

Designing Effective Learning Paths for Adult Immigrants to Learn Elementary Finnish Using Service Design

Hieu Nguyen

Master's Thesis

Thesis for a Master of Business Administration (UAS)

The Degree Program of Service Design

Turku 2024

MASTER'S THESIS

Author: Hieu Nguyen

Degree Programme and place of study: Service Design, Turku 2024

Supervisor(s): Reija Anckar & Eva Holmberg

Title: Designing Effective Learning Paths for Adult Immigrants to Learn Elementary Finnish Using Service Design.

Date: 18.9.2024 Number of pages: 51 Appendices: 3

Abstract

The study aims to explore and develop an effective Elementary Finnish language learning paths for adult immigrants who are just starting to learn the language based on a Service Design approach. The goal was to understand the specific difficulties that immigrants face when learning Finnish as a means to integrate into society as well as participate in the local labor market. This study applied theories of education, psychology and sociology, with the pillars of Malcolm Knowles's Andragogy theory, Social Capital and Krashen's Optimal Input theory to build a model of factors affecting language learning including personal motivation, family and community support, and psychological and social factors. Furthermore, this study combined tools such as Personas, Journey map and Empathy map to design flexible language learning paths, adapting to the needs and characteristics of adult learners.

The research results provided solutions for designing language learning programs to enhance learning motivation, making language learning interesting and long-term, thereby helping to improve the quality of life as well as career opportunities for adult immigrants.

Language: English

Key Words: learning language, elementary Finnish, immigrants, adult learning, natural approach, service design

Table of contents

1	Introduction	1
1.1	Background of the Study	1
1.2	Problem Areas	1
1.2.1	Research subjects	2
1.2.2	Issues to consider	2
1.2.3	Objectives	2
1.2.4	Implementation.....	2
1.3	Research Questions	2
2	Theoretical background.....	2
2.1	Psychological Theories.....	2
2.1.1	Psychosocial Development Theory.....	2
2.1.2	Social Psychology Theories.....	3
2.1.3	Achievement Goal Theory	3
2.1.4	Self-Determination Theory	4
2.2	Sociological theories	4
2.2.1	Capital Theory.....	4
2.2.2	The role of age in second language learning.....	6
2.3	Educational Theories	7
2.3.1	Optimal Input Theory	7
2.3.2	Andragogy Theory.....	8
2.3.3	Other Learning methods.....	9
3	Service Design - an approaching and implementation method	9
3.1.1	Principles of Service Design	9
3.1.2	The implementation of Service Design	10
4	Methods and Tools.....	11
4.1	PESTEL analysis.....	11
4.2	Survey	13
4.2.1	Questionnaire.....	13
4.2.2	Interviews.....	14
4.3	Personas.....	14
4.4	Empathy map.....	14
4.5	Journey map	15
5	Implementation Process.....	15
5.1	Discover	15
5.2	Define	18
5.2.1	Summary of survey responses	18

5.2.2	Create Personas and Journey Map	21
5.2.3	Interview analysis and Empathy Map	23
5.3	Develop.....	28
5.3.1	Teaching According to Natural Approach.....	28
5.3.2	Learner levels.....	29
5.3.3	Proposed solutions	32
5.4	Deliver.....	37
5.4.1	Detail the learning path.....	38
5.4.2	Plan to maintain and expand the learning path.....	39
5.4.3	Communication and distribution	39
6	Conclusion.....	40
7	References.....	41
8	Appendix.....	45
	Appendix 1: Questionnaire for Finnish Learners	45
	Appendix 2: List of learning resources suitable for elementary learners.....	47
	Appendix 3: List of Figures and Tables.....	50

List of Abbreviations

Abbreviation	Full form	Explanation
AI	Artificial Intelligence	Technology that enables computers and machines to simulate human learning, comprehension, problem solving, decision making, creativity and autonomy.
CEFR	Common European Framework of Reference for Languages	An international standard for describing language ability.
PESTEL	Political – Economic – Social – Technologic – Environmental – Legal factors	An analysis method used to identify the macro (external) forces facing an organisation.
TE Office	Työ- ja elinkeinotoimisto	A state authority that organizes and produces employment and economic services.

1 Introduction

1.1 Background of the Study

Finland has a small population, just over 5.6 million as of September 2024 (Statistics Finland, 2024). However, Finland is facing the problem of an aging population, which increases the need for qualified workers in many professions, especially in the health and social services sectors. In this context, immigrants play an increasingly important role in the economy. In recent years, the significant increase in the number of immigrants to Finland has posed new challenges and opportunities for both the country and the immigrant community.

Language is one of the challenges that immigrants face, but it is also considered the key to helping immigrants integrate into the new environment. It not only helps them communicate, but also serves as a tool to access career opportunities and improve their income, thereby improving their quality of life (Lang, 2022; Daley, Hu, & Warman, 2019). However, immigrants who first arrive in Finland face a number of psychological, health and cultural challenges. These issues not only add to the stress of the integration process but also make learning Finnish more difficult for them. In particular, the language learning process for older people is often more complex and challenging than that of younger age groups. Cognitive changes and age-related declines in learning ability are limiting factors for adult people when learning a new language (Samrani, Lundquist, & Pudas, 2022). For adult immigrants in Finland, learning Finnish – the main language of communication, work and society in this country – becomes even more urgent but also challenging because it is a significant barrier to their entry into the labor market, in addition to other systemic barriers such as discrimination and administrative procedures. (Nichols & Virsinger, 2021)

Although the government and educational institutions have made great efforts to develop integration programs and diversify Finnish language learning resources for immigrants, in general, they still lack a suitable and optimized learning path. This not only makes it difficult for them to absorb but also reduces learning efficiency.

To address this issue, the Service Design approach offers a holistic approach and focuses on adult immigrant learners. By understanding the needs and capabilities of the beneficiaries, this study will develop optimal learning paths: Paths are tailored to their characteristics, helping them to absorb language knowledge naturally. The learning process is also not focused on the aspect of “How can I learn Finnish the fastest” (When) but the author believes that more importantly, it needs to address the requirement of “How can I make learning Finnish enjoyable and interested” (How) to maintain motivation to learn.

This study uses some theoretical foundations of education, psychology and sociology to build a framework of necessary factors for adult immigrants to learn Finnish. Based on this framework, the opinions of learners and education experts were solicited to promote ideas. Then, these ideas were organized into complete learning paths.

1.2 Problem Areas

With the rapid increase in the number of immigrants in Finland, their linguistic and cultural integration becomes extremely urgent. It will take a lot of effort to learn Finnish, a language that is considered very difficult (Kenny, 2021). This author has identified the main aspects of this research report, which are as follows:

1.2.1 Research subjects

The study focused on adult immigrants aged 25 – 65 who have decided or wish to settle permanently in Finland. The target group does not include people who do not intend to establish a stable life here, such as tourists, travel enthusiast and those who come for short-term business trips.

1.2.2 Issues to consider

There are barriers that adult immigrants face when learning Finnish: Firstly, the burden of work as well as family responsibilities limit the time and energy for learning. Secondly, the ability to memorize and absorb new knowledge decreases with age. Finally, the market lacks methods designed to suit the learning needs of adult people, leading to a lack of motivation to learn.

1.2.3 Objectives

The aim of the study was to develop effective and optimal Finnish language learning paths at the elementary level for adult immigrants who have never studied Finnish or are just starting to learn Finnish. This path not only improves language skills, but can also support social integration and enhance future career opportunities.

1.2.4 Implementation

The study applied Service Design processes and tools to understand the needs, barriers and motivations of the research subjects. The research process included interviews, surveys, document and data analysis. From there, it was possible to propose comprehensive, effective learning solutions that were suitable for the individual characteristics of the learners.

1.3 Research Questions

The two guiding questions for the study were as follows:

1. What difficulties do adult immigrants encounter in learning Finnish?
2. How can we build effective and flexible language learning paths according to different individual needs?

2 Theoretical background

This topic is related to social issues (immigrants, and cultural integration), psychology (adult psychology, adaptability, cognition and retention of learning motivation) and education (learning Finnish as a second language). Therefore, the topic has referred to fundamental theories from research in these fields.

2.1 Psychological Theories

2.1.1 Psychosocial Development Theory

Based on Erik Erikson's Developmental Psychology Theory, Santrock (2018) analyzes human psychological development through seven age groups. In each age group, people will have to face and resolve each separate psychosocial conflict. The way to resolve those conflicts will shape their personality and ability to face challenges in life.

According to Santrock, as people age, their information processing speed and short-term memory show signs of decline, but accumulated experience helps them solve problems more effectively. Adults also have many ties with many relationships: Society and family

increase the burden of responsibilities, thus bringing more pressure, requiring them to have strategies to cope with the effects of stress on their health and happiness. Finding a balance between work and life as well as pursuing meaning and purpose in life play an important role in helping them achieve happiness and self-fulfillment.

Therefore, this theory provides insights into the characteristics of human development for the topic “Adult Immigrants Learn Finnish”. An example of utilizing these characteristics would be to develop learning and teaching methods that use repetition and embed practical situations to deal with memory loss, or when learners seek personal fulfillment and learn based on personal experience, a language learning path should emphasize practical benefits such as providing career opportunities, social connections. Learning should also be flexible, combining many forms of learning to balance work, family and study.

2.1.2 Social Psychology Theories

In the study of the language learning process of immigrants, Caldwell-Harris (2019) mentioned several key factors that affect language acquisition. First, personal motivation plays a key role, as immigrants want to integrate into the new society as well as build relationships in the community, or simply meet basic communication needs. In addition, social pressure contributes to their decision to learn a language. Social expectations from family and local communities also motivate immigrants to make more efforts. Another important factor is economic benefits. Proficiency in the host country's language brings more career opportunities and advancement, thereby improving income and living standards. Finally, the level of community support also strongly affects the language learning process of immigrants. Education and social service programs can facilitate their easy access to new languages, enhancing learning efficiency.

In addition, Caldwell-Harris also analyzed the challenges that affect immigrants' language learning. The first is the large difference in cultural background between immigrants and the host country, which makes language learning much more complicated. The second is financial barriers and limited time. In addition to having to adapt to the new living environment, many immigrants have to spend most of their time taking care of their family and children. As well as the majority of immigrants, they are concerned about financial issues. These things restrict their time to learn the language, or it is not their top priority. In addition, the feeling of anxiety and lack of confidence due to the fear of making mistakes when using the language also reduces their determination to practice.

Overall, Caldwell-Harris's research provides insights into the factors that promote and hinder immigrants' second language acquisition. It is not only valuable for designers of language training programs for immigrants, but also helpful for policy makers when developing effective language learning support programs that promote faster social integration of immigrants.

2.1.3 Achievement Goal Theory

Carol Dweck and John Nicholls developed Achievement Goal Theory originally to analyze in depth how the importance of motivation affects adult language learning. Later, Sommet, Sheldon, and Elliot (2021) expanded this theory to show that autonomous motivation (e.g. learning for passion) combined with self-efficacy goals brings excitement and sustains learning, instead of extroverted motivation (e.g. to be rewarded) combined with control goals (e.g. to strengthen the ego or to avoid punishment) is less effective, even leading to psychological stress for learners.

2.1.4 Self-Determination Theory

Another theory that emphasizes the importance of intrinsic motivation in learning is the Self-Determination Theory developed by Ryan and Deci (2017). According to this theory, intrinsic motivation includes three basic needs:

(1) Autonomy represents the need for self-control, whereby people feel interested and self-motivated in activities that stem from their own desires.

(2) Competence reflects the desire to see the ability to achieve success as well as expect themselves to improve in the activities they participate in.

And, **(3) Relatedness** represents the connection with others. Accordingly, when feeling connected and belonging to a community, individuals will be motivated to participate and contribute more.

When learners have all three of these needs, intrinsic motivation will be strongly activated, helping learners feel happy and comfortable in learning. On the contrary, when intrinsic motivation is hindered, external motivation can easily cause stress for learners and reduce their interest in learning.

In addition, Ryan and Deci also pointed out that the living, working and learning environment can also affect these needs, thereby affecting the overall motivation of learners. This theory is an important foundation for application in the fields of education, work and personal development.

The above psychological theories have specific explanations of motivational factors and all affirm their crucial role in the learning effectiveness of individuals in general and immigrants in particular, as well as showing the relationship of motivational factors with other social factors.

2.2 Sociological theories

2.2.1 Capital Theory

The Capital theory group studies types of capital such as Physical Capital, Human Capital, Social Capital, Financial Capital and Intellectual capital. This theory also studies as how these types of capital contribute to economic development, creating strategies for sustainable development of social resources. In the scope of this research, this author focuses on explaining Social Capital and Human Capital and their roles that can contribute to the study.

2.2.1.1 Social Capital Theory

Social Capital is the social resources that individuals and societies can use to help promote cooperation and improve performance in communities, thereby achieving economic and social goals. Social Capital includes the following components:

Trust is the level of trust between members of a community or organization. It is the foundation for building strong and sustainable relationships. It helps increase cooperation and reduce costs in social relationships. A typical example of this factor is the credit index. Individuals or organizations will enjoy more favorable interest rates when borrowing money from banks if they have a good transaction history as well as demonstrate a stable financial status because they have built trust with creditors. Another example of trust can be easily seen in the way food scales and payments are operated in Finnish supermarkets. Instead of all products and shopping baskets having to be performed at the cash register, customers can do it themselves at the cash registers. This cannot be successfully

implemented if the supermarket does not have trust in the autonomy of customers. In return, it also helps the supermarket significantly reduce labor costs as well as increase the efficiency of serving shoppers.

The second part is social norms. These are informal rules of behavior that members of a community accept and adhere to, and thus, help maintain social order and promote positive behaviors. Identifying these norms is not difficult, " if we observe individuals to follow a regular pattern of behavior and to be punished if they act otherwise, then we have a norm." (Bicchieri, Muldoon, & Sontuoso, 2018)

Social Networks include relationships that create opportunities and support each other, help maintain and develop connections, thereby facilitating the sharing of information and resources. Relationships have many different levels, from family relationships, friends and colleagues to more extensive relationships such as community relationships or professional relationships. Through frequent interactions, connections between individuals and social groups become stronger and deeper, thereby creating attachment and trust among members of the network. And thanks to close relationships, information sharing becomes faster and more convenient. Individuals can exchange information about job opportunities, professional knowledge, as well as useful personal experiences. This helps people access diverse resources, including learning resources and experiences that they themselves would not be able to or would need a lot of time to own.

More specifically, when studying how social norms affect adult immigrants, a study by (Jiang & Renema, 2021) concluded that Social Capital including social relationships, community participation, and support from friends and family plays an important role in the integration and well-being of immigrants.

Social Capital Theory provides a theoretical foundation showing the important influence of the role of social connections in motivating learning in general and language in particular, "by fostering a supportive environment where learners feel encouraged to communicate, increasing their confidence and willingness to engage in language practice" (Khajavy, Makiabadi, & Samaneh, 2019). Specifically,

Social Capital is not only personal connections but also a broad resource. When an individual is supported by social networks, they are often more motivated to strive and achieve success in their studies. Each relationship not only provides encouragement but also emotional support, helping them face obstacles and maintain learning momentum. Especially in language learning, which requires interaction, communication and continuous practice. Difficulties in vocabulary, grammar or pronunciation can be overcome through opportunities to practice communication with classmates or native speakers, thereby helping learners acquire the language more quickly and naturally.

Close relationships such as friends and family help learners not only have the opportunity to use the new language in real communication situations but also increase their confidence. At that time, learners are less afraid and find it easier to contact and communicate in the new language.

By participating in a study group, learners not only learn for themselves but also strive to keep up with other learners who have made progress, as well as help other learners. This social connection, in turn, creates a connection with the language being learned.

Language learning is a process that requires perseverance and long-term effort, so social relationships can be seen as the foundation to help learners overcome challenges and achieve their language goals.

2.2.1.2 Human Capital Theory

Human Capital is the aggregate of professional skills, knowledge, capacities, and health of an individual or a group, contributing value to the processes of production and economic development. Human Capital plays a critical role in the economic growth of nations, as it directly influences innovation, technological advancement, and the efficient use of resources (Becker, 1993).

Fields such as education and vocational training, healthcare, and nutrition are critical areas of investment in Human Capital, essential for the development of organizations and economies. Among these, education and training are the most important investments in Human Capital. These investments improve skills and knowledge, which in turn increase productivity and earnings (Becker, 1993).

For adult immigrants, learning Finnish is a means to improve communication skills, thereby enhancing job opportunities and increasing income. Language training programs, in a sense, contribute to building their Human Capital, helping them increase their competitiveness in the labor market.

Human Capital emphasizes the critical role of learning. It is not limited to formal education or short-term courses but includes continuous learning and the application of knowledge in diverse and creative ways at the workplace, through social interactions, and via self-learning capabilities. This largely depends on an individual's adaptability. Nevertheless, it can be asserted that everyone has the potential to build a learning program suited to their abilities and personal circumstances.

From a management perspective, Human Capital theory reminds managers and policymakers of the need for appropriate investments in education—not just financially, but also in terms of teaching quality and supportive policies for individuals.

Moreover, Human Capital also encompasses health and social integration. It explains that language learning is not merely about building a new linguistic asset but also involves creating changes in social relationships, fostering deeper integration into the community, and reducing isolation.

Thus, Human Capital and Social Capital are closely interconnected, forming a foundational theoretical framework for the topic of "Building Finnish Language Learning Paths for Immigrants." In this context, language learning serves as both a link and a driving force for the development of individuals and the community. Human Capital focuses on individual capacities, while Social Capital emphasizes connections between individuals and the community, creating an enabling environment for personal growth.

2.2.2 The role of age in second language learning

Age plays an important role in language learning, especially when comparing adult and older people with younger people. According to Erik Erikson, Santrock (2018) said "Older adults have reduced information processing speed and short-term memory". However, "factors such as motivation, life experience, and learning environment also play an important role" (Singleton & Leśniewska, 2023). That is, old age is an obstacle that makes learning difficult, but learners can overcome it to develop a second language effectively

when they have enough motivation to learn, rich life experience, and are supported by a favorable learning environment.

Motivation is a key factor that helps learners persevere and overcome challenges, regardless of age. Highly motivated learners will make more efforts, proactively seek out materials and practice opportunities to achieve better learning results.

The rich life experience is a valuable asset when they have an understanding of the semantics and culture of the language they are learning, and apply it to real-life situations. Life experience also helps learners develop effective learning strategies that are appropriate to their abilities and conditions.

A conducive learning environment that encourages practice, enhances connectivity and provides a variety of relevant materials helps to boost motivation and engage them with the language they are learning.

2.3 Educational Theories

The educational and language theories of Krashen (2020) and Malcolm Knowles (1980) are quite clear about how an adult learns a new language. Specifically, these authors mentioned in the theories as follows:

2.3.1 Optimal Input Theory

In his updated Optimal Input Theory, Krashen (2020) emphasizes that for the most effective second language acquisition, learners need to be provided with the optimal type of input. This includes several key factors, which are as follows:

Accessible but challenging. The language content must be within the learners' understanding, meaning that they can understand the general meaning even if they do not master all the grammatical details. However, it must contain an element of novelty to stimulate learning. Krashen calls it $i+1$, where "i" is the current language level and "+1" is the amount of new knowledge that the learner can easily absorb.

Natural and meaningful. This means that the input is received in a real-life communication context, not simply as a matter of learning individual grammar structures or vocabulary. This helps learners acquire the language as a tool of communication rather than as a store of theoretical rules.

Relevant to interests and needs. When language knowledge is related to the learners' interests, concerns or needs, it will be absorbed more effectively because the learners are genuinely interested in it.

No pressure. When learners do not feel pressured or anxious, they will be confident and comfortable in receiving the new language. Accordingly, a comfortable psychological state plays an important role in receiving and remembering the language.

Optimal Input theory plays an even more important role for adult learners when they need to be exposed to the language to apply in real communication environments. For example, an immigrant with a passion for cooking is learning Finnish, a learning environment designed as a cooking class is a good idea because it provides the optimal inputs that the learner needs.

The input $i+1$: In addition to using simple words and sentences such as *keitoo* (soup), *sekoita* (stir), *keitä* (cook), the teacher can add new related or extended words such as *lohikeitto* (salmon soup), *tilli* (dill), *kerma* (cream) when instructing how to cook this dish. The learner will guess the meaning of the word through the teacher's gestures.

Meaningful and practical input: The content of the lesson is not only about learning language but also about learning to cook, a practical activity in life and highly applicable.

Suitable for interests and needs: The language lesson on the topic of cooking will therefore attract the attention of the students

Pressure-free environment: The language lesson combined with cooking takes place in an open, friendly atmosphere, without assessment or testing. This helps students to confidently communicate, exchange and ask questions such as food and cooking methods instead of worrying about using the language correctly.

2.3.2 Andragogy Theory

In addition, according to Malcolm Knowles' Andragogy theory, Merriam and Bierema (2014) emphasizes that adult learning is different from child learning and has unique characteristics in that they have separate needs, experiences and goals when pursuing work. That is, adults are autonomous and rely on their own experiences to determine their goals and clear directions before starting to learn. It also means that for adults, the outcome of learning is a specific benefit, such as the ability to communicate with native people, find a job and advance in work, and so forth. Specifically, these are the following characteristics:

Independence and self-determination. Unlike children who are guided by adults, adults themselves are often able to make decisions and control their own learning process, such as searching for and choosing the content, methods and pace of learning that are suitable for their abilities and conditions.

Need to understand the meaning of learning. Before making a decision to learn, adults often consider whether new knowledge and skills will be useful to themselves. If they feel that the learning content is useful, they will be easily convinced to participate in the learning process.

Use experience in learning. Unlike children who only learn theory, adults tend to want to learn things related to reality and apply their own experiences to learning to create a connection between theory and practice. This makes learning more meaningful to learners. And, it also leads to the following need,

Learning to be able to solve a specific problem. Instead of just learning general knowledge and unlike children, where learning is to prepare for the future, adult learning is aimed at improving the ability to solve problems in life and work. This also explains why in the learning process, there is always a need for real-life situations or examples that they encounter so that they can apply them immediately later.

In short, the Andragogy theory shows that adults learn in an autonomous style based on their own experiences and that learning knowledge is closely linked to practicality.

On the other hand, the theory still has some limitations according to Merriam and Bierema (2014) that is, it assumes that learners are autonomous. This is not entirely true for those who lack independent learning skills. In addition, cultural diversity (learners come from many different cultures and religions) and diverse learning contexts, that is, work environments or online environments, require flexible adjustments in the application of Andragogy theory. In addition, teachers should consider learners as partners in the learning process by creating conditions for learners to have open learning spaces for learners to self-orient and develop their own experiences.

However, Andragogy Theory has provided important arguments to understand the needs and characteristics of adult learners. Understanding these characteristics helps curriculum designers have an approach as well as propose appropriate teaching and learning methods, as well as help learners make the most of their learning potential.

2.3.3 Other Learning methods

This topic also synthesizes some popular learning methods and memorization methods that have been applied in E-learning and Blended Learning, which can suggest flexible approaches to learning materials. Specifically, these are the following methods:

Distributed learning method: reviewing knowledge in evenly spaced intervals helps improve long-term memory (Xiao & Wang, 2024). A popular application of this method is Flashcards.

Contextual learning method: learning through real-life situations helps learners understand and apply knowledge flexibly. (King & Ritchie, 2011)

Communicative Language Teaching: aims to develop learners' communication skills through exposure to real-life contexts such as communicating with native speakers and role-playing problem solving. This improves language skills and intercultural understanding (Qasserras, 2023).

Level-Based Listening Comprehension: Level-appropriate sources of podcasts, videos, images, and TV shows (Kabri & Budiyanto, 2023).

Self-assessment and Feedback Loop: Encourage learners to self-assess their progress (Yan, 2020). Practice: self-recording and listening back helps identify mistakes.

After synthesizing information from foundational studies, the author proposes the following model of factors influencing adult immigrants' Finnish language learning:

3 Service Design - an approaching and implementation method

Service Design Thinking is an interdisciplinary, creative and human-centered approach to solving complex problems. It emphasizes a deep understanding of users and puts them at the center of the design process, using techniques such as empathy, testing, and iteration to create solutions that are valuable to them (Clatworthy, 2017).

3.1.1 Principles of Service Design

There are some fundamental principles when applying the service design thinking method:

User-centered. Services are created through interactions between customers and suppliers. A service is considered good when it meets user needs, through frequent use and enthusiastic introduction. To do so, the designer must put himself in the role of the users and use the language of the service user.

Co-creative. Co-creation is a core principle of service design, in which stakeholders – including customers and partners – are invited to participate in the design process to ensure the final product fully meets the needs of all groups involved.

Sequence. The service is designed as a series of continuous steps or actions, so that the user experience is smooth and seamless from start to finish.

Holistic. Service design needs to encompass the entire user experience, from the physical environment to emotional elements, to deliver a complete and positive experience.

(Schneider & Stickdorn, 2011)

3.1.2 The implementation of Service Design

Immigrants face many difficulties in finding a method to learn a new language in general and Finnish in particular, because it not only comes from the individual learner but also from many external factors, specifically the working, living and social environment of the host country. Therefore, a multi-perspective and comprehensive approach is needed to evaluate and find a solution. Not only that, the solution also needs to be flexible and creative to be suitable for the needs of all subjects. Applying Service Design thinking is a suitable orientation for this.

The author proposes an approach and implementation of the research by applying the Double Diamond model (Polaine, Løvlie, & Reason, 2013). Accordingly, the model is divided into four main stages including two expansion stages: Discover, Develop. Then there are two narrowing stages: Define and Deliver.

Discover is the first stage of the service design process. In this stage, the designer focuses on understanding the problem in depth, discovering user needs, behaviors and perspectives. The designer needs to collect data to understand the context as well as identify potential opportunities to aim for the purpose of building a foundation for the design process.

Define is the second stage of the design process. After collecting data, this is when the designer needs to filter and analyze the data, thereby discovering user insights and narrowing them down to more specific goals. This step helps guide the next steps.

In the **Develop** stage, the designer creates potential ideas and solutions, tests and develops them through brainstorming methods, prototyping and continuous testing. This is the second expansion stage, where creative ideas are encouraged to find many different solutions. User interaction, feedback, and initial results gathered from the prototype help designers evaluate the effectiveness of each solution before officially implementing it.

The final stage, **Deliver**, focuses on finalizing the solution and implementing it. The designer makes necessary adjustments based on feedback and testing, then introduces the solution to users or the market. This is the final narrowing stage, where the solution is refined and implemented to meet the needs identified at the beginning of the design process.

However, the process is not completely over. The designer continues to receive feedback from users to adjust and improve the service to suit the market.

For this study, the guiding question was: What difficulties do adult immigrants encounter when learning Finnish? Based on this question, the author began his design process.

In the first step, to Discover, the tools and methods used are (a) Observation of the subject; (b) Interviews with stakeholders including the research subject and those in a supporting role such as teachers, family members, friends; (c) PESTEL analysis. Finally, (d) Analysis of the collected data.

The data is synthesized to identify the core problem. This stage uses the tools (a) Personas; (b) Customer journey map and (c) Empathy map.

In the third stage, Development, preliminary ideas and solutions are proposed based on the identified problems, as well as building scenarios for specific target groups. These ideas are adjusted in consultation with education experts and tested on a small number of

subjects. Based on the feedback from the users, the Finnish language learning curriculum will be edited again.

In the final step, Deliver, a refined framework has been completed, meeting the needs of a wide range of users. Research is still taking user feedback into account to improve the language learning program in the future.

Figure 1 shows the complete sequence of implementing the study with steps, along with the tools and activities in each step.

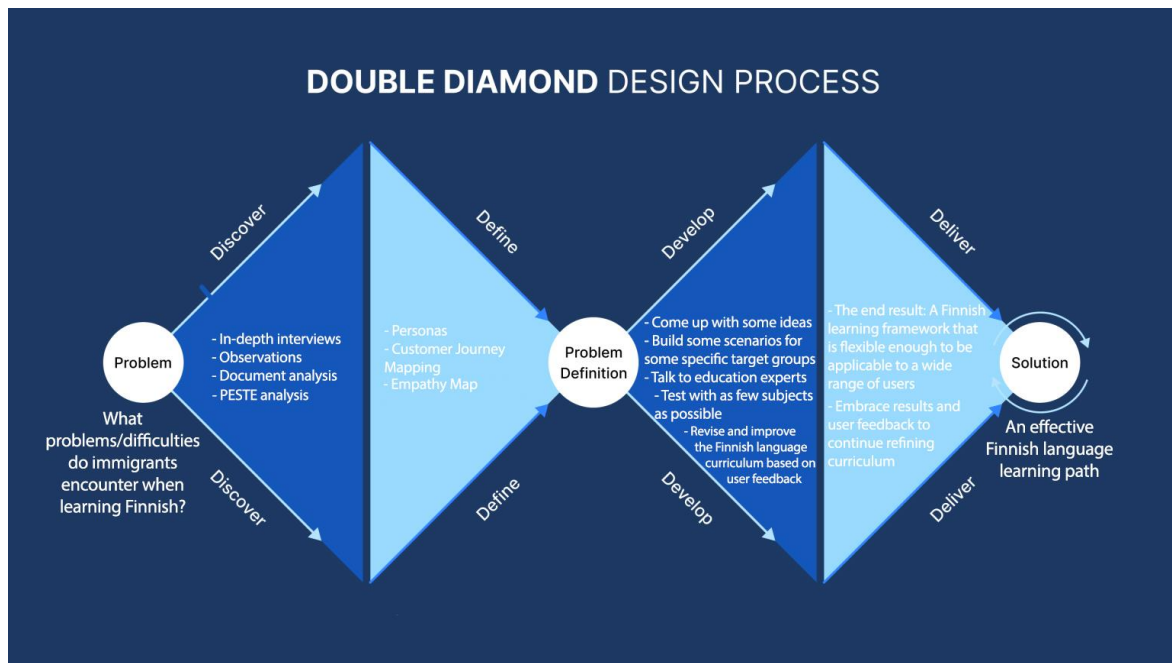


Figure 1 Double Diamond Design Process for Adult Immigrants Learning Finnish

4 Methods and Tools

The study used tools including PESTEL Analysis, Survey, Personas, Empathy Map, and Journey Map to explore and develop effective solutions to support Finnish language learning for adult immigrants. These tools were selected based on their relevance to each stage of the research and service design process, ensuring a deep exploration of aspects that influence learners from the macro context to individual experiences.

4.1 PESTEL analysis

PESTEL is a strategic analysis tool used to evaluate macro factors affecting an organization or a project, including 6 factors: Political, Economic, Social, Technological, Environmental and Legal (Morrison, 2016). PESTEL helps individuals and organizations comprehensively analyze external factors that can impact their operations and strategies, thereby helping to make better decisions (Johnson, Whittington, & Scholes, 2017).

The PESTEL analysis helps the study have a broad and holistic view, supplementing information to easily visualize the current situation in Finnish language learning in general.

a. Politics:

The Finnish government has a "lifelong learning" policy that strongly supports adult education, including immigrants. Accordingly, the continuous learning reform initiative aims to enhance the skills and competencies of adults to meet the needs of a rapidly changing labor market. This policy includes universal adult education programs, facilitating learning and improving skills, especially for those of working age from 25 to 64 years old (Finnish Adult Education Association, 2022)

According to Education International (2017), for immigrants, the Government provides language courses and basic skills to help them adapt and find jobs faster. For example, the Osaava project in Helsinki offers digital skills courses and Finnish language courses to immigrants with flexibility and low or no cost. Or the KOTIVA program supports immigrant parents with young children by organizing childcare services, helping them to study while taking care of their children. The program also includes social skills classes for Arabic, Somali and English-speaking communities to facilitate immigrants' integration into life and have access to social services in Finland (The Finnish Adult Education Centre, n.d.).

These policies and programs demonstrate the Finnish government's commitment to supporting immigrants' education, helping them integrate better and increase their income.

b. Economics:

High costs, accessibility, and limited time frames are some of the major issues for the immigrants who want to learn a new language, both traditionally and through technology. However, instead of enrolling in expensive traditional language courses, learners can now take online courses taught by language teachers on OTT (Over The Top) platforms such as Zoom, Teams, WhatsApp, etc. as well as using AI-assisted tools such as Elsa, Duolingo, which help reduce the cost burden and increase access to learning resources.

c. Society:

In recent years, the issue of population aging has created a need to expand the labor force through immigration (Ministry of Economic Affairs and Employment, 2024). However, the shortage of appropriately skilled labor remains alarming, especially in the social and health service sectors, partly due to the lack of digital and language skills of immigrant workers (Ministry of Economic Affairs and Employment, 2023). This problem is difficult to solve in the near future.

Due to language disadvantages and labor competition, immigrant workers have significantly lower incomes than native workers (Aki, Antti, Aino, & Tarmo, 2023). This may have a significant impact on the sense of happiness, as well as the psychology of immigrants.

d. Technology:

The development of AI and online learning tools opens up many new language learning opportunities. Applications such as Duolingo, Babbel and e-learning platforms use AI to personalize learning paths based on the learner's needs and learning speed. Not only that, AI is also capable of providing assessments to improve language learning. This is the good complement to traditional educational methods.

Some specific applications of AI in language learning include:

Practice communication with AI virtual assistants. AI virtual assistants such as ChatGPT, Alexa, Google Assistant can chat and respond in many languages, helping learners practice daily communication.

Foreign language learning applications integrate AI. Some applications such as Duolingo, Babbel or Memrise use AI to personalize lessons based on the learner's ability and learning progress, as well as AI has the ability to adjust the difficulty and content of the lesson according to the learner's needs and learning pace.

Use AI to correct pronunciation errors. AI-enabled apps like Elsa can analyze pronunciation and point out mistakes to improve learners' pronunciation.

Real-time translation and transcription. Translation tools like Google Translate use AI to translate text and speech in real time. This makes it easier for learners to understand and communicate in necessary situations.

Use AI to practice listening and reading comprehension. Tools like LingQ, Speechify convert text into audio to practice listening skills. These tools can customize the speed, voice and intonation to suit the learner's level..

AI analyzes learning styles. Some platforms use AI such as Coursera, edX to track learning progress and suggest suitable courses. Or like Knewton, a personalized learning platform, it creates customized lessons to optimize learning methods and personal learning styles.

e. Environment:

Currently, learners can access learning environments through both online and in-person. Online learning helps learners learn anytime, anywhere. This helps overcome the limitations of space and time. However, today's online learning technology cannot completely replace direct classes due to social values and the ability to interact between individuals. Therefore, it is still necessary to combine these two forms to meet the diverse needs of learners.

f. Legal:

Along with language, regulations and standards for the recognition of foreign work experience and qualifications are barriers that adult immigrants must overcome when entering the Finnish labor market.

In addition, the growing trend of learning languages through online tools or applications has raised security and privacy issues, making it an important concern for government agencies. There are EU regulations such as the General Data Protection Regulation (GDPR) that require these platforms to strictly comply with security and privacy standards (European Union, 2018).

4.2 Survey

Surveys are a method of collecting data from a group of people (sample) through standardized questions. Survey results help researchers understand the opinions, behaviors, or other characteristics of the sample and from there make inferences about the broader population. Surveys can be conducted through self-administered questionnaires or interviews, and can be conducted in a variety of ways such as via email, in person, over the phone, or online. This method requires carefully designed questions to ensure clarity, avoid ambiguity, and avoid factors that lead respondents, in order to collect accurate and reliable data (Bhattacharjee, 2012)

4.2.1 Questionnaire

Questionnaire is a data collection tool consisting of a series of pre-designed questions that help researchers systematically collect information from a certain group of subjects.

Questionnaire can be used for both qualitative and quantitative research. It is important that the questions are clear and not confusing (Bryman, 2016).

Questionnaire plays an important role in this research topic. Because it helps the author re-examine the model of factors affecting language learning, in addition to collecting a significant number of user opinions without spending much money and other resources. Although the author has tried to use the simplest and most understandable way of asking questions, as well as providing glossaries for some academic definitions, the author understands that there may still be situations where respondents do not fully understand the meaning of the questions that the author is aiming for. This can be overcome by comparing the responses between questions to identify any inconsistencies and discrepancies between them.

4.2.2 Interviews

In-depth Interview in qualitative research is a method of conducting one-on-one dialogue between the interviewer and the participant to explore personal aspects, as well as provide detailed information about a topic of interest” (Roller, 2020). In-depth interviews in qualitative research aim to understand aspects in detail from a small number of people in the target audience, based on a careful research design to maximize reliability and analytical ability. This method requires the interviewer to establish a relationship and gain trust from the participant, as well as build a sincere and comfortable atmosphere throughout the interview to create closeness so that the participant shares complete and accurate information, helping to minimize data bias. During the survey, the author interviewed both adult immigrant learners and teachers with many years of experience teaching Finnish to immigrants to exploit more information about the learners. Further interviews were conducted to get their feedback after the prototype was available.

4.3 Personas

Personas are fictional characters with typical characteristics representing different types of users created from real user analysis data. This helps designers better understand user expectations and behaviors to develop appropriate products and solutions. Characteristics of lifestyle, motivation, and specific usage situations are described in detail to create scenarios that make the research more vivid (Dam & Siang, 2024).

When using Personas, designers put themselves in the shoes of users, thereby creating suitable products. Not only that, the Personas tool helps generalize customer portraits instead of relying on the designer's feelings. Personas are general because they summarize identifying characteristics.

In a study on Finnish language learning by adult immigrants, Personas helped to classify learners into types according to their demographics, typical behaviors, motivations, and learning goals.

4.4 Empathy map

Empathy map is a tool that helps designers gain a deeper understanding of the thoughts, feelings and behaviors of the target audience. Consisting of four parts: Say, Do, Think, Feel, this tool helps designers grasp the way the research subject perceives and reacts to products and services (Gray & Macanujo, 2010). Say and Do are two easily recognizable actions, however, these are sometimes not exactly the same, sometimes different from Think and Feel, two internal factors that are more difficult to express externally.

Another version of Empathy map, also developed by Gray and Macanuso, adds “Hear” and “See” to the four factors mentioned above. In which, “Hear” is what the subject hears from others, the community or the media. And “See” is what the subject observes in the surrounding environment. This version of Empathy map is commonly used in the fields of experience design, service research and product development, especially when it is necessary to deeply understand the context around the user.

Thus, Empathy map helps create a comprehensive view and understand the subject from many angles. It is especially useful when used to detect the Pain points of the subject in a certain context through interviews, surveys or observations, thereby supporting the development of products and services that are sympathetic to users.

During the research process, the author conducted interviews with Finnish learners and education experts. By using the Empathy map tool for analysis, the author can discover more multi-dimensional information and implicit truths¹ from these two groups of subjects.

4.5 Journey map

Journey maps visualize a person’s experience over time, helping to identify gaps in the customer experience and explore potential solutions. And it is structured as a sequence of events or actions that take place (Stickdorn et al., 2018).

Typically, Journey maps are built after Personas have been sketched. This is the case in this study. Journey maps help the author visually identify the steps from start to finish, the touchpoints that are the moments when the hypothetical persona is exposed to the Finnish language, as well as opportunities to optimize the time and method of learning this language.

5 Implementation Process

5.1 Discover

According to Statistics Finland (2024), In 2023, Finland welcomed more than 73,000 immigrants – a record number compared to the average of 29,000-36,000 people in previous years. (see Figure 2). Among these immigrants, the adult group accounts for a large proportion, up to 71.2%. It is reflecting the policy of attracting high-quality foreign labor to study and work, as well as the increasing demand for this force in the Finnish labor market.

¹ *Implicit truths are known or hidden things that are really valuable in better understanding an issue or an object. These are often perceptions that are not directly expressed but can profoundly influence the research subject's behavior, attitudes, or decisions.*

Immigration, emigration and net migration 1990 to 2023

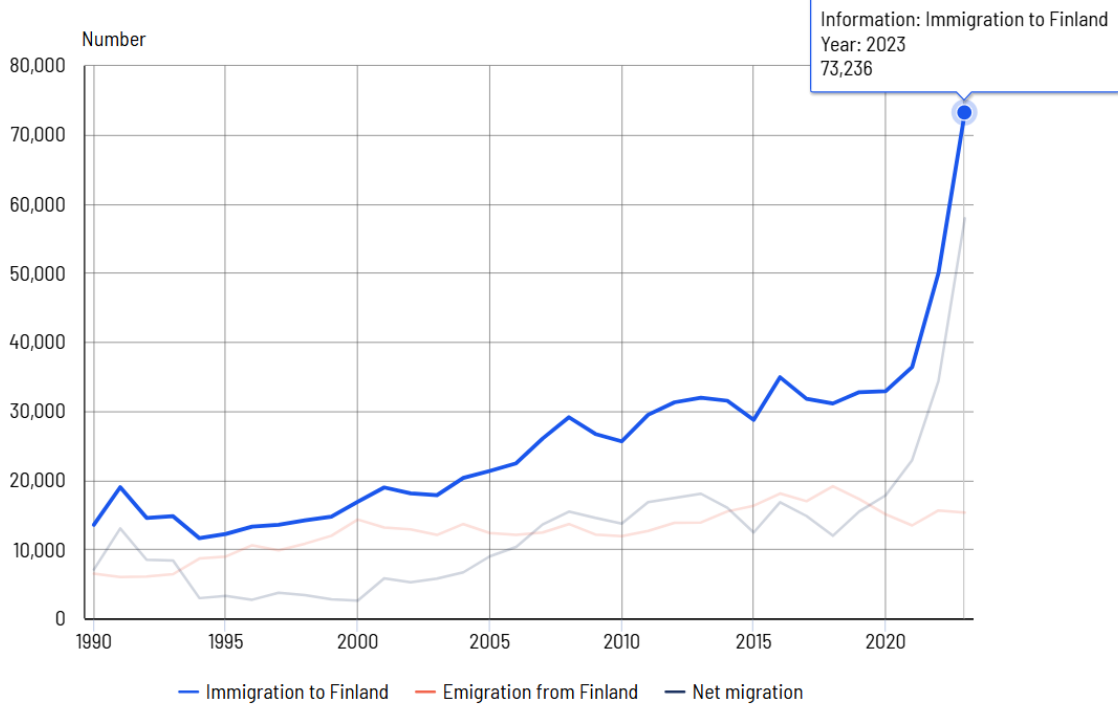


Figure 2 Statistics of Finnish immigration from 1990 – 2023. Source: Statistics Finland, migration

However, in another report by Ministry of Economic Affairs and Employment (2024), the number of unemployed people is still increasing, showing that there is a gap between the job requirements and the skills that candidates can meet.

Realizing this trend, the author became interested in the integration aspect and the ability to use the native language of immigrants, two factors that are closely related to each other. Through preliminary recording of the opinions of his network of relationships, the author initially hypothesized that "immigrants have many difficulties in learning Finnish". This was the premise for the author to design a process according to the Double Diamond approach to build an effective Finnish learning path for this group.

The first step in this design process is Discover. Discovering user needs and perspectives requires a theoretical framework. Based on that, continue to carry out information collection steps through survey tools.

a. Modeling the theories and PESTEL

The author has developed a model of "Factors affecting the learning of Finnish by adult immigrants" (see Figure 3) by synthesizing information from PESTEL and fundamental studies in Psychology, Sociology and Education.

The author proposes a model of four groups of factors affecting the learning of Finnish by adult immigrants: Social Agents, Resources, Perception and Experience, and Motivation. In which, Social agents include four factors: Tutor/Teacher, Family, Community and Government. Resources include Objective agents and Subjective agents. Motivation includes Intrinsic Motivation and External Motivation. The fourth factor is Perception and Experience

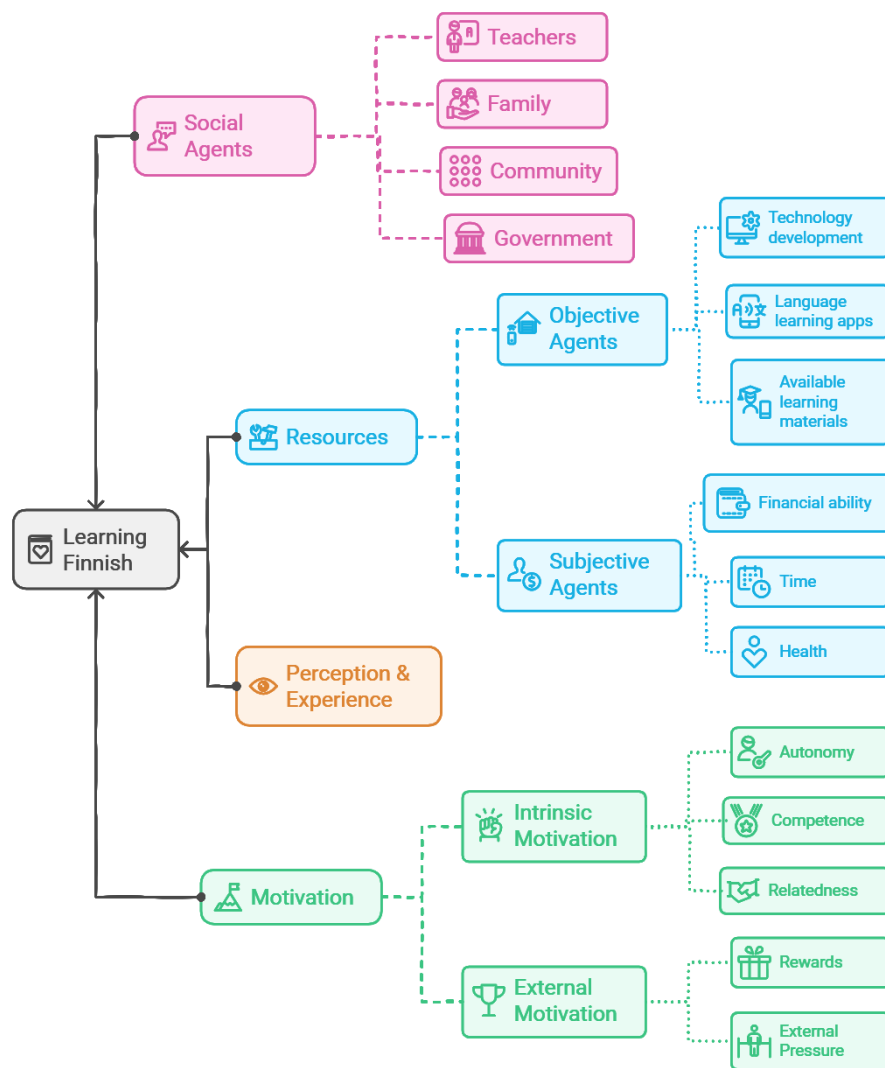


Figure 3 The model "Factors Influencing Finnish Language Learning of Adult Immigrants"

b. Distributing questionnaire

The study used a survey tool including Online Questionnaire and In-depth Interview. The questionnaire was sent to immigrant groups on social networks and students of integration classes organized by TE Services.

Using The model "Factors Influencing Finnish Language Learning of Adult Immigrants" combined with PESTEL information, the author built a survey for beneficiaries consisting of 39 questions divided into 8 main groups of questions: Motivation, Awareness and Experience, Resources, Family, Community, Teachers and Government. The questionnaire applies both closed questions (choose from available answers) and open questions. Among them, questions about the level of influence or the level of evaluation of something use the 4-level Linkert scale. This is aimed at eliminating neutral answers, making it difficult to analyze insights.

After that, the author will synthesize, analyze the responses and invite some of the respondents to conduct in-depth interviews.

c. Conducting interviews

The author plans to conduct 4 in-depth interviews including education experts and adult immigrants to exploit insights in a specific learner case from an inside-out perspective and the teacher's insights as an outside perspective towards the research subject.

The information collected will be used to create an Empathy map.

d. Number of hours required for language learning

According to Kenny (2021), compared to English, which is an easy language to learn, it takes about 600 – 750 hours of classroom instruction with a teacher to reach level B2, Finnish is a difficult language to learn, requiring about 1,100 hours to reach the equivalent level.

The estimated learning time is not completely accurate and is only for reference because it also depends on many other factors such as: whether the learner's mother tongue is similar to the target language or not, as well as the learner's ability to absorb, learning method, personal motivation and the opportunity to be exposed to the target language. However, estimating the learning time like this is also beneficial because it helps learners visualize the challenges they will face and the effort needed to overcome them. This also provides the author with reference information in planning suitable learning paths for adult immigrant learners.

5.2 Define

5.2.1 Summary of survey responses

As of November 18, 2024, 58 responses were received. Figures 4, 5, 6 and 7 show the percentage of responses to the questions about Age, Gender, Experience with other foreign languages before learning Finnish and Living arrangement in Finland respectively.

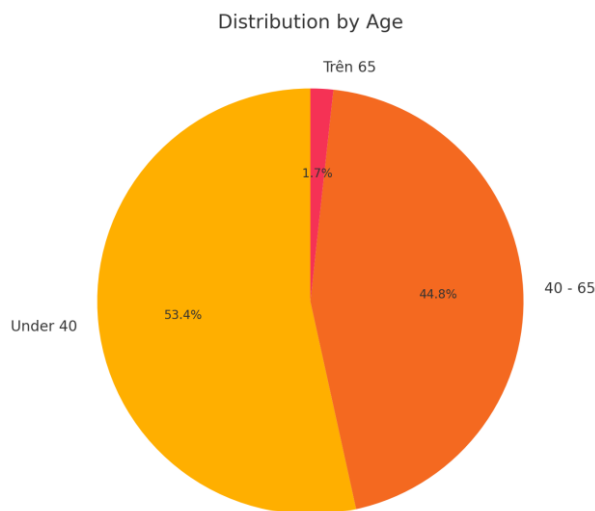


Figure 4 Responder Age

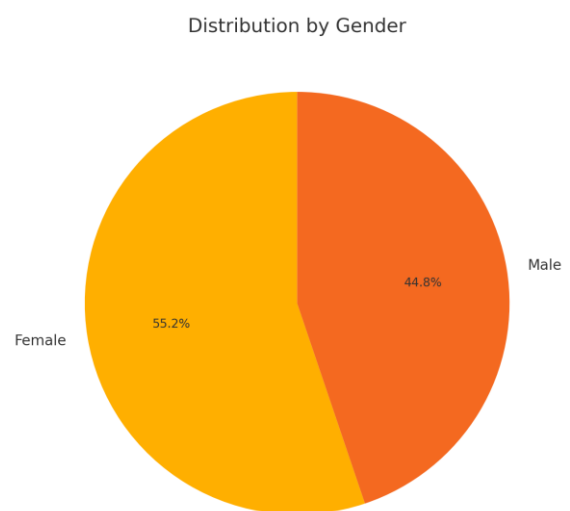


Figure 5 Respondent gender

Q19: Living Arrangements in Finland

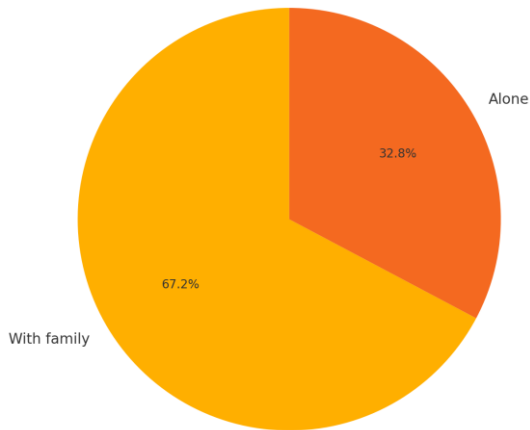


Figure 7 Living arrangement in Finland

Q10: Experience with Other Foreign Languages Before Finnish

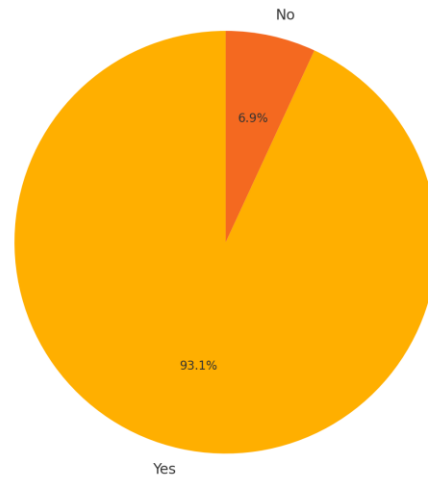


Figure 6 Experience with other foreign languages before learning Finnish

a. In terms of motivation for learning:

Most people learn Finnish out of a sense of both enjoyment and obligation (50%). However, a significant number (34.4%) learn it mostly out of obligation, meaning they have to learn it for some reason.

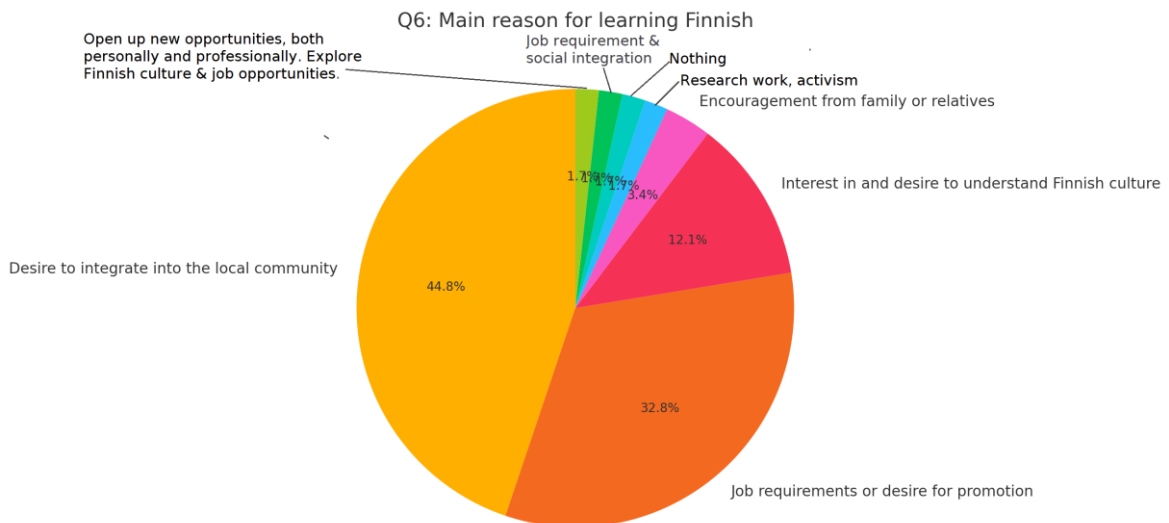


Figure 8 Main reason for learning Finnish

Figure 8 shows almost half of respondents learned Finnish to integrate into society (44.8%), followed by finding a job (32.8%). 3.4% were encouraged by their families and 12.1% because of personal interests. This shows that the reason for deciding to learn Finnish comes from extrinsic motivation, accounting for 87.9% of respondents.

In terms of the influence of the Personal Motivation factor on learning Finnish, the age group "40 – 65" tends to feel more positively about learning Finnish as a way to develop themselves (question 8) and the level of autonomy in deciding to learn (question 9). The group "Under 40" scored slightly lower, showing less motivation in these aspects.

Your age is	8. Do you find that learning Finnish helps you develop as a person or gives meaning to your life?	9. What level of autonomy did you feel when deciding to learn Finnish?
40 - 65	3.230769231	3.076923077
Under 40	2.741935484	2.935483871

Regarding foreign language learning experience, 54/58 people (93%) had learned another foreign language before learning Finnish. Of these, the majority rated Finnish as more difficult to learn than the language they had learned. The feedback also showed that learners felt that there was no effective method for learning Finnish (with a survey score of 2.29/4 points).

Regarding the application of technology to learning Finnish: Most respondents used technology and applications to learn Finnish, commonly ChatGPT, Duolingo, translation apps, Youtube, Yle Areena.

Regarding learning resources (including time for learning, financial ability, health and learning resources): Learners said that learning resources met their needs quite well and were easy to access. They were quite hesitant if they needed to spend money on learning, in which males were more hesitant than females. The 40-65 age group said they had plenty of time to study, while the Under 40 age group did not. Most respondents said they were healthy and alert enough to study Finnish.

b. In terms of Family factors:

By gender: Most women often mentioned taking care of family, children and managing housework as the main reasons affecting study time. Meanwhile, men rarely answered about family, instead, work responsibilities were mentioned more.

By age: The Under 40 age group is under a lot of pressure from taking care of family and work, especially for those with young children. Meanwhile, the responses of those aged 40–65 were often related to the balance between work and family, but this pressure seemed to be less than that of the under-40 group.

By living status: Those who live alone reported pressure from managing all responsibilities, including schoolwork, work and daily life. Those who live with family reported more family-related responsibilities, especially childcare and housework.

Of the above factors, living alone or with family has the clearest influence on the time spent learning Finnish, more than gender or age.

Looking more specifically at the family support aspect, women aged 40–65 scored higher in receiving encouragement from family (3.23/4) as well as other support (3.61/4) than other age groups. However, very few mentioned that family members were directly involved in learning. As can be seen, women often receive more encouragement and support from their families than men. The younger group (under 40 years old) has more difficulty balancing family responsibilities with studying, and also feels that their family has less of a supportive role than the middle-aged group.

Most respondents believe that their family plays an important role in encouraging learning and providing emotional support, but they are less directly involved in learning.

c. In terms of Community factors (including: friends, colleagues, Finnish language practice groups and tutors)

The responses to questions 25 and 26 indicate that friends and colleagues are important factors in increasing motivation to learn a new language, especially for the 40-65 age group. Meanwhile, men under 40 feel less influenced by friends or colleagues. It would be good to improve the community learning environment to promote motivation from friends and colleagues, especially for the under 40 age group.

Most respondents rated clubs and groups as important (3.38/4) in providing opportunities to practice the language and that learners felt welcome when participating. However, few (34.5%) have participated in Finnish practice groups, which are considered to be a positive environment for motivating and creating a sense of belonging for Finnish learners.

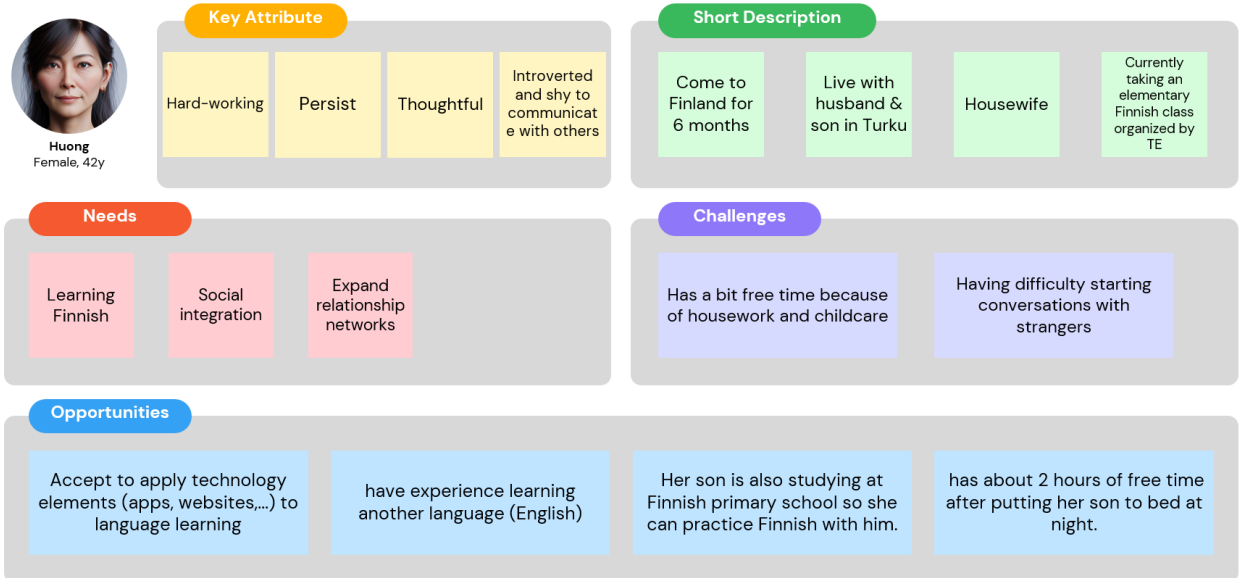
The majority (76%) of respondents have attended or are currently attending teacher-led courses. People said they were quite satisfied with the teaching method, the ability to absorb knowledge as well as the frequency of interaction with teachers. The majority of respondents (79.3%) affirmed that teachers play a necessary role in helping learners learn Finnish effectively. However, there are opinions that the teaching method of Finnish as a second language needs to be improved to be more suitable for today's era.

5.2.2 Create Personas and Journey Map

Based on the information gathered, the author has discovered some typical characteristics and visualized the images of the subjects. Based on that, suitable Finnish learning paths will be proposed for them.

a. Personas 1

Huong Nguyen is a 42-year-old woman living in Turku with her husband and a child. She is a "Family ties" immigrant, currently a housewife. During the day, she attends a basic Finnish language class organized by TE with the desire to integrate into society and be able to communicate in Finnish every day. Due to her family responsibilities, she does not have time to participate in other groups or clubs in the afternoon. In the evening, she has about 2 hours of free time after putting her child to bed. All information about her characteristics, living situation and needs is summarized in Figure 9. Along with that is the Journey Map shown in Figure 10.



2

Figure 9 Building Personas Type 1: Housewife

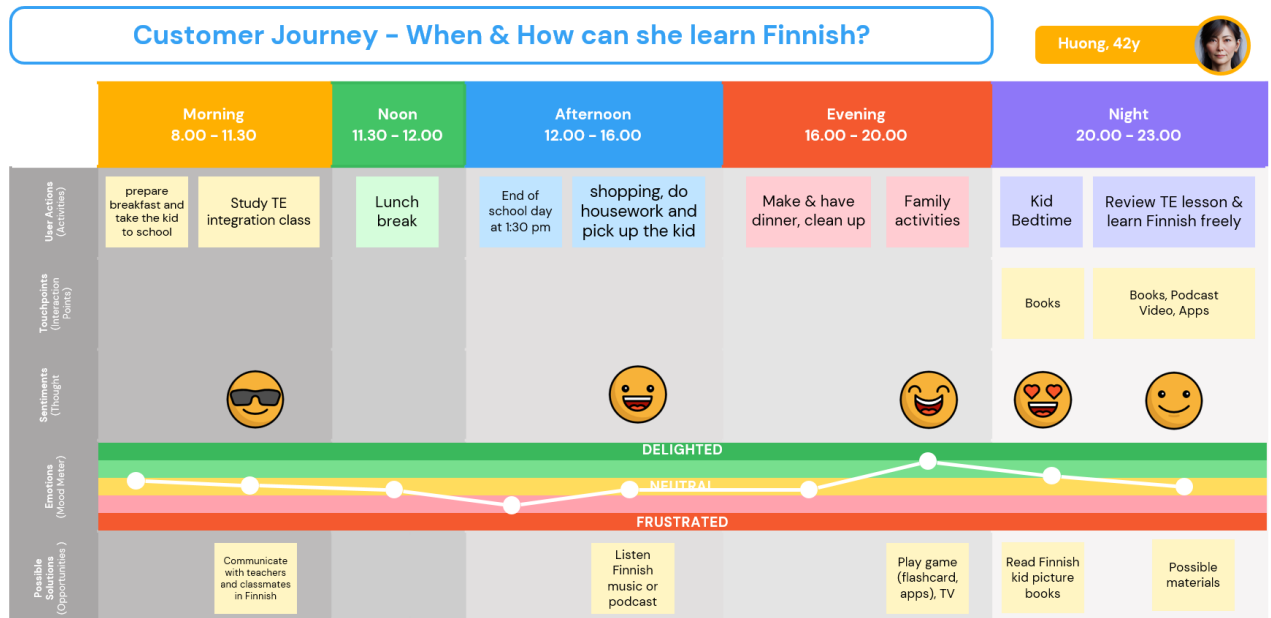
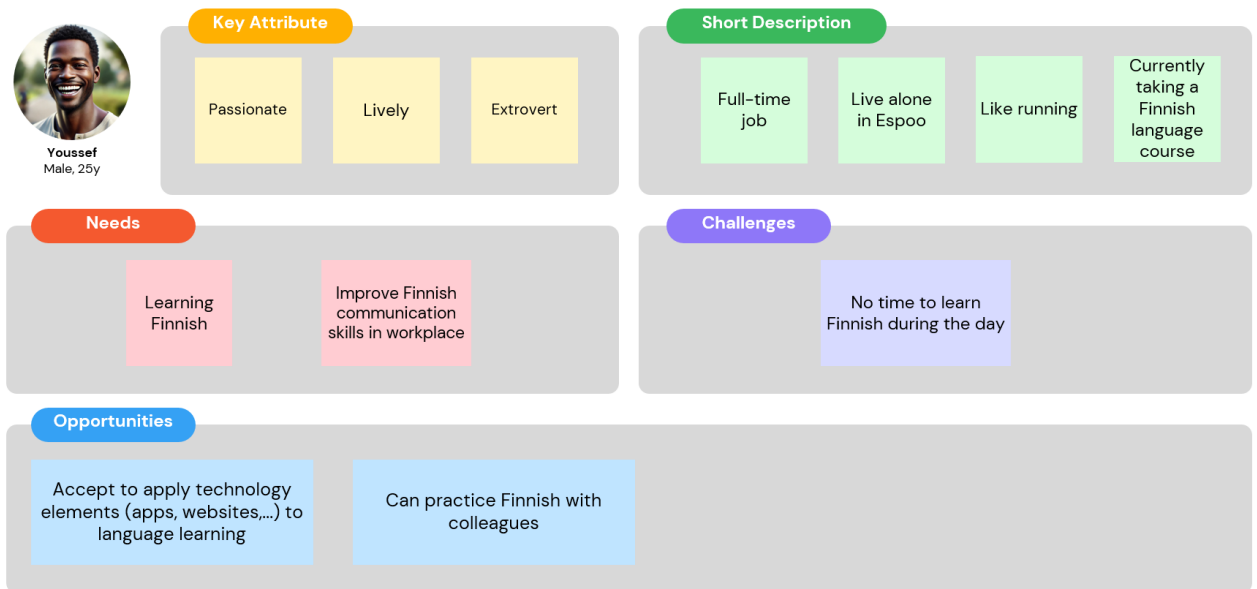


Figure 10 Journey Map of Personas Type 1

b. Personas 2

Youssef is a 25-year-old extroverted man. He lives alone and works in Tampere. He really wants to learn Finnish so that he can communicate better with his Finnish colleagues. Youssef attends a short Finnish language course after work on Mondays, Wednesdays and Fridays. He has a number of friends and colleagues who are also learning the language. He has a habit of jogging for 45 minutes every evening. All information about his characteristics, living situation and needs is summarized in Figure 11. Along with that is the Journey Map shown in Figure 12.

² The avatar of Personas 1 is generated by Dall-E, an AI image generator



3

Figure 11 Building Personas Type 2: A Young Male with Full-Time Job

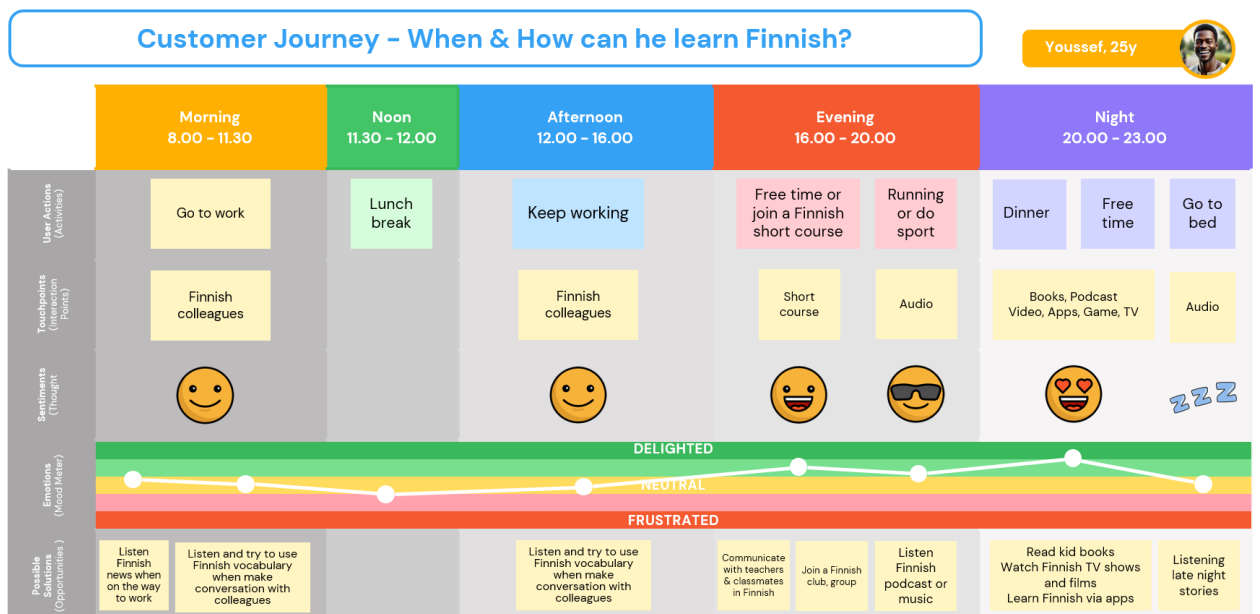


Figure 12 Journey Map of Personas Type 2

5.2.3 Interview analysis and Empathy Map

In order to collect multi-dimensional information from many different perspectives, the author conducted interviews with four subjects including two learners who are typical cases who have learned many languages and successfully conquered Finnish, one teacher specializing in teaching Finnish to immigrants and one expert in building university and postgraduate training programs. The interviews were conducted mainly by video call via Microsoft Teams. This method has some limitations such as being affected by the internet connection, the signal is sometimes unstable which affects the conversation, along with the camera angle which makes it difficult to capture all the expressions and actions of the interviewee at that moment. However, this method is acceptable because the geographical

³ The avatar of Personas 2 is generated by Dall-E, an AI image generator

distance makes it impossible to meet in person. All interviews are recorded to serve the purpose of analyzing the Empathy Map later.

a. Interviewee 1 and her empathy map

Interviewee 1 is a 37-year-old woman who has lived in Finland for 2 years. Previously, when she was still in her home country, she also studied English by herself and later worked as an English tutor, a unique way to practice the language. When she came to Finland and joined the integration class organized by TE Office⁴, she also applied her English learning experience by applying the Direct method to learning Finnish. After 5 months, she was allowed by the teacher to work as a teaching assistant. After 8-10 months of studying, she reached level B1 in Finnish.

The interview was conducted to learn about her experience and language learning process.

When learning Finnish, I use the language itself to explain vocabulary and grammar, instead of translating through an intermediate language. This way of learning is difficult at first but effective in the long run.

...Studying takes time and discipline. I always set aside 1-2 hours a day to study. Even on weekends, I still keep up with my study rhythm so that I don't "break" when I come back on Monday.

She also appreciated and was grateful to the Finnish government for its support policies so that she could devote all her energy to learning the language during her first time in Finland. Figure 13 shows her empathy map.

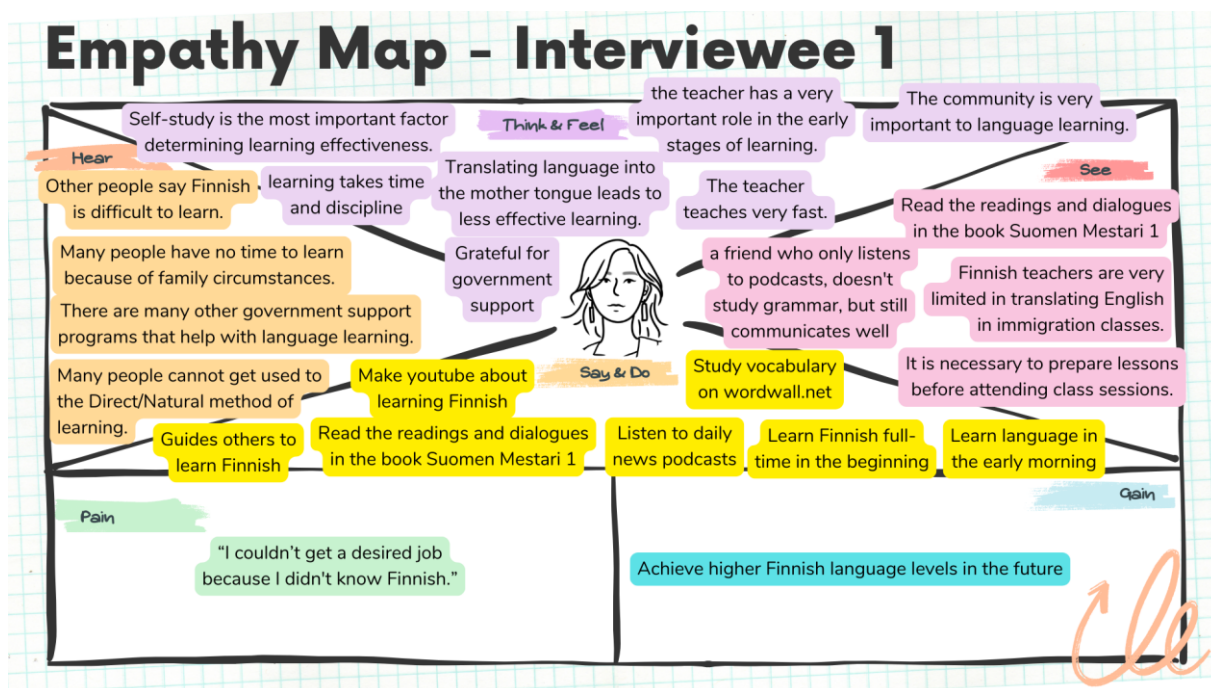


Figure 13 The Empathy Map of Interviewee 1

⁴ It stands for "Työ- ja elinkeinotoimisto", a state authority that organizes and produces employment and economic services.

b. Interviewee 2 and his empathy map

Interviewee 2 is a middle-aged Russian man who knows many languages and learned Finnish more than 20 years ago. He can now work, teach and write fluently in Finnish. He is a typical case of self-taught Finnish without any classes or support from an education professional.

When I learned Finnish more than 20 years ago, online resources were not as abundant as they are now. So I learned the old-fashioned way: writing a lot by hand. I believe in kinesthetic memory. When you write by hand, you don't just look at the words, you memorize them by doing. This is much more effective than just reading or learning on a screen.

Figure 14 shows his empathy map.

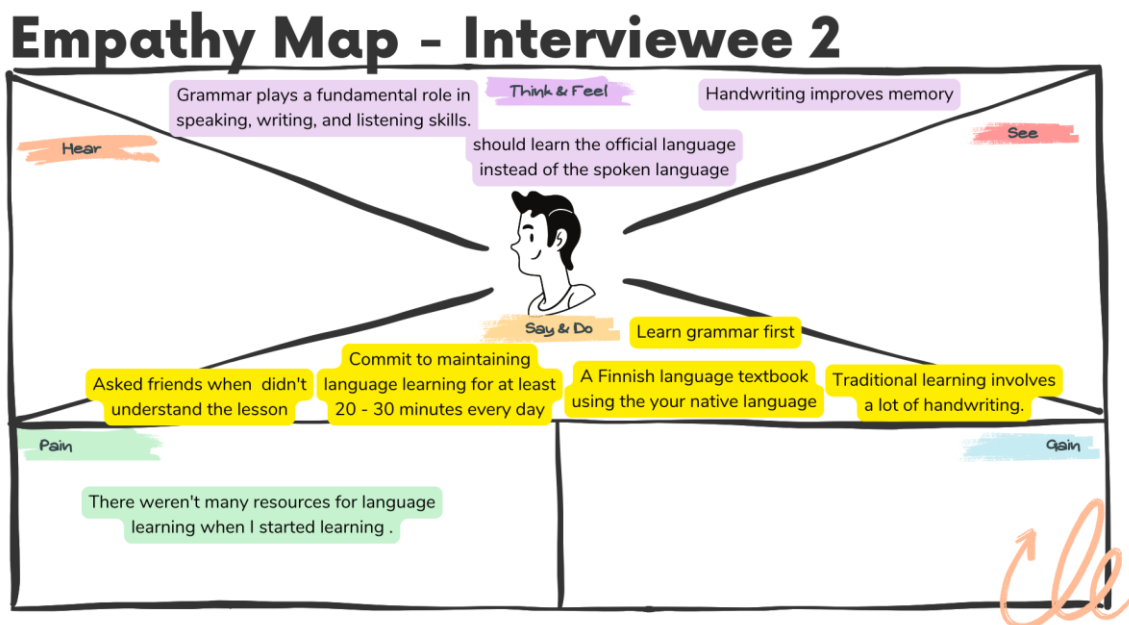


Figure 14 The Empathy Map of Interviewee 2

c. Interviewee 3 and her empathy map

Interviewee 3 is a Finnish teacher for immigrants. She is of Japanese descent and studied in Finland. She has been living in Finland for 22 years. She is a great example of both teachers and immigrants learning Finnish.

She shared her process and experience of learning Finnish from the moment she was exposed to the language to how she mastered it. Living with a Finnish family gave her the opportunity to listen, try to understand and use common words and phrases in daily life to communicate in Finnish without using her mother tongue for a long time.

My study of the Finnish language began on a practical level. I was in a kind of language immersion, as I hardly used my native language at all during that school year.

Later, when she had mastered the ability to communicate in Finnish, she began to standardize the learning of this language through learning grammar and specialized vocabulary due to the demands of the university study.

She also provided a lot of information about Finnish learners in the teaching process, such as the habit of translating word by word from Finnish to their mother tongue, which reduces the ability to memorize words and learning efficiency. Or the difficulties that older learners encounter in the learning process, besides memory loss, such as family responsibilities, technological barriers or psychological obstacles.

The more and faster one accepts the differences as they are and learns the language at the level of phrases, the better and more fluently they can use the language.

Figure 15 shows her empathy map.

Empathy Map - Interviewee 3

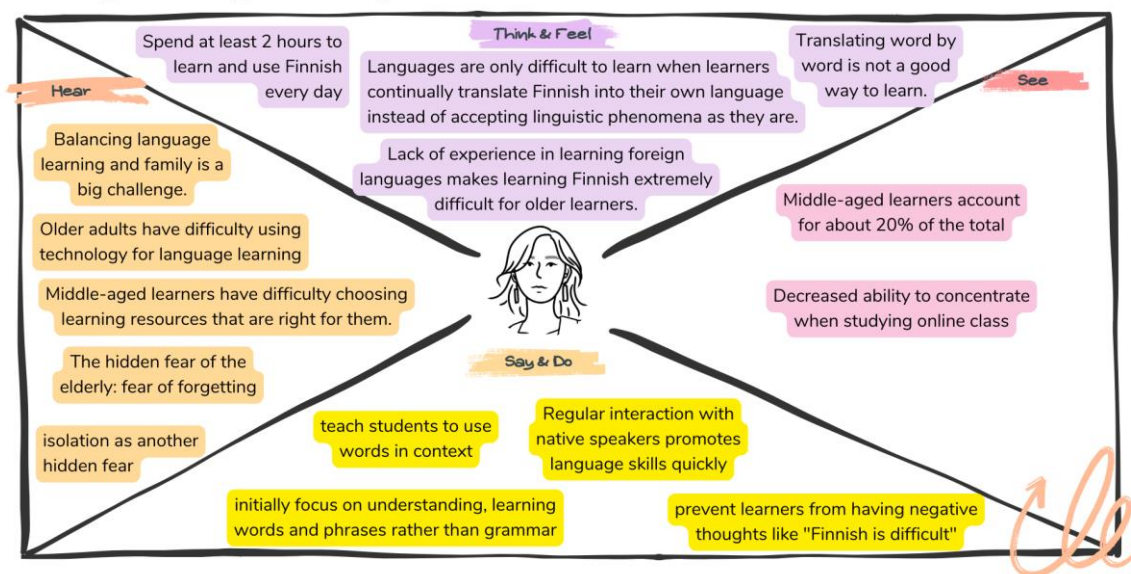


Figure 15 The Empathy Map of Interviewee 3

d. Interviewee 4 and his empathy map

Interviewee 4 is an expert in developing undergraduate and graduate education programs. His opinions and experiences are a valuable source of information for the author to refer to when developing a language learning program. He believes that whether learning is successful or not, the first factor is that the learner needs to have a clear learning goal, and the goal setting needs to meet the SMART⁵ criteria. For example, when starting to learn Finnish, the learner can set a "smart" goal as follows: "I will complete A2 level Finnish (specific) by learning 20 vocabulary words per day and completing 2 grammar exercises per week (measurable). I will spend 1 hour per day studying (achievable), because this goal will help me communicate better when living in Finland (relevant), and I will achieve this goal by 30 June next year (time-bound)."

In addition, Interviewee also affirmed the role of teachers/tutors in language learning:

⁵ SMART is a method to help determine effective goals, an abbreviation of Specific – Measurable – Achievable – Relevant – Time-bound.

In the early stages of learning, teachers or tutors play a very important role. They guide and orient the learner. But as the learning progresses, the role of the teacher becomes less important.

As an expert in designing training programs, Interviewee also noted that service designers needed to have achievement milestones throughout the program that learners could achieve to maintain learning motivation, which was crucial to the success of the program:

A well-designed learning path will help learners achieve small successes, interspersed with challenges to make them try harder. This is very important to maintain motivation to learn.

Figure 16 shows his empathy map.

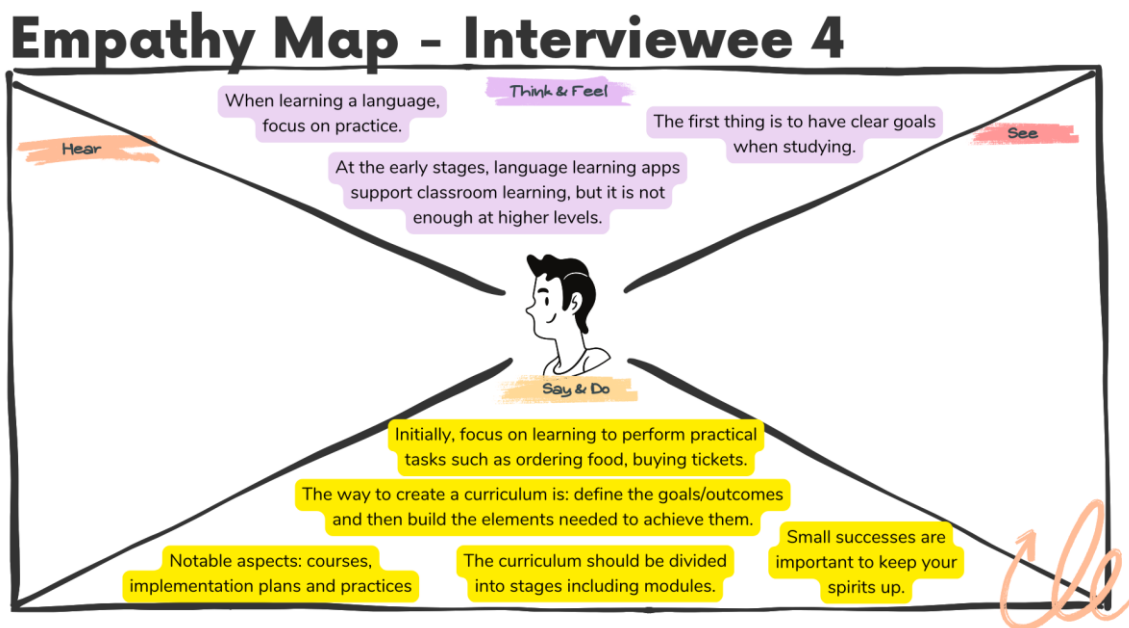


Figure 16 The Empathy Map of Interviewee 4

e. Interview Summary

Interviewees 1 and 2 clearly represent two very different learning styles. One follows the “traditional way” of learning, focusing on grammar first and following a specific textbook. This learning style is popular and almost the only option for beginners who have limited learning resources. It also requires learners to spend a lot of time every day. The other also spent a lot of time learning Finnish in the beginning. However, she combined many learning styles and focused more on listening skills and had many opportunities for real-life communication as a teaching assistant in an immersion class. However, both of them agreed that achieving good results requires discipline and continuous learning every day, as well as setting specific goals.

Education experts also agree that setting clear goals is also the first factor needed when wanting to build an effective learning path. Once learning objectives are set, the curriculum designer or learner will know what standards and skills required, along with the necessary resources to support them, to meet the set objectives.

All four interviewees mentioned that practicing the language through real-life communication helps to strongly promote the process of memorizing and using the language effectively.

5.3 Develop

5.3.1 Teaching According to Natural Approach

According to Krashen (1998), Bailey and Fahad say that three components: motivation, self-confidence, and anxiety form an “affective filter” that significantly affects language acquisition. Specifically, “when learners feel comfortable and safe, input flows easily and is processed easily. Conversely, when they feel stressed, unmotivated, or afraid, acquisition is hindered” (Bailey & Fahad, 2021). According to developmental psychology theory, as people get older and accumulate more experience, they tend to be cautious and defensive with new things and when they make a mistake, the reaction is often “I made a shameful mistake”.

The distinction between acquisition and learning is the most fundamental of all the theories presented. Popular teaching methods often focus on learning grammar and practicing speaking and writing skills because they are easily standardized according to templates that can be applied to a large number of students. Unfortunately, these are the things that make learners prone to making mistakes in the learning process. For older people, this is not pleasant. It creates pressure that makes learners stressed and afraid, reducing their motivation to learn and their ability to absorb.

On the contrary, the Natural Approach is a language teaching method developed by Terrell and Krashen that believes that language learning is a reproduction of the way people naturally acquire their mother tongue. It focuses on comprehension, and the teaching of speaking must be delayed until comprehension skills are established. (Krashen & Terrell, 1998)

The benefits of this approach include:

Emphasizing meaningful communication (communication for understanding) rather than accuracy, while encouraging learners to communicate at a level appropriate to them, which increases motivation in the learning process.

Immersing learners in the language in a natural environment. This makes the learning experience more authentic and meaningful. Learners can pick up on nuances of language (e.g. tone, rhythm and intonation) that are difficult to learn through traditional methods.

Reducing anxiety. By focusing on communication for understanding rather than on grammatical accuracy, learners feel less pressure to be perfect. This creates a comfortable and reassuring learning environment for learners.

Improving pronunciation. By listening attentively and repeating regularly, learners can develop a more natural accent and pronunciation.

To visualize this method, the author have had the opportunity to observe the language teaching process (naturally) of teachers at a kindergarten in Turku (Finland) with many immigrant children from 3 to 6 years old. Each group of 8 children is taught by 2-3 teachers. On average, each teacher is responsible for 3-4 children, enough for teachers to supervise and monitor each child carefully. To communicate with children, teachers often give short commands in Finnish combined with gestures and facial expressions, as well as use cards with pictures illustrating actions (such as eating, drinking, singing, going to the toilet, etc.)

and objects (bread, glass of water, bowl of soup, toys, etc.) for children to understand and follow. At first, the child will need the teacher's support to perform the action. Gradually, with the frequency of repetition of the teacher's daily commands, the child will understand exactly what the teacher wants to do, and can even respond verbally. This also means that the children are not completely proactive in learning the language because there is no specific time frame for this activity. Instead, the children acquire Finnish through a daily schedule of activities, movement and interaction with the teacher.

Teaching a language this way to children probably requires less effort than to adults because children's brains are very flexible and absorb new information easily. However, adults are compensated by their extensive experience as well as other advantages such as the ability to speak fluently and actively choose different practice methods.

It is wonderful that the Natural Approach is completely suitable and exactly the way of learning that an adult person learning a foreign language should pursue. Especially for those at the Beginner level who want to achieve Intermediate Finnish because of the characteristics that this method brings: creating a worry-free learning environment, enhancing comprehension and communication skills, especially high flexibility, when it does not require a fixed framework, so each individual learner can customize the schedule, learning tools as well as the amount of knowledge suitable for themselves.

The following methods and tools to support Finnish language learning that the author proposes also attempt to simulate what the Natural Approach aims for Personas 1 and 2.

5.3.2 Learner levels

The process of natural language acquisition through four stages of language development (Krashen & Terrell, 1998) includes:

- 1. Pre-production:** This is the first stage when learners mainly listen and observe, building a foundation in the target language without having to produce language immediately. Learners only need to listen attentively and use gestures without having to speak much.
- 2. Early Production:** When learners can start to speak short phrases and sentences. Although they often make mistakes, they still have communicative meaning.
- 3. Speech Emergence:** At this time, learners are able to communicate more effectively, knowing how to use longer phrases and more complex sentences. The communicative language is quite flexible and can be applied in many situations.
- 4. Intermediate Fluency:** This is the final stage when learners can clearly understand and express the language naturally and flexibly, communicate fluently and have the ability to participate in complex discussions.

The roadmap the author proposes for Finnish learners also follows this process and focuses on the first two stages, which are the stages when learners need the most guidance and support.

According to the Common European Framework of Reference for Languages (CEFR) guided by Finnish National Agency for Education, the levels are divided sequentially corresponding to the stages of language development proposed by Krashen as shown in Table 1:

Table 1 Correspondence between language development stages and CEFR language levels. (Krashen & Terrell, 1998) and (Finnish National Agency for Education, n.d.)

Language Developing Stage	CEFR	Description
Pre-production	A0 ⁶	Completely new to language learning. Has no basic knowledge of the language. May know some single words or common phrases, but cannot use them in conversation.
Early Production	A1	Can understand and use basic everyday phrases and simple sentences aimed at satisfying basic needs. Can introduce him/herself and ask and answer basic questions about personal details (name, address, age, occupation). Can communicate in familiar situations only.
	A2	Understand sentences and expressions related to areas in areas of immediate and familiar importance (e.g. family, shopping, work, local geography). Can communicate in simple terms on routine tasks.
Speech Emergence	B1	Understand the main points in clear context on familiar matters (work, school, leisure). Can deal with most situations likely to arise whilst travelling in an area where the language is spoken. Can produce simple text related to areas of personal interest or concern.
	B2	Understand the main ideas of complex text, including both concrete and abstract topics. Can interact spontaneously with native speakers without great difficulty. Can produce clear, detailed essays on topics that are familiar or of personal interest.
Intermediate Fluency	C1	Understand a wide range of longer, more complex texts, and recognise implicit meaning. Express ideas fluently without much pausing. Use language flexibly for social, academic and professional purposes. Produce clear, well-structured text on complex subjects.
	C2	Understand almost everything heard or read.

⁶ Level A0 is not officially listed in CEFR, but is often used informally in language teaching programmes to describe a level lower than A1.

		<p>Summarize information from different sources, construct arguments or give clear explanations.</p> <p>Use language spontaneously, accurately and with sophistication even in complex situations.</p>
--	--	--

In more detail, for elementary levels A1 and A2, according to CEFR, the 4 skills of Listening, Speaking, Reading, and Writing must meet the criteria shown in Table 2:

Table 2 Language level criteria A1 and A2. (Europe Council, n.d.)

	A1 level	A2 level
Listening	<p>Understand very short, simple words and phrases frequently encountered in everyday life, e.g. personal introduction, family, job, numbers, times, prices.</p> <p>Follow very short, simple conversations that are spoken slowly and clearly.</p> <p>Understand short, simple instructions in familiar contexts, e.g. "Istu alas" (Please sit down), "Odota hetki" (Wait a moment).</p>	<p>Understand phrases and frequently used expressions related to familiar topics (e.g. very personal or family information, shopping, work, local geography).</p> <p>Understand the main points in short, clear conversations.</p>
Speaking	<p>Introduce yourself and others, e.g. name, age, nationality, occupation.</p> <p>Ask and answer basic questions, e.g. "Mikä sinun nimesi on?" (What is your name?), "Missä asut?" (Where do you live?)</p> <p>Use some simple everyday phrases, such as greetings ("Hyvää huomenta", "Moi") and thanks ("Kiitos").</p> <p>Participate in simple conversations if the other person speaks slowly and is willing to help.</p>	<p>Express simple ideas on familiar, everyday topics.</p> <p>Carry out basic communications such as requests, instructions or short descriptions of everyday situations.</p> <p>Begin to express personal thoughts or give brief responses in specific situations.</p>
Reading	<p>Understand simple vocabulary and phrases from signs, menus, leaflets, and short notices.</p> <p>Understand simple sentences related to personal or everyday information, e.g. "Minä olen opettaja." (I am a teacher).</p>	<p>Read and understand short, simple texts related to everyday topics (short emails, basic instructions). Understand the main ideas in short texts, such as notices, instructions or advertisements.</p>

Writing	Write short, simple sentences, such as: Introduce yourself: "Minä olen Maria. Olen 35-vuotias. Asun Helsingissä." Write down basic personal details, fill in forms. Write basic phrases or sentences in familiar contexts, e.g. congratulations, thanks.	Write short paragraphs describing yourself, your daily routine, your interests, or your plans. Take notes or fill in forms relating to personal information or simple transactions (shopping, requesting services).
----------------	---	--

(Europe Council, n.d.)

In addition, to achieve level A1, learners need to master about 500 - 800 basic words, this vocabulary helps learners participate effectively in daily communication situations as well as achieve basic language skills (Milton, 2009). Milton also believes that for those who want to achieve level A2, they need to master about 1,500 vocabulary words.

5.3.3 Proposed solutions

5.3.3.1 Philosophy of learning

Learners mainly rely on the Natural Method, which is active listening, which means actively listening and judging to understand the overall meaning of the content, rather than focusing on understanding the exact meaning of each word and sentence. This can bring a feeling of vagueness and discomfort, but it will not last long when learners gradually get used to this method.

In addition, language acquisition through interesting and easy-to-understand content follows Krashen's Optimal Input principle. Learners actively seek out and listen to learning resources such as podcasts and short videos with simple topics, moderate speaking speed, and children's picture books with illustrations and simple writing style, using common vocabulary. In order to ultimately achieve the initial goal of understanding the language, as well as being able to speak without mechanically learning grammar. This helps learners adapt and train their brain's flexibility, improving their ability to absorb naturally, thereby achieving rapid progress.

5.3.3.2 Learning Methods and Processes

The following learning methods for A1 and A2 level learners are referenced from the interview information combined with the textbooks Suomen Mestari 1, 2 and the Finnish course applying Natural Approach by Pirttimaa Lotta, the author and operator of the online courses Finnished.

a. Study time:

To be effective, learners need to be committed and spend at least 20 - 30 minutes a day, continuously for 5 - 6 days a week, to self-study Finnish.

b. Active listening

When watching videos, learners need to focus completely on the material, instead of combining it with other activities such as exercising or cooking. This will cause distraction, reducing the effectiveness of active listening.

The materials must be slow enough to be able to distinguish individual words when reading. Videos should have English subtitles. Learners learn one sentence at a time, checking the meaning of each word before moving on to the next sentence.

c. Listening Practice

- Listen to every 5-minute snippet of videos and read the English subtitles to understand the meaning of the video.
- Repeat the snippet several times, read the Finnish subtitles and try to remember the meaning.
- When understanding 75%, try listening without subtitles.
- Move on to the next 5-minute snippet and repeat the process.

d. Nurturing Learning Motivation

Learners should continue to take Finnish language courses if they have them, especially those using Suomen Mestari or Natural Approach. Classes with teachers and classmates and a variety of learning activities provide opportunities for social interaction, which promotes motivation and pace of learning, as well as orientation to curriculum of learners.

In addition, learners need to immerse themselves in the language by incorporating Finnish into their daily activities, personal interests or free time, including: Listening to podcasts, listening to music while commuting, watching Yle TV. This is a smart strategy to create a natural and regular language environment to get used to the tone and intonation of the language (Vandergrift & Goh, 2012) and at the same time contribute to improving the speed and efficiency of language processing in real time (Field, 2008).

5.3.3.3 Recommended learning path

To achieve A1, A2 level, learners need to spend a total of 200 - 250 hours studying with a minimum of 20 - 30 minutes of self-study and practice per day for each level.

a. Set goals by day, week, month, for example:

Every day: Practice listening to a 5-minute video, learn 3 - 5 new vocabulary

Every week: Learn 20 new vocabulary + 5 communication sentences (for 60 minutes of study per day)

Set a fixed time frame for language learning. For example: Early morning 6.00 - 7.00 or/and Evening 20.30 - 21.30

b. Developing Listening skill:

Learn to listen to conversations through Youtube videos with Finnish or English subtitles. Go to a Youtube channel, select "Video" and then select "Oldest" to start listening to videos from the first videos.

See the list of video channels in Appendix 2.

c. Developing Writing and Reading skill:

Learn grammar, vocabulary, reading according to the curriculum in class or free online courses <https://yle.fi/aihe/artikkeli/2015/12/15/supisuomea> or Suomen Mestari books.

Learners can choose to learn vocabulary, phrases by topic available on Lingohut.com or any application, website that users find. As well as using many different learning sources at the same time to increase diversity and avoid boredom.

See the list of Finnish learning applications in Appendix 2.

d. Developing Speaking skill:

Use Finnish in daily activities with family, friends, colleagues without worrying about whether it is grammatically correct or not. Try to use Finnish vocabulary in communication in the beginning and gradually increase the density of Finnish vocabulary and sentence patterns over time.

Annotate the English names of household items with stickers, for example: the refrigerator is “jääkaappi”, the table is “pöytä”, the microwave is “mikroaaltouuni”, the cooker hood is “liesituuletin”, etc. to expand vocabulary, increase interaction as well as the ability to remember vocabulary.

A notebook with phrases and sentence patterns used for daily communication, with frequent repetition to remind when needed.

5.3.3.4 Measuring and self-assessment of language proficiency

Assessment is an essential part of ensuring effectiveness and helping learners control their learning process. First of all, the process is assessed based on a clear set of criteria, including the level of progress in language skills and the ability to maintain learning motivation.

Periodic measurement tools will be applied to check learning progress. Listening, Speaking, Reading, Writing skill tests designed according to the CEFR framework will help accurately measure learners' language ability at each stage. In addition, learners can answer Kielibuusti's survey via the link <https://www.kielibuusti.fi/en/learn-finnish/assess-your-language-skills#/> to get a quick assessment of their Listening, Speaking, Reading, Writing skills. For beginners, acquiring vocabulary is an extremely essential factor. To review the level of completion of this personal goal, users can create an account and study on the Yle.fi Kielikoulu website: <https://kielikoulu.yle.fi/profile>. This tool helps learners track their progress and the number of vocabulary words they have learned.

Regular self-assessment not only helps to control the learning process to see how much progress they have made, but also helps learners identify future goals to strive for, thereby maintaining their motivation to study and making necessary adjustments to their study time and methods.

5.3.3.5 Testing and Feedback

a. Description of the Testing Process

The proposed learning path was applied by the author and a Finnish language learner for two weeks. Hereinafter referred to as Learner 1 and Learner 2, respectively. Learner 1 had been learning Finnish for three months, and the other had been learning Finnish for seven months in a TE Office class. The testing was aimed at examining the feasibility as well as measuring and gathering feedback on whether the new learning method was effective compared to the previous status quo. Figure 17 shows the specific testing process.

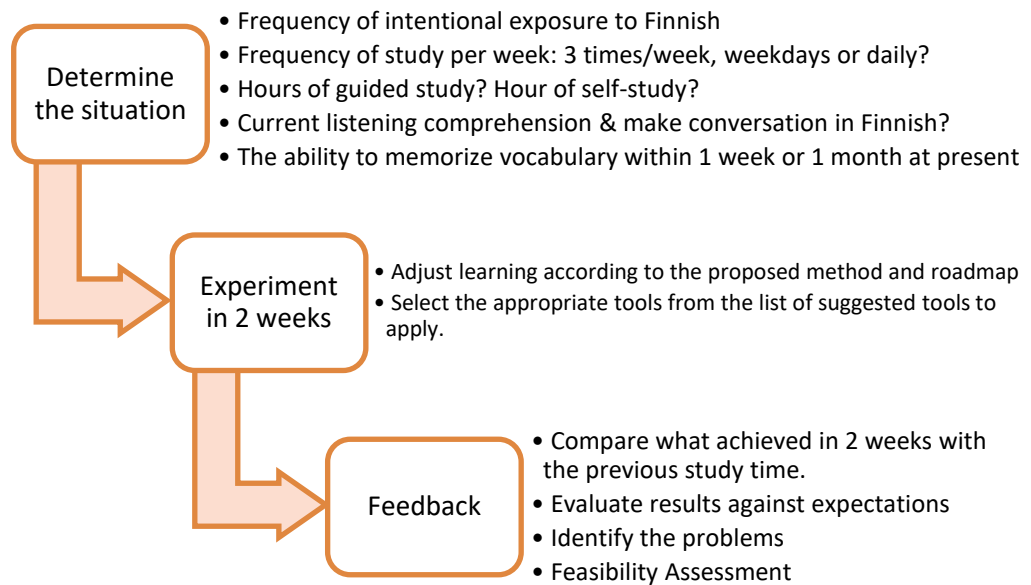


Figure 17 The Experimental Process for an Effective Elementary Finnish Language Learning Path

In addition, this learning path was also sent to a Finnish teacher. The teacher, with his pedagogical skills and practical experience in language training for adult immigrants, will evaluate the accuracy of the information as well as contribute other practical suggestions to improve the feasibility of the proposal.

b. Collecting opinions

The collection of opinions is based on practical observation methods for Learner 1, direct interviews, and for Learner 2 and the Teacher.

b1. The learner 1's feedback

Learner 1 has been self-studying for 3 months but feels that his progress is very slow, especially in listening skills. He expects that in 2 weeks of studying with the new method, he will improve these skills and be able to respond in simple communication situations. In fact, although he feels that he has not met his expectations, he feels that he has improved in vocabulary recognition when he spends more time watching videos at a basic level. Therefore, the results are still very remarkable.

He had some difficulties with listening comprehension as he could not keep up with the speaking speed and vocabulary in the videos. He also lacked opportunities to practice speaking in real-life environments. Although he used stickers and incorporated Finnish into his daily activities, the results were still not significant. In addition, after about 20 minutes of listening to the videos, maintaining concentration became a big challenge.

When assessing the feasibility, he thought that spending an hour a day on learning was feasible for his schedule. However, this still required support from his family as well as personal discipline. The learning resources in the roadmap such as apps and videos were highly appreciated for their ease of use and suitability for the elementary level. However, to overcome the difficulties, he thought that it was necessary to add more speaking practice opportunities, such as joining conversation groups or online language exchanges. Under this condition, the roadmap could be maintained sustainably in the long term.

Overall, the new learning path has helped him have a clear approach and new motivation in learning Finnish.

b2. The learner 2's feedback

After two weeks of testing the new learning path, the learner, a 27-year-old woman, noticed many positive points in her Finnish learning. Previously, she mainly learned through classroom activities and only did limited revision at home. This made her learning progress slow and irregular, and she had difficulty memorizing vocabulary and applying grammar in practice. However, after two weeks of applying the new learning path, she noticed a lot of progress. Arranging time to learn vocabulary and practice listening every day at a fixed time frame has helped her significantly improve her ability to memorize and use new words.

I can confidently remember and use 10-15 new words in daily communication, which is a clear improvement compared to previous weeks.

She found the learning path to be quite satisfactory. Her goals of expanding her vocabulary, improving her listening comprehension, and integrating Finnish into her daily life were largely achieved. Methods such as using stickers to label objects around the house and learning through the Lingohut app were effective in helping her practice vocabulary in a familiar environment. Additionally, listening to podcasts such as "Finnish with Eemili" improved her listening comprehension, although her speaking skills did not improve significantly due to the short duration and lack of focus on communication.

She also encountered some difficulties. Time management was still her biggest challenge, due to frequent interruptions from work and family responsibilities. In addition, although the author had carefully selected appropriate learning resources, it seemed too much for her to try them all in 2 weeks. Some apps, like Duolingo, while appealing, did not meet her actual needs, especially for work-related vocabulary.

In terms of feasibility, she found the roadmap useful but would benefit from some minor adjustments. Specifically, the evening class schedule (8:30-9:30 p.m.) was more suitable for her schedule than the morning session. She also found the need for guided speaking activities, such as group study sessions or teacher support.

Overall, her two-week experience suggests that this learning roadmap is effective and can be applied long-term if it is tweaked to better suit her needs and schedule.

b3. The teacher's feedback

The Finnish teacher provided detailed and helpful feedback on the Finnish learning path. First, she emphasized that using English subtitles during listening practice is very helpful, especially for learners whose native language has a very different grammatical structure from Finnish. Learners can use their knowledge of their native language and English to compare and grasp similar or different structures. For example, she shared that Japanese sentence structure is very different from Finnish, but some grammatical aspects such as agent participle are similar. She also emphasized the importance of maintaining a clear learning goal to expand vocabulary, even if learners may forget some words. She suggested using a notebook to take notes and even handwriting notes from a phone to increase memorization, based on research from Norway. In addition, the teacher recommended Kielikoulu Yle and Kielibuusti as two listening resources that are very suitable for beginners.

Regarding vocabulary and writing, she highly appreciated the method of using small note cards, and emphasized that learners need to learn how to divide basic word forms such as

Partitive, Genitive, Illative, and Elative to use words effectively in real life. She also encouraged learners to write short example sentences related to new words, such as “Käytän mikroaaltouunia” (I use the microwave) or “Otan lautasen mikroaaltouunista” (I take the plate out of the microwave), to understand how to use words in specific contexts. Learners can get support from their teachers on how to create sentences. If they are self-studying without a tutor, this is not a big problem when they can take advantage of translation support tools such as DeepL. Teachers also suggest using idioms to learn how to construct sentences, which not only helps to diversify vocabulary but also helps learners understand more about Finnish culture.

There are also a lot of archiphrases in the textbooks you can borrow from the library.

Another thing teachers note is that learners need practice in listening comprehension:

Language acquisition requires both input and output, so there must be a situation where the learner can practice productive skills and receive feedback.

In addition, teachers encourage learners to choose phrases and conversational sentences that suit their individual needs, as courses often focus on the basics. This requires learners to put in extra effort to practice and expand beyond the classroom. Overall, these responses emphasize the importance of being proactive, personalizing learning methods and making the most of materials to achieve high efficiency in learning Finnish.

c. Summary of feedback

There was a wide range of feedback on the Finnish language learning path prototype. Both learners appreciated the variety and ease of use of the suggested learning resources, but they still struggled with listening skills and lacked opportunities to practice speaking. This was also noted by the teachers. The new Finnish language learning path was also commented to have significantly improved vocabulary memorization through regular daily learning combined with the use of sticky notes and videos, and language learning applications.

However, there was an opinion that speaking practice needed guidance and direction. The role of the community was very important at this time, but it seemed that both learners had difficulty accessing language groups.

Teachers, from a professional perspective, emphasized the importance of personalizing the learning path, combining vocabulary learning with practical practice through specific contextual examples, while encouraging learners to maintain initiative, take advantage of diverse materials and practice output skills to achieve the highest efficiency.

Feedback all indicated that, although the new learning path has brought positive results, adjustments are needed to better meet the individual needs and schedules of each learner.

5.4 Deliver

Deliver is the final stage of the process of developing an effective Finnish language learning path for adult immigrants. It aims to realize and implement the solutions developed in the Develop stage. After finalizing the learning path with a combination of theory, practical feedback, and testing from learners, this stage focuses on how to put the path into practical application. Deliver is not only about implementation but also about testing the success of

the path through effective measurement and evaluation tools. This is the time to transform the ideas from the pilot into concrete, sustainable, and long-term results, ensuring that the learning path is widely adopted and brings practical benefits to learners in the immigrant community in Finland.

5.4.1 Detail the learning path

5.4.1.1 Learning path according to level A1, A2

After receiving feedback from learners and teachers, a systematic and flexible learning path is created, suitable for adult immigrants who want to combine their studies with work and daily life. The path aims to strongly develop Listening and Speaking skills in the early stages (level A1) so that they can be applied in practice soon, helping learners to be interested in learning as well as creating a solid foundation before moving on to more complex skills at level A2.

Specifically, for level A1, the study time: Total 120–150 hours, lasting 3–4 months, with a duration of 45–60 minutes per day, 5–6 days/week. The study time at home needs to increase by 10-15 minutes per day if the learner attends a Finnish language class.

Learning activities	Duration	Learning content
Listening	25 minutes	Videos with Finnish and English subtitles with very simple contents such as Youtube Easy Finnish, Kielinuppu and Kielikoulu Yle.
Speaking	15 – 20 minutes	Practice basic conversational phrases like "Missä asut?" (Where do you live?).
Reading and Write	5 – 10 minutes	Read the vocabulary list and write simple sentences like "Minä olen Maria." (I am Maria.). Then send it to your teacher or use DeepL to check their grammars.

For level A2, the course focuses on developing all four skills of Listening, Speaking, Reading and Writing equally. Listening time is reduced to 15–20 minutes, while Reading and Writing time is increased to consolidate text comprehension and practice expressing ideas. Accordingly, the total study time is 150–180 hours, lasting 4–5 months, with a duration of 45–60 minutes per day, 5–6 days/week. The study time at home should be increased to 10 - 15 minutes per day if the learner attends a Finnish language class.

Learning activities	Duration	Learning content
Listening	15 – 20 minutes	Listen to more complex topics like culture, technology.
Speaking	10 – 15 minutes	Practice conversations about familiar topics such as work and hobbies.
Reading and Write	20 – 25 minutes	Read short articles on Yle Areena or Suomen Mestari 2; Write paragraphs describing personal plans or simple emails. Then send it to your teacher or use DeepL to check their grammars.

		Learning grammar through textbook Suomen Mestari, Uusi Kielemme.
--	--	--

To keep things fresh, learners can use language learning apps that incorporate gamification and rankings to avoid boredom and make learning more fun, along with listening to podcasts and joining language exchange groups once they feel they have a certain vocabulary.

5.4.1.2 Weekly Checklist

Learners self-monitor their learning progress through checklists to ensure development in all four skills.

Skills	Monitoring criteria	Minimum duration (weeks)
Listening	Number of podcasts/videos listened to and main content understood.	1.5 – 2 hours
Speaking	Number of times practicing conversational sentences, level of confidence in using them.	1–1.5 hours
Reading and Write	Number of paragraphs written, reading comprehension completed.	2–2.5 hours

5.4.2 Plan to maintain and expand the learning path

To ensure the long-term effectiveness of this learning path, a maintenance and expansion plan is built with the goal of not only supporting learners to achieve higher levels but also expanding the scope of application to a wider audience.

In the long term, the path needs to continue to develop to meet the learning needs at advanced levels such as B1 and B2. These levels will focus on using more specialized language for work, including reading complex documents, writing reports, and participating in in-depth discussions. The path content will be updated regularly based on real feedback from learners and teachers. This feedback helps to adjust learning activities, add new resources, and personalize the path according to each individual's needs and goals, thereby maintaining learning motivation throughout the process.

In addition, consider adjusting the path to suit different groups of learners. For example, young people aged 18-30, with a faster ability to acquire the language, may need a shorter learning path, focusing on everyday communication situations and social integration. Or for those who are single and do not have a full-time job, the learning time can be increased. For learners who already have a foundation in Finnish, the path can focus on improving advanced skills such as essay writing or professional communication. Flexibility in the design of the path will help ensure that the learning content is suitable for a wide range of audiences, thereby expanding the scope of application and improving the effectiveness of supporting Finnish language learning in immigrant communities.

5.4.3 Communication and distribution

In order for the Finnish language learning roadmap to reach a large number of learners and be highly effective, a well-developed and consistent communication strategy is needed in both form and method. Promotional materials include videos introducing the roadmap, and infographics that visually illustrate the learning steps. These materials not only help

learners understand the content and benefits of the roadmap, but also arouse interest and motivation to participate.

At the same time, cooperation with government agencies such as the TE Office and immigrant communities will be an integral part of the communication strategy, playing an important role in disseminating information about this roadmap to the right target audience.

In the broad implementation plan, close coordination with Finnish language training centers, employers, business associations, and immigrant communities will be the foundation for putting the roadmap into practice. Training centers can integrate this pathway into their curricula, while employers and business associations can support migrant workers in improving their language skills through courses that are relevant to the workplace.

In addition, with government support, immigrant communities can organize online workshops, study groups, language clubs or classes with teachers or tutors who are highly trained in the Natural Approach teaching method to enhance implementation effectiveness. The schedules of these activities are made public on municipal official media channels to help those in need easily find and access information. This not only ensures continuity in the learning process but also creates close-knit learning communities, helping learners feel supported and encouraged in their journey to conquer Finnish.

6 Conclusion

This study aimed to develop effective elementary Finnish learning paths for adult immigrants, using a Service Design approach to take a holistic view to address the language challenges they face. To this end, the study applied the 4-step process in the Double Diamond model to analyze learners' needs and behaviors. Tools such as surveys, interviews, Personas, Empathy Map and Journey Map were used to collect real-world data, not only identifying the challenges the research subjects faced but also analyzing in depth the factors that affect language learning. The study results identified the main groups of factors that influence adult immigrants' Finnish learning, especially emphasizing the importance of Personal Motivation and Social Factors that affect learning effectiveness. Based on the collected and analyzed data, this study proposed solutions to create flexible and optimal language learning paths that meet the characteristics and needs of the target group, helping to improve learning efficiency as well as support the social integration process. These solutions thereby contribute to reducing pressure on the Finnish social and labor systems, while opening up the potential for widespread application in countries with similar circumstances.

Despite the significant achievements, this study still has some limitations that need to be considered. First, the number of respondents participating in the survey, although sufficient to draw some initial conclusions, may not be large enough to represent the entire immigrant population and ethnic group in Finland. This may limit the generalizability of the research results. In addition, the testing period lasted only two weeks, which was not enough for learners to fully experience the proposed methods and tools. This reduces the ability to comprehensively evaluate the effectiveness of the learning path. In addition, the study cannot fully cover external factors such as cultural differences, social impacts, and systemic policies that may affect the Finnish language learning process. Finally, although

the proposed solutions have proven to be feasible, further testing with other immigrant groups is needed to ensure that the path can be widely applied and bring optimal effectiveness in many different contexts.

This topic also opens up many other research directions in the future to continue to improve the effectiveness of Finnish language learning for immigrants. The first is to further study the role of AI in language learning, especially the ability to personalize the learning path. Along with that, the prospect of new technologies such as VR, AR brings new forms of learning that are more convenient and intuitive. Finally, the study explores the influence of cultural differences and the learner's native language system on Finnish. This will help clarify the specific challenges that learners face, thereby providing more optimal solutions, suitable for target groups with diverse linguistic and cultural characteristics.

In summary, the study "Designing Effective Learning Paths for Elementary Finnish for Adult Immigrants" has many practical implications, not only in terms of academia but also in creating of positive impacts on communities and the labor market. Thereby the ultimate goal, as its consequence, is to build a more diverse, inclusive, and sustainable society.

7 References

(u.d.).

Aki, K., Antti, K., Aino, K., & Tarmo, V. (2023). *The Number of Employed Immigrants Has Increased in Finland*. ETLA.

Bailey, F., & Fahad, A. K. (2021). Krashen Revisited: Case Study of the Role of Input, Motivation and Identity in Second Language Learning. *Arab World English Journal*, 540-550.

Becker, G. (1993). *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education*. 3rd Edition. Chicago: University of Chicago Press.

Bhattacharjee, A. (2012). *Social science research: Principles, methods and practices (Revised Edition)*. University of Southern Queensland.

Bicchieri, C., Muldoon, R., & Sontuoso, A. (2018). *Social Norms*.

Bryman, A. (2016). *Social Research Methods (5th ed.)*. Oxford University Press.

Caldwell-Harris, C. L. (2019). Language Learning Following Immigration: Modeling Choices and Challenges. *Human Simulation: Perspectives, Insights, and Applications*, 95-123.

Clatworthy, S. (2017). *Service design thinking*. Cheltenham: Edward Elgar.

Daley, A., Hu, M., & Warman, C. (2019). *Language proficiency and immigrants' economic integration*. IZA World of Labor.

Dam, R. F., & Siang, T. Y. (2024). *Personas – A Simple Introduction*. Hämtat från Interaction Design Foundation: <https://www.interaction-design.org/literature/article/personas-why-and-how-you-should-use-them>

- Education International. (den 22 August 2017). *Finland: government increases support for education of immigrant students and teachers*. Hämtat från <https://www.ei-ie.org/en/item/22066:finland-government-increases-support-for-education-of-immigrant-students-and-teachers>
- Europe Council. (u.d.). *Common European Framework of Reference for Languages skills*. Hämtat från euopass: <https://euopass.europa.eu/en/common-european-framework-reference-language-skills>
- European Union. (2018). *GDPR.eu*. Hämtat från General Data Protection Regulation (GDPR): <https://gdpr.eu/tag/gdpr/>
- Field, J. (2008). *Listening in the Language Classroom*. Cambridge University Press.
- Finnish Adult Education Association. (2022). *Roadmap for popular adult education in Finland 2030*. Hämtat från Peda: <https://peda.net/yhdistykset/vst/vst/strategia/strategia/faea-roadmap-for-popular-adult-education-2030-final.pdf:file/download/b1387421bfef6aa483798472456688d450b62904/FAEA%20-%20Roadmap%20for%20Popular%20Adult%20Education%202030%20final.pdf>
- Finnish National Agency for Education. (u.d.). *Kehittyvän kielitaidon tasojen kuvausasteikko*. Hämtat från Oph.fi: <https://www.oph.fi/fi/koulutus-ja-tutkinnot/kehittyvan-kielitaidon-tasojen-kuvausasteikko>
- Gray, D. B., & Macanufo, J. (2010). *Gamestorming: A Playbook for Innovators, Rulebreakers, and Changemakers*. O'Reilly Media.
- Jiang, N., & Renema, J. A. (2021). Immigrant–Native Disparities in Happiness among Middle-Aged and Older Adults in Western European Countries: The Moderating Role of Social Capital. *Journal of Aging and Health*, ss. 427–441.
- Johnson, G., Whittington, R., & Scholes, K. (2017). *Exploring Strategy*. Pearson.
- Kabri, K., & Budiyanto, B. (2023). The Role Of Synchronous And Asynchronous Multimedia In Efl Listening Comprehension. *NextGen Education Review Journal*.
- Kenny, D. (2021). *FSI language difficulty*. Hämtat från FSI Language Courses: <https://www.fsi-language-courses.org/blog/fsi-language-difficulty/>
- Khajavy, G. H., Makiabadi, H., & S. A. (2019). The Role of Psychological Capital in Language. *Eurasian Journal of Applied Linguistics*, 5(3), 495–513.
- King, D., & Ritchie, S. M. (den 23 11 2011). Springer International Handbooks of Education. *Learning Science Through Real-World Contexts*, ss. 69-79.
- Krashen, S. (2020). Optimal Input. *Language Magazine* 19(3), 29-30.
- Krashen, S. D., & Terrell, T. D. (1998). *The Natural Approach Language Acquisition in the classroom*. Prentice Hall Europe.

- Lang, J. (2022). Employment effects of language training for unemployed immigrants. *Springer Link*, 719–754.
- Merriam, S. B., & Bierema, L. L. (2014). *Adult learning : linking theory and practice*. San Francisco: Jossey-Bass.
- Milton, J. (2009). *Measuring Second Language Vocabulary Acquisition*. Multilingual Matters.
- Ministry of Economic Affairs and Employment. (den 29 11 2023). *Labour Force Barometer: Most of Finland suffers from labour market mismatch*. Hämtat från Valtioneuvosto: <https://valtioneuvosto.fi/en/-//1410877/labour-force-barometer-most-of-finland-suffers-from-labour-market-mismatch>
- Ministry of Economic Affairs and Employment. (den 15 5 2024). *Labour market forecast: A turn for the better can be expected towards the end of 2024*. Hämtat från Ministry of Economic Affairs and Employment of Finland: <https://tem.fi/en/-/labour-market-forecast-a-turn-for-the-better-can-be-expected-towards-the-end-of-2024>
- Morrison, J. (2016). *PESTEL Analysis*. Oxford University Press.
- Nichols, S., & Virsinger, P. (2021). *Always standing on the fragile side of ice”: Immigrants’ integration into the labor market in Finland*. TEK.
- Nilsson, E., & Kristenson, M. (2010). Psychological factors related to physical, social, and mental dimensions of the SF-36: a population-based study of middle-aged women and men. *Patient Related Outcome Measures*, ss. 153-162.
- Pirttimaa, L. (u.d.). *Tutorial for the natural method of language learning*. Hämtat från Learn Finnish: <https://www.learnfinnished.com/view/courses/finnish-me-special-offer/1886122-start-here/6031309-tutorial-for-the-natural-method-of-language-learning>
- Polaine, A., Løvlie, L., & Reason, B. (2013). *Service Design: From Insight to Implementation*. O'Reilly Media.
- Qasserras, L. (2023). Systematic Review of Communicative Language Teaching (CLT) in Language Education: A Balanced Perspective. *European Journal of Education and Pedagogy*, 17–23.
- Roller, M. R. (2020). The In-depth Interview Method. *Research Design Review*.
- Ryan, R. M., & Deci, E. L. (2017). *Self-Determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness*. New York: Guilford Press.
- Samrani, G., Lundquist, A., & Pudas, S. (2022). Healthy Middle-Aged Adults Have Preserved Mnemonic Discrimination and Integration, While Showing No Detectable Memory Benefits. *Frontiers in Psychology*.
- Santrock, J. W. (2018). *Life-Span Development (17th Edition)*. New York: McGraw-Hill Education.
- Schneider, J., & Stickdorn, M. (2011). *This is service design thinking : basics - tools - cases*. Hoboken, N.J.

- Singleton, D., & Leśniewska, J. (2023). The Role of Age in Second Language Development. *Language Teaching Research Quarterly (Volume 39)*, 359-371.
- Sommet, N., Sheldon, K., & Elliot, A. J. (November 2021). Achievement Goal Complexes: Integrating the “What” and the “Why” of Achievement Motivation. *Handbook of Personality: Theory and Research (4th Edition)*, ss. 104–121.
- Statistics Finland. (den 27 10 2024). *Finland's preliminary population figure was 5,628,931 at the end of September 2024*. Hämtat från Statistics Finland: <https://stat.fi/en/publication/clmk9ryz23i460bw19ta41tdd>
- Statistics Finland. (den 24 5 2024). *Net immigration nearly 58,000 persons in 2023*. Hämtat från Statistics Finland: <https://stat.fi/en/publication/cln4jbq3b6u210avtv0wphb8k>
- The Finnish Adult Education Centre. (u.d.). *For immigrants*. Hämtat från The Finnish Adult Education Centre: <https://tyovaenopisto.hel.fi/en/student-services/for-immigrants/>
- Valentini, A. (den 8 2 2022). *Council Resolution on a New European Agenda for Adult Learning 2021-2030*. Hämtat från European Commission: <https://epale.ec.europa.eu/en/blog/council-resolution-new-european-agenda-adult-learning-2021-2030>
- Vandergrift, L., & Goh, C. C. (2012). *Teaching and Learning Second Language Listening: Metacognition in Action*. New York: Routledge.
- Xiao, Q., & Wang, J. (2024). DRL-SRS: A Deep Reinforcement Learning Approach for Optimizing Spaced Repetition Scheduling. *Applied Science*.
- Yan, Z. (2020). Self-assessment in the process of self-regulated learning and its relationship with academic achievement. *Assessment & Evaluation in Higher Education*, 224–238.

8 Appendix

Appendix 1: Questionnaire for Finnish Learners

Link: <https://forms.gle/omL5byxFGrgf6gpJ9>

Your information

You gender (Male, Female or Prefer not to say)

Your age (Under 40, 40 – 65 or Over 65)

Part 1: Motivation

1. How long have you been learning Finnish? (Answer by text)
2. Do you feel like you are making progress and becoming more proficient in learning Finnish? (Scale 4 from Not at all to Very progress)
3. Are you confident that you will achieve your goals in learning Finnish? (Scale 4 from Totally unconfident to Totally confident)
4. Do you often have the opportunity to use Finnish when communicating with the surrounding community? (Scale 4 from Not at all to Very frequently)
5. How integrated do you feel when you are among people who speak Finnish? (Scale 4 from Out of place to Very comfortable)
6. What is the main reason that motivates you to learn Finnish? (Interest in and desire to understand Finnish culture, Job requirements or desire for promotion, Desire to integrate into the local community, Encouragement from family or relatives or Other)
7. Do you find learning Finnish a pleasure, or just a responsibility? (Absolutely a responsibility, More than a responsibility, Both equally, More than a pleasure, Absolutely a pleasure)
8. Do you find that learning Finnish helps you develop as a person or gives meaning to your life? (Scale 4 from Not at all to A lot)
9. What level of autonomy did you feel when deciding to learn Finnish? (Scale 4 from No autonomy at all to Full autonomy)

Part 2: Perception and Experience

10. Before you started learning Finnish, had you learned any other foreign languages? (Yes or No)
11. Did you find learning Finnish easier because of your previous language learning experiences? (Scale 4 from Not easy at all to Very easy)
12. Do you feel you have a good grasp and understanding of effective methods for learning Finnish? (Scale 4 from Not at all to Definitely)

Part 3: Resources

13. Do you use language learning technologies or apps to support your Finnish learning? (Yes or No)
14. If so, what kind of technology or apps are you using to learn Finnish? (Answer by text)

15. Are the language learning resources (such as books, online materials, apps) adequate for your needs and easily accessible? (Scale 4 from Lacking & not easily accessible to Extremely diverse and accessible)

16. Do you have enough time to learn Finnish every week? (Scale 4 from Very limited time to Plentiful time)

17. If you had to spend money to learn Finnish (such as paid apps, courses), would that make you hesitate? (Scale 4 from Not at all to Very much)

18. Does your current health condition (physical, mental & absorption capacity) affect your Finnish language learning? (Scale 4 from Not at all to Very much)

Part 4: The family factor

19. Do you live in Finland alone or with family? (Alone or With family)

20. Does your family encourage you to practice Finnish every day? (Scale 4 from Not encourage at all to Highly encourage)

21. Do family responsibilities (e.g. housework, childcare, earning money) make it difficult for you to find time to learn Finnish? Please describe. (Answer by text)

22. Do family members join you in language learning activities, such as taking courses or practicing with you? How do you feel about that? (Answer by text)

23. In general, how do you find your family supportive in learning Finnish? (Scale 4 from No support at all to Support me as much as possible)

24. What do you think about the role of your family in your learning Finnish? (Answer by text)

Part 5: The community factor

25. Do you have any friends or colleagues who study or regularly use Finnish? (Yes or No)

26. Do you find that having friends or colleagues who are learning or using Finnish helps motivate you? (Scale 4 from Not motivated to Very motivated)

27. Are you involved in any Finnish language clubs or groups? (Yes or No & deny the question 28, 29)

28. If so, do you feel these groups provide opportunities to practice the language naturally and regularly? (Scale 4 from Ineffective to Very effective)

29. Do you feel welcomed and accepted when participating in Finnish language learning groups? (Scale 4 from Not at all to Very positively)

30. How important is community to your language learning success? (Scale 4 from No impact to Extremely important)

Part 6: Tutor factor

31. Have you ever taken or are you taking a Finnish course with a tutor/teacher? (Yes or No and deny following questions 31, 32, 33, 34)

32. Do you feel that the teacher's teaching method is suitable for your learning needs? (Scale 4 from Not at all suitable to Very suitable)

33. Does the frequency of interaction or communication with the teacher meet your learning needs? (Scale 4 from Not at all suitable to Very suitable)

34. Does the teacher explain the knowledge clearly and easily during the learning process? (Scale 4 from Very difficult to understand to Very easy to understand)

35. Do you feel that the teacher communicates effectively and helps you master the knowledge? (Scale 4 from Not effective to Very effective)

36. Do you think it is necessary to have a tutor/teacher to guide you to learn Finnish effectively? (Yes or No)

Part 7: Government factor

37. Have you ever heard of or participated in any government-sponsored or government-organized Finnish language learning programmes? (Yes or No)

38. If yes, do you feel that these programmes meet your language learning needs? (Scale 4 from Not at all to Very well)

39. Do you think these support programs need improvement or should there be other ones for immigrants? Please describe in detail. (Answer by text)

Keep in touch (Not compulsory)

Your email

Your whatsapp

Appendix 2: List of learning resources suitable for elementary learners

Classification	Resource	Description
Learn vocabulary, phrases, short sentences	Uusi Kielemme	Websites providing self-study materials for Finnish: Grammar: https://uusikielemme.fi/finnish-grammar Vocabulary and Semantics by topic: https://uusikielemme.fi/finnish-vocabulary
	Kielikoulu Yle	https://kielikoulu.yle.fi/ The video library has many features according to the Natural Approach: Filter videos according to many criteria (difficulty, length and categories) to suit the learner's level and interests Finnish subtitles with word by word explanations Color-coded difficulty level (based on the learner's level) of vocabulary. Click on any word to see the meaning and variations of that word Accompanying exercises

	Dashboard to track vocabulary learning progress etc.etc.
App Quizlet	Flashcard learning format Create your own vocabulary collection or rely on available courses by searching for keywords such as: suomea, finnish, mestari,... Learning styles: Pairing (words with pictures), multiple choice, etc.
App FunEasyLearn	Learning content: Alphabet, Words & Sentences. Each category is divided into many topics and has many different learning forms. Can actively adjust the learning rhythm and reading speed. Use illustrations to create associations and make it easy to remember.
Drops	Use illustrations to visually explain the meaning of vocabulary. The app uses many different forms of connecting letters, combining word clusters, matching words with illustrations, asking for context that matches the usage of the word, etc. to help learners memorize words more easily.
Duolingo	The most popular language learning app, learning vocabulary by applying the method of integrating games (Gamification) and ranking to create gentle competition to motivate learners to learn.
Lingohut.com	https://www.lingohut.com/ Learners choose native language and choose the language they want to learn. Divided into 125 common life topics such as Meeting someone, In the pool, Beach activities, Job Interview, etc. Learners can choose which topic they want to learn first.
App Brainscape	Many flashcard sets by topic are available Repeat learning mode, helping to optimize the process of memorizing information
App WordDive	A paid app. Learn vocabulary = listening to pronunciation combined with illustrations When learning how to put sentences together, there is a grammar explanation

	Youtube Finnish With Anna	https://www.Youtube.com/@FinnishWithAnna/videos with voiceover
	Digitaldialects .com	https://www.digitaldialects.com/Finnish.htm Learn vocabulary by topics with illustrations through the form of word guessing games and flashcards.
	Learn Finnish with FinnishPod101 .com	https://www.Youtube.com/@FinnishPod101/videos Learn vocabulary by topic with videos and illustrations and practice listening to short sentences
Listening development	Kielikoulu Yle	https://kielikoulu.yle.fi/ The video library has many features according to the Natural Approach: Filter videos according to many criteria (difficulty, length and categories) to suit the learner's level and interests Finnish subtitles with word by word explanations Color-coded difficulty level (based on the learner's level) of vocabulary. Click on any word to see the meaning and variations of that word Accompanying exercises Dashboard to track vocabulary learning progress etc.
	Opiskelemaan suomea-Puhuminen	Podcast channel on Spotify 1-minute audio talks are read by children's voices at a slow speed and with very clear pronunciation. Common topics such as Writing an email to schedule a doctor's appointment, booking a hotel room, inviting friends to join a hobby, inviting friends to watch a movie, etc. Audio titles in English so that listeners know the overall content in advance.
	Finnish with Eemili Podcast:	Podcast channel on Spotify Includes audios that are 12 - 20 minutes long with a male voice speaking clearly at normal speed. Titles and introductions are bilingual in Finnish and English so that people can grasp the overall content of the audio. Diverse topics mainly about culture, history and science - technology such as Nokia History, Sauna, etc. In parallel, users can follow the podcast on Youtube with Finnish subtitles and can be translated into English using

		Youtube's auto-translate feature: https://www.Youtube.com/@FinnishwithEemeli/videos
	Kielinuppu	https://www.Youtube.com/@Kielinuppu/videos Learn Finnish through children's songs of about 2 - 3 minutes with illustrations, simple content with repetition.
	Areena Yle	https://areena.yle.fi/tv/ohjelmat/57-6AXjXXPdI Includes 1 - 20 minute conversation videos classified by fields History, Science, Nature, News for Children, etc.
	Easy Finnish	https://www.Youtube.com/@EasyFinnish/videos Applying the Total Physical Response method to explain the content of the conversation by acting out the action or drawing illustrations.
	Finnished	https://www.Youtube.com/@finnished/videos Natural Approach app, including short videos of 3-5 minutes talking about familiar topics in Finnish culture.
	Learn Finnish with FinnishPod101.com	https://www.Youtube.com/@FinnishPod101/videos Learn vocabulary by topic with videos and illustrations and practice listening to short sentences
	Yle Areena	https://www.Youtube.com/@YleAreena/videos Including videos of conversations in specific communication situations. Short videos length from 1-5 minutes
Other	Kielibuusti	https://www.kielibuusti.fi/ Providing Finnish learning resources Helping learners plan & set learning goals, as well as orienting their learning path
	DeepL	https://www.deepl.com/en/translator Translation tool using AI.

Appendix 3: List of Figures and Tables

Figure 1 Double Diamond Design Process for Adult Immigrants Learning Finnish

Figure 2 Statistics of Finnish immigration from 1990 – 2023. Source: Statistics Finland, migration

Figure 3 The model "Factors Influencing Finnish Language Learning of Adult Immigrants"

Figure 4 Responder Age

Figure 5 Respondent gender

Figure 6 Experience with other foreign languages before learning Finnish

Figure 7 Living arrangement in Finland
Figure 8 Main reason for learning Finnish
Figure 9 Building Personas Type 1: Housewife
Figure 10 Journey Map of Personas Type 1
Figure 11 Building Personas Type 2: A Young Male with Full-Time Job
Figure 12 Journey Map of Personas Type 2
Figure 13 The Empathy Map of Interviewee 1
Figure 14 The Empathy Map of Interviewee 2
Figure 15 The Empathy Map of Interviewee 3
Figure 16 The Empathy Map of Interviewee 4
Figure 17 The Experimental Process for an Effective Elementary Finnish Language Learning Path

Table 1 Correspondence between language development stages and CEFR language levels. (Krashen & Terrell, 1998) & (Finnish National Agency for Education, n.d.)

Table 2 Language level criteria A1 and A2. (Europe Council, n.d.)