitting in university… that it would be higher sciences and I would have nothing to say about it. But it was actually the other way around. My field experiences gave me a lot of insight. It was a significant help. (P4)

> The unemployment didn't affect my choice. I had decided already before that I wanted to study this subject. But I did feel some uncertainty about it because I had not studied a lot. (P5)

Online learning can contain a varying amount of independent work and for many participating in online studies it can also mean a need to learn new ways of working. Some interviewees were unsure of their own discipline and maintaining motivation. Some had challenges with independent study and explained how they needed to revise their own learning techniques, especially if it had been some time since previous studies. Interviewees talked about how lack of peer support and self-management skills affected their experience.

> Maybe these kinds of online studies are challenging in general. I mean, it wasn't like in my previous studies where there was the support of other students. And you can really tell that you're all alone. Like, you are supposed to do all the tasks alone. (P1)

> The students are scattered here and there, even all over the world in your courses and group assignments. It can be challenging to reach others. Even if you message them on the learning platform, it's not certain if the messages reach them. They might not check the messages on the platform or their school email ---. This could mean answering really takes time. (P4)

P1 also pondered about the positive aspects of independent study and how a learner can improve their information retrieval skills.

> I think having to do things alone can be an upside or a downside. I mean, it's beneficial that you have really retrieved all the information alone. (P1)

Managing own work and use of time in online studies can sometimes feel challenging. Some interviewees felt like their self-management skills were improved during their studies, as they had to learn scheduling and prioritizing.

> The real benefit must be that you really learn to plan your days and prioritize things. And the importance of sticking to the schedule. And I really think it teaches a way of

> working independently and that you have to know how to search information by yourself and be systematic. Noone is going to kick your butt for you and what goes around finally comes around. For many it seemed very hard to understand how much input is actually required. And if they didn't take a proper attitude, their tasks were left undone. --- I made it very clear that I would do study related things from Monday to Friday and have the weekend off. (P10)

> I was glad about learning new things but especially about time management. I managed to participate in the live e-classes pretty well. But unfortunately, --- I often do the learning tasks at the very last minute before deadline. That I don't put enough effort into them. Which is maybe kind of a way of studying. (P7)

> I surprised myself. I have always struggled with remote work. I have usually needed a change of environment for work or other things so that I can focus on that thing. These courses are the first thing ever I have been able to diligently complete remotely at home. (P6)

Differences in personalities and personal capabilities can influence the learning experience. Some interviewees were more accustomed to classroom learning and enjoying the accompanying social environment. Some told they had preferred leaving their home for studies and other learning activities. On the other side some preferred online learning because of less social distraction. When asked about likely or expected challenges in online learning, many mentioned discipline and motivation as concerns.

> Well probably [my concern was], how I can finish all the tasks in time. Will I have the discipline for that. That was what I really considered… If I can oversee myself and see to it that the learning tasks get done. (P10)

> When it's an online course that you can do at your own pace. How do you remember to do that? And commit to doing it so that it doesn't just break off. And also, now that I found a job and I'm working, where can I find time to finish it? Which was a surprising turn of events. --- How to motivate yourself, stick to the schedule and go to the finish even though there are no credits involved. Or that kind of advantage. (P3)

> It's self-management and prioritizing use of time. And I am very good at making excuses for myself. For real, if I didn't have time to do a course or prepare for an exam or something… It was my own responsibility. (P4)

> I would like to grow as a person and study. But I find myself slowly giving up. I'm telling people that ship has sailed. And I'm in the middle of an attainment? It does say something. Mental yielding. Tired of banging my head against the wall, there are easier ways to get a bruise. (P6)

> The pros and cons of e-learning depend on the person. If you can do most of the studies at your own pace, how can you motivate yourself. And if you are self-aware and already know that you need to step it up… But maybe nowadays you learn to do these things in school, unlike 20 years ago. Young people might be more prepared. But perhaps it's not suited for all, for example if you have no experience with digital tools and platforms. It can be hard to even register. (P7)

Often interviewees were aware of their likely pitfalls concerning online learning. However, of those interviewees who had already finished their studies, all had completed them despite of the challenges. It could be interesting to compare dropout rates between youth and adult learners to see if more experience, accumulated resilience or for example motivational factors affect completion. Poor learning techniques or not knowing own best practices could feel deflating.

> I have noticed that I'm very slow. It has started to affect my future study plans and I don't know if I can even dream about it. Because if tried doing the fulltime studies, no time limit would be enough. I don't even know how I managed my first degree. (P6)

For adult learners, personal insecurities or time having passed since previous studies may have caused some concerns about their performance. Many explained about new institution and learning practices and new information systems they were not familiar with, and which created some uncertainty. It may require patience and resilience at the beginning of the studies to become acquainted with how the learning process is conducted.

Learning often contained interaction and doing learning tasks with other students. Interviewees reported discussions in groups, discussions as a part of lectures, and many kinds of mandatory group work or assignments. Some common challenges that interviewees recognized were the challenges in organizing teamwork and finding a suitable group for group assignments.

> Well, there's no mandatory attendance in online studies. And people complete them in their own phase… So doing group work was sometimes challenging. People went missing. And then sometimes more people came out of nowhere. (P4)

> We had a theme assignment for each subject that was done in a group. It was okay because you could influence the group formation a little bit. So, of course you chose those people who you knew had similar schedules so that you didn't have to work in evenings or on weekends. (P10)

A common issue which had some impact on the online learning experience was brought up by some interviewees, namely managing group work and group working schedules. Because of the somewhat flexible nature of online studies, it is not uncommon for learners to work on their learning tasks even in unconventional hours. The challenge is to find group members with similar daily schedules and goals. More study is needed on the effects of learner peers and learning groups on online learning success and satisfaction.

7.7 Perceived usefulness for the target group

Perceived usefulness in its classic sense, is the degree to which a user believes using a system will improve their own or their group's performance. Typically benefits also outweigh the costs. (Seddon, 1997.) It has been shown that perceived

usefulness of information systems impacts intention and willingness to use e-learning technologies (Mohammadi, 2015) and increases satisfaction (Sun et al., 2008). Interviewees recognized aspects such as increasing skills and employability, updating professional knowledge, receiving a qualification or a degree, using their time in a meaningful way, creating networks, and making transition to working life easier, when taking part in online learning. Perceived usefulness was a significant indicator for the interviewees to participate in online learning.

7.7.1 Increasing employability and upskilling

For the interviewees, perceived benefits of online studies were often related to employment and employability. Typically, either upskilling or updating existing career skills or switching careers.

> I wanted to improve my employment opportunities. And also – during the unemployment I hadn't written anything or presented anything – to do something to learn to write again, really. To know what to write in job applications and get the hang of everything again. It made it easier to try and transition back to working life. --- Yes, unemployment affected my choice of studies. I tried to choose something that would assist in finding employment. I was home for two years without doing anything work or studies related. I felt like I couldn't even write a job application. That I really don't know how. I felt like I couldn't do anything, who would even hire me? (P1)

Some felt studies were good for updating skills perceived necessary or useful in working life. Skills may have been outdated or otherwise unknown from before.

> --- it was a free digital skills training for adults, and I thought this was something I really need. Updating skills. --- Usefulness of it and that it was free of charge. (P2)

Acquiring certain type of knowledge and skills in the studies was regarded a benefit for working life, such as knowledge of e.g., appropriate terminology, employers in the field, and commonly needed software.

> I visioned my digital skills would improve significantly. Even the terminology is hard to understand, and still is. But I wanted to update my knowledge. Or at least not be unreasonably behind of those who are in working life. (P2)

> I thought about all the practical benefits. The terms etc. The subject was very vast. (P5)

Studies can increase confidence in one's professional capabilities, and even make potential transition back to working life seem easier.

> The benefit I was really expecting was that I find employment after I've taken these courses. And also, maybe some tips about employers in that field. And to get the hang of writing and talking, and learning new things. Even making the learning tasks was good to activate the brain. (P1)

For some interviewees to goal was to attain a complete degree or qualification. Some benefits of upskilling were receiving a formal education and potentially receiving better salary after studies.

> I have received many answers to many questions in these studies. And a degree certificate is always nice because most concretely it should increase your salary. That is very significant thing. And tangible too, the wage level. (P4)

> Well, I'm a salesperson by profession and have done that for a long time for firms and industry. And procurement. So, to have a formal qualification in something is what I would want… to acquire that. (P5)

Being goal-oriented in the studies seemed to motivate some interviewees in completing their studies.

> I was certain that I would complete the studies. And I also wanted to finish them fast. And to know that from the beginning made it somehow easier. (P10)

> It started as a side-hobby but then at some point I had a goal of obtaining a degree. Like there was no way it was going to be just adult education center studies. I had a clear goal of receiving some kind of degree certificate in the mail. (P4)

Also, participating in studies to receive deeper insight into own profession and broadening their knowledge was true for some interviewees.

> The themes of the courses interested me. And it was something I wanted lean towards professionally. So, it was suitable and interesting for myself. (P1)

> I just happened to find this course and it seemed interesting enough to expand the knowledge of my profession. In short, I wanted to learn something new. (P7)

7.7.2 Networking benefits and purposeful use of time

Some interviewees also appreciated meeting new people and connecting with them. Networking benefits were perceived useful for gaining new insights and ideas, and possibly for connecting later in professional sense.

> Yes, I achieved my learning goals and much more. My network has grown, and I have these kinds of partnerships ---. And networking during the studies has provided me with all kinds of information which is quite impressive. (P4)

> --- benefits like networking. Getting connected with other people in the course. Then perhaps you can contact them if you have some similar matters to deal with. (P7)

Many interviewees also wanted to bring purposeful content to their days and use their time sensibly. Studies were seen to create structure and consistency to their daily routine during unemployment.

> I expected to have something sensible to do during unemployment. I think it created structure in my everyday life. That I got something done. And of course, I expected to gain new insights. --- It wasn't mandatory so I would have probably dropped out if I didn't find it suitable for myself. But it was in fact nice to do a course in wellbeing while being unemployed. I had time for the exercises and the course in general was very well suited for my situation. And I like studying online. --- It was a good pastime but also beneficial. (P3)

> I wanted to schedule my days for the studies in a similar way like going to work in the morning and coming back in the evening. To have some structure and the drive for it. It can be hard being at home. And during the pandemic you couldn't even go to a library or other environment better suited for studying. (P6)

> Two things. For self-development and upskilling. And to have something sensible to do during the days, to pass the time. (P7)

7.8 Learner satisfaction and benefits of online learning

User satisfaction is a subjective assessment of the pleasantness of the system and its use (Seddon, 1997) and user's general conception of the information system (Hassanzadeh et al., 2012). It is also the assessment of how well the system responds to user's needs and desires – and in online learning specifically their educational needs (Mohammadi, 2015). Learners may regard the learning system or learning entity to provide poor value to them and not meet their expectations which would increase dissatisfaction. Among the interviewees the overall value and usefulness of their learning experiences were considered fairly positive. Learners were also quick to adapt to different ways of learning and teaching. Some interviewees had to learn new ways to acquire learning materials, use different required digital tools, communicate on the learning platform, operate in e-classes, or even way of carrying out learning tasks.

7.8.1 Own performance, flexibility and value of studies

Sometimes the learners were unsure of what to expect from their studies and were doubtful of maintaining their motivation and fulfilling their learning tasks. Many interviewees had however positive experiences of their performance, sometimes to their own surprise.

> I was satisfied that I could acquire the qualification as fast as I did. During the first 6 months I completed the studies of the first year… Which was a bit crazy. But quite doable when you follow your own schedules. Many students did not graduate when they were supposed to because they had not finished their learning tasks. (P10)

> I think I achieved some gains but there's still definitely uncertainty. --- But actually, I think the biggest contribution of these studies was the swift transition to online learning. It was not planned but it was good to learn about the remote working. It might be problem these days in working life if you had no experience in it. (P2)

> I was satisfied in myself. --- I had never even opened an e-book, so underwent that too. --- I have to say that I'll be disappointed if I don't pass this second course. But at the same time, I'm so glad that I passed the other course. --- I had very little expectations but I definitely reached some goal by passing a course. And surprised myself. (P6)

The interviewees reflected on their online learning experiences. Own performance in achieving learning goals, passing courses, and managing new and different ways of learning was regarded a positive experience. Even if there was some disappointment about own performance, there was also understanding. It was generally well understood that studying online was a new mode of learning and commonly time had passed from previous studies. Personal goals and expectations could also affect these feelings.

However, even if satisfied with their performance, sometimes the outcomes weren't as expected. For P5 who had completed their studies at the time of the interview, the outcome of studies was not what they had hoped for which was discouraging and made them wonder about the mismatch of their studies and the positions they had applied for.

> I think I achieved my learning goals. And actually, applied for jobs as well but haven't gotten one. Because I don't have… They ask for the certificate. It's weird in this country that they hire papers and not people. --- I wish I had been employed but maybe I was applying for too ambitious positions or asking too much pay. (P5)

One significant upside in online learning is the flexibility of it. Learners are freer to plan their own learning process. Compared to contact learning, learning schedules are more adjustable which gives more autonomy in making own arrangements and more time for learning reflection (Palloff & Pratt, 2013). Interviewees were also very happy that their time was not wasted in traveling for example.

> What I was most satisfied with was how easy it was to "get there". I didn't have to spend time traveling somewhere and back. When I had online classes at a certain time of the day, like sometimes on Wednesdays, I knew to be by the computer and in that meeting link. That's what I liked the most. (P10)

> It's definitely a benefit that you do not have to travel to the institution every day. It's one hour each way. (P2)

Having course recordings available and being able to moderate own pace of study as well as study places and study times was also appreciated.

> I think working at your own pace and wherever you want is a benefit. Like for example in the Springtime it was nice to listen to the lectures outdoors or lying down and choose good timing for yourself. I think that's the biggest advantage. (P3)

> Online studies are always hassle-free. And what's really great is the flexibility for your own use of time. And the lecture recordings, even if the quality wasn't always the best. But flexibility is the most important. --- Savings in transportation etc. and flexibility. Obvious advantages. (P4)

Many appreciated the possibility of studying from home because it increased flexibility ja autonomy to choose studying times. Some interviewees even wondered why online learning opportunities have not been more common before and what the future of studying will be like.

> For contact studies you have to be physically present. If something good must be said about the Covid pandemic, it's the benefits of online and remote working. Not everything must be done side by side, hand in hand together in the same place. Being physically present of course has its own purpose and some contact work is important. --- But seriously most of these kinds of jobs at least in my field can be done remotely just as well. Of course, I understand that it's not possible for all industries like teaching handcrafts or similar where you should be present. But if it's possible, remote opportunities should be boldly increased. (P5)

For some, the transition to a digital learning environment was eye-opening. It was a realization to some, that many things in studies as well as in working life can be done remotely and digitally, and with similar quality and even additional benefits like flexibility. A smart remark from P10 was that in online learning they know that the time spent on the computer and doing the studies, has its own purpose and for their own benefit. Similarly, no extra time is spent in travel or other arrangements related to contact studying.

> I think I could study like this again because I find this mode of studying very suitable for myself. You're also not responsible for others and their issues don't really reflect on you. Also, shared time is not wasted on dealing with matters someone does not understand. All kind of additional hassle is gotten rid of in online learning. --- I didn't even consider it [contact studies]. I think it's liberating to know that the time I spend on the studies is completely for myself. (P10)

A seemingly obvious benefit for many was the suitability of studies. The studies were well suited for their capabilities and had a good learning value. Interviewees also often evaluated the studies a bit more critically if the studies were paid.

> --- the scheduling and contents are very well thought through. There are a lot of independent learning tasks which support the studies. It's all very professional. And I feel it's worth the money. I know what I'm paying for and what I get in return. (P8)

> For my current situation the studies were golden. They were timely and it's good that I can put these updated skills in my resume. It's a pretty big concern for employers for sure when someone has been away from working life for long. (P2)

7.8.2 Limitations and concerns for adult studies

Some limiting or distressing factors about online learning or taking up studies in general could diminish satisfaction or perceived total benefits. However, it seemed that more often that the interviewees had surpassed these limitations. Certain limitations and conditions typically apply to studying while being unemployed and arranging finances for and during the studies can be a big concern. Financial situation and available resources and funding were among the most important influencers. When registered as an unemployed jobseeker there are certain conditions for receiving benefits and what type of studies are allowed. Adults also need to evaluate their overall living situation because studying could potentially complicate their financial arrangements.

> Financing definitely mattered. I would not have gone studying if I wasn't able to do it while on earnings-related allowance. I would have just stayed unemployed and maybe come up with something else. But then again, I feel it was a sort of a boost for the studies. To study swiftly and get swiftly back to working life. (P10)

> I had the idea already a few years before. I was doing some studies while working. Many small things that fell into place and personal finances were in order. I saw this opportunity and I chose to seize it. --- I had 500 days of earnings-related daily allowance. So, I had two years to study and get paid more than my wife with a higher education degree. I thought my chance had come. (P4)

> Of course, it is important to figure out how to fund it. That's the big question. You can study all you want when you get the routine. But if you need to work and study all that… That's not so much fun. (P5)

One interviewee also told that one reason for participating in studies was that the studies were free of charge. Financial situation of adult learners can affect both willingness and ability to participate. On the other hand, many studies are not free of charge, which brings up the question of how well learners feel they receive compensation for their investment.

> I was a bit irritated because open university students are paying for the courses on top of things. It would be nice if they had put together some kind of information package. It should be marked in the student management system for the teacher, like which students are not full-time students. Some may not have any prior knowledge of previous courses or other things. (P1)

When studies are offered for a fee, the "product" should correlate with the investment by most quality indicators.

Being unemployed and navigating different alternatives for self might sometimes feel overwhelming. In general, public employment services regulate the quantity of studies unemployed jobseekers can participate in, so that simultaneous studies do not interfere with job seeking and the person does not lose

their unemployment benefit. Also, for self-motivated full-time studies, an educational need must usually be identified which means attending whatever kind of education might not be possible.

> Being an unemployed jobseeker, the employment office has fairly strict criteria what you can study and how much. I was allowed to participate in two courses and now after wrangling I was granted permission for one more course. --- The amount of course credits determines if you get permission, maximum is 5 ECTS per month. Because then you're a part-time student and can apply for jobs simultaneously. (P6)

P6 received labour policy statement to attend some courses as to for some courses the permit was not granted. The practices may not always feel uniform which may be partly because some of the decisions made by employment experts are discretionary. If the permit is granted the person must deliver a certificate of attendance to the employment services to verify that they have truly attended. The goal of the employment services is to find suitable services, training, and employment for the unemployed jobseekers. Sometimes however the guidance and suggestions may seem ill-suited.

> Before you can enroll, you need the permission from employment services. And sometimes those decisions take a long while. --- These courses for example were not endorsed because they were not continuing studies for my previous degree and don't make up a new profession. I was recommended taking part in one-year basic training for financial management - or a taxi driver training. (P6)

Sometimes decision making in the employment services is discretionary and expert opinion might conflict with person's own views of their best interest. Matters regarding permits, sanctions, and benefits may feel complicated and discourage educational self-development and lifelong (formal) learning.

8 DISCUSSION

This study explored the research question *What are the quality indicators of successful online learning for unemployed adult learners?* The study investigated different online learning quality dimensions specific to unemployed adult learners through investigation of prior research and by interviewing 10 adult learners about their recent online learning experiences. The study presents and discusses online learning quality indicators, which constitute a successful learning experience for unemployed adults. In this chapter the results of this study are discussed in relation to prior research. The quality indicators, their validity, significance, and implications, and potential follow-up topics are discussed.

Various assumed quality indicators were included to evaluate their experiences in online learning. The possible indicators are evaluated based on previous research and the findings of our research interviews. Support for several previously identified online learning quality indicators (e.g., Mohammadi, 2015; Hassanzadeh et al., 2012; Alsabawy, et al. 2016 etc.) was found. These indicators included for example perceived usefulness, service and system quality, and quality of materials, communication, and guidance. Quality indicators affect the success of online learning and predicted a positive learning experience for the learners. This research aims to present current popular and successful practices for planning and organizing online learning in relation to the views and experiences presented by the interviewees.

This research is important for understanding the current state of learning opportunities available for unemployed adults, challenges often faced with online learning and implications for re-employment. The information can be applied to developing meaningful online learning for the unemployed. Unemployment and adult knowledge building and education are current matters in the Finnish society, and there is need for new means in making learning more attainable and democratic for everyone to participate in. Findings about online learning success included perspectives about the influence of instructor communication skills, availability of support and guidance during studies, comprehensiveness of provided instructions and their suitability for adult learners, up-to-datedness and attainability of learning materials, mixing learning modalities, and absence of technical difficulties. Many of these findings could be used e.g., to improve learner support and guidance practices, to increase multi-modality and practicality in adult learning, to ensure sufficient instructions for the participation, and to establish working feedback processes and instructor resources.

8.1 Educational quality often relies on good instruction

Sun, Tsai, Finger, Chen & Yeh (2008) present course quality as the strongest indicator of learner satisfaction. In their definition, course quality involves for example learning materials, course design, and course discussion. In this study, factors such as instructor attitude, course evaluation, course discussions and certain pedagogical choices were also seen to contribute to experience of educational quality.

Learning process and pedagogical principles
Learning process and course design can have a direct impact on user satisfaction and continuance intention. This indicates, that learning processes should be developed to include flexibility for learners to control their own study pace and e-learning course structure and materials should be coherent and structured in a clear manner. (Chow and Shi, 2014.) Flexibility was seen as one of the best qualities in learning online. Interviewees appreciated being able to adjust their learning times when it was possible. This was seen to improve satisfaction as well as considered a great benefit compared to traditional classroom studies.

Best design practices and pedagogical principles should be noticed when defining learning goals and course content for online learning. The curriculum should be relevant and current for learners, and support skills requirements of working life. (Li et al., 2012.) When explaining the benefits for participation and completion, describing the learning process, the level of needed commitment and actual applicable benefits after course completion is recommended. (Salmon et al., 2017). Increasing skills and employment potential was seen important when taking part in online studies. What was sometimes confusing to the interviewees was the structure, requirements and process of the studies which were often insufficiently communicated. Instead, they should be clearly described for adult learners who may have not participated in any type of learning for some time. Learning practices can also change in time which is why making sure that everyone has the necessary understanding of the process is very important. Learner's interest towards learning and system use can be increased through user-centered course design, where learner's needs and experience levels are considered, and learning made easier and more enjoyable through instructors implementing different creative learning methods, like games in the system. (Cheng, 2012.) Investigation of learning methods and modalities suitable for adult learners would require further investigation through service design practices.

If group activities are included, unambiguous responsibilities are to be instituted to course participants to avoid disengagement and confusion. (Salmon et al., 2017.) Sometimes not having clear guidelines in the classes and learners having dissimilar goals could cause dissatisfaction among the interviewees. This is one reason why it could be important to recognize typical groups and their expectations and motivations for the process and task completion and provide alternate paths for them if considered useful. (Salmon et al., 2017.) Different means in participating and completing online learning could therefore be promoted. This could mean alternative schedules, alternative modalities for course

content, alternative means of finishing course work, or alternative or partial attainment options for learners. Different options for learning purposes of unemployed adult learners could be surveyed and tested.

Instructor skills and interactions

Instructor quality is found to significantly influence learners' perceived usefulness and enjoyment (Cheng, 2012) as well as learner satisfaction and motivation (Sun et al., 2008). Instructor capabilities and skills can predict learner achievement. For example, instructor's practical experience, education, and skills in conducting learning online formally and informally are all significant indicators of learner achievement (Martin, 2020). Sun, Tsai, Finger, Chen and Yeh (2008) concluded in their study that instructor attitudes in conducting the studies influence learner satisfaction and motivation. Interviewees implied that satisfaction in the studies was strongly related to quality of instruction and teaching provided by the instructor. Instructors with expertise, practical experience and interest in their subject matter were often commended for their attitude and professionalism which increased interest and satisfaction among learners. The learners felt more motivated when the instructor seemed genuinely interested in their own field and was active in their communication efforts during the studies. On the flipside learners felt unmotivated, when instructors did not keep contact with them, were not too interested in giving feedback, rotated old course materials, or were impolite in their messaging. The interviewees appreciated instructors who could incorporate practical views and examples to the teaching and could also make a distinction between more and less motivated instructors.

Ozkan and Koseler (2009) found a strong connection between learner satisfaction and instructor quality. This means for example positive experiences of student-teacher communication, proper teaching technique and given explanations, and ability to use technologies required to conduct e-learning. Instructors can have a central function in providing quality learning with their teaching methods, provided support and responsiveness to increase learners' interest and continuance intention. Instructors are advised to communicate appropriately and timely to learners about learning process and feedback, attempt to identify learning obstacles and solve them, and implement interactive learning methods to encourage interaction and participation. (Cheng, 2012.) In online learning the learning experience is inevitably different from contact learning, and possibilities and constraints created by online learning will set certain preconditions for interactivity. Many interviewees brought up feelings of loneliness, challenges of independent study and loss of social connections. These kinds of challenges should be recognized and aided for example by paying attention to frequent communication and interactive practices. Even system-initiated messaging (such as reminders and other notifications) alleviated the feelings of being "left alone". It would be advisable to assess a minimum level of required information for new learners and explore possibilities for increasing messaging. Instructors play an integral role in any learning effort. Instructor quality is therefore also a key factor of e-learning satisfaction although their ability to communicate - and their attitude towards the system seemed not to affect system use. (Al-Fraihat et al., 2019.)

Learning with included online classroom discussions between learners, facilitated by the instructor, were found interesting and motivating. When discussion and sharing of thoughts is encouraged in online classes it can help formulating new ideas and gathering perspectives. Instructor quality did seem to support engagement and regular communication might decrease feelings of loneliness in independent studies. Based on the experiences of the interviewees, it is safe to assume that it is better to instruct and message the learners about the process, tasks, and other things preferably more frequently than less frequently. Sun et al. (2008) also encourage diversified assessment methods and applying multiple feedback loops for learners to improve their performance. This also means diversifying schemes of assessment and providing feedback more frequently which might require learning and applying new evaluation skills. The interviewees were sometimes confused with the limited feedback processes, for example peer reviewing practices, and limited feedback on their assignments or exams. Interviewees explained that improving own performance or correcting faulty knowledge was challenging without proper feedback. It is therefore important to create feedback processes which support learning.

Another important aspect related to instructor skills is how well equipped they are to conduct learning online. Instructors should be provided with sufficient training, to know for example how to facilitate learning groups and discussion and guide different types of activities online. Instructors also need guidance and motivation for the teaching process and appropriate resources in order to be successful in organizing and conducting online learning. (Akbaba Altun & Johnson, 2022.) To conduct learning online, the institution should ensure sufficient skills and capabilities for their faculty members, as well as sufficient resources, common guidelines, and support. Instructor experiences with online learners and of institutional support, and attitudes towards online learning could be an interesting topic to investigate further. Some system attributes like content management tools, creating content and establishing integrations, can exist in the system but need instructor actions and skills to activate and utilize them for the purpose of their studies. (Aydin & Tirkes, 2010.) Utilization of the learning system features can depend upon the capabilities of the instructor, guidelines provided by the institution and the nature of the study.

Educational system quality

Previous research shows that educational system quality affects user satisfaction. System features such as discussion forum, chat, learning tools which support collaboration, and class discussion support are likely to increase satisfaction (Hassanzadeh et al., 2012). Some attributes associated with educational system quality are for example features that allow communication with others (chat, forum etc.) and discussion in class, having means to validate learner presence in class, supporting appropriate learning styles, enabling collaborative learning, and having means to evaluate learner progress (Hassanzadeh et al., 2012). It is noteworthy that educational system quality might not have as a significant impact on e-learner satisfaction as some other quality indicators. This may be in part because

of the involuntariness of chosen e-learning systems for the user and similar findings have been made with other mandatory systems. (Mohammadi, 2015.)

However, existence of system features does not guarantee their use in purposeful ways. Instructor quality can affect learner satisfaction but might not influence system use (Al-Fraihat et al., 2019). Nevertheless, instructor behavior and organization of the learning experience can influence learners' intentions to use the system (Li et al., 2012). Interviewees were often motivated to continue and complete the studies regardless of the instructor quality. They seemed motivated by other drivers and were not discouraged by poor instructor quality enough to seize system use. High quality instruction however did seem to assist in achieving learning goals through high quality teaching and materials and active communication and support. The interviewees did not report significant difficulties with the system and its pedagogical choices. This would imply usability and functions of the systems were generally good, or at least sufficient for the purpose. However, learners with less experience with digital platforms or a longer break from working life experienced some challenges. Learning systems use is often mandatory for online learning and even interviewees with challenges managed to complete their studies. System quality is discussed more in the following chapter.

8.2 Technical system quality as means and not a purpose

As presented by DeLone and McLean as a part of their IS success model, technical system quality can be perceived as the technical success, performance, and accuracy of the system (DeLone & McLean, 1992). According to Mohammadi (2015) technical system quality and service quality have been discovered to significantly impact e-learning satisfaction. Hassanzadeh, Kanaani, and Elahi (2012) recognized indicators such as ease of access, ease of use, user-friendliness, interactiveness, personalization, attractive and structured design and user interface, system security, speed and reliability, and usability, to measure system quality based on prior research. What constitutes *system quality* in online learning? This study defines educational system quality as the level of quality determined by features and capabilities that support and improve the processes of teaching and learning of the system. These can include interactive and discussion features, user-friendliness and good interface design, progress monitoring features, and feedback and performance management. In this study, perceived ease of use as a quality indicator was not considered as an independent variable but as a part of the system quality dimension.

Traditional concepts of perceived usefulness and ease of use

Davis presented in his work of 1989 that perceived usefulness and perceived ease of use are the two main factors to impact system use and user acceptance. As Perceived usefulness is theoretically sensible since people often take systems into

use to accomplish certain goals and ease of use facilitates performing tasks effortlessly. (Davis, 1989) The views of the interviewees of this study also recognize the importance of these factors and indicate partially similar results. However, the ease of use of the e-learning systems did not seem to invoke many opinions. This indicated that many interviewees were mostly satisfied with and accepted the learning solutions offered to them for educational purposes by the institution. Davis, Bagozzi, and Warshaw (1989) found in their study of information systems success that perceived ease of use also impacted use intentions. This impact decreased in time. It was also suggested that use intention, perceived usefulness and perceived ease of use would forecast user behavior. (Davis et al., 1989.)

Davis (1989) points out accurately that typically systems users will manage some level of difficulty if the system performs desired functions and allows achieving target goals, and that "no amount of ease of use can compensate for a system that does not perform a useful function" (Davis, 1989, pp. 333-334). The perceived usefulness of the e-learning system is the most important factor of examining system success and acceptance. E-learning systems should inspire reuse of these services. (Alsabawy et al., 2016). This could be mean that although the learning efforts themselves could be perceived useful, if the system does not support the learning goals, the learner may feel unmotivated to carry out the studies. The interviewees hoped for educational learning systems which offer new learning experiences and skills development opportunities. Even if the learning system was not always pleasing to the eye, it often served its purpose by delivering means of education. Nevertheless, perceived ease of use has considerable impact on learner satisfaction (Sun et al., 2008). System ease allows user focus on core purpose of learning without needless effort put into resolving the system complexities. Li et al. (2012) also recommend considering ease of use when designing systems and including learners in the planning work. This could mean for example including learners in the process through service design practices, user testing, or surveys sent out by the institution. It can also be important to follow different trends among e-learners, to investigate preferred methods and techniques of study.

Technical success and ease of use

According to Hassanzadeh et al. (2012) technical system quality can be defined as a system's technical success, reliability, ease of use and lack of errors. Educational system quality on the other hand consists of properties and capabilities of the system that help and enhance teaching and learning. For example chat and forum functionalities, possibility to communicate with other students, matching different ways of learning, supporting collaborations and activity, and offering evaluation, as important factors relating to educational system quality (Hassanzadeh et al., 2012). Perceived ease of use on the other hand, is the belief or experience of an easy to use, intuitive and effort-free systems. Perceived ease of use motivates technology acceptance and further intention to use a system (Mohammadi, 2015). These factors are related to e-learning system and platform technical accuracy and efficiency and overall platform design and structure, and inbuilt (programmed) features.

System quality has been found to improve learner acceptance, affect learner satisfaction positively and encourage intention to use. Course designers should ensure that learner requirements meet with the system features and develop responsive and interactive features for interaction to stimulate learning and perceptions, and immediate messaging. When doing so it is important to assure system capacity and performance requirements. (Cheng, 2012.) It is recommended to provide learners with user-friendly, adaptable, reliable, and visually pleasing systems. This includes a structured design, system efficiency, interactive features, and support for different learning formats. (Mohammadi, 2015.) Instructors should also properly utilize the system multimedia opportunities to support learning and utilize the interaction features to increase connection and connectivity to advocate system usefulness (Cheng, 2012). To be able to use the systems purposefully, instructors require training about the system and its features. Also, when systems and platforms are acquired for institutional and learning purposes it could be important to validate their usability through e.g., defining requirements and conducting case tests.

Satisfaction and different requirements

One fundamental matter to consider is access and needed tools. To provide successful transition to online teaching and creating learning communities, matters such as student and instructor access to technologies in use and understanding of them are important to consider. The online course site should be easy to use and access, and the instructor should be familiar enough with the technology to provide support to students if needed. (Palloff & Pratt, 2013.) Similarly, learners are usually informed about the technology requirements before enrolling to a course or a module, and internet connection is certainly customarily among obligatory requirements. The growth of use of mobile technologies has also paved the way for alternatively using mobile devices in online learning instead of desktop computers. (Palloff & Pratt, 2013.) Informing learners about the study requirements is vital. The interviewees accounted challenges with gaining access to additional but required software and materials, and how the communication about these requirements was very poor. In addition, when challenges do occur, it would be important for the learners to know who to contact for help.

In the case of e-learning it might be important to point out that system use is not often voluntary but a prerequisite for completing studies which involve use of a learning system or similar. Bringula (2013) found that use frequency of the system is not a strong indicator of usability in e-learning. When it comes to e-learning, the learning platform and tools are in part preordained by the institution and instructor. This often means that in order to complete the online studies, at least the learning management system or platform must be used regardless of the perceived usability or user experience. Use frequency in this case does not therefore determine usability.

As Hassanzadeh, Kanaani, and Elahi (2012) present, technical system quality of e-learning systems has a direct impact on user satisfaction which consequently means better systems success. Also, in a study by Mohammadi (2015)

system quality together with information quality were found to be the most influencing determinants of use intention and e-learning satisfaction. As for preferred technical features in the e-learning system, Aydin and Tirkes (2010) mention for example that the system should be adaptable with other learning systems and support other essentials tools, have good performance and chance for extensions, entail content management options, like creating, reusing, and sharing content, and have tools for integrations and authorization. Santoso et al. (2016) present in their study that the quality of the learning system will ultimately impact learner performance and learning outcomes. This means investigating usability and learner experience is important for educational systems. If system quality can affect performance and outcomes, it is an important topic for all learner groups.

User interface and user experience design

System quality has many backend based aspects such as system performance and speed (e.g., data mapping and queries, routing), availability (e.g., servers), accessibility, and integrations, which greatly affect system use and usability. However, the user interface (UI) should be accessible and well-organized to allow ease in navigation and finding required resources and materials. This includes for example theming and graphics design. As the UI is designed to allow effective use and is visually pleasing, learner productivity and enjoyment is increased. (Cheng, 2012.) Usability of learning systems is an important factor despite the previous experience or knowledge of the learner. (Harrati et al., 2016.) Learners wish to complete their online studies successfully and efficiently and to feel satisfied with how the system supports accomplishing these goals, and user interface design is an essential factor in use adoption. (Harrati et al., 2016.)

Ozkan and Koseler (2009) found a strong positive connection between system quality of the learning system and user satisfaction in their study statistics. What was especially recognized to affect learner satisfaction was the user interface, its design, stability, and user-friendliness. In habit building, easy navigation, locatable needed information, and attainable help selection were found to be important. Additionally, learners also wish to manage their own learning progress in the system. (Ozkan & Koseler, 2009.) Alsabawy et al. (2016) list system quality and success factors such as easy use and navigation, accessibility, user interface design, attractiveness and how information is presented, user-friendliness, interactive qualities, availability, and integration. To summarize, e-learning solutions should be designed visually pleasing, easy to use, well-structured, stable, safe, flexible, environmentally engaging, with optimized response times and interactive elements (Mohammadi, 2015).

Interviewees did not report or emphasize any major challenges with user interfaces and usability when asked about system quality. In general, it seemed like the learning instruments were relatively well designed and easy to use, and many were pleased with the systems. Most issues reported related to system quality were issues with user rights and access, trouble with additional digital

tools (like online meeting software), and insufficient instructions related to acquiring and using additional tools and accessing materials and instructor capabilities of using these tools.

Technology is critical for the process

In some e-learning studies (Mohammadi, 2015; Hassanzadeh et al., 2012) technical system quality was found to be the strongest indicator to impact user satisfaction. Also, for educators, according to a study by Islam (2012), perceived usefulness and satisfaction with the system determine continuance intention whereas perceived system quality might not play a central role in continued use. However, it has been found that system quality is a central indicator influencing user satisfaction positively (Islam, 2012; Mohammadi, 2015). Therefore, it seems that system quality and user satisfaction are interconnected. Al-Fraihat, Joy, Masa'deh, and Sinclair (2019) suggest that factors of system technical quality influence overall learner satisfaction and perceived usefulness of the system. These factors include ease of use, meeting of user requirements, interaction flexibility, integration and compatibility of various system elements, and presence of features which are needed by the learners. Online learning is a complex structure, and its success cannot be measured with a single indicator. Learning management system or chosen learning technology only constitutes a part of online learning success but forms a critical factor in the process. The learning system should facilitate online learning and enable easy or even effortless online learning processes and allow implementing suitable pedagogical solutions. For the interviewees qualities such as ease of access, easily attainable materials and other content, and a clear content structure were among the things which were appreciated in the learning system. It seemed however, that the technical system quality was not of primary importance. Only few experienced technical challenges and technical issues were rarely the cause of dissatisfaction. The importance of technical system success and quality in online learning should be investigated more thoroughly for example by means of user testing and surveys to gain more insight into its influence on the entire learning experience.

8.3 General quality guidelines for content and materials

Information quality is an indicator that is found to correlate positively with learner satisfaction also among the participants of this study. As presented by DeLone and McLean (2003) information quality can also be assessed through its "accuracy, timeliness, completeness, relevance, and consistency" (DeLone & McLean, 2003, pp. 15). Often information quality can be described as understandable, versatile, and up-to-date content. Other things identified to affect satisfaction are illustrations, good example cases, additional resources on the matter, and interactive content. (Ozkan & Koseler, 2009.) Hassanzadeh, Kanaani, and Elahi (2012) recognized in their study that "content and information quality has the most direct effect on user satisfaction" (Hassanzadeh

et al., 2012, pp. 10963). This would suggest that content and information quality may bear more importance to overall satisfaction of learning experience than chosen technologies and learning methods. Also, in this study the content quality was a focal theme among the interviewees. Information and content quality provides an interesting and important follow-up subject for adult online learning. Important questions to consider include how to assure appropriate learning contents for the target learners, how to utilize different learning modalities in adult learning, how to manage the materials in a sustainable way, and how to use additional online or physical resources?

Information and content quality in online learning

Assessing information quality in the context of e-learning is often considered challenging because the content varies widely, is typically complex and perceived differently by different stakeholder groups. However, information is often considered high in quality if it is easily available and understandable, and concise. (Alsabawy et al., 2016.) Similarly, Ozkan and Koseler (2009) list attributes such as sufficiency, comprehensibility, maintenance, and organization of the learning content, up-to-date materials, learning model, adaptability, and quality of orientation or tutorials. Similarly based on previous research, Hassanzadeh, Kanaani, and Elahi (2012) add content accuracy, timeliness, comprehensiveness, and usefulness to the list of important factors regarding information quality. Although often described as the output of the learning system, it is important to notice, that the system rarely generates the existing learning content, but that the content is rather created by the instructor or the course planners. Outputs are rather information the learner can self-generate, and it can be studied how well the system enables and supports in creating these outputs. Content and information quality in this study were rather investigated regarding how well the learning content and materials have been created, selected, and serve in achieving the set learning goals.

Information quality in the earlier information systems studies was considered to be relevant, timely, and accurate information produced by the system (Seddon, 1997) and the quality and usefulness of the generated outputs and information for the learners (Mohammadi, 2015). The interviewees appreciated being offered learning content in different formats, combining theory and practice in teaching, and having sufficient amount of information and it being up to date. For example, information quality for Alsabawy et al. (2016) contained items such as information availability, and conciseness and understandability of the information in the online learning system (Alsabawy et al., 2016). It has also been found that information should be accurate, comprehensive, and relevant to learner needs (Mohammadi, 2015). Users might also hope to have direct links to course content, content in varying formats, evaluative content, and related search options (Bacsich & Pepler, 2014) which offer search methods to enhance usability and reflect typical user expectations.

Previous research shows that learning content quality has significant impact on perceived usefulness, perceived ease of use and perceived enjoyment of use. Course design quality can also positively influence perceived ease of use.

This suggests richness in materials, up-to-date and learner friendly content, and suitable and flexible course design increases experiences of usefulness and usability of the system. (Cheng, 2012.) It has also been shown that in online learning some topics (e.g., business studies) perform better than others compared to face-to-face learning (Martin, 2020) which could also influence the success and learner experiences and indicate that other topics are more suited for online learning. In addition, as stated in previous chapter, Mohammadi (2015) found system quality and information quality together to comprise the most central factors behind user intention and satisfaction towards use.

The subjectivity of information quality can make assessment of quality more complex. However, there are common denominators such as availability, conciseness, and understandable materials. (Alsabawy et al., 2016). These indicators are something all responsible parties can aim for in their implementations. These notions would further implicate that information quality, may it be subjective to an extent, plays an important role in the learning experience. Being able to apply previous knowledge, reliability, accessibility, and up-to-datedness of the used learning materials, varying formats and learning modalities, and suitability and proper amount of content, were among important matters discussed about with the interviewed learners. For example, practical examples, recorded materials, and accessing materials flexibly was appreciated.

Organizing the contents

Chow and Shi (2014) advise professionals working in the field of e-learning to produce and construct courses with logical and reasonable overall structure, as well as offer well-organized materials. Similarly, Al-Fraihat et al. (2019) recommend focusing on the structuring the information into logical segments on the learning platform which assists the learners to comprehend the entirety of the course more easily and carry out their study work more effectively. The learning materials and other content were widely discussed.

Guidelines for good information quality, according to the study of Al-Fraihat et al. (2019) were appropriate amounts of necessary materials that are up-to-date, and conciseness and clearness of the information. (Al-Fraihat et al., 2019.) Also, organizing and chunking content into meaningful portions and in a relevant manner can affect the learning experience positively. It can even make learners become more effective in completing their tasks as Al-Fraihat et al. (2019) state. Also, as Chow and Chi (2014) present, it is important for practitioners to construct a clear learning structure and provide learners with coherent and concise materials. Providing learners with appropriate amount of learning materials can be a challenging task. Information quality factors into satisfaction and perceived usefulness (Al-Fraihat et al., 2019). The amount materials need to be consistent with the amount of study credits and support in achieving the learning goals.

An important perspective supporting inclusiveness and different learning styles presented by Cohen and Baruth, (2017) is to provide additional and supporting learning materials for learners who are not as diligent and need more support. This partially concurs with the findings of this study although instead of hoping for educational aids, learners hoped for additional materials to deepen

their understanding and to have these materials ready, selected by the instructor. If selected materials were not provided for them, learners often chose not to seek information independently.

Up-to-date, accessible materials

Accessible and up-to-date materials can be considered a common requirement which is central to any learning effort. Many were satisfied with the high quality of materials, but some had poorer experiences. Unfortunately, it was sometimes found by the participants that materials are outdated and circulated from previous implementations. Studying based on outdated information was a cause of dissatisfaction among learners. According to Hassanzadeh et al. (2012), information quality has the most direct impact on user satisfaction.

Habit of repeatedly circulating materials, was also a finding by Bringula (2013). The reason for this was often time pressure and other instructor obligations. This means the material is not revised before release of the study implementation and could impose learners to potentially outdated or faulty information. This could simply imply that instructors are not allocated sufficient time for planning the implementations. Materials used should be reviewed and revised to provide learners with relevant and up-to-date information. Especially when learners are paying for the course, utilizing same materials repeatedly and with potentially outdated information may even seem rather unethical.

To complete the studies, the necessary materials also need to be accessible physically or virtually. Some participants reported that accessing necessary materials was sometimes challenging due to lack of access rights, because of their adult student role in the institution, or because the materials were simply not reasonably attainable. Bringula (2013) also found that it is important to provide not only relevant but also accessible materials. It was found that instructors often do have an understanding of the learning value of online library materials, but they are however seldomly utilized.

8.4 Service quality in both ICT and learning support

Learners should be able to reflect their ideas and cooperate with others, manage their courses, and have instruction and training available. (Mohammadi, 2015.) ICT related service is user support by a technical unit which aims to help users with system use and issues. (Hassanzadeh et al., 2012). Service to users can also be provided by the institution or the instructor in which case it does not necessarily have to do with technical questions. When organizing online learning, institutions also need preparedness for offering learner support which includes administration, commitment and required infrastructure (Palloff & Pratt, 2013). Service quality in this study included both types of learner support structures. In this study service quality was seen to incorporate quality of technical support, and instructor and other institutional support, guidance, and counseling services.

They can be examined by their provision and availability, response times, response quality, and utilizing user feedback in system and course development. Service quality is examined as both technical support and learning support, as they are both central service dimensions for online learning.

Technical vs. learning support

One perspective to separate these service quality dimensions is based on whether the service or instruction is provided *proactively* or *reactively*. Proactive service is service, or instruction provided for the learner by the learning system, institution, or instructor as guidance for completing the studies before any issue arises or in parallel with the studies. Reactive service is learner-initiated as questions or issues arise at any stage of the studies. The learner then needs to contact the instructor or alternatively the helpdesk to resolve the situation. Some factors of service quality collected from other studies by Hassanzadeh et al. (2012) include speed and responsiveness of service, giving guidance service, managing courses, and taking user experience into account.

Common elements for IS service quality can include things like support service reliability, responsiveness, and empathy. (DeLone & McLean, 2003.) Measuring service quality can be challenging because although e.g., ITSM practices often aim at measuring support service efficiency through different metrics, the user experience is always very subjective. This can also mean, that among the essential skills requirements for support service specialists are communication and customer service skills. Reliability, responsiveness, and empathy are factors which could easily extend to other support and guidance services as well. It was a positive experience for the interviewees to receive swift and friendly replies from the instructor.

There commonly is a technical help desk to aid online learners with technical issues. However, the interviewees of this study would have been prone to contact their instructors even with technical difficulties. IT infrastructure services of the institution can consist of items like channel management and a variety of contact channels, ICT division or similar providing advice and consultancy if needed, communication infrastructure and having ICT support services in place for the use of the online learning system (Alsabawy et al., 2016). It would also be important for the ICT unit or service provider to have a feedback process for system errors to improve user experience and system use (Mohammadi, 2015). The online environment should also be safe and offer ease of inquiry for students and prove faculty presence online (Tobin et al., 2015). Similarly, instructors or other teaching staff should have sufficient work allocation and processes to provide support for learners on the learning platform or by other means, and to proactively prepare information and messages about important topics or changes, to support learning and to avoid confusion.

Service delivery quality can be considered increasingly important for organizations as they operate in web-based environments and aim to provide successful web-based systems and services for their stakeholders, primarily instructors and learners. Service delivery quality can be assessed based on service delivery efficiency, availability, fulfillment of promises and expectations, working

communication, system responsiveness, and information privacy. Service delivery quality affects competitiveness, performance and stakeholder satisfaction in critical ways, and should be assessed regularly e.g., via surveys to learners. (Alsabawy et al., 2016.) For unemployed adult learners, it would be important to further investigate at what times, by which means, to whom specifically, and about what subjects most commonly would they like to receive support, advice or instruction.

Learner support along the way

As Thompson and Porto (2014) state, "Support service is a strategy to prevent poor academic success, increase retention and build satisfaction". This indicates that by providing support service during the studies, the effects are more fundamental and far-reaching than the mere instructions given to learners. Like in the study by Harrati et al. (2016) learners were satisfied with the online teaching system but clearly stated the need for more training and guidance for system use itself. This could mean that many useful features could go unnoticed or unused because of user insecurity or lack of proper guidance to system use. This could be especially true for learners who are unaccustomed to e-learning or computer use, or have outdated skills, and could benefit from additional support. Different modalities for creating instructions or guidance materials or portals could be utilized. Sun et al. (2008) come to similar conclusions about providing training in system use, and add that guidance also impacts satisfaction and learning effectiveness. Hassanzadeh et al. (2012) also suggest that service quality affects learner satisfaction and intention to use. It projects establishing collaborative learning through communicating about important features and therefore generating better user experience. (Hassanzadeh, Kanaani & Elahi, 2012.) Similarly, Al-Fraihat et al. (2019) present the connection between satisfaction towards the learning system and service quality. Technical staff can provide help with different types of issues and create positive reactions for the overall system experience.

Interesting about this study was, that the interviewees rarely had difficulties with the system and would in fact primarily contact the instructor rather than IT support if met with system challenges. In part this could indicate that the learning systems were user-friendly and end-users sufficiently capable of using the systems. It may also be that the institutions in general have a policy of conducting all primary communication through the instructor rather than IT service but there is no evidence to support this notion. Respectively, Bringula (2013) found that the institution should follow the use of chosen technologies and commit to providing faculties with needed support. For example, institutions should oversee the use of e-learning systems, provide help in use, and encourage continuous use. (Bringula, 2013.) Information about availability and scope of the IT services should also be communicated to learners at the beginning of the studies for them to know the appropriate points of contact. It has been shown that when met with technical issues the satisfaction of learners is affected negatively and, on the contrary, impacted positively when assistance is readily available and capable of following up (Ozkan & Koseler, 2009). This is why available and suffi-

cient personnel to assist with these difficulties and smooth coordination is important for an overall good online and blended learning experience. Even though it has been proposed that service quality does not affect the perception of usefulness nor the actual use of the system. (Al-Fraihat et al., 2019.)

Well premeditated support service processes help alleviate insecurity and frustration, and ultimately improve learning experience and outcomes. It may also affect how learners feel about returning to online study. Li et al. (2012) found, that regarding intention to reuse learning systems, instructor-learner communication and support also matter. A part of planning user-friendly e-learning systems is providing learners sufficient support, interaction, and instructions (Li et al., 2012). Positive experiences with e-learning may encourage learners to take part in another learning opportunity. As interviewees of this study stated, instructor responsiveness and attitude also affected their experience, as some found it hard to get replies, guidance, or any form of support from their instructors. Al-Fraihat et al. (2019) even suggested that instructor quality is the single most meaningful success factor in online learning. There was discrepancy among the interviewees about how much guidance and support was needed. Most were satisfied with instructor replies and messages. Some would have hoped for more guidance in their studies. Many assumed that in online learning the provided support is not as comprehensive. An interesting topic to investigate would be to examine what are the expectations and hopes that unemployed adult learners have towards support and guidance services.

8.5 Communication skills and ways support the learning process

Interaction and learner support between teachers and students are important for intention to reuse e-learning systems (Li et al., 2012). Some important practices for teaching with technology in general include advocating effective communication between students and faculty, promoting cooperation among students and applying active learning methods, as well as providing feedback and responses promptly after task completion or inquiries. The same principles can be applied to online environments. Also learning goals, workloads and completion requirements should be communicated to learners, and student progress followed. (Tobin et al., 2015.) In this study communication quality includes instructions, interactions with the instructor or peers, instructor communication skills, peer learning practices, and study related announcements and other messaging.

Giving guidelines for the studies

At the start of online learning, distinct guidelines for participation should always be presented to avoid students not having a clear understanding about the learning process. Guidelines are complemented with expected learning outcomes, course outline and other procedures for learners to understand the workload and whether they can complete the course successfully. (Palloff & Pratt, 2013.) Course guidelines should also leave space for interaction and discussion and encourage

students to participate and ask questions. Participation should be course related and contribute to the discussion. (Palloff & Pratt, 2013.) Instructors should also lead by example by contributing to the discussion and supervising it regularly. If individual students do not participate or seize to post, it would be advisable for the instructors to contact them, evaluate their situation, and give advice correspondingly. (Palloff & Pratt, 2013.) In a study by Chow and Shi (2014) tutor and peer interaction were not found important satisfaction and intention indicators. This could be the result of methods of organizing of the surveyed e-learning experiences where possibly not as much emphasis had been put on collaboration and interaction. (Chow and Shi, 2014.)

In the online course, giving guidance and orientation to online learning is useful, and it should not be assumed that students can innately navigate in a specific online learning environment. Preconditions for grading and course assignments are typically fixed, whereas deadlines can be negotiated and polled in class. (Palloff & Pratt, 2013.) It's been also shown that users show motivation in using the platform for online teaching if they receive sufficient training beforehand (Harrati et al., 2016) which is a part of instruction and training practices. The online environment cannot therefore be a deserted and quiet space without interaction with others. Students should feel like there are others to communicate with and an instructor to whom they can address their potential concerns. However, the guidelines for e.g., the platform use such as discussion boards, communication ways and times with the instructor, means of peer interaction, and location of instructions and other materials need to be made clear to the learners before or at the start of the studies for everyone to know the same guidelines.

Instructions cornerstone the learning journey

Interviewees were mostly satisfied with instructions regarding overall learning process, assignments, and tasks. The guidelines for course completion and requirements also seemed to be clear for most. If any issues presented themselves, interviewees often thought to contact the instructor and their contact information was always attainable. The matters that interviewees felt should be improved concerned guidelines for the online learning system use and interaction on the platform, clarity of instructions, sufficient instructions before the start of the study and about needed systems and tools and considering the target audience (adult learners) when preparing the course and its instructions.

In a study by Harrati et al. (2016) learners said that they needed more guidance and instruction with the online learning system although this would not affect their future system use. It can be interpreted that system use is a prerequisite for online learning participation and learners would have to use the system despite of lacking instruction. In our study, some interviewees commented that they were unsure of how some of the system features were to be used or that there was general confusion among learners of shared practices. For example, how the discussion board was used or supposed to be used, and how to communicate with other learners via the platform. Also, instructions regarding system use in the course was not often introduced but rather it was assumed that learners knew the system from before or otherwise which was not always true

according to the interviewees. Providing training and guidance in system use improves learner satisfaction and efficiency of online learning (Sun et al., 2008). As interviewees explained, sometimes giving comprehensive instructions might have alleviated feelings of uncertainty regarding interaction practices or carrying out learning tasks as intended. They may have also ultimately helped learners to perform better if misunderstandings or confusions were diminished.

According to Chow and Shi (2014), if the online learning system and the learning experience overall is good and learner expectations are met (confirmation of expectation), learners' post-adoption expectations about the learning process, interaction, and course design were more positive. To support confirmation of expectation and learner satisfaction sufficient instruction on efficient system use should be provided to learners. (Chow & Shi, 2014.) It is noteworthy that although the learning system itself might be familiar to some learners, the ways it is used for each individual course seem to differ even in the same institution. This suggests it would be useful in the beginning of the study to present learners with shared guidelines and instructions for use. Providing instructions for system use for new learners is even more paramount. Showing learners how to use the system will then according to Chow and Shi (2014) eventually improve their satisfaction and experience.

Interaction in online learning

The interaction between instructors and learners and co-investigation of the subject is what is often seen integral for the learning process. As online learning has become widely offered, institutions and educators are met with new challenges and possibilities. It can for example be viewed that use of ICT makes the learner feel secluded and alone. (English & Mayo, 2012.) For some interviewees studying online was a primary choice, for others it was simply more convenient compared to contact studies in their situation. Some just wanted to try it out and some were required to because the pandemic shifted classroom studies to online. A somewhat shared experience about the downsides of online learning were feelings of isolation and lack of social contact. This was often due to not much interaction with the instructors or other learners. The way in which instructors interact with the learners has an impact and meaningful interactions can anticipate for learners to overcome challenges better (Martin, 2021). Discussion forums can be one way of interacting with others. Some studies have even found it to be the most important feature of a learning system (Santoso et al., 2016). Learning systems are developed continuously, and discussion forums and inboxes may not be the only method of communicating with other learners, tutors, or teachers. However, based on previous studies and answers of the interviewees of this study, learners hope for the learning process to include some type of interactivity which is then seen to increase satisfaction in the learning experience.

Hassanzadeh et al. (2012) found in their study of learning systems success that for example features like discussion forum and chats, discussion in e-class, and collaborative learning features can improve learner satisfaction. However, interaction with tutors or peers might not anticipate online learning satisfaction or aim to continue use, unlike perception of learning process. Nevertheless, tutor

and peer interaction are found to be important quality factors of e-learning. (Chow & Shi, 2014.) Communication in the system should be advocated and interaction with learners made easier if these features or practices are currently underused. (Chow & Shi, 2014.) It is important to notice that to make the most out of these platforms, the learning planners and instructors of the courses also need to be aware of the range of features and how to best utilize them in their learning process. This could mean training the staff, sharing best practices between educators, and trying out new tools and features with an open mind.

As the interviewees of this study accounted on some occasions, there were necessarily no set guidelines for interaction with peers or instructors. Discussion boards were often available in the learning system but used in uncertain ways. Sometimes there was no instructor involvement in the discussions, and in general it was not seen as a reliable way of communicating effectively. Sometimes peer communication was easier through other means like mobile messaging applications which was found to be more convenient and at hand. Proactive instructor communication on the other hand was often considered insufficient or limited. It is not however clear based on the answers if learners would have hoped to essentially *interact* and exchange multiple messages with the instructors. It seems more that learners hoped for informative messages, instructions, and general greetings from the instructor, and guidance when needed. This would require further investigation.

Instructor communication skills

Li et al. (2012) studied intention to reuse online learning systems and found that for one, interaction between instructors and learners is important, as is providing learner support. Instructors should communicate, give guidance, and provide support in a consistent manner as well as offer good user instructions (Li et al., 2012). Ozkan and Koseler (2009) found a strong relation between instructor quality and learner satisfaction as well as showed the importance of interactivity in online learning. For instructors things such as replying to messages quickly, sufficiently good teaching technique, understandable explanations, and technological skills, were considered to affect the learner satisfaction toward online learning in a positive way.

There was a relative consensus among the interviewees about the relevance of a good instructor for the entire learning process. Instructors were commended for example their expertise on their subject, enthusiastic or professional attitude, answering promptly to messages, and giving good lessons. What was seen to affect the learning experience negatively was for example being hard to reach, offering complicated or minimal guidance and instruction for the study, and having an impolite delivery. Some interviewees also explained often feeling alone in their studies. This indicates there was not a lot of interaction involved in their studies. But as Ozkan and Koseler (2009) found, interactivity is an integral part of learner satisfaction. The learning systems today often enable the use of interactive features or tools, so this finding suggests enhanced use of these opportunities. Examining which means of communication and interaction are expected

or preferred by adult learners and for which specific purposes, is an interesting follow-up topic for the field of adult online learning.

8.6 Influence of different social factors

Personal traits influence the success of online learning. It was found in a study by Cohen and Baruth (2017) that openness to experience and dutifulness are important predictors of online learning satisfaction among students - elements which may vary according to personality, previous experience, personal learning goals, and learning styles (Cohen & Baruth, 2017). In the Study by Salmon et al. (2017) the subject matter itself motivated participants and they wanted to learn more through the course content and become skilled in the method. For some participants whose initial motivation might have been curiosity grew deeper engaged as the course progressed. Some were motivated by the desire to apply the gained knowledge in their own work and even engage others. (Salmon et al., 2017.) Learner's personal background in working life and previous studies may have accumulated knowledge and skills useful for the online learning experience. Learners may have practical experience to support teached theories and find applications for them. Learners with previous experience can also be more prepared for individual workload, managing learning schedules, and prioritizing tasks.

There were differences in personalities between interviewees in terms of discipline, motivation, and suitable learning techniques. Also, life situations affected learning overall. For some interviewees, the whole learning process was completed mainly without much contact or interaction with others. More commonly however the learning did entail class or group discussion and group assignments. When group factors come into play elements like the learning atmosphere, different learner types, group formation, and similarity or difference in learner backgrounds can affect the learning experience. Interviewees described how group members were sometimes hard to reach and managing group work sometimes challenging. Group work was preferably done with people with similar motivation and timetables.

Personality in IS research

In traditional information systems science studies impact of indicators like attitudes, job relevance and subjective norms have been investigated. Davis, Bagozzi and Warshaw (1989) found that user attitudes only partly explained impact on intention to use and subjective norms had no impact. In their technology acceptance study of 2000, Venkatesh and Davis suggested that social influence processes, including subjective norm, and cognitive instrumental processes, like perceived ease of use had a strong effect on user acceptance. Subjective norm is defined as how a person perceives their significant others to think about the behavior (supported or not supported). Their second technology acceptance model presents subjective norm to have a strong and direct impact on intention to use, perceived usefulness and perceived ease of use for mandatory systems. (Venkatesh

& Davis, 2000.) Social influence processes might have affected some of the interviewees whose spouses or other significant others had advocated or shown example in online learning. Learning systems themselves vary between institutions. Whis is why rather than examining certain learning systems and their success or user acceptance, learners might often respond better to evaluating institutional performance in online learning.

Sometimes motivation can decrease if other learners in the studies do not participate with similar expectations. Learners who are motivated in the studies can feel frustration if other learners are inactive or choose to discontinue the studies in midstream (Salmon et al., 2017). Individuals can have very different approaches and strategies in online learning, which may be suitable for achieving their learning goals and processing information, or they can prove counterproductive and sometimes adapting new ways of learning can be hard. Different learning styles or their adaptation can affect success. This was also true for the interviewees who experienced satisfaction when the learning groups they were in were working well. Contrary to this, peers disappearing from courses and group work, and the learning group having very different starting points for the learning, could cause dissatisfaction.

Learner attitude is a significant indicator of learner satisfaction towards the online learning system, especially perceived enjoyment towards the system (Ozkan & Koseler, 2009; Al-Fraihat et al., 2019). Individual differences between interviewees could also be recognized. Some started the studies with insecurities about their capabilities, some were more confident about their ICT skills for example because of prior work experience. Sun et al. (2008) stated that learners who are better adapted to technology, experience less anxiety and have a more positive outlook about online learning. Whereas if the experience is positive for learners who have "computer anxiety" their attitude for online learning and their user skills may improve. (Sun et al., 2008.) Li et al. (2012) found that learner efficacy and computer skills affected intention to use learning system and its perceived ease of use. As for our interviewees, some did hesitate in taking part in online learning. Directly hesitating because of lacking technological skills was not however the main reason. Some hesitated because they were unsure if studying after a break was too challenging, new learning practices hard to pick up, and if their motivation and time management skills were sufficiently good. Some interviewees were however positively surprised by their own abilities and performance which could indicate they had some doubts about learning on the web. Positive attitude increases satisfaction towards the system. Also, knowledge of the system, use competence and self-efficacy with learning tasks, could create positive attitudes. (Al-Fraihat et al., 2019.) Some interviewees began the studies with doubts but overcame obstacles and succeeded in their efforts which seemed to increase their overall satisfaction towards the studies and boost confidence in themselves. The influence of individual characteristics and other social factors in participating in online studies would require further investigation. This could provide insight into what capabilities support online studies and should be strengthened if a person is to participate in online studies, especially on unemployment.

Personal characteristics

Cohen and Baruth (2017) studied relation between personality, learning and online learning satisfaction and found that individual learning styles and attitudes affect satisfaction. Their findings suggest that learners with high openness to experience and diligence are more satisfied with online learning. (Cohen & Baruth, 2017.) For online learning, elements such as self-regulation and self-direction can help the learner to make deliberate choices for appropriate learning strategies and assess and reassess different ways to succeed (Cohen & Baruth, 2017). When participating in online learning, motivation and good self-management skills are beneficial. Also, strong intrinsic primary motivation and flexibility is useful to re-strategize and adjust working methods if the course dynamic changes. (Salmon et al., 2017.) Because learners vary in their personalities and learning styles, providing different learning approaches and alternatives in online learning is recommended if course customization is possible. This could improve learner satisfaction and improve efficiency. (Cohen & Baruth, 2017.)

Motivations for studying and participating can be complex, and generally intrinsic motivations are regarded more preferable over extrinsic motivations to lean toward learning achievements, understanding and engagement instead of external rewards. Task-oriented motivation for learning new skills is also recognized as part of intrinsic motivations. Intrinsic motivations are regarded as more permanent and of better quality than external motivations, which may even shift more easily. (Salmon et al., 2017.) Adult learners participating in short-term studies found it important that their knowledge of the field was updated and boosted, that they received an official qualification, and could change careers, improve their employability or find employment. It is important to organize adult training flexibly, which can sometimes be insufficiently regarded. Also, acceptable workloads are important to consider because students might also be working simultaneously. (Nyman et al., 2020.)

It could be argued that many of the interviewees took a somewhat open-minded approach to online learning since some of them had not studied fully online before. It has also been found that learners with lower dutifulness and open-mindedness especially will benefit of aids and extra materials. For some learners, learning which does not require as much independent work, has a supportive environment, and can provide feedback and additional support is more suitable. (Cohen & Baruth, 2017.) For this reason, every learner should evaluate their own capabilities for online studies. Also, as has been mentioned before, ways of implementing online learning vary. The course or module descriptions should be made with sufficient detail for the learners to be able to decide if the implementation, content, and used methods fit their skills, knowledge, and personality.

Adults as online learners

In a study by Bringula (2013) age of the learner and commitment to system use were some of the important system usability indicators. In a 2016 study Harrati et al. also recognized a strong relation between age and user performance. It

seems younger users have better skills and motivations to use the online learning system compared to older users' performance. (Harrati et al., 2016.) This means that personal factors can also have impact in achieving learning goals. Commitment or certain tenacity can probably help in overcoming some use difficulties which increases experience of usability. Also, in case of adult learners, instructions to use are also of importance if they are not familiar with the learning systems in use. Perhaps younger learners with more experience in different learning systems and adaptability in system use find the usability better. Among the interviewees of this study, poor system usability was rarely an issue and the used technologies seemed to serve well in laying out the learning experience. This means system usability was not a major blocker among interviewees in completing the online studies regardless of their adult age.

When studying wellness of adult learners Thompson and Porto (2014) found that common challenges among adult learners and online learning are having many roles and responsibilities (especially women) and scheduling challenges. Taking part in online learning can also cause stress and too many overlapping tasks which may lead to poor success. Some learners might not possess needed time management skills. (Thompson & Porto, 2014.) Also, adults might not care for the individualistic nature of the studies (English & Mayo, 2012). Quite few interviewees mentioned isolated study as a downside. However, aligning other personal and family life with the studies did not come up. On the contrary it seemed like online learning allowed them to study in a more flexible manner which would suggest less time-related stress. And although scheduling and time management were commonly recognized general challenges, interviewees seemed to have overcome them quite well. Additionally, insecurities with own performance and motivation, outdated or lacking digital skills, and time away from working life, were issues mentioned by the interviewees.

8.7 Perceived usefulness in IS research

Systems-wise, perceived usefulness indicates user acceptance and use intention. In the online learning context Al-Fraihat et al. (2019) state that perceived usefulness is a significant indicator of learner satisfaction and system use: learning tasks can be done with ease and the system helps them perform better. If users find that the system can accomplish certain functions, preferably easily, they are more inclined to use the system (Davis, 1989). This way, perceived usefulness can predict both use intention and use behavior (Davis et al., 1989; Seddon, 1997). It's also suggested that users continuously revise their expectations based on new system experiences which can lead to system use or termination (Seddon, 1997). Venkatesh and Davis (2000) found that subjective norms, such as social influences and perceived status gains, affected user's own perceptions of usefulness. Also, users make usefulness assessments of how well system use is relevant to job goals and if the outputs are desired (Venkatesh & Davis, 2000). System use

can also be perceived more useful if users associate system use with other people's value propositions of status and influence increase (Venkatesh & Davis, 2000). Similarly, certain learning efforts can be perceived more useful if norms of the social environment support those kinds of identities and ideas. In this study, the impact of social influences was not directly surveyed. Some interviewees did however mention that studies were recommended to them by important others and that they hoped to achieve some status or career gains via the studies. For example better salary, obtaining a qualification or a degree to increase chances of employment, learning skills necessary for the job market, or upskilling to be a more attractive choice to employers were some usefulness assessments the interviewees made about their learning experiences.

According to the unified theory of acceptance and use of technology also facilitating conditions influence system use and acceptance (Venkatesh, Thong, & Xu, 2012; Venkatesh, Morris, Davis, & Davis, 2003). Historically facilitating conditions are defined as the offered structured and coherent support for system use. This means there is assigned help for system use, and available instructions and guidance to support system use. User experience and age have been found to increase the importance of facilitating conditions and affect system use. (Venkatesh et al., 2003.) In our study the interviewees often referred to deficiencies in receiving support and comprehensive instructions for their studies. Although interviewees were mainly satisfied with their online studies, it could be argued that facilitating conditions for online learning were often insufficient for adult learners who might require more support. In a broader context, facilitating conditions can also be seen to refer to social aspects like varying resources and opportunities of the learners. In the context of our study sufficient technical resources like equipment, and financial or otherwise opportune situations to begin studies, could be seen as "facilitating conditions" for an adult learner. For example, many interviewees agreed that without sufficient monetary resources, they could have not taken on studies.

8.8 Perceived usefulness of online learning for the target group

Li et al. (2012) studied reuse intentions of Chinese e-learning students and found that the strongest indicator for reuse was perceived usefulness. Aspects which promote perceived usefulness according to Alsabawy et al. (2016) are enabling quicker accomplish of tasks, improvements in study performance, increase in productivity, and making studying easier (Alsabawy et al., 2016). Also, things such as recordings of lessons for absent learners, offering individual assessments for learners, and arranging opportunities for contact meetings might complement or improve usability and motivate usage of e-learning (Mohammadi, 2015). Adult learners can expect different kinds of positive outcomes from online studies which can affect perceptions of usefulness. When attending continuous learning outcomes of the studies can include professional advancement, promotions, or better pay which suggests increased perceived usefulness (Sun et al., 2008).

When planning participation in studies or their suitability, unemployed adults need to consider multiple factors. When choosing or planning studies adults can look for increasing chances of employment after study, adapting to the requirements of working life, updating skills required in working life, studying matters they hope to find employment with or reskill themselves, making transfer to working life smoother or simply activate the mind and have a sensible pastime during unemployment. In information systems study, perceived usefulness mediates intention and willingness for system use (Mohammadi, 2015). Perceived usefulness for learning could therefore mediate intention and willingness to take part in learning. In the study by Li et al. (2012) the learners lived in rural areas, and it was speculated if e-learning usefulness was perceived more important for them if they had a true intention for acquiring skills and qualifications and improving their employment outlook. Also, people living in rural areas might not have any reason or have poor possibilities to visit the physical institution facilities. (Li et al., 2012.) This should also be considered in the Finnish education and training context since physical distances in Finland might be lengthy.

Adults find education to increase their competitiveness in the labour market (Thompson & Porto, 2014). One interviewee mentioned that because of long-term unemployment they did not want to appear like they did not engage in any self-development. They thought it was good to show potential employers they had been active in educating themselves during unemployment. In a report studying effects of short-term labour market training and conversion training by Nyman et al. (2020) it was found that generally short-term labour market training and qualifications significantly improved the employability and labour market positioning of learners. Learners found the training beneficial for necessary skills development and appreciated that their knowledge of the field was updated and boosted, that they received official qualification, and could change careers, improve their employability, or find employment. (Nyman et al., 2020.)

If learners find the e-learning system and content useful, it also increases their satisfaction. Learners found that through continuing education it was possible to make career gains like promotions, raises, or rewards. (Sun et al., 2008.) Also, in a study by Alsabawy et al. (2016) career development was one of the perceived key benefits. Li et al. (2012) suggested that learners who sincerely wish to improve their employability and obtain skills and qualifications, view usefulness more important. Among the interviewees this phenomenon could be seen in determination to complete studies and gain professional boost from themselves. In general, it seems that completing complete degrees or qualifications, or modules was perhaps seen more useful than individual courses in terms of employability and professional boost.

Assessing perceived usefulness of the online learning system and usefulness of the learning effort in totality (content, teaching, guidance etc.) can be hard to separate from one another. The online learning system and other components necessary for a successful learning execution are intertwined. However, perceived usefulness is a primary indicator of online learning system success and acceptance. If learner expectations are met and they acquire new knowledge and

experiences, they may be inclined to return. (Alsabawy et al., 2016.) Interviewees also seemed generally more motivated with their studies if they could work out direct benefits from them and thus justify the usefulness. These could include aspects like increased chances of employment after study, adapting to the requirements of working life, updating skills required in working life, studying subjects that they hoped to be employed around, and making transfer to working life smoother. Although expectation of "employment effect" of studies was common, also general self-activation and even networking purposes were found to be important. Because usefulness seemed like one of the main motivators for learning, it would be important for adults to be able to participate in studies which they feel can presumably help their employment process. If the usefulness of studies is hard to imagine, it may affect motivation.

8.9 Learner satisfaction and benefits of online learning

Users evaluate net benefits, usefulness, and expectations of their system use. Expectations are re-evaluated during system use, which may lead to more use or discontinuing use. (Seddon, 1997.) The flexible nature of online learning also influences learner attitudes, and they may feel more positively about the learning system (Ozkan & Koseler, 2009). Causes of satisfaction for the interviewees are partially embedded in the prior chapters. For example, successful instructor communication, instructor expertise, learning materials of high quality, and peer learning and classroom discussions can all contribute to learner satisfaction.

What are satisfaction and benefits in online learning?
Satisfaction can examine user attitudes and interaction between the system and the learner (Hassanzadeh et al., 2012). Net benefits, on the other hand, are defined as the sum of perceived past and future benefits of system use with costs such as time and investment reduced. Net benefits are different depending on the user group because what is considered valuable may vary. (Seddon, 1997.) Many studies suggest that perceived benefits through e-learning adoption strongly influence use continuance. (Chow and Shi, 2014.) Benefits can manifest in many forms and have effect on many levels (personal, organizational, etc.) and as time passes, benefits can have an expanded impact (Hassanzadeh et al., 2012).

Harrati, Bouchrika, Tari & Ladjailia (2016) found the role of user satisfaction to be important for user acceptance and performance of the institution. User satisfaction is typically understood as the perceived positive experiences of system use and fulfillment of related expectations (Harrati et al., 2016). For example, online learning provides an opportunity for flexible learning which has also been found to positively affect learner satisfaction. Flexibility enables control over the pace of learning and improved chances to coordinate learning practices with other areas of living. (Sun et al., 2008.)

Learner satisfaction and motivation towards studies has also been shown to increase when learners receive feedback and the institution or instructor has diversity in their assessment methods (Sun et al., 2008) for progress and task evaluation. The study of Chow and Shi (2014) shows that confirmation of expectation among students strongly influenced satisfaction for e-learning and the perception of e-learning usefulness. Thereby it was also noted that sufficient effort should be placed on system training or guidance to improve confirmation of expectation of students. (Chow and Shi, 2014.) Many aspects presented in this study, can weigh in when examining learner satisfaction.

When it comes to perceived or actual benefits of online learning, things like cost and time savings, certain level of autonomy and increased knowledge are among common denominators (Mohammadi, 2015). Benefits of the system use can extend to one learner, a group or an entire community or organization (Hassanzadeh et al., 2012) although in this study mainly individual impacts are considered. Whereas common challenges in online learning can include not having sufficiently time, feelings of computer anxiety, appropriate workloads, and resources to run the online course (Sun et al., 2008). What is important to notice in many of the online studies directed at adult learners is that they are not free of charge. The learner must assess whether the investment provides a satisfying trade-off and that the overall benefits outweigh the disadvantages. Interviewees share their experiences of benefits of online learning and of the things causing satisfaction or dissatisfaction.

More freedom and flexibility

Learners value the flexible nature of online learning. When planning and providing online learning, the process should include enough flexibility and ability for learners to moderate their pace of study (Chow & Shi, 2014). Common benefits of online learning are generally flexibility, lower costs, ample choices of study, and freedom of place and time (Thompson & Porto, 2014). When planning and organizing adult education it is important to pay attention to somewhat adaptable learning process and sensible workloads (Nyman et al., 2020). Adult learners might be working while studying and have many other responsibilities in their lives which is why flexibility and reasonable amount of learning tasks can make learning more appealing and possible for some adults. This may be especially true for women who typically have many roles and duties in their lives which may make participating in contact studies more difficult (English & Mayo, 2012).

Online learning also makes accessing contents free of time and place and learners can choose whether to access information for example in a library or elsewhere (Aydin & Tirkes, 2010). For example, one interviewee explained how they liked listening to the lecture recordings outdoors. It feels like online learning can allow more creativity in learning and at best support various learning styles. Flexibility of an online learning course has also been found to be a significant influencer of satisfaction as learners have more control over pace of studying and range of flexibility (Sun et al., 2008). While this is certainly true, the vast use of ICT in education may also increase isolation and prevent dynamic learning pro-

cess that normally takes place in interaction between teachers and students (English & Mayo, 2012). In addition, while providing learning through the means of ICT offers flexibility, it can increase access for groups that might otherwise have difficulty participating and provide better opportunities for community organizing and collective learning by means of e-networking (English & Mayo, 2012).

Knowledge building and achieving goals

DeLone and McLean (2003) suggested that system use, and satisfaction together establish net benefits, which included both individual and organizational influences. If the benefits are regarded positive, a positive feedback loop will entice further use and satisfaction. (DeLone & McLean, 2003.) If learners' expectations of online learning are met, it directly impacts their satisfaction (Chow & Shi, 2014) and on the other hand as Mohammadi (2015) states, learner intention and satisfaction positively impact use of online learning. It seems that the will to learn, positive experiences of online learning, met expectations, and especially gaining benefits encourage future participation in online learning. Most interviewees had pondered about further studies. Many considered studies related to current career or upskilling to have the most optimal professional value. Hassanzadeh et al. (2012) found that learner satisfaction and interest in using the online learning system prevailed meeting individual goals and learning goals and relating to this notion, in a study by Al-Fraihat et al. (2019) one finding also was, that satisfied learners will achieve better benefits.

Benefits of both utilitarian and hedonic nature motivate system use (Venkatesh et al., 2012). Within our target group and based on the accounts of the interviewees, during time of unemployment, utilitarian drivers seemed to dominate choice of studies. One interviewee out of ten had chosen studies which they assumed would have very little direct professional value and that were selected almost purely based on own interest and for passing time. For others, the drivers included upskilling, improving employability, and maintaining capabilities which are of utilitarian value.

9 LIMITATIONS OF THE STUDY

Some limitations for the study remain. Firstly, the sample consisted of 10 interviews with e-learning users. The objective of the study was to investigate individual experiences of the unemployed adult learners. However, a larger sample of interviewees and a conjointly arranged survey would provide more thorough insight and a wider set of samples to study the phenomenon and the experiences. With quantitative methods and a larger sample, it would also be possible to divide learners by study type, study purpose, demographic factors et cetera to allow a more segmented analysis. However, the observations and experiences of the interviews did agree with many of the indicators recognized in earlier studies.

The study also did not aim to make statistical generalizations about the phenomena, but to investigate it in broader sense to get a feel of the experiences that unemployed adult learners might face in online studies. To survey the phenomenon with higher validity, it could be beneficial and recommended to conduct larger surveys on the target population to receive more insight into the matter and speculate or recognize possible new e-learning indicators. Additionally, more emphasis could be placed on instructor quality and information quality, since these are the indicators which received most mentions. However, because no single indicator was exclusively investigated, a more thorough examination was not conducted. is not covered. Interviews were chosen as the research method of this study especially because of the unique target group. It was also speculated that the interviewees could provide new information or insight into motivations, intentions, and user experiences of using e-learning. The study did not exclude those who had been currently completely laid-off and were participating in online courses because their future employment situation was unclear and uncertain. These motivations are important to understand when determining future online study paths for the unemployed.

Secondly, it must be noted that not all aspects of the priorly identified e-learning success measurement factors were taken into account in this study. This very likely means that not all interdependencies between variants have been accounted for. Some interdependencies might have been left unintentionally out of the scope or been left unnoticed because of a more selected outtake of indicators. The study excludes considerations of inequality in access, such as geographical or socio-economic challenges in participating in online learning. Being able to participate in online learning depends on the resources and life situation of the individual. Therefore, the success attributes may vary. For example, for someone with good access and good digital skills a user-friendly user interface can be a more important success indicator, than aspects of service quality. Whereas, for someone who requires assistance with tools and learning processes, ICT and instructor support can weigh in more. The study neither takes into consideration people with lacking digital skills and what implications increasing online learning might have on them and their upskilling opportunities or employment.

It is also possible that somethings could have been lost in translation. The interviews were conducted in Finnish and the interview transcripts are available only in Finnish, which means assessing their validity and correctness can only be done by a Finnish-speaking person. Thus, some aspects of the interviews can be interpreted differently due to the translation process. What is generally worth consideration is whether the research concerning online learning is universally applicable. The cultural or local context of research has not been widely observed and could suggest need of further investigation. For example, online studies in Finland have been fairly common and people generally have good network access and access to required devices and tools but whether this has effect on learning experiences and quality might require further investigation. As for the author, this was the first time conducting more thorough research. The inexperience of the researcher could have affected the analysis and interpretation of the data. However, this risk was mitigated by help of the supervisors.

10 CONCLUSION

There is an increase in the ways and methods of studying and acquiring qualifications, as new globalized world is spawning with different online learning innovations and opportunities. There are already many platforms and applications which are used for various learning purposes. Individuals take on online learning for different reasons. Some are forced to do so because of changes in working or learning processes. We might have become more accustomed to using new and developing technologies. Perhaps it has prepared us for the shift in ways of learning as well. Many educational institutions are utilizing e-learning platforms and conducting lectures and lessons online, as it has slowly become axiomatic.

Individuals also fall out of employment for a variety of reasons. For some, quick re-employment might not be possible, some require support in increasing working ability, and some require language studies to increase employment opportunities. For some, employment can't be found for their prior profession or with their existing qualification, some wish to change careers. There are various services directed at unemployed individuals to help them with job searching, increasing employability, and working ability, advisory services, and of course different ways to increase skills or learn new skills. Online learning could be an opportunity suitable for many unemployed individuals. Online learning can also be cost effective and flexible for the needs of adults. The unemployed are not a unified and heterogenic mass but consist of individuals with varying backgrounds. Therefore, rather than focusing on the qualities and the assumption of a certain unemployed character, focus of this thesis goes into the shared experiences of the unemployed adults. It was also examined, what kind of online learning would these individuals find most useful, what impacts their learning success, and what kind of learning outcomes do they expect. This study investigated online learning success indicators for unemployed adults and recognized eight interrelated quality indicators for successful online learning.

Some benefits and drivers recognized were that studies would aid employment, improve skills, result in pay grade increase, help in switching careers, and offer meaningful activity during unemployment. Participants also found several positive aspects of online studies. Some found that peer learning and class discussion aided in achieving learning goals and getting multi-sided opinions and ideas about the learning subject. Interviewees generally enjoyed practicality in studies such as giving practical examples, being able to apply previous knowledge in studies, sharing practical knowledge on the subject matter, and learning from instructors with experience from working life. Instructor preparedness in courses and giving lectures and giving necessary instructions was also considered a positive aspect in studies. Online learning platforms were generally perceived as easy to learn.

In addition, common personal challenges in online learning identified by the interviewees were lack in personal time management and prioritizing skills and upkeeping motivation throughout the studies. Also working alone on tasks

and having full responsibility of the study schedules was sometimes considered challenging. Also, having sufficient IT skills and coping with learning difficulties and physical challenges were mentioned. Self-management skills are especially important in online studies which could mean that it is not suitable for everyone. However, the combination of online teaching, group work, discussion, and independent study was considered successful by many interviewees. It is also evident that not all studies can be transferred to online environment and require contact studies like many vocational studies. Overall, interviewees generally had somewhat realistic expectations of online studies and what it requires from learner perspective and often felt that learning goals were somewhat achieved. Also, it seemed that learners were mostly satisfied with their choices of study which would indicate that adult learners understand what might interest them and are prepared to do the learning work. Self-initiated adult studies also do not directly compare to compulsory education, which could propose higher learner motivation. Some matters were mentioned by more than one interviewee considering points of improvement for their online learning experience. Among the things mentioned were having more instructor involvement and instruction in studies e.g., having more personal feedback or instruction, more instructor activity in learning platform, more communication overall and better instructor availability. Learners may have felt detached and uncared-for and replies to their comments and questions were sometimes lagging. Some also brought up unclear assignment instructions, as well as not explaining context relevant terms and vocabulary to learners. Unclear reviewing criteria and the process of students reviewing or instructing each other was also seen problematic. What was also seen to cause dissatisfaction was if instructors had lacking technical skills in using relevant learning systems, the online meetings etiquette was ill-instructed and (heterogenic) groups poorly managed. Sometimes studies were seen to disregard the needs of the adult learner in poor content descriptions on studies, misleading titling, overlooking differences in student starting levels, and applying same materials and schedules as those used for degree students. Especially in open university studies, which are often paid studies, the institution and instruction service availability and quality and not planning learning to involve adult learners was considered an issue. Challenges in online group working and circulated or otherwise outdated learning materials also sometimes caused dissatisfaction. Generally, dissatisfaction with service quality and instruction was common – not enough attention was placed on adult learner needs and prefers and online studies were insufficiently guided. One explanation for experiences of lacking instructor involvement or guidance may have been that the institution or course planners had not allocated sufficiently time or offered any compensation for providing additional instruction for learners. It may also be that instructors were overworked or had lacking skills in online and/or adult pedagogy. It became nevertheless apparent, that more attention should be placed on providing clear instructions and learner guidance, as well as regular communication through the learning platform or by email. Interestingly, the technical system quality and overall online course implementation did not receive many mentions as factors

decreasing satisfaction. Learners did not have many technical difficulties in accessing and using the learning systems. What received feedback, however, were interactive methods or tools in the learning process and the formats of study materials in which videos were generally liked.

Learners appreciated the flexibility of time and space in online studying and being able to adjust their own schedules. Online learning often had fewer study related expenses such as travel costs and was free of inconveniences of contact studies such as crowds, interferences in teaching, smells, sounds and physical barriers. Online studies are flexible which suits many learners well: studying can be done in preferred pace, materials can be reviewed and revisited, and learners can study in the environment best suited for their needs. The results of the study concurred largely with previous research but proposed new significance on some indicators which received more emphasis for the target group.

Online learning opportunities can be utilized together with contact learning or independently for unemployed jobseekers to increase their employment outlook. Adult learners can uptake studies to complete full or partial degree attainments or qualifications, or separate study modules, in accordance with practical training. The motivation for studying often seemed to be increasing own employability through acquiring new skills or updating knowledge in their field of employment. Adults as learners might have a more practical perspective on the studies and their expected outcomes. In case of adult learners, the relative value and need for different types of support and instruction should be considered. Time away from working life or studies can vary and the instructions and additional support services should guide the learner through the learning process. The use of new digital tools acquires digital competences of students and teachers. How these required competences are evaluated and ensured is another consideration for online learning organizers. Similarly, available resources to participate in online learning can vary. This requires consideration about access, means and possibilities for adult learners if online education is to be a viable option for many. In best case, online learning could create learning opportunities for those with difficulties in participating in contact learning for example because of their life situation, disability, or travel time and cost. This could increase equality among adult learners. Ultimately, could these learning opportunities aid re-employment, further knowledge building and support the wellbeing of the individual during unemployment?

Investigating online learning experiences of adult learners requires further examination. Instructions and guidelines, materials and multi-modality, class work and interaction practices, usefulness and motivators for the target group, and support needs are topics which would require examination in more detail. By surveying and interviewing unemployed adult learners about their expectations, hopes, and online learning experiences, the learning implementations can be planned and organized to meet with the needs and expectations of learners.

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APPENDIX 1: INTERVIEW

Title: Interview on experiences of online learning during unemployment (translated from Finnish)

Background questions: Personal information

1. Age
2. Highest completed level of education (basic education, upper secondary education, bachelor's degree or similar level, master's degree or similar level, doctorate degree or similar)
3. How long had you been unemployed or laid off before the start of studies?
4. For how long have you been unemployed or laid off in total?
5. Why did you choose to study?

Background questions: Basic questions about the studies

1. What were the online studies you participated in and who (what institution) organized them?
2. How long did the studies last and/or how many credits were they worth?
3. Why did you choose these specific studies?

Questions about e-learning system use and experiences

Perceived usefulness and net benefits

1. What sort of benefits did you expect to receive from the online studies?
2. What sort of benefits did you receive?

User satisfaction and confirmation of expectation

1. What were you satisfied with in the online studies?
2. What were you not satisfied with or did something cause dissatisfaction?

Perceived course or information and content quality and experiences of the teaching (if included)

How did you find the learning materials and content,
1. …what was good about it?
2. …what was not good about it?

Was teaching included in the studies?

1. If yes: What was the teaching like? What was good/bad about it?

If no: Would you have hoped for teaching and why?

Capability of choosing appropriate studies

1. What do you think about the suitability of the chosen studies for yourself?

(Technical) System quality and platform usability

Did you face any technical challenges? (Using the devices, networks, accessing the system, using the system etc.)

1. If yes: How did it affect your use experience?

Service quality and experiences of guidance and instruction

1. If there were or would have been problems with the system use, how would you receive help?
2. How was the guidance and instruction during your studies – how was the student given advice and instruction?
3. What would you have hoped in terms of guidance?

Perceived ease of use and usability in e-learning

1. What challenges were you expecting to face in your online studies?
2. Were some things actually challenging and if yes, which things?
3. What did you expect to be easy for yourself in studying online?
4. Were some things actually easy and if yes, which things?
5. How did you find the online learning platform in terms of use and usability?

General questions about views on online learning

1. What benefits or disadvantages can you recognize in online studies in comparison to classroom studies?
2. How would you rate your study experience in the scale from 1 to 5 (where 1 is the poorest and 5 the highest grade) and give some reasons.
3. Do you feel like unemployment affected your choice of studies and how?
4. What kind of online studies would you find useful to you in the future?