Strengthening one's digital skills outside of

prison

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The thesis focused on evaluating the case of digital literacy for prison inmates to facilitate them in their post-prison life. The study evaluated the Finnish prison and the initiative of "Smart Prison," which equips inmates in Finnish prisons with digital education and information technology. The thesis found that while criminal offenses are dealt with capital punishment, little focus is maintained on post-prison life. It was also identified that prisoners face severe challenges in reintegrating into society and finding suitable employment opportunities. The provision of limited rehabilitative opportunities and lack of practical skills induces them to revert to their criminal activities.

The thesis explored the role of digital literacy in empowering inmates in their post-prison life and serve the goals of Valoa digiperustaitoihin Satakunnassa project, which was the working life partner. Therefore, the objective set in the study focused on evaluating the knowledge and understanding regarding digital skills among prisoners in Finland and exploring the prospects of employment opportunities, reintegration into society, and social benefits due to digital skills in post-prison life.

The results indicated that innovative prisons in Finland, which are currently in their initial stages, provide digital education to prison inmates in three areas. These include artificial intelligence, virtual reality, and data management. Other than these, further basic digital skills, such as online shopping, video calling, and office tools, are also being taught. The prisoners are also using their digital skills for earning. It is expected that the digital education being imparted to them would significantly help them reintegrate into society in their post-prison life. They are expected to have better job opportunities from diverse sources. The inmates are also expected to apply for benefits effectively and are eligible for them due to digital education.

Keywords: Digital skills, technological skills, life after prison, inmates, education, inclusion

Contents

1   Introduction

A prison is a penal institution and an integral part of the legal criminal punishment system of an organized society (Honkatukia and Kivivuori, 2019). Prison systems have been in use for various centuries in most of the justice systems around the world. While the more significant part of the prison and justice systems focus on eliminating crime, little attention is provided to improving the lives of inmates once they complete their prison terms (LaBriola, 2020). It has been observed that, in most cases, once the prisoners are out of jail, their world is significantly changed around them. From a financial perspective, they find it challenging to start a new career and lead an everyday life - such difficulties may again lure them to return to their previous career as a criminal, rather than eliminating crime. The prison system tends to support it in an indirect manner (Anderson, 2018). This thesis focuses on the latter portion of the lives of the inmates once they complete their prison sentence.

The prison system in Finland could be divided into two major categories: open and closed prison. According to recent statistics, there have been 1766 inmates in closed prisons while 977 have been placed in open prisons, among which 2743 total prisoners, 92% of the inmates are male, while 8% are female (Järveläinen and Rantanen, 2021). The official capacity of the prison system is 2,998 inmates, of which closer to 94% are occupied (Järveläinen and Rantanen, 2021). The inmates belong to different age groups; however, more than 35% are 25 to 40 years old (Mertanen and Brunia, 2018).

Similarly, in terms of education, the population has different education levels. In open prisons, most of those criminals are held who have either committed a white-collar crime or a homicide. White-collar crimes can be, for example, financial crimes. Therefore, the minimum education of such inmates is graduation (Lappi-Seppälä and Koskenniemi, 2018). The open prison could be termed an innovative concept where inmates are not placed under solitary confinement. They can leave open prisons to go to school or work. A social worker and classes on substance addiction or anger management are included in the wraparound services. The facility's smaller population enables the provision of individualized care. The prisoners maintain their bank accounts and carry their cell phones with them. The main philosophy behind the concept is rehabilitation (Järveläinen and Rantanen, 2021).

The system of open prisons could be termed successful as it has not led to an increase in the crime rate (Moore, 2021). At the same time, it is essential to understand that the rehabilitation philosophy also requires consideration from the perspective of closed prisons. The thesis explores the feasibility of digital skills for prisoners in further enhancing the rehabilitation process. The research area is expected to assist the inmates in improving their

lives and careers in the post-prison phase, at least when it comes down to digital and technological skills.

1.1   The Consequences of Digitization

Finland could be termed a global leader in digitization as it stands 2nd in the Digital Economy and Society Index (Happonen, 2021). Both the private and public sectors are highly digitized, and technical innovation is the key concept in all types of operations. The digital economy comprises more than 15% of the Gross Domestic Product in the country (Happonen). However, while this factor is highly favorable for the overall economy, it poses a significant challenge to prison inmates in Finland.

The prisoners that have completed their sentence in recent periods or will complete it shortly are expected to face several challenges in, for example, getting decent jobs due to a lack of technical knowledge and digital skills (Azemi, 2020). Inmates in their post-prison life would be forced to adopt jobs that do not require technical skills but are at the same time low paying in nature. Such trends would make it difficult for the inmates to integrate into regular society in their post-prison life as it would lead to the creation of a class that is considered unskilled in technological terms and is therefore distinct from the rest of the society, which is technologically advanced and equipped (Puumala, 2020). They would also face challenges in climbing the organizational ladder due to a lack of technological and digital skills. The policymakers and the stakeholders are not currently anticipating the challenge, so no particular emphasis is being placed on equipping the inmates with digital and technological knowledge (Kaskela and Tourunen, 2018). Because digital education could make a more significant and a positive difference in the rehabilitation process of prisoners, this thesis aims to explore this aspect in greater detail and find a solution on how to strengthen the digitalization amongst the target group.

1.2   Working Life Partner: Valoa digiperustaitoihin Satakunnassa

The thesis was done for Valoa digiperustaitoihin Satakunnassa (Light on the Digital Skills in Satakunta) project. The project was developed to assist those that are excluded from digital services due to lack of skill. Its goal is to offer young individuals from Satakunta free one-on-one and group coaching on subjects considering digital literacy, education, and employment. However, considering the target group of the thesis and the wide age distribution of prisoners, the researcher has decided to include the older generation as well. Other goals of the project is to plan for personalized counseling and instruction in fundamental digital skills. Additionally, the project creates a digital guiding environment and training materials with the

help of the participants, with the intention of disseminating them for wider use. (Valoa Digiperustaitoihin Satakunnassa, 2022)

The goal of the Light on basic digital skills in Satakunta project is to promote the realization of inclusion and educational equality by developing digital guidance services that can be used to reach young adults outside of education and working life. The project also aims to enhance the target group's digital abilities and talents for studying. This, as well as for maintaining the social interactions and relationships necessary for work and employment. (Valoa Digiperustaitoihin Satakunnassa)

As per the published in the project plan, the main implementer of the project is Valo-Varmennusyhdistys ry, and the partial implementers are Rauma Seudun Katulähetys ry and Laurea AMK. The project is financed by the European Social Fund ESF. The project is financed as part of the measures implemented by the European Union due to the Covid-19 pandemic. The implementation period is from the beginning of 2022 until August 31, 2023. (Valoa Digiperustaitoihin Satakunnassa)

2   Theoretical Framework

The chapter conducts an in-depth and critical analysis of the concepts, ideas and theories that help in effective understanding of digital and technical skills of Finland's inmates. Use of tables has also been implemented. This is to help the reader to follow different perspectives and facts the researcher has described in the theory chapter.

2.1   Learning as an Adult

Tennant (2019) contends that learning could be a challenging experience for adults who intend to learn an entirely new phenomenon. Elaborating on the self-directed theory of adult learning, Tennant briefs that it is generally due to the preconceived notions that learning as an adult is more complex than learning as a child. In essence, the notion, however, is not valid. Learning as an adult is not much different from studying when one is younger. If learning were formulated into a process that is easier to understand and comprehend, knowledge could be imparted at any age.

Highlighting the case of Finland, Kärkkäinen (2017) argues that adults in Finland belong to different diverse educational, vocational, cultural, and linguistic backgrounds and therefore support the experiential theory of adult learning. The theory focuses on developing life experience or "hands-on" learning. Therefore, formulating policies for their learning and education requires more careful planning and consideration. Roxana and Ceobanu (2013)

share that while going through the learning process, adults may come across concepts that they may find challenging.

It is, however, essential to understand that while some concepts are difficult to grasp, others are easy. The adult learning process should not be stopped if the learner comes across a topic that is not easily comprehended. Merriam and Bierema (2013) share a completely different perspective and argue that when one is learning at a younger age, it is much easier to focus on learning alone as the learner's mind is not occupied with different psychological and social burdens (Table 1). On the other hand, when learning is initiated as an adult, the varying responsibilities may make the process more complicated than it is.

Lövdén et al. (2013), however, believe that in some instances, the adult may find the topics under study more exciting and interactive compared to their younger self. Therefore, emphasizing the theory of adult learning in which adults reframe their emotions around their experiences. The experiences they have gone through in their adult lives may make the concepts more understandable and comprehensible.

Bonk and Kim (2013) argue that digital learning skills as an adult have a different perspective. The overall process may seem more daunting when the concepts are being learned from scratch. It is, however, essential to understanding that with interactive methodologies, adults could learn digital skills from scratches, such as graphic designing, content writing, digital marketing, and others. In agreement, Brockett and Hiemstra (2018) argue that some adults may find digital skills more amusing than others and, for this reason, may be fast learners.

In either case, however, the teaching methodology must be designed in such a way that it considers the adult learner's specific learning environment and, therefore, proposes the orientation theory of adult learning. Through effective teaching methodologies, the impact of a hostile environment on adult learning could be effectively reduced. Ogienko and Meleshko, (2017) explain that in the Finnish context, adult learning is a state policy and for this reason, the Andragogical approach and technologies for adult learning are extensively used.

Mukhalalati and Taylor (2019) suggest that it is generally believed that the adult mind can comprehend the depth of concepts more effectively and, for this reason, the role of a teacher is limited. The theory of mentorship therefore holds significant importance in adult learning. A teacher's importance in the adult learning process cannot be undermined, especially if the learning involves more complex ideas such as coding or database management.

Edwards et al. (2013) take a distinct position and suggest that as compared to learning at a younger age, adult learning is more focused on the result. Consequently, in instances where adults cannot measure or immediately observe the results of their learning process, they get

frustrated and avoid the learning process altogether. Such practices negatively impact the overall learning process.

Kilpi-Jakonen et al. (2015) suggest that a more democratic population is a significant advantage of adult education. In Finland, for this reason, the systematic structure of adult education has been developed over the years. Page and Margolis (2017) emphasize that adult learning provides networking opportunities. While the teacher and the classroom environment support learning, the interaction between adults provide further stimulus to learn new concepts and grasp new perspectives. Talking to peers can have a positive impact on the learning process. Unlike when one is younger and is hesitant to ask questions, adults tend to ask questions more confidently and are generally not afraid of any negative perception of their peers.

Chen (2014) shares an entirely different opinion and suggests that not all adults feel confident in a classroom environment and may be more comfortable in one-on-one sessions with the teachers. This generally depends on the specific environment of the adult. It may be essential to note that when it comes to the education of digital skills and more advanced concepts like programming languages, the adult learner may feel more confident in the presence of a teacher who is available to answer complex questions rather than a peer who asks unnecessary questions.

Kelly (2013), however, disagrees with this notion and believes that the discussion among adult learners is more thoughtful and in-depth. The discussion facilitates the learning process. If adults lack these opportunities, their learning processes may lack the stimulus. In support of this argument, Hsu et al. (2015) demonstrate that in the case of adult learning, an important factor is learning from each other. From the arguments, it could be inferred that this cooperation and collaboration assist the adults in learning better and more comprehensibly. The points are also highlighted in Table 1, when considering the benefits and disadvantages of adult learning.

Benefits	Disadvantages
Learning as an adult is not much different from studying as a child. Learning is a process where understanding is brought within reach of the learner regardless of age.	The misconception that learning as an adult would be difficult in contrast to learning as a child can raise the threshold of even trying. Unfamiliar concepts can make learning difficult.

One can learn from their own life experience and through practical experiences. It may be easier to understand new concepts.	Learning can be more difficult as an adult because information is processed through different perspectives.
Interactions are an important part of learning, especially considering digital and technological skills.	It is difficult to take everyone into account because learning is not a universal experience.
An adult can feel more confident in the presence of a teacher.	Not everyone can learn by themselves. If they do not feel that they have succeeded quickly, they may avoid the learning process altogether.
The teacher and the classroom environment support learning. One can share opinions and points of view with fellow students.	Not everyone is confident and doesn't dare to ask questions.
Adults do not hesitate to ask questions in the same way as young people.	Not everyone wants to learn in class, as they may be more comfortable one-on-one with the teacher.
Adult learning offers networking opportunities. Children are not of working age, unlike an adult learner.	

Table 1: The benefits and disadvantages of learning as an adult

2.2   Digital Literacy and Technological Skills

Breakstone et al. (2018) suggest that digital literacy could be defined as using information technology to find, evaluate, create, and communicate information. With the advancement in society and technology, the conventional methods of literacy have been surpassed by digital methods, where people use digital tools to achieve the same goals but in a more efficient and efficacious manner; Heitin (2016) shares similar views and explains that digital literacy requires the acquisition of practical skills so that access, deliver and manipulate the information. However, the entire practice should be in the domain of ethics and sustainability.

Rontu et al. (2018) elaborate that digital literacy has played an essential role in transforming higher education in Finland. As a result, the graduates are not only effectively trained in conventional knowledge but are also equipped with digital skills. Hobbs (2017) shares a

different perspective and suggests that digital literacy is another step in one's journey of learning and education. It could only be enhanced once the conventional measures of learning have been effectively adopted.

Students who directly obtain digital literacy without going through the conventional education measures would ultimately lack behind their conventionally learned counterparts. It is, therefore, essential that digital literacy should be considered in the context of advanced knowledge and must not be considered an alternative to conventional literacy methods. (Hobbs) Khan et al. (2019), however, do not agree with these views and argue that in the case of Finland generational technological skills are diverse. With conventional literacy, an individual cannot deal with a more advanced and complex technological environment that is gradually becoming a norm at schools, workplaces, and society in general.

McDougall et al. (2018) contend that digital literacy has various phases, and each phase has its respective importance in one's career. At the most fundamental level, an individual must be able to use both offline and online methods of information creation and dissemination. They need to have a grip on digital methods of information creation, such as textual, visual, or other types of data. They are then required to have enough knowledge regarding online sources so that the same information can be shared with stakeholders. Sefton-Green et al. (2016) partially support these views and suggest that the widespread use of the internet, social media networks, and digital platforms have made online identity an integral part of digital literacy. The individual is now required to create and maintain an online identity to transfer the information it creates to relevant users.

Spires et al. (2019), in contrast, suggest that the online presence of an individual does not suggest that the person is digitally literate as well. To be called digitally literate, it is equally essential that the person should be able to positively use all these mediums in an educational or professional environment. In support, Kim et al. (2021) asserts that once the basic features of digital literacy are mastered, the individual could opt for more advanced knowledge, such as searching, locating, and critically evaluating the information on the web on-shelf in libraries.

Anckar (2016) also agrees and suggests that in Finland, digital skills are modeled on similar lines. Advanced digital literacy could then be used to manipulate the existing information and create new aspects of data. Using digital skills has led to the widespread emergence of digital entrepreneurship in Finland. Consequently, it could be termed that digital literacy is a vast area that offers a sea of knowledge to information seekers. (Anckar)

Hobbs discussed that technological skills have become significantly important in today's advanced age. The skills are highly diverse and include as easy skills such as data entry and as complex as data coding. McDougall et al. (2018) also agree and emphasize that technological

skills are paramount for digital literacy, and learning technological skills ensure that individuals can understand the dynamics and requirements of digital literacy in an in-depth manner. In contrast, Spires et al. (2019) share a different opinion and suggest that technological skills are complex and cannot be mastered by all. Skills such as database management, website development, digital marketing, project management, and cyber security require dedication, hard work, and serious efforts, given that the person has an aptitude for such complex tasks. Every person may not find it interesting to conduct statistical data analysis; similarly, not everyone may be fond of graphic design. (Spires et al.)

Heitin (2016) does not agree with these views. Heitin suggests that the increasing number of people opting for technological skills clearly shows that these skills are adaptable and essential to progress in one's career. Consequently, by mastering these technological skills, one can not only ensure a stable income stream but could use these skills for more advanced tasks such as problem-solving.

2.3 Benefits of Digital Skills to Inmates

Farley and Pike (2016) explain that prison inmates should be provided with digital skills as digital literacy has been termed a fundamental human right by the United Nations. Therefore, it is the human right of prison inmates to learn basic and advanced computer and digital skills to reintegrate into their societies. Various essential elements of daily life, such as access to social security, jobs, healthcare, and insurance, would require the user to be digitally literate enough to use these services effectively. Raitakari et al. (2019) identify that in Finland, the application for social benefits requires knowledge of digital applications and services such as OmaKela e-service, which are used for housing allowances and other social benefits.

Lindstrom and Puolakka, (2019) suggest that Finland is among the leading nations that have introduced digital education to inmates. In agreement, Zada et al. (2019) identify that the world has changed significantly in the post-Covid period. The pandemic has taught society to shift from offline to online services. When evaluated in the context of prisoners, it could be argued that their transformation to the online trends is a need of the time so that they can also move with the changing social trends.

In contrast, Hopkins and Farley (2014) share that while digital literacy for prisoners is a noble idea, it also has its own challenges and drawbacks. More importantly, it will allow white-collar criminals to conduct their activities (Table 2). However, Contreras-Pulido and Aguaded (2019) do not agree with these views and suggest that every technology could be used in many ways. Depriving inmates of technological education of fear of harmful use must not be an obstacle for those who aim to make their living through honorable ways.

Ndunagu and Tanglang (2019) argue that only two out of ten prisoners can get a job or find work in the first year of their release. While their past criminal record is the most critical factor for them not receiving the jobs, their lack of digital skills quickly becomes a new major obstacle. Costelloe and Warner (2019), agreeing with the assertion, contend that most jobs in Finland require knowledge of digital skills to some level. When former inmates join society after their release, they lack the required skills and therefore find it difficult to get jobs.

Oliveira and Graca (2018) share similar views and contend that the high unemployment ratio of prison inmates is a reality in the post-release phase. The ratio could be reduced by equipping the inmates with digital skills to make their living independently. In support, Ogbonnaya-Ogburu et al. (2019) suggest that one of the most significant advantages of digital skills is self-employment. Due to their prior criminal record, not many people may be comfortable with giving them a job opportunity. However, once the inmates are equipped with digital skills, they can work from the comfort of their own homes without putting anyone else in an uncomfortable position. They could also be a source of employment for others.

In contrast, Davis and Ostini (2019) believe that to be employable, digital skills are not the only viable option, but rather any skill that could be used to earn money could be termed beneficial for inmates. In contrast, Dervin and Li (2020) believe that digital skills are essential for reintegration into society in societies such as Finland, which are highly advanced in digital terms. From the arguments, it could be inferred that digital skills have more significant potential to provide employment opportunities.

Hopkins (2018) identifies that direct effect of not having access to internet is to their ability to find jobs and resettling into the society is limited to a considerable effect (Table 2). This, therefore, increases their chances of reoffending and getting back into their criminal activities. If they are provided with digital literacy and technological skills that could increase their employability, the chances of reoffending will automatically reduce.

Monteiro et al. (2015) shares a different perspective to that of Hopkins' and argued that digital literacy is essential not only from an employability perspective but also from the perspective of mental health (Table 2). Due to digital literacy, the integration of past offenders into society is accelerated. The factor positively impacts their mental health as society views their vows to contribute to society positively.

In contrast, Thompson et al. (2014) share that digital literacy could not be expected to reduce crimes as most crimes result from socio-economic dynamics. Technological skills could be termed a way to empower former inmates. However, it cannot be expected that the same skills may also lead to a reduction in crime rate as the socio-dynamic factors for a crime committed in the first place remain intact.

However, Zada et al. (2019) do not agree. They believe that the underlying reasons that lead to crime, such as unemployment and poverty, could be substantially controlled by imparting digital skills. In support, Järveläinen and Rantanen (2019) suggest that Finland's digital education and open prison system is expected to reduce the number of re-offenders to unprecedented low levels.

2.4   Challenges in Promoting Digital Skills in Prison

Knight (2015) argues that teaching digital skills to inmates has various explicit and implicit challenges for the authorities, and therefore the project requires careful consideration (Table 2). The most critical challenge for the authorities is teaching advanced digital skills to inmates with little formal education. The authorities may be required to teach them first the basics of education, through which they may be able to understand the dynamics of digital education.

Naukkarinen and Niemelä (2020), on the other hand, disagree with this proposition and contend that in the case of Finland, the literacy rate of the population is closer to 100%. 572,000 people have a bachelor's degree, 482,000 people have a master's degree, and more than 1.5 million people have higher education qualifications. With minor variations, similar educational profiles could be considered for prison inmates (Table 2). Consequently, Finnish authorities may not have significant challenges in attracting inmates to digital education.

Farley and Pike (2016) highlight a different scenario and suggest that while the overall idea of digital education for inmates has more significant potential, the authorities, however, have their respective limitations. Not all prisoners may be interested in availing themselves of the opportunity, even if provided. Some inmates may have other skills and they may prefer to stick with them once they are released, such as gardening, plumbing, farming, or others (Table 2).

In contrast, Jewkes and Reisdorf (2016) suggest that the number of inmates admitted to digital literacy programs and the number of inmates successfully finishing the program will provide better information on inmates' interests and attitudes toward digital literacy initiatives. Puhakka et al. (2019), on the contrary, suggest that with digital skills, the prison inmates in Finland could be better equipped to apply for social benefits and, therefore, could motivate their learning (Table 2). From the arguments, it could be inferred that digital skills for prisoners are not without their apparent challenges.

Discussing the dynamics and challenges of digital skills to inmates, Richardson and Bissell (2019) argue that e-education, on the one hand, can transform inmates into better and more qualified people; at the same time, it could create educational criminals as well. With most financial transactions being conducted through online means and measures, it has become a

lucrative arena for people with criminal minds to break into digital systems and commit fraudulent transactions.

In support, Di Tella and Schargrodsky (2013) explain that after understanding the importance of digital education, inmates that have an aptitude towards criminal and illegal activities may further hone their skills, specifically in the areas of cyber security and security management, to commit financial crimes (Table 2). Dias-Trindade and Moreira (2019) disagree and argue that the primary objective of digital skills for the inmates is to teach them the changing dynamics of digitalization in their environment. The skills being taught to them are such that they could be used to provide services and earn a living. A criminal could build upon this knowledge to gain an advanced understanding of the system so that they could manipulate it. However, it is challenging and would require years of hard work.

Jones (2014) shares similar views. Jones contends that the harmful use of technology is not exclusive to prison inmates; instead, any person with access to technology could use it in either way. Consequently, under fear of such measures, most inmates cannot be deprived of their rights to learn and master digital skills for survival in the digital age (Table 2).

Coates (2016) suggests that teaching digital skills to inmates may have some implied challenges. One of those is less interaction between incarcerated people (Table 2). It has been observed that providing laptops to inmates has impacted less physical interaction with other inmates and the more significant part of their time being spent on online activities. O'Rourke et al. (2016), however, do not see any problem with reduced interaction between inmates and believe that to master a skill, it is essential to provide a reasonable amount of time. At some stage in the learning process, isolation becomes an essential requirement.

In agreement, Lambie (2018) also points out that less interaction between inmates should be considered an opportunity, as limited interaction would lead to limited trouble for the authorities. Di Tella and Schargrodsky (2013) highlight another aspect and suggest that it is not only the interaction among inmates that is of particular importance but also that between the teacher and the student. Deciding the mode of teaching could also be a challenge to authorities. They have the option to go for both online and offline mediums where inmates could be taught digital skills through the internet or in the presence of a teacher. Selecting between the two methods has its respective benefits and disadvantages and selecting between them could be a real test of strategy and planning for the authorities.

Benefits	Disadvantages

According to researchers Naukkarinen and Niemelä, with small changes digital learning could interest prisoners from different educational backgrounds.	The authorities consider teaching digital skills to prisoners who have no prior education to be a challenge.
Searching for social benefits and jobs is easier with digital skills. Therefore, the benefit acquired from digital skills can act as a motivator.	Not all prisoners are necessarily interested. Prisoners may feel that, for example, gardening or plumbing are sufficient skills to survive outside of prison.
Digital learning can bring competence and change the direction of prisoners' lives and may impact their mental health positively.	Can give direction to the path of crime in the digital world, to for example committing financial crimes in form of online fraud.
It is important to remember that the aspect of potential crime does not only affect prisoners, but everyone who has access to technology and internet.	The increase in technology in prisons can reduce the interaction between prisoners.

Table 2: The benefits and disadvantages of digital learning in prison

3   Methodology

In this section, the research methodoly is explained. This includes research questions, the types of data, sources used for data collection, and analysis methods. Finally, a detailed explanation of research ethics is provided, which serves as the study's ethical foundation.

The thesis follows an inductive methodology. The researcher generally relies on observation to spot and look for patterns contained within a particular phenomenon. Theories are based on observation and recognized patterns. (Flick, 2015) The ability to change the direction of the research is one of the critical features of the inductive approach. If a more appropriate and trustworthy method is discovered, the researcher is to alter the course of the investigation.

As a result, inductive reasoning is expected to move from specific to general, which is termed the bottom-up approach. This contrasts with the deductive approach, which moves from general to specific. The inductive approach benefits the entire research process in multiple measures. With the incorporation of the approach, the researcher has the propensity to make new theories and concepts based on the patterns identified in the data. (Silverman, 2016)

Additionally, the research process could be designed using the existing theories. A multi-dimensional data collection and analysis approach could be used due to the inductive method's ability to evaluate from a holistic perspective. The approach allows the researcher to explore and explain the patterns from different perspectives. There are two different ways to learn, one is based on experience, and the other is on experimentation. The former is the foundation for the inductive approach, whereas the latter is the foundation for the deductive approach. The researcher notices the patterns and concludes using their experiences (Mackey and Gass, 2015). The use of abstract generalizations and ideas is another aspect that sets inductive research apart from other methodologies. As the research continues, the preliminary relationships are noticed, and an explanation is discussed at the conclusion.

Prison education, in general, and technical education for prisoners has a long history and has undergone several stages of evolution. The available literature would assist the researcher in conducting a thorough and in-depth analysis of the subject (Humphries, 2017). According to the documented evidence on the innovative prisons of Finland, these fragments of evidence should be examined and studied to determine the efficacy of the digital skills being taught to inmates. For the study to have a multi-dimensional, elaborated, and detailed explanation of the topic, qualitative methodology and a secondary data approach are required.

3.1   Research Questions

The thesis aims to evaluate the strengthening of digital skills outside prisons in Finland and focuses on post-prison life digital skills and competence. Therefore, the research objectives were firstly to evaluate the knowledge and understanding regarding digital skills among prisoners in Finland, and secondly to evaluate the prospects of employment opportunities, reintegration into society, and social benefits due to digital skills in post-prison life. The results should also benefit the work life partner. Thus, the following research questions were formulated:

1. What is the current level of digital literacy among inmates in Finland's prisons?
2. How could technical knowledge and education be used to support the inmates in their post-prison lives?

3.2   Literature Review

Snyder (2019) states that usually, a state of knowledge in a given body or concerning a specific topic is evaluated on the basis of a literature review methodology. Literature reviews can be employed to develop agendas for research, establish knowledge gaps or even provide a description of a given subject matter and/or phenomenon of interest (Ramalho et al., 2015). Mahrool (2020) states that through a critical review of the literature, one is able to understand what has been done before and the findings established. Thus, the importance of

reviewing the literature is to build on the ideas of other scholars who have examined the same phenomenon of interest and obtain relevant information for pointing out knowledge gaps.

The thesis was carried out as a descriptive literature review. The process of a literature review is guided by defined research questions, to which the answer is sought from already existing materials. A descriptive literature review is one of the most used types of literature review and it can be characterized as an overview without strict and precise rules, as the materials used are extensive (Salminen, 2011) and often open to interpretation. A descriptive review works as an independent method, but it is also considered to offer new researchable phenomena for a systematic literature review (Salminen).

According to Younas and Ali (2022), using literature summary tables is one way to introduce the collected data. An article that is included in the table is summarized in the literature summary table. It concisely outlines its methodology and findings. The reader should be able to access the information quickly and easily in these literature summary tables. (Younas and Ali)

3.2.1 Data Collection

The topic of "Digital skills for prison inmates" is broad and necessitates the evaluation and exploration of sources to gather data from the viewpoints of various databases. To evaluate data on technological skills, digital tools, e-education, and social science different databases were accessed.

Databases were used to evaluate the concepts and gain a deeper understanding on the research questions itself. Their use was influenced by high levels of credibility as they are reputed to contain peer-reviewed articles. Consequently, there were high chances of obtaining credible data, hence implying that the findings attained high rates of trustworthiness, as suggested by Korstjens and Moser (2018). The keywords used included "prison, digital, literacy, skills, improving, strengthening, enhancing, outside, technical, Finnish, technology, system and knowledge." These keywords were combined with Boolean operators "AND" and "OR" to generate appropriate search phrases and terms that were used to obtain relevant academic articles from the databases (Table 3).

Keywords	Boolean Operator	Search terms/phrases

Digital, prison, technical, technology, Finland, literacy, skills, improving	OR	Strengthening OR improving digital OR technical skills in prison through digital literacy in Finland
Artificial intelligence, prison, Finnish, digital, literacy, skills, improving, strengthening, enhancing, outside, system, knowledge.	AND	• Improving digital literacy AND knowledge in Finnish prisons • Enhancing digital knowledge AND technical skills outside Finnish prison system • Artificial intelligence in Finnish prisons

Table 3: Combinations of keywords with Boolean operators to form search terms

After coming up with suitable keywords, the data search was conducted (Table 4). The first searches yielded a lot of search results, so adjustments had to be made. After the results started to decrease, the researcher could focus on narrowing down the researched material better.

Database	Google	Google Scholar	ProQuest	Total
Search words	Digital skills among Finnish inmates	Strengthening OR improving technical skills in prison through digital literacy in Finland	Strengthening OR improving technical skills in prison through digital literacy in Finland	

Adjusted search words	Digital literacy in Finnish prison OR Digital skills among Finnish inmates OR artificial intelligence Finnish prison OR artificial intelligence Finnish prison OR artificial intelligence AND digital skills Finnish prison	Enhancing digital knowledge AND technical skills outside Finnish prison system OR Digital literacy in Finnish prison OR Digital skills among Finnish inmates OR artificial intelligence Finnish prison OR artificial intelligence AND digital skills Finnish prison	Improving digital literacy AND knowledge in Finnish prisons OR digital skills prison inmates Finland	
First search		3	48	
Second search		2	17	
Narrowing		2	9	
In thesis	2	3	2	7

Table 4: Article searches from different databases

3.2.2   Inclusion and Exclusion Criteria

Patino and Ferreira (2018) contend that the identification of a criteria for including and excluding data sources is helpful in establishing a threshold for standardizing the research with protocols of high-quality. In addition, Connelly (2020) suggests that given the potential of having potential extensive and large datasets, the use of inclusion and exclusion criteria helps equip restrictive features that narrow the sources selected for review. Therefore, the key features that qualified or disqualified the data sources are presented in Table 5.

Inclusion Criteria	Exclusion Criteria
Only articles to be included were those published between 2010 and 2022.	Articles published before 2010 were excluded from this investigation
Since only the digital skills only Finnish inmates are studied in this inquiry, then the sources included were those that focused on the Finnish prison system.	Sources that focused on the phenomenon of digital skills enhancement of the prison system of other countries apart from Finland were excluded
Data from three prisons, Hämeenlinna, Helsinki, and Turku are used	Data drawn from other contexts were excluded from this study.
Only sources published in the English language were included in the study for purposes of comprehensibility	Sources published in other languages were excluded from this study to avoid the issue of language barrier
Data that focused on the aspects of digitization of prison system and digital skills were included in this study	Data that focused on vocational training and education for inmates were excluded.
The study utilized reports written by independent security and educational consultants and organizations	Unreliable sources of information like blogs and unpublished scholarly manuscripts were not considered in this inquiry.

Table 5: Inclusion and exclusion criteria

The first inclusion criteria for the data collection specified that the data ranged from 2010 to 2022. This exception, therefore, nullified the search results from Google. The second inclusion criteria specified that the digital skills of only Finnish inmates are studied, and other countries beyond the scope of the study are not included. Sources other than English or Finnish were not incorporated. Any skill taught other than digital skills of Artificial intelligence or Graphic designing is omitted. Data focusing on vocational training and education for inmates is also excluded.

Based on the keywords, the specific search on each database followed the process provided in data collection to identify suitable scholarly sources for review (Table 7). It indicates that the search process identified four suitable scholarly sources for inclusion in this study. It was noticed that the same authors and researchers had published works regarding the keywords.

However, only a limited extent of the academic literature has addressed the idea of prisoners' digital education in Finland.

There is already one answer on how to help with digital literacy among the prison inmates. According to Puolakka's article 'Smart Prison: A historical digital leap in Finnish prisons (2021),' the concept was firstly introduced to a women's prison in Hämeenlinna in 2020. This provided the basis for the analysis in chapter four and gave direction to the rest of the research. The third inclusion criteria specified that data from three prisons, Hämeenlinna, Helsinki, and Turku are used.

The restriction for only accessing peer-reviewed sources was removed and overcome by gathering information from journalistic sources, as shown in Table 6. The media sources, reports, and investigative studies were preferred for more first-hand information on the operations. Most importantly, the authors' own opinions should not appear in these journalistic sources, as this would undermine the credibility of the material and thus the reliability of the thesis.

Many results were not related to the search criteria or there were only a few of them. As mentioned, it may be significant to note that only a limited extent of the academic literature has addressed the idea of the Smart Prison, as developed by the Finnish authorities. Because of this, few studies have examined the case of the concept of smart prisons. Based on the inclusion and exclusion criteria, a total of seven different sources were found, which included both academic and journalistic sources that highlighted different aspects of Finnish prisoners' digital education.

Database found on	Author(s)	Title	Methodology	Findings	Recommendations
ProQuest	Allen and Abadi (2021)	"At prisons in Finland, inmates are learning AI and taking online tech courses as a bridge to life on the outside"	Journalistic source	There is increased adoption of advanced technology into the prison system in preparing inmates for	Digital literacy courses offered in prison settings can help inmates to bridge their skills and enhance their capacity to match life outside.

				life after prison	
Google	Puolakka (2021)	"Smart Prison: A historical digital leap in Finnish prisons"	Journalistic source	There is increased integration of digital technologies into the prison settings in Finland	Since smart prisons are concurrent with current and technological trends, more digital and smart services should be offered in such settings to promote offender rehabilitation.
Google	Van De Steene and Puolakka (2021)	"Artificial Intelligence in Prisons in 2030. An exploration on the future of Artificial Intelligence in Prisons"	Qualitative study using a literature review methodology	While the integration of AI into Finnish prisons continues, there arises issues of ethics because of breach of privacy in offender management	AI should be utilized ethically as well as in a human-centered manner to scale up safety, security and individuals' wellbeing in the prison ecosystem.
Google Scholar	Järveläinen and Rantanen (2021)	"Incarcerated people's challenges for digital inclusion in Finnish prisons"	Qualitative research involving 26 interviews with incarcerated people	The digital divide for incarcerated people stems from gaps in digital skills as well as internet	Prisons should set aside initiatives for enhancing inmates' digital skills and provide internet access to scale up digital literacy

				accessibility challenges.	
ProQuest	Rantanen et al., 2021	"Prisoners as users of digital health care and social welfare services: A Finnish attitude survey"	A cross sectional survey encompassing 225 people recruited from 11 prisons	Digital training should be provided to enhance the literacy and skills of older inmates	The prison staff and other stakeholders should support inmates in using digital healthcare as well as social welfare services. Older and long-sentence prisoners' digital skills should additionally be enriched.
Google Scholar	Chen (2019)	"Inmates in Finland are training AI as part of prison labor"	Journalistic source	Inmates are increasing their technical skills by training on AI to better improve labor provision	While AI is helping advance skills in the prison ecosystem, it is important that AI algorithms are specialized in culturally specific ways.
Google Scholar	Becker-Pestka (2022)	"E-learning for Prisoners. Experience from Sweden, Norway, Poland, Finland and Germany."	Qualitative exploratory research	E-learning offers opportunities to prison confines to acquire digital literacy skills.	E-learning should be promoted in prisons to create a pathway to preventing exclusion. The reason for this is that E-learning in the context of prison helps to

					merge social issues, individual interests, technological skills and family interests of interacting with others who outside the prison environment.

Table 6: Data Matrix

3.2.3   Thematic analysis approach

To analyze the data, a thematic analysis approach was adopted. According to Nowell et al. (2017), thematic analysis is advantageous in presenting qualitative findings because it is easy and flexible to use. Kiger and Varpio (2020) echo the assertion above by stipulating that the use of thematic analysis in delineating subjective insights in research yields the benefits of flexibility of application, hence evaluators have a duty of clearly outlining their philosophical orientations as well as assumptions to foster the credibility of their results as well as interpretations. Therefore, the process of analyzing the data thematically encompassed followed a sequential process from data familiarization, identification of initial themes, refining them and validating their relevance, as detailed below in Figure 1:
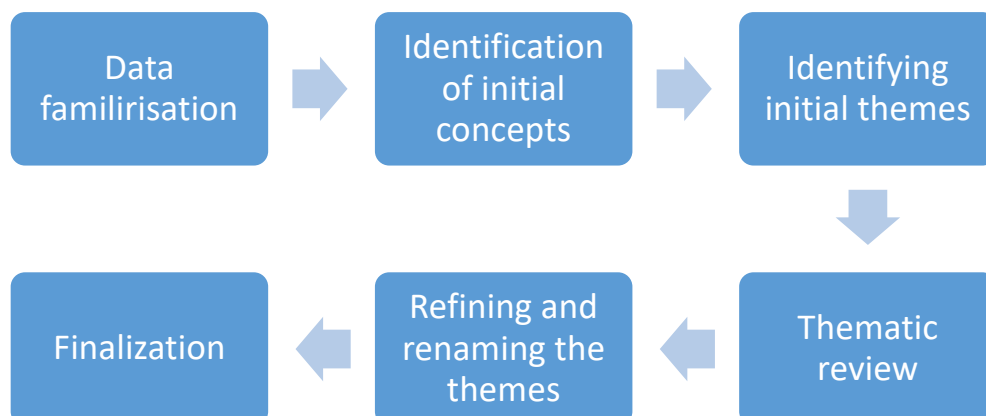
Figure 1: Thematic analysis process involved in the research

The topics focused on factors such as prison inmates and digital skills. The topic's nature requires in-depth analysis, and a goal of understanding different perspectives is set. This is feasible when different themes associated with the subject matter are explored. On the contrary, other analytical methods, due to their respective shortcomings, such as focusing on the occurrence and frequency of words rather than specific themes, may not have assisted in a broader and deeper understanding (Jackson and Bazeley, 2019). The approach ensured that relevant points, ideas, facts, and critical issues regarding the challenges associated with teaching digital skills to inmates were effectively incorporated.

As outlined in Figure 2, the first step of thematic analysis and data familiarization was conducted. The familiarization process evaluates the data in detail by reading and exploring material on the subject matter (Mihas, 2019). This is to understand the background and history of the topic and the possible aspects that could be explored. In the second step, different ideas and concepts highlighted in the previous step were assigned specific codes (Table 7). For example, papers discussing digital skills' effectiveness in providing post-prison employment opportunities were listed as "employable skills." On the other hand, papers suggesting that digital teaching skills to inmates faced significant challenges were marked as "challenges and obstacles."

Initial concepts	
Employable skills	Digital literacy courses offered in prison settings can help inmates to bridge their skills and enhance their capacity to match life outside. (Allen and Abadi) Prisons should set aside initiatives for enhancing inmates' digital skills and provide internet access to scale up digital literacy. (Järveläinen and Rantanen)
Challenges and obstacles	Since smart prisons are concurrent with current and technological trends, more digital and smart services should be offered in such settings to promote offender rehabilitation. (Puolakka)

Ethical considerations	AI should be utilized ethically as well as in a human-centered manner to scale up safety, security and individuals' wellbeing in the prison ecosystem. (Van De Steele and Puolakka)

Table 7: Initial concepts made from materials

The third and final step in the thematic analysis process is to review the coded data. The process included combining, splitting, deleting, re-organizing, and regeneration codes based on texts identified (Table 8). The data is re-evaluated to exclude all irrelevant and relevant information (Jackson and Bazeley, 2019). The process ensures that the coding of different topics is correct, as a failure to do this could lead to mishandling and mismanagement of information. As a consequence, the various themes that emerged from the data included development of the concept of smart prison in Finland, systems and implementation, digital skills, and artificial intelligence, and data management. These themes are discussed in chapter four.

Original phrase	Re-evaluation	Congregating
"At the beginning of my sentence, I thought that there can only be negative things in being in prison. That basically life is over." (Allen and Abadi)	When prisoners first receive their sentences, they believe that being incarcerated could only have harmful effects on their lives.	A prison sentence affects negatively on the minds of the prisoners.
"Despite the progress made [in 2015], digital services remained limited and did not yet provide personal access or fully support the rehabilitation and reintegration of prisoners." (Puolakka)	Personal access to digital services remained restricted, and they did not yet fully support prisoner rehabilitation.	There should be a strategy to aid prisoners in honing their digital skills.

"The Smart Prison Project was started in October 2018 with the purpose to introduce a new prison concept that uses digital services for rehabilitation, education, and reintegration. The objectives were to install cell devices, with a smart system, in to the new Hämeenlinna women's prison and develop the use of digital services in all Criminal Sanctions Agency's (CSA) units." (Puolakka)	Finland has recognized the need for teaching digital skills. The purpose is to improve the digital and technological skills of prisoners so that they learn and use the skills outside the prison.	Smart Prisons introduce digital and technological skills to inmates.
"The prisoners have laptops in their cells and can use the system for messages, requests and video calls to contact the staff and to communicate with family and friends. The cell terminal has restricted access to the Internet (whitelist) yet allowing the prisoners to study via Moodle, do online shopping and access several other selected websites that support rehabilitation and management of daily affairs." (Puolakka)	Inmates were given online access to office tools for studying, e-books and audiobooks. They could communicate with authorities and the staff in prison.	Inmates could access day to day necessities to make day-to-day life easier.
"'Prison labor' is usually associated with physical work, but inmates at two prisons in Finland are doing a	An AI Start-up 'Vainu' collaborates with two prisons to train the prisoners in	Inmates gain access to additional skills and aspects of digital

new type of labor: classifying data to train artificial intelligence algorithms for a startup. [---] Vainu is now working with two different prisons, one in Helsinki and one in Turku. Vainu shipped 10 computers to these prisons and pays the CSA for each task the prisoners complete." (Chen)	artificial intelligence and data management. The inmates are earning money, which can serve as a motivation. However, the digitization increases the demand for AI training.	literacy, in additional of income.

Table 8: Combining and re-evaluation of the source material

3.2.4   Ethical Considerations

This thesis is intended to respect the instructions of the Finnish National Board on Research Integrity, TENK. The principles include conducting responsible research, preventing research errors, and promoting information about the integrity of research in various organizations, such as universities of applied sciences. The honesty of the research must be present at every stage of the work and manifest itself to the reader as a clear whole. (TENK, 2012)

The researcher is committed to documenting the research and the results as clearly as possible to promote the reliability of the thesis. When done properly, ethically sound research ethics rejects dishonesty. The researcher must commit to this while doing the thesis.

The database collected for the thesis describes the researched phenomenon and key terms, such as prisoners' digital skills and digital literacy. With the help of different concepts and phenomena, the researcher narrows down the researched object to better understand the emerging results. The results are described in the data collection. The results rely on the researcher's honesty, general care, accuracy and appropriate references from researchers and experts. This is especially true for human research. Interviews are not conducted in the thesis, but they may have been used in the researched source. In that situation, the researcher must be able to assess that the subjects knew about this and that their participation was voluntary. (TENK, 2019)

The aim of the thesis is to promote the researcher's professional expertise as well as the knowledge and skills of working life and research and development work. In human-centered research, the need for an ethical preliminary assessment must be clarified in connection with the selection of the topic (Arene ry, 2015). Methodical or research method solutions are based on what kind of research topic it is, how it is possible to study the topic consistently,

and that the method is suitable for researching the topic. The research tasks and questions guide the selection of information acquisition and production methods. Ethically sustainable data acquisition and research methods mean that their use in research is described in accordance with ethical guidelines. The most typical information acquisition methods are the documentary materials used in this thesis, websites, and media materials, such as news. (TENK)

A key factor affecting the reliability of the research is the choice of material, where the justification of the choices must be carefully considered. In the selection and processing of the material, the fairness, equality, and honesty of reporting should be emphasized, and for example, changes in the selection criteria of the material should be detailed to improve reliability. If the basis of the selected material is not clarified, the conclusions made based on the material can be questioned. The reliability of the research is also improved by clear presentations and justifications regarding the research questions. Care must be taken when formulating research questions. (Kangasniemi et al. 2013, 297– 298.)

The ethical considerations involved in the thesis were carefully addressed before any data collection and the implications of ethics were carefully considered (Bloomfield and Fisher, 2019). At first, the standards specified by the university were strictly adhered to in the context of ethical requirements. The datasets used in the study were all public, and no confidential information was incorporated into the study. It was also ensured that all the data was obtained from reliable and authentic sources that are academically accepted (Simpson, 2017). Finally, it was ensured that all the data used in the study, whether in analysis or literature, was adequately cited and due credit was provided to relevant sources and authors.

4   Results

The chapter evaluates the case of "Smart Prisons" in Finland and how the prisons promote digital education and skills to inmates and prepare them for their post-prison life. It also focuses on the "post-prison employment opportunities" segment of the second research objective. The results provided profound and significant insights regarding the digital education of prisoners and the profound impact it could have on the lives of the inmates outside the prison.

4.1   Smart Prison in Finland

In 2015, legislation in Finland allowed inmates to use video calls to speak with their loved ones and access online social, educational, and healthcare services. This was the first step toward the digitalization of prisons, and the legislation paved the way for practical initiatives (Allen and Abadi, 2021). With a focus on normalcy and equality, this legislation aimed to

ensure that all citizens had access to the same public services. The Finnish Criminal Sanctions Agency provided shared workstations with restricted Internet and Skype access to all units between 2015 and 2017.

Despite the advancements made during that time, personal access to digital services remained restricted, and they did not yet fully support prisoner rehabilitation and reintegration (Puolakka, 2021). To further facilitate the prisoners, the "smart prison concept" was introduced. The objective behind the program was to develop a strategy that would aid inmates in adhering to their sentence plans and supports the overall strategic goals of the Finnish Criminal Sanctions Agency, which include reducing reoffending and assisting inmates with their reintegration into society.

On November 1st, 2020, Hämeenlinna Smart Prison was completed. Each of the 100 single cells was given a laptop by Gerdes in March 2021, which was installed with an intelligent system (Van De Steene and. Puolakka, 2021). Inmates can then use the system to send messages to staff members, requests, and video calls. Additionally, they can use video calls to speak with family members and other important people in their lives by contacting prison medical services, other authorities, and cooperation partners like NGOs.

4.1.1 Systems and Implementation

The convicts were given initial access to the Digital Learning platform Moodle to further their education. The authorities created the system with the vendor, and it was security assessed to ensure it complied with European Comission's General Data Protection Regulation and safety regulations. The new system, which was completed and used in the Hämeenlinna women's jail, was first used to train staff and prisoners (Järveläinen and Rantanen, 2021).

The inmates were provided laptops in their cells, and they could utilize the system to send messages, make requests, and make video calls to the personnel and their loved ones. The cell terminal had limited Internet access, but it permits inmates to study using Moodle, purchase online, and access several other carefully chosen websites that aid rehabilitation and daily life management. Websites for NGOs and social services are among the latter.

Additionally, inmates get online access to essential office tools for studying, e-books, and audiobooks. They can also use video calls to communicate with other authorities, cooperative partners, and medical staff of the prison. An inmate at the open prison in Laukaa divides his time between studying for a tech profession after prison and his hostel, which is close to a local university. The inmates have already finished the "Elements of AI" free online course (Puolakka).

While completing their prison sentences, the inmates intend to finish their university degree and launch a career in business or entrepreneurship. Allen and Abadi suggest that, as per one of the prisoners, when they first received their sentences, they believed that being incarcerated could only have harmful effects. However, Allen and Abadi argue that they should be given a chance. From inmates' views, it could be inferred that digital skills provide a ray of hope and motivation to restart life with positive prospects. One of the inmates' tests VR technology and learns the fundamentals of computer operation over at the Turku closed jail.

According to Allen and Abadi, some convicts have been released and returned, and they have stated very plainly to others that they cannot handle it because everything is so different and so computerized. It would be beneficial to receive some digital knowledge. From the views of the Inmates, it could be inferred that they realize the importance of digital skills in the digitalized society of Finland. They are, therefore, more seriously considering the option of digital knowledge and skills for them. (Allen and Abadi)

4.1.2 Digital Skills, Artificial Intelligence, and Data Management

Finish private organizations in collaboration with the government, and the authorities are taking the initiative to the next level. One start-up, Vainu, collaborates with two distinct prisons in Helsinki and in Turku, to train prisoners in artificial intelligence and data management. Vainu's artificial intelligence program aims to use artificial intelligence to collect information about companies and present it to everyone in a format that is understandable and easy to adopt. The purpose is to help companies and other entities that are customers of Vainu to improve their own sales. (Chen, 2019)

In practice, the work of the prisoners is that they read texts in Finnish and answer questions about the text. The same question is repeated many times by different people. In this way, the material that is used in training artificial intelligence can be collected. (Chen)

The company delivered ten computers to these prison facilities and now reimburses the Community Supported Agriculture (CSA) for each work the inmates perform (Chen). The CSA oversees calculating how much goes to the prisoners and designating the inmates who perform the data classification. The AI start-up pays prisoners to train their algorithms (Becker-Pestka, 2022). While earning money is one of the inmates' driving forces, it is also important to note that there is a rising global demand for AI training. "RISE AI," the latest initiative in the Smart Prison concept, is expected to offer an artificial intelligence system for managing offenders. The administration is confident that the data and digitalization strategy and the intelligent prison idea will yield results in the future. (Van De Steene and Puolakka, 2021)

4.1.3 Implications

The most infeasible aspect of "smart prison" is that the concept has only recently been introduced. Consequently, the impact of digital and technological skills on inmates is yet to be ascertained. Another negative aspect is the kind of education being provided to the inmates. Artificial intelligence training could be termed only at the primary level, which involves repetitive procedures and does not involve any in-depth type of analysis.

Still, it is safe to assume that Smart Prison is expected to equip the inmates with the technological and digital skills that were previously difficult to obtain in the prison environment. As the inmates are currently using their AI skills to earn basic compensation within the prison, it is safe to assume that with more excellent training and higher expertise, they would be able to earn better when they leave the prison.

4.2 Post-prison Life Initiative

At first, the results identified that prisons in Finland are being trained on some fundamental technological aspects. These include artificial intelligence, data management, and virtual reality. The prisoners are being taught the disciplines that have significant practical importance in the real world and could substantially help them earn a living. The results, therefore, validate the assertion of Lindstrom and Puolakka (2019), who suggested that Finland is among the leading nations that have introduced digital education to inmates. The results revealed that the authorities in Finland are not only severe but taking some unprecedented initiatives to ensure that the inmates are trained on digital grounds to start a new life once they get out of prison.

The results also validate the assertions of Oliveira and Graca (2018). They highlighted the issue of unemployment among inmates after completing their imprisonment and suggested that the issue could be resolved through digital education. The results also reveal that Finnish authorities realize and understand the challenges and requirements that former prisoners may face. Consequently, by training them with basic and advanced digital skills, the authorities strive to ensure that former prisoners do not have to face prolonged unemployment and that they can receive multiple job opportunities.

Inmates who formerly believed their sentence had practically ended their life, have started seeing a new perspective – a new life and new hope with digital education. One of the inmates' comments identified that they were previously concerned about their post-prison life. Now, they are full of hope. They are putting their efforts and energies into completing their degrees, learning artificial intelligence and data management, and intending to start their entrepreneurial ventures and digital arena. The results, therefore, validate the

assertions of Ogbonnaya-Ogburu et al. (2019) that one of the most significant advantages of digital skills is self-employment.

Life outside the prison could be challenging for the inmates as they may be forced to face societal pressure in the form of biased behaviors of their co-workers. By being equipped with digital skills, former inmates ensure that they can be their own bosses and can work on their initiative, without relying on an employer. Independence could be termed a greater achievement for them. The results, however, do not support the assertion of Davis, and Ostini (2019), who contended that digital skills are not the only viable option for employability, but instead, conventional skills would also similarly support a person.

The Finnish society has significantly advanced in technological terms, validating the points made by Dervin and Li. They argued digital skills to be essential for rehabilitation. While the need and requirement for conventional skills are never reduced, the pay gap between technical and conventional skills is wider. Consequently, when inmates are trained in digital skills, they are expected to find better job opportunities, be self-employed, and earn better wages and compensation. For this reason, the results reveal that digital skills have greater importance for former inmates than conventional skills.

The results reveal important information regarding the type of digital skills being imparted to the inmates. While the prisoners could learn a multitude of skills from Moodle servers and other online resources, the authorities are more focused on practical skills such as artificial intelligence, virtual reality, and data management and handling. The results also reveal that these skills have greater appeal at the global level. Consequently, prisoners could not only strive for opportunities at home but will also be able to get jobs in other countries through online mediums. This could be termed a breakthrough for the inmates as such an opportunity was never previously available. They will have a broader arena to get employment opportunities and earn their living.

Once the former inmates have better employment opportunities, they will be less inclined to commit crimes; therefore, the number of re-offenders is also expected to reduce. The results, therefore, seem to validate the statement of Järveläinen and Rantanen (2019), who believed that digital education and the open prison system in Finland are expected to reduce the number of re-offenders to unprecedented low levels. The assertions of Thompson et al. (2014) therefore, seem to be based on incorrect assumptions and therefore invalidated by the results that digital literacy could not be expected to reduce crimes. The results, on the contrary, show a greater prospect for the same. The aspect of "post-prison employment opportunities" of the research objective could therefore be termed to be achieved.

4.2.1 Reintegration Into the Society

The section focuses on the "reintegration into the Finnish society" segment of the second research objective. The results highlighted essential aspects regarding the reintegration of former inmates into Finnish society due to digital education. The findings revealed that when the former inmates completed their prison terms and rejoined the regular walk of life in Finland, they faced several challenges due to the computerization and digitalization of society and things related to daily life.

Consequently, digital education has become integral for the prisoners to reintegrate into Finnish society not as aliens but as regular members. The results, therefore, validate the points of Farley and Pike (2016), who suggest that essential elements of daily life, such as access to social security, jobs, healthcare, and insurance, would require that the user be digitally literate enough to make effective use of these services. The results, therefore, show that digital skills could profoundly assist former inmates to fully acclimate to the requirements of daily life in modern Finland, whether it is social security or insurance.

Inmates in Finland are being trained for more advanced skills like virtual reality or artificial intelligence and other digital knowledge more frequently used in daily life (Puolakka). In Hämeenlinna Smart Prison, inmates could video call their loved ones, and health professionals could perform online shopping, access educational resources, and access e-books. These are some of the digital activities that are generally performed more frequently and are considered efficient ways to access the benefits that society has to offer. The findings, therefore, confirm the views of Zada et al. (2019), who suggested that transformation to the online trends and digital education to inmates is a needed in the post-covid world. Consequently, it could be expected with greater confidence that when inmates rejoin Finnish society, they do not face as many challenges in reintegration.

Another aspect that has raised a point of concern for policymakers is the negative use of technology and its later use in white-collar crimes. Skeptics have raised the point that criminals could use technological skills negatively, such as by committing financial fraud and crimes. While their reintegration into society is viewed positively, it is also feared that their skills may not be a disaster for society. The results answer this concern, and the findings reveal that before the provision of the system, such as hardware and software, the authorities ensure that it has passed through strict security checks, such as GDPR. Therefore, it has been made extremely difficult to direct the use of the technology in any way other than initially intended. The findings, therefore, effectively answer the concerns of scholars such as Hopkins and Farley (2014), who feared that they would provide an added avenue for white-collar criminals to conduct their activities.

Results, on the other hand, show that while future usage of any technology cannot be guaranteed, the current education of digital skills is being imparted with strict measures to ensure that no negative use of the technology can be committed. As a result, the technological skills of inmates are not expected to negatively affect society and hinder their reintegration into it. The results, therefore, fully validate the assertions of Contreras-Pulido and Aguaded. They suggested that every piece of technology could be used in a multitude of ways; therefore, depriving inmates of digital skills may violate their rights.

The result highlighted that digital skills could support the reintegration of inmates into Finnish society. Various prisoners intend to start their initiatives once out of prison. They are not only learning digital skills, but also business studies and other types of degrees to launch their entrepreneurial ventures. While some prisoners could work as sole proprietors, others may need team members in their respective ventures. The inmates would therefore become a source of employment for others. The same inmates who had previously harmed society will contribute positively to it due to their technological skills. The results, therefore, support the assertion of Ogbonnaya-Ogburu et al. (2019), who suggested that once equipped with digital skills, the same inmates in the future could become a source of employment for others. The results also invalidate the argument of Spires et al. (2019), who contended that technological skills are complex and cannot be mastered by all.

In turn, the findings reveal that with effective teaching methodologies and motivation to excel many people, if not all, could be attracted to digital skills, paving their way toward reintegration into society. The aspect of "reintegration into the Finnish society" of the second research objective could therefore be termed to be achieved.

4.2.2   Application for Social Benefits

Integrating inmates into society requires that all the benefits and privileges available to ordinary people are available to former inmates and new members of the free Finnish society. A hindrance, however, occurs for former inmates as the process of applying for benefits has become digital. When the inmates in Finnish innovative prisons are provided both basic and advanced digital knowledge, access to offline and online media, and are introduced to regular online services, they become qualified to apply for their social benefits once they get back into society. The results, therefore, validate the assertions of Raitakari et al. (2019), who argued that in Finland, the application for social benefits requires knowledge of digital applications and services such as OmaKela e-service, which are used for housing allowances and social benefits.

Consequently, it could be argued that digital skills also train the inmates to apply for social benefits effectively, and their reintegration into society could be further strengthened. The results also validated the assertions of Puhakka et al. (2019) that social benefits could work

as motivation for inmates to learn digital and technological skills. It could be argued that by receiving the social benefits, the former inmates have all the benefits available to regular members, conditional to eligibility. Consequently, the inmates and society start to consider them a part of the regular social structure. This factor is highly favorable for the inmates' mental health and the swiftness of their reintegration into the regular social order. Therefore, the "social benefits" of the second research objective could be termed to be achieved.

4.2.3   Challenges of Digital Education and Adult Learning

The results identified that while teaching digital skills to inmates could be challenging from multiple perspectives, careful analysis and consideration could be used to overcome the challenges. The first challenge for the authorities was to teach digital skills to the inmates who did not have any prior formal education.

In this regard, however, the results showed that the model of open prison significantly assisted the authorities, and inmates could be taught digital education along with their formal education. The results, therefore, negated the assertions of Knight that the most critical challenge could be teaching digital education to prisoners with no formal education. The findings showed that this case does not apply to Finland, where prisoners are pursuing different higher education degrees and could grasp the concepts more effectively. Therefore, the argument of Naukkarinen and Niemelä (2020) holds greater weight because the literacy ratio among Finnish prisoners would not let this aspect become a challenge for the inmates.

The results highlighted that Finnish authorities had taken substantial steps to ensure that the technologies being taught are not used negatively (Puhakka). For this reason, they have focused on security measures and the restricted availability of online resources. This aspect has helped them to teach digital skills without negatively affecting the process. The results, therefore, tend to partially validate the argument of Richardson and Bissell (2019) that digital education has the potential to create educational criminals. The results, however, showed that authorities are aware of this factor and have therefore taken respective measures.

Scholars such as Coates have suggested that one of the implied challenges of digital education is less interaction between incarcerated people. The results revealed that this might not be challenging for Finnish inmates as the open prison concept has unique characteristics for inmates. They are not restricted to solitary confinement and are allowed to carry on essential tasks such as college education and others. Under such a concept, the interaction between incarcerated people may not even be according to their own preference, as they have their respective schedules.

On the contrary, it could be argued that by teaching digital skills, interaction and networking among inmates could be further enhanced. Consequently, concerns raised by Coates in the Finnish prison scenario may not be accurate. Instead, the arguments of O'Rourke et al. seem to hold better ground in that occasional isolation could be beneficial for learning.

The results showed that digital skills were taught to the inmates, and the staff was also trained in a similar approach. The objective was to ensure that staff knew the technological skills they intended to teach the prisoners. Consequently, through strategic planning, the staff of the three prisons was also trained on the line of digital education. The results, therefore, answer the concerns of Di Tella and Schargrodsky, who argued that deciding the teaching mode could also be a challenge to authorities. The results, however, showed that the mode of teaching in Finnish prisons is a combination of online and on-site teaching. With further knowledge regarding the success ratio, the method could be modified to support better learning.

The results identified that most of the prisoners being taught digital skills are adults, and some could be middle-aged. While adult learning could be challenging, the prisoners are getting along with it with comparative comfort. The results, however, suggest that inmates are gradually grasping the concepts of digital skills such as artificial intelligence and virtual reality. Furthermore, different aspects such as jobs, integration into society, and obtaining benefits may be other factors that motivate them to focus more on digital skills. The first research objective is therefore achieved by evaluating the knowledge and understanding regarding digital skills among prisoners in Finland.

5   Conclusion

The chapter provides a conclusion to the findings and analysis obtained in the previous chapter. The chapter is based on three segments. The first segment provides a conclusion of the thesis. The second chapter provides recommendations for the future research. The third chapter elaborates the researcher's professional growth.

In Finland, offenders are expected to face several challenges in terms of reintegration into society and finding good jobs. Prisoners' lives rarely improve after serving their sentences since transitioning to the outside world is exceptionally difficult for them. They find it very challenging financially to embark on a new career and maintain a regular life. It is anticipated that this will lead to the development of a technologically unskilled class that will be different from the rest of the technologically advanced society in Finland.

To explore the subject, the first research question of the study focused on exploring the current level of digital literacy among inmates in Finland's prisons. The second research

question focused on evaluating how technological knowledge could be used to support inmates in their post-prison lives.

The objective set in the study focused on evaluating the knowledge and understanding regarding digital skills among prisoners in Finland and exploring the prospects of employment opportunities, reintegration into society, and social benefits due to digital skills in post-prison life. The research study aimed to evaluate the strengthening of digital skills outside prisons in Finland and focus on post-prison life digital skills and competence.

The results identified essential insights. The findings showed that the current digital knowledge of the inmates in Finnish prisons is minimal. While a few may be digitally literate to a certain extent, others are not digitally trained. The inmates are receiving their college degrees and other types of education in open prisons; however, the initiative to train them digitally was started in 2020.

Early on, personal access to digital services was still limited, and they did not yet fully facilitate the rehabilitation and reintegration of prisoners. However, prisoners are aware of the benefits of digital skills to improve employment opportunities and are motivated to learn. This supports the points made by Lövdén et al., who argued that adult experiences might make the learning process more understandable and comprehensible.

The results also suggest that adult prisoners show greater interest in digital literacy and technological skills. The "smart prison concept" was introduced to help the prisoners further. According to the results, the program's goal was to create a strategic initiative to help prisoners lessen their likelihood of reoffending and help them reintegrate into society. Inmates could communicate with prison staff, conduct video calls to family members, and contact prison medical services and other authorities using the technologies set up for digital education.

The results showed that the prisoners have access to a Moodle server, which could be termed a portal for different types of educational programs. Both employees and inmates received training using the system. Access to office supplies for learning, e-books, and audiobooks was made available to the prisoners. The inmates receive specialized training in data management, virtual reality, and artificial intelligence. An AI start-up 'Vainu,' pays prisoners to train their algorithms on their program through reading the given texts and answering questions made by the algorithm. 250 inmates are currently employed by the enterprise, tagging company names in trade magazines and publications. The results, therefore, invalidate the assertions of Merriam and Bierema, who suggested that the varying responsibilities may make the process more complicated than it is.

The thesis discovered that, as the idea has only recently been initiated, it may be early to determine how inmates' use of digital and technological abilities will affect their reintegration and employment opportunities. However, the findings indicated that it is safe to predict that Smart Prison will provide offenders with the digital and technological abilities previously difficult to acquire in a prison environment.

The first objective was achieved by identifying that the current knowledge of the Finnish inmates regarding digital literacy and skills is limited and require enhancement. The second objective was achieved by identifying that digital skills are expected to support the inmates in obtaining better jobs, starting their initiatives, obtaining social benefits, and, most importantly, reintegrating into Finnish society effectively.

5.1 Recommendations for Future Research

Future research could enhance the subject matter and the research area through different measures. First, it is recommended that future research should evaluate the digital literacy of prison inmates from an international perspective. Case studies of countries and justice systems where the digital literacy of inmates is being worked up for their rehabilitation should be explored in future research.

The second recommendation is to include case studies of former inmates and offenders who obtained digital education and are using it for their benefit. Future studies should explore the level of their reintegration into society due to digital literacy. The third recommendation is to focus on primary data, such as that of prison inmates and jail authorities, to obtain more first-hand data on digital education. The primary data is expected to provide first-hand knowledge on inmates' reintegration into regular society due to digital literacy.

5.2 Professional Growth

The biggest problem of any professional development I have experienced throughout my studies is how to consciously implement it in such a way that I believe in my own work and how it is presented to the reader. During my studies, I have often noticed that I have taken certain things or terms that appear in the courses for granted, and I have not recognized my own professional competence as a quality to be considered. If one takes information for granted, it often leads to making careless mistakes and in turn, leaves readers to wonder for a reasoning behind the text. While studying, I get the base knowledge and skills to prepare for my career, but the biggest development still happens only when practicing the profession itself – or, at least, when acquiring the right mindset on how to do a task.

Partly for these reasons, I ended up doing a thesis for a work life partner and I treated it like a paid commission, because I felt it improved my professional approach. After all, my thesis

could possibly make an impact on someone. My prior knowledge of Finnish prisons has been superficial (commit a crime, get caught and, depending on the seriousness of the crime, serve a prison sentence). However, I have had a set of digital skills from a very young age, so for the sake of this thesis I had to put myself in perspective of someone who has not not had the same opportunities to get to learn as I.

I feel that with the help of the research method I chose, the literature review, I could focus on my own interests. This also means learning new terminology (like digital literacy), challenging myself and honing my problem-solving skills. For example, doing interviews could have taken more time than the schedule allowed.

I tried my best to invest in data collection and text productivity. The effort was to include many different sources and information in the thesis, so that I could offer both the working life partner and the reader a solution to the presented problem. I also learned from mistakes made during the process, which will be useful in the future. At the same time, I feel that I have deepened my own knowledge and understanding of different concepts, such as prison and the poor digital skills of the target group.

I am aware that learning is not a universal entity but depends on the individual's ability to read and understand information. Each of us has our own way of internalizing any given information. With this, I believe that my time working on the thesis and the knowledge and skills I have learned will help me in the future when the time comes to use what I have learned.

References

Printed

Anckar, R., 2016. Digital Entrepreneurship in Finland–a Narrative of a Finnish digital entrepreneur. In *Innovative (Eco-) Technology, Entrepreneurship and Regional Development. Conference proceedings*.

Anderson, J., 2018. Introducing and theorising an in-prison restorative justice programme: The second-generation Sycamore Tree Project. *Int'l J. Restorative Just.*, **1**, p.210.

Azemi, F., 2020. The impact of the prison environment on behavioral changes of inmates: a study of inmates in Kosovo and Finland. *Journal of Criminological Research, Policy and Practice*.

Becker-Pestka, D.J., 2022. E-learning for Prisoners. Experience from Sweden, Norway, Poland, Finland and Germany. *International Journal of Research in E-learning*, **8**(1), pp.1-24.

Bonk, C.J. and Kim, K.A., 2013. Extending Sociocultural eory to Adult Learning. *Adult learning and development: Perspectives from educational psychology*.

Breakstone, J., McGrew, S., Smith, M., Ortega, T. and Wineburg, S., 2018. Why we need a new approach to teaching digital literacy. *Phi Delta Kappan*, **99**(6), pp.27-32.

Brockett, R.G. and Hiemstra, R., 2018. *Self-direction in adult learning: Perspectives on theory, research, and practice*. Routledge.

Chen, A., 2019. Inmates in Finland are training AI as part of prison labor. *The Verge*, **28**.

Chen, J.C., 2014. Teaching nontraditional adult students: Adult learning theories in practice. *Teaching in Higher Education*, **19**(4), pp.406-418.

Coates, S., 2016. *Unlocking potential: A review of education in prison*. Routledge.

Contreras-Pulido, P. and Aguaded, I., 2019. Communication Media and Digital Literacy as Intervention Tools in Prisons: The Case in Spain. In *Info communication Skills as a Rehabilitation and Social Reintegration Tool for Inmates* (pp. 105-125). IGI Global.

Costelloe, A. and Warner, K.J., 2019. Prison education across Europe: Policy, practice, politics. *London Review of Education*.

Davis, K. and Ostini, J., 2019. Understanding the post-release technology experiences of women ex-prisoners: Do they have the access and literacies to support employment and study?

Dervin, F. and Li, Y., 2020. *Towards Educational Heterotopology?* Routledge.

Di Tella, R. and Schargrodsky, E., 2013. Criminal recidivism after prison and electronic monitoring. *Journal of Political Economy*, **121**(1), pp.28-73.

Dias-Trindade, S. and Moreira, J.A.M., 2019. Pedagogical scenarios enriched with audiovisual technologies and their impact on the promotion of the learning skills of inmate students in Portugal. *Digital Education Review*.

Edwards, R., Hanson, A. and Raggatt, P., 2013. *Boundaries of adult learning*. Routledge.

Farley, H. and Pike, A., 2016. Engaging prisoners in education: Reducing risk and recidivism. *Advancing Corrections: Journal of the International Corrections and Prisons Association*, **1**, pp.65-73.

Flick, U., 2015. *Introducing research methodology: A beginner's guide to doing a research project*. Thousand Oaks, CA: Sage.

Happonen, A., 2021. Finland 2025-2030 and state of digitalisation official plans and current predictions review.

Hartley, J., 2017. *The uses of digital literacy*. Routledge.

Heitin, L., 2016. What is digital literacy? *Education Week*, **36**(12), pp.5-6.

Honkatukia, P., Kivivuori, J., 2006. *Nuorisorikollisuus: määrä, syyt ja kontrolli*. Helsinki: Oikeuspoliittinen tutkimuslaitos, 2006.

Hobbs, R., 2017. *Create to learn: Introduction to digital literacy*. John Wiley and Sons.

Hopkins, S. and Farley, H., 2014. A prisoners' island: teaching Australian incarcerated students in the digital age. *Journal of Prison Education and Reentry*, **1**(1), pp.42-51.

Hopkins, S., 2018. *Digital Learning for Prison Students: the State of Play*. Routledge.

Hsu, J., Hamilton, K. and Wang, J., 2015. Guided independent learning: A teaching and learning approach for adult learners. *International Journal of Innovation and Learning*, **17**(1), pp.111-133.

Humphries, B., 2017. *Re-thinking social research: anti-discriminatory approaches in research methodology*. London: Routledge.

Jackson, K. and Bazeley, P., 2019. *Qualitative data analysis with NVivo*. Sage.

Järveläinen, E. and Rantanen, T., 2019. Social interaction between employee and offender in supervised probationary freedom in Finland. *Nordic Journal of Criminology*, **20**(2), pp.157-175.

Järveläinen, E. and Rantanen, T., 2021. Incarcerated people's challenges for digital inclusion in Finnish prisons. *Nordic Journal of Criminology*, **22**(2), pp.240-259.

Jewkes, Y. and Reisdorf, B.C., 2016. A brave new world: The problems and opportunities presented by new media technologies in prisons. *Criminology and Criminal Justice*, **16**(5), pp.534-551.

Jones, C.R., 2014. Are prisons really schools for terrorism? Challenging the rhetoric on prison radicalization. *Punishment and society*, **16**(1), pp.74-103.

Kaskela, T. and Tourunen, J., 2018. Facing drug problems and advancing sentence plan. Prisoners' perspectives on drug treatment programmes in Finland. *International Journal of Comparative and Applied Criminal Justice*, **42**(2-3), pp.195-213.

Kelly, M.J., 2013. Beyond classroom borders: Incorporating collaborative service learning for the adult student. *Adult Learning*, **24**(2), pp.82-84.

Khan, F. and Vuopala, E., 2019. Digital competence assessment across generations: A Finnish sample using the digcomp framework. *International Journal of Digital Literacy and Digital Competence (IJDLDC)*, **10**(2), pp.15-28.

Kilpi-Jakonen, E., Vono de Vilhena, D. and Blossfeld, H.P., 2015. Adult learning and social inequalities: Processes of equalisation or cumulative disadvantage?. *International Review of Education*, **61**(4), pp.529-546.

Kim, K.A., Kim, M., Oh, J., Chu, S.H. and Choi, J., 2021. Measurement of digital literacy among older adults: systematic review. *Journal of Medical Internet Research*, **23**(2), p.e26145.

Knight, V., 2015. *Some observations on the digital landscape of prisons today.*

Korstjens, I. and Moser, A., 2018. *Series: Practical guidance to qualitative research. Part 4: Trustworthiness and publishing.* European Journal of General Practice, **24**(1), pp.120-124.

Kumar, R., 2019. *Research methodology: a step-by-step guide for beginners*. Thousand Oaks, CA: Sage Publications Limited.

Kärkkäinen, K., 2017. Learning, teaching and integration of adult migrants in Finland. Jyväskylä studies in education, psychology and social research, (594).

LaBriola, J., 2020. Post-prison employment quality and future criminal justice contact. *RSF: The Russell Sage Foundation Journal of the Social Sciences*, **6**(1), pp.154-172.

Lambie, I., 2018. Using evidence to build a better justice system: The challenge of rising prison costs.

Lappi-Seppälä, T. and Koskenniemi, L., 2018. National and regional instruments in securing the rule of law and human rights in the Nordic prisons. *Crime, Law and Social Change*, **70**(1), pp.135-159.

Lindstrom, B. and Puolakka, P., 2019. Smart prison: The preliminary development process of digital self-services in Finnish prisons.

Lövdén, M., Wenger, E., Mårtensson, J., Lindenberger, U. and Bäckman, L., 2013. Structural brain plasticity in adult learning and development. *Neuroscience and Biobehavioral Reviews*, **37**(9), pp.2296-2310.

Mackey, A. and Gass, S.M., 2015. *Second language research: methodology and design*. London: Routledge.

Mahrool, F., 2020. *Research methodology. A guide for a literature review*. Grin

McDougall, J., Readman, M. and Wilkinson, P., 2018. The uses of (digital) literacy. *Learning, Media and Technology*, **43**(3), pp.263-279.

Merriam, S.B. and Bierema, L.L., 2013. *Adult learning: Linking theory and practice*. John Wiley and Sons.

Mertanen, K. and Brunila, K., 2018. Prison Break. Education of young adults in closed prisons—building a bridge from prison to civil society? *Education Inquiry*, **9**(2), pp.155-171.

Mihas, P., 2019. Qualitative data analysis. In *Oxford research encyclopedia of education*.

Monteiro, A., Barros, R. and Leite, C., 2015. Lifelong learning through e-learning in European prisons: rethinking digital and social inclusion. *INTED2015 Proceedings. Madrid: IATED*, pp.1038-1046.

Mukhalalati, B.A. and Taylor, A., 2019. Adult learning theories in context: a quick guide for healthcare professional educators. *Journal of Medical Education and Curricular Development*, **6**, p.2382120519840332.

Naukkarinen, J.K. and Niemelä, H., 2020, June. Understanding better young people's views on technology in Finland. In *2020 ASEE Virtual Annual Conference Content Access*.

Ndunagu, J.N. and Tanglang, N., 2019. Recidivism panacea in Nigerian prisons through digital literacy: National Open University of Nigeria (NOUN) initiatives. *Journal of Emerging Trends in Engineering and Applied Sciences*, **10**(5), pp.234-238.

O'Rourke, C., Linden, M.A., Lohan, M. and Bates-Gaston, J., 2016. Traumatic brain injury and co-occurring problems in prison populations: A systematic review. *Brain Injury*, **30**(7), pp.839-854.

Ogbonnaya-Ogburu, I.F., Toyama, K., and Dillahunt, T.R., 2019, May. Towards an effective digital literacy intervention to assist returning citizens with job search. In *Proceedings of the 2019 CHI conference on Human factors in computing systems* (pp. 1-12).

Ogienko, O. and Meleshko, I., 2017. Andragogical approach to adult learning: experience of Finland. *Dyskursy o kulturze Discourses on Culture*, p.273.

Oliveira, L. and Graca, D. eds., 2018. *Info communication skills as a rehabilitation and social reintegration tool for inmates*. IGI Global.

Page, M.B. and Margolis, R.L., 2017. Cocreating collaborative leadership learning environments: Using adult learning principles and a coach approach. *New Directions for Adult and Continuing Education*, **2017**(156), pp.77-87.

Puhakka, R., Pitkänen, K. and Siikamäki, P., 2020. The health and well-being impacts of protected areas in Finland. In *Protected Areas, Sustainable Tourism and Neo-liberal Governance Policies* (pp. 134-151). Routledge.

Puumala, S., 2020. Finland: Re-evaluating the Social Role of Religion in Modern Society–Religion in Prisons. In *Religion and Prison: An Overview of Contemporary Europe* (pp. 149-169). Springer, Cham.

Raitakari, S., Juhila, K. and Räsänen, J.M., 2019. Responsibilisation, social work and inclusive social security in Finland. *European Journal of Social Work*, **22**(2), pp.264-276.

Ramalho, R., Adams, P., Huggard, P. and Hoare, K., 2015, August. Literature review and constructivist grounded theory methodology. *Forum: Qualitative social research* **16**(3),pp.1-13.

Rantanen, T., Järveläinen, E. and Leppälahti, T., 2021. Prisoners as users of digital health care and social welfare services: A Finnish attitude survey. *International Journal of Environmental Research and Public Health*, *18*(11), p.5528.

Raskind, I.G., Shelton, R.C., Comeau, D.L., Cooper, H.L., Griffith, D.M. and Kegler, M.C., 2019. A review of qualitative data analysis practices in health education and health behavior research. *Health Education and Behavior*, **46**(1), pp.32-39.

Richardson, L. and Bissell, D., 2019. Geographies of digital skill. *Geoforum*, **99**, pp.278-286.

Robson, C., 2013. *Real-world research* (Vol. 3). Hoboken, NJ: Wiley.

Rontu, H., Juurakko-Paavola, T. and Nelson, M., 2018. DIGITAL LITERACY AND LEARNING OF LANGUAGES AND COMMUNICATION IN HIGHER EDUCATION-CASE STUDY FROM FINLAND. In *ICERI2018 Proceedings* (pp. 7506-7506). RATED.

Roxana, C.R.I.U. and Ceobanu, C., 2013. E-Learning-Implications For Adult Learning. *Turkish Online Journal of Distance Education*, **14**(2), pp.56-65.

Salminen, A. 2011. *Mikä kirjallisuuskatsaus? Johdatus kirjallisuuskatsauksen tyyppeihin ja hallintotieteisiin sovelluksiin*. Vaasa: Vaasan yliopisto

Sefton-Green, J., Marsh, J., Erstad, O. and Flewitt, R., 2016. Establishing a research agenda for the digital literacy practices of young children. *A White Paper for COST Action IS1410*.

Silverman, D. ed., 2016. *Qualitative research*. Thousand Oaks, CA: Sage.

Snyder, H. 2019. Literature review as a research methodology: an overview and guidelines. *Journal of Business Research*, **104**, pp. 333–339. doi:10.1016/j.jbusres.2019.07.039

Spires, H.A., Paul, C.M. and Kerkhoff, S.N., 2019. Digital literacy for the 21st century. In *Advanced methodologies and technologies in library science, information management, and scholarly inquiry* (pp. 12-21). IGI Global.

Tennant, M., 2019. *Psychology and adult learning: The role of theory in informing practice*. Routledge.

Thompson, K.M., Jaeger, P.T., Taylor, N.G., Subramaniam, M. and Bertot, J.C., 2014. *Digital literacy and digital inclusion: Information policy and the public library*. Rowman and Littlefield.

Zada, K., Khairani, D. and Durachman, Y., 2019, November. Reduce Extremism through Digital Literacy. In *2019 7th International Conference on Cyber and IT Service Management (CITSM)* (Vol. 7, pp. 1-4). IEEE.

Electronic

Allen, D. and Abadi, M., 2021. *At prisons in Finland, inmates are learning AI and taking online tech courses as a bridge to life on the outside*. Business Insider. Available at: <https://www.businessinsider.com/finland-prisons-technology-ai-online-classes-2020-8> [Accessed 12 October 2022].

Arene ry. 2015. *Opinnäytetyön eettiset ohjeet*. < http://www.arene.fi/wp-content/uploads/Raportit/2018/arene-opinnaytetyoprosessin-eettiset-suositukset_muistilistat-opiskelijalle-ja-ohjaajalle.pdf?_t=1526903222 > [Accessed 9 December 2022]

Kangasniemi, M., Utriainen, K., Ahonen, S., Pietilä, A., Jääskeläinen, P., Liikanen, E., 2013. *Kuvaileva kirjallisuuskatsaus: Eteneminen tutkimuskysymyksestä jäsennettyyn tietoon.* <https://www.proquest.com/scholarly-journals/kuvaileva-kirjallisuuskatsaus-eteneminen/docview/1469873650/se-2> [Accessed 16 November 2022].

Moore, N. 2021. *No bars, no chains, no locks: How Finland is reimagining incarceration.* < https://www.wbez.org/stories/how-finlands-criminal-justice-system-compares-to-the-us/288505cf-365b-4508-a850-5106f551ce3e > [Accessed 12 October 2022]

Tutkimuseettinen neuvottelukunta. 2012. *Hyvä tieteellinen käytäntö ja sen loukkausepäilyjen käsitteleminen Suomessa.* Tutkimuseettisen neuvottelukunnan ohje 2012. Helsinki. < https://www.tenk.fi/sites/tenk.fi/files/HTK_ohje_2012.pdf > [Accessed 10 December 2022]

Tutkimuseettinen neuvottelukunta. 2019. *Ihmiseen kohdistuvan tutkimuksen eettiset periaatteet ja ihmistieteiden eettinen ennakkoarviointi Suomessa.* Tutkimuseettisen neuvottelukunnan julkaisuja 3. Helsinki. < https://www.tenk.fi/sites/tenk.fi/files/Ihmistieteiden_eettisen_ennakkoarvioinnin_ohje_2019.pdf > [Accessed 10 December 2022]

Puolakka, P., 2021. *Smart Prison: A historical digital leap in Finnish prisons*. JUSTICE TRENDS Magazine. Available at: <https://justice-trends.press/smart-prison-a-historical-digital-leap-in-finnish-prisons/> [Accessed 12 October 2022].

Van De Steene, S and. Puolakka, P. (2021). Artificial Intelligence in Prisons in 2030. An exploration on the future of Artificial Intelligence in Prisons. *Advancing Corrections Journal*, Edition # 11, ICPA. < https://icpa.org/17417-2/ >

Younas, A. and Ali, P. (2021). Five tips for developing useful literature summary tables for writing review articles. Evidence Based Nursing. < https://www.researchgate.net/publication/349838214_Five_tips_for_developing_useful_literature_summary_tables_for_writing_review_articles > [Accessed 10 December 2022]

Figures

Tables

Appendix 1: The title of the first appendix

Appendix 2: The title of the second appendix