The immigrant integration online training program in Finland

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***Abstract* - Finnish integration training for immigrants aims to improve social inclusion into Finnish society and to promote employment. The first fully online integration training and the still ongoing program has conducted since 2015. During the training activities, the education provider has collected varieties of data from 2015 to 2019. Utilizing design science theory, authors demonstrate that integration training succeeds online at least as well as in the classroom when the design is implemented in a customer-oriented way lingually, pedagogically, and technically accessible. When teachers and the group learn collaboratively, and with ensured interaction, the training supports integration and finding career pathways. This study describes frugal and inclusive educational innovation. One main finding is that the teacher's ability to facilitate learning situations in distance-based synchronous e-learning differs from classroom instruction and requires detailed planning in advance. The training needs to prepare immigrants for the requirement of Finnish society. The desires of the students shape the training from the beginning.**

Keywords – e-learning; immigrant integration; distance learning; design science; education innovation

I. INTRODUCTION

A. Background of the design research

This study is design research of a fully online immigrant integration training program, which is the first in Finland, and one of the first globally, which is designed from beginner level and organized fulltime. This design is the first Finnish fully online integration training program aimed at training immigrants in Finland with language skills and promoting their occupational skills, and career planning. The design was conducted in Arffman Finland Ltd. (formerly Arffman Consulting Oy), an immigrant training company in Finland, by pedagogical coordinator Marja Ahola with team members Raisa Haikala and Ulla-Riitta Mikkonen. Arffman Ltd. provides online integration training since 2015 in Finland. This research utilizes data collected from 2015-2019 from 329 participants, who started and finished their integration training before July 2019. The findings suggest that the implementation of online integration training is as well as classroom-based integration training. The sample is large enough to exclude the possibility that participants have a great study or digital competence before selected for online training. Students' background and education varied significantly, with some participants with low literacy skills and low digital literacy. In the developed online training model, interaction is on the focus. Every day at the training begins with the synchronous guidance of groups to ensure that each participant can learn. Gradually, as the teacher learns more about the student's desire and competences, the learning and guidance process is personally tailored.

The factors of frugality guided the design of the training. The curriculum is broad, as are the target outcomes of integration training and inclusion [1][2]. The design of the implementation took place during the training and rested on the requirements of students. This approach is ideal for learners who do not have a target language proficiency or whose digital competence is low.

The research questions of this study are as follows:

1. How to design fully online integration training based on the Finnish Act on the Integration of Immigrants?
2. How well does the fully online integration training succeed in terms of participants' language level?
3. How well does the fully online integration training succeed in terms of participants' employment?
4. How well does the fully online integration training succeed in terms of participants' career pathways?

B. Integration Training in FINLAND

In 2019, 4.52% of the people living in Finland had different citizenship than Finnish. The past 20 years showed an increase in the percentage of immigrants in Finland; however, these numbers remain one of the lowest compared to other EU countries [3][4][5].

Out of the majority of immigrants coming to Finland, 21.8% came on a family basis, 8.4% as refugees or asylum seekers, 31.2% of the people seeking residence permits came to study or non-seasonal work, and 38.6% for other reasons [6][3]. The unemployed immigrants have a right to study in government-paying integration training. Employed or studying immigrants are omitted from intensive language learning, as no permanent body exists to support their studies.

Less than 35% of participants who take integration training in Finland reach the target language level B1.1 [7], which considered to be the threshold level in the European Framework of Languages [8] and also one of the requirements for applying for Finnish citizenship [9].

Finland is a country with a huge area and long distances. The population density in 2016 was 18 inhabitants/km² [10]. At the same time, Finland is a technology-based country with speedy and reliable

internet connections. In 2018, 97% of homes could get a stable and quick internet connection throughout the country. 92% of Finnish inhabitants use the internet; therefore, the digital competence of citizens is crucial for the Finnish economy. Information technology (IT) workers constitute a major and rapidly growing share of the overall Finnish workforce. Public services are mostly digital, and the government invests considerable effort into citizens' digital skills [11][12][13].

The funder of interaction training, the Centre for Economic Development, Transport and Environment (ELY) monitors the learning outcomes of these integration training. The continuity of training depends on the achievement of objectives. The integration training of immigrants is organized in Finland as labor policy training within the Integration Act framework in all major municipalities. Each unemployed immigrant arriving in Finland receives an integration plan. Unemployed immigrants have the right and obligation to participate in free integration training, which lasts from six to twelve months or participate in other activities to support integration or employment during an integration period of three years [14].

The training aims to promote the integration and employment of immigrants and to support their inclusion into Finnish society. The training is full-time. In 2015, the length of the study day was seven hours. New models of integration training were introduced in 2017. The length of the study day changed to five hours in both classroom and distance-based integration training and diversified implementations.

With the planning of online integration training, both the Finnish Ministry of Labor and the funder were interested in whether integration training could start at the beginner level with low digital competence. The premise of the training is that participation is straightforward and accessible with the three dimensions of accessibility [15] [16], and participation is achievable for everyone, despite language proficiency or digital competence [17][18].

During the implementation of this research, language skills and learning requirements differentiated them, bringing together peers from different regions. Today, almost everyone, also those with low literacy, has a smartphone, and they can use it to stay connected to their networks by instant messaging, voice messaging, video calls, and email. The training is open to all types of learners. A student may have low literacy and low digital competence, but almost everyone has a smartphone and instant messaging applications, which they can use from the beginning of the training.

II. RELATED RESEARCH

Digital competence is part of citizenship [19]. Digital habits are the key to e-learning. However, many have low digital literacy, such as searching for jobs and other opportunities online, even though job search today is almost entirely online, as was shown in a research conducted in South Africa [20].

As was shown in a comparative study of Spanish adult students' attitudes toward ICT in the classroom, blended and distance language learning modes, the students, understand their digital competence. It can be utilized in course planning. E-learning should be designed based on an individual's desire and competence [21].

In Lagier's research [22], non-Western learners preferred group activities, interaction, relationship building rather than competition. Those who studied actively in the group received higher test scores. Research on Educational technology in transnational higher education in South East Asia showed the cultural politics of flexible learning [23]. Online learning is suitable for all types of learners but requires co-design with students depending on their cultural barriers conditions and competences.

Scaffolding in learning is defined to mean support, the process of support, interaction in a zone of proximal development (ZPD), or cooperation between the student and instructor [24]. Scaffolding facilitates students to achieve their goals in learning. Responsibility is shifting gradually to students as they develop their understanding and skills [25]. Students achieved communicative competence in a social context and through interaction [26] [27].

In Flanders, Dutch L2 teaching has shown that e-learning is well suited for low-literacy learners. The findings obtained challenge the previous notion that e-learning would only be suitable for learners with a higher level of education [18].

According to De Paepe [18], the main constraints in the design and implementation of an online curriculum are negative beliefs about the effectiveness of online language learning, costs, lack of technical and pedagogical support, and lack of teachers' digital skills. The most critical success factors were course design, technical, financial, and pedagogical support, development of learners 'competencies and skills, changes in attitudes, and development of guidance designers [18].

As was shown in the research of learner's perceptions from a Turkish distance language education context and sustainability in lifelong learning, students believe they learn language skills in the distance program. When productive skills as spoken interaction and writing in various genres are concerned, they believe that they cannot achieve these without the existence and guidance of a teacher explicitly teaching in a face to face context. On the other hand, students give good feedback on synchronized e-learning, where they meet with the group and the teacher, go through things together, have the opportunity to ask questions and discuss. Real-time interaction guided by a language teacher has proven to be a very functional solution to solve particular grammar and vocabulary issues, as well as to practice accurate pronunciation and spelling problems using text chatting [28].

A study of L2 e-learning in Portugal mentions that bringing together students of the same level from different schools is a benefit of e-learning [29].

High-quality online training requires planning, as also observed in other researches [30][21][17]. Topics and the learning functions are defined and distributed to teachers

according to the factors of linguistic and pedagogical accessibility [15][16] has also shown that lingual accessibility plays a significant role in e-learning [16].

Design is an innovation in inclusive education [23] [31]. Design is a frugal innovation [32] formed by linguistic, pedagogical, and technical implementation. Also, that e-learning does not require expensive investment or licensing from the education provider, and implementation is sustainable [16] [21] and equitable [21] as it requires high quality and effective interactive, inclusive education into the home of students economically and stably.

III. RESEARCH DESIGN

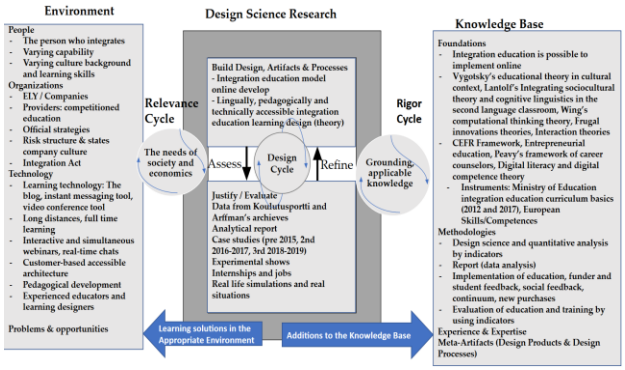

Figure 1: Design science cycles and significant artifacts in the Finnish Online Integration Training 2015-2019, source: M. Ahola, 2020

This research follows the design science research (DSR) method. DSR studies support a pragmatic research paradigm that calls for the creation of innovative artifacts to solve real-world problems and enhance educational processes [32]. (See Figure 1): The process divided into three cycles: The Relevance Cycle, the Design Cycle, and the Rigor Cycle.

Relevance Cycle inputs requirements from the contextual environment into the research and introduces the research artifacts into environmental field testing [32]. In this research, the environment is the requirements of Finnish society and economy and consists of three primary artifacts. 1. The people who are integrating with varying capability, cultural background, and learning skills, 2. the organizations: The conditions of the funder, companies, competition training, official strategies, risk structure, state's company culture, and Integration Act, 3. Technological solutions: learning technology, e.g., the blog, instant messaging and video conference tools, long distances and full-time learning, interactive and simultaneous webinars, real-time chats, customer-based available architecture, pedagogical development, experienced educators and learning designers.

The Relevance Cycle outputs the main problem to the Design Cycle. The Design Cycle supports a research activity for the construction and evaluation of design artifacts and processes. This research developed a fully online integration training as an ongoing process. The evaluation and development of the design followed a lingually, pedagogically, and technically accessible learning design. The evaluation is justified and grounded on feedback which was collected electrically from students during online integration training, and at the end of the training. Data was collected by employment services, which analyze and made statistics for training and influences on the new purchases.

In regards to immigrants who participated in the program during the years 2015-2019, 64% were female, while 36% were male. Students live in a wide area. Some moved during the training. In most cases, students were allowed to continue their integration course despite relocating. The students lived in 130 municipalities.

42% of students were born in the 1980s, so the majority of students were in their thirties during the training. Some 21% of the participants were born in the 1990s, while some 20% were born in the 1970s.

In regards to language, 24% of the students spoke Russian as their mother tongue. The second most common mother tongue was Arabic, which was spoken by 15% of participants. The third most common language was Thai, spoken by 11% of participants. Some 7% of the participants were native English speakers. 5% spoke Spanish, 3% Chinese, and 3% spoke the Austronesian language of Tagalog. The rest 32% spoke other languages. In total, the students had 48 different mother tongues.

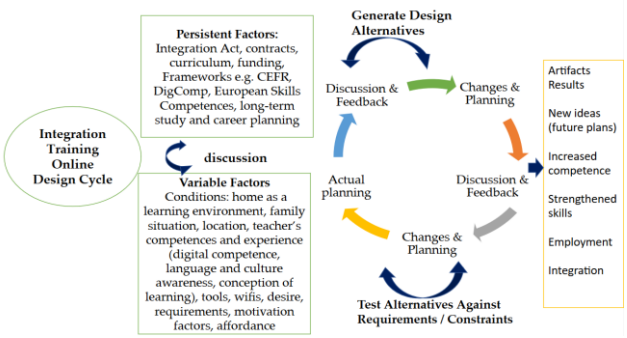

Figure 2: Description of making Immigrant Integration Training Online design (persistent and varying factors), source: M. Ahola, 2020

Cooperation between funders, educators, companies, and students is essential. The activities and feedback report to the official systems of the state administration, where the teacher forwards the outcomes and further pathways for the students. The feedback from the funder, collaborate companies, participants, and teachers were also collected. A report of the training to the employment services and the funder is also provided. Also, teachers analyzed the feedback. The concept followed a continuous design and development iterations based on feedback.

Design is an inclusive innovation formulated by utilizing students' resources, tools, and competencies, environments that create affordances, home as a learning environment, and free digital services. The approach avoided multiple logins and expensive online platforms. Learning content has been modified into everyday language and formatted into functions. Persistent factors, such as curriculum content, can be pre-processed into a format suitable for the web. Interactive virtual learning situations are created to the simulations in virtual classroom or facilitated in authentic locations. The daily

study programs and acquired skills informed the blogs supported by the curriculum aims.

The varying factors of institutional arrangements forming after the teacher have contacted the student, found out his or her digital and communicative competences, and conditions. Digital habits vary a lot between the students. As was observed, mainly, interaction is usually the strength of each participant, as almost all those entering training interacts with their relatives and friends in their home countries via mobile or network. They are familiar with mobile practices, although they are low-educated, or have low literacy and low digital competence. Similar experiences are described by [20] Matli & al; in Latin America.

Online integration training connects participants across regions. Thus, the opportunity is to have sufficient groups with a similar target and progress, as was observed by Lagier [22]. Forming groups based on language proficiency, learning competence, a particular demand, requirement, interest, or profession, requires determined planning and ongoing collaboration between teachers. At the beginning of the training, the emphasis is guiding and building trust and empathy.

The Rigor Cycle provides grounding theories and methods and adds the new knowledge generated by the research to the growing knowledge base. Applicable knowledge for the development of design, grounded for Vygotsky's [33] educational theory in cultural context, Lantolf's [34] integrating sociocultural theory and cognitive linguistics in the second language classroom, form the conception of learning. Computational thinking [35] is needed to recognize digital competence and to define the demand for scaffolding. Frugal innovations theories [31][36] define design in an economical and user-oriented way. The design has required frameworks that take into account language learning, digital literacy, and career competencies. Methodologies, which enable this study are design science and quantitative analysis by indicators, report for data analysis, implementation of training, feedback, continuum, and new purchases, which enable evaluation and development of training.

IV. RESULTS

The language level is one of the most important indicators of successful integration education. Of all those who completed the immigrant integration online training, 36% achieved CEFR proficiency Levels [8] target level B1 in the Finnish language. Approximately every second, 52%, of those who studied at least 200 days, reached the target level B1 of integration training.

Regarding placement after the training, 43% of students applied for a job or internship at the end of their course. Some 17% had a job and 16% a study place. 3% of students found employment in a family business or started their own business. 9% started a work trial. 9% moved out of the labor force. The majority of those who moved out of the labor force started maternity leave or care leave, a few completed their courses and were referred for an occupational health survey.

88% of students went through online guidance and learning processes by described design. Without career paths, 9% moved out of the labor force and 3% which dropout.

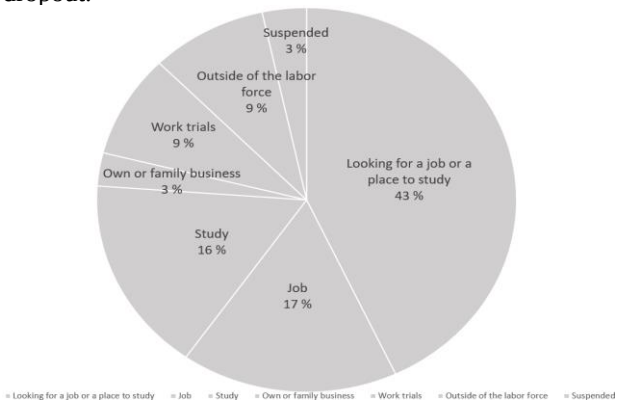

Figure 3: Placement after Online Immigrant Integration Training, source: M. Ahola, 2020

The training emphasizes daily interaction with the group and the teacher, as well as an individual guidance process that progresses from the learner's requirements.

Learning of productive skills is arranged online, although some participants have low digital competence. At the beginning of language learning, it is sufficient that each learner can open a communication application, a microphone, and a video connection. E-learning with synchronous interaction is intensive and gradually scaffolds the student to active participation and inclusion. A multi-channel network environment utilizes all the senses simultaneously. Our results show that in the online integration training, context-oriented and synchronized, e-learning promotes linguistic competence and enhances language learning. E-learning produces content that can retake. Slow-progressing students repeated what they had learned, e.g., by watching webinar recordings.

Our findings show that differences between learning cultures confuse many students at first. For many, the conception of e-learning is entirely different from the implementation of our online training. Students with low-literacy and low digital competence tend to have a cynical and skeptical attitude towards e-learning with distance before the first learning experience. After getting used to online learning systems and routines, attitudes became neutral or positive.

Findings from the research show that online scaffolding supports the learner's development into a self-effective actor in the digital society. A detailed understanding of objectives, task completions, and teacher feedback increases commitment and achievement of targeted learning outcomes. Our results also show that the teacher's role changed to that of facilitator and counselor. Scaffolding in the e-learning process keeps learners' attention on the essentials, adjusting the requirements of the exercises, maintaining motivation, and relieving learner's frustration.

A gradual transition to the Finnish operating environment initially requires a lot of guidance and understanding of cultural differences. During the training, language and study skills, culture, social practices, and

working life skills are learned in parallel. In the online immigrant integration training, students are engaged in joint designing. E-learning is developed together with students. Participants were asked about the tools available, the availability of the internet connection (if necessary, the institution provides them), the language level, whether they already have Finnish language skills or another auxiliary language with the teacher. Additionally, issues to be clarified before starting the training are conditions, study skills, study history, occupation, motivation, social skills, responsibility, and restrictions on participation. The information influences the effects of implementation designing and tool selection.

V. DISCUSSION

The first research question asked, *"How to design fully online integration training based on the Finnish Act on the Integration of Immigrants?"* The results and analysis have shown the following.

First, the implementation must be effortless to students and teachers. The integration training relies on three dimensions of accessibility: lingual, pedagogical, and technical. In addition to learners with higher education and digital competence, participants with low literacy and low digital competencies successfully participate in immigrant integration online training. Second, the teacher's role is advanced to the facilitator and counselor. Learning outcomes are better if the guidance and counseling process is carefully defined. The training requires teachers who know precisely how to manage and scaffold learning processes in a digital environment. Third, interaction defines the whole design to encourage the desire of students to interact with teachers and peers. Interaction design has contributed to the formation of interactive learning situations and networking at training by providing unexpected interactions.

Our second, third and fourth research questions asked: *"How well does the fully online integration training succeed in terms of participants' language level, employment, and career pathways?"* The results show the following.

First, contrary to previous expectations, the targeted learning outcomes of online integration training, especially productive skills, developed at least as well as, or even slightly better than in classroom-based training. Second, the learners benefit from their previous competence and know-how in learning tools, and because learning reaches them over long distances from areas where education is not available. Third, the majority of the students has reached the target outcomes on language proficiency and had a planned career path and placement at the end of the training.

VI. CONCLUSIONS

Based on the findings, the authors have a new understanding about arranging of online learning, interaction and design process.

A fully online integration training is a way to learn the Finnish language and successfully integrate into the digital society. Success requires a redefinition of the pedagogy. Further research for intercultural online guidance and the framework for integration is needed. The teachers indicated some surprising situations for further research. Teachers are required to take risks and approve that there are no answers to everything. The final form of design may not be what the teacher is used to or expected.

Learners need to adapt to the new learning culture, which might aim e.g., towards entrepreneurial learning. Synchronous, accessible e-learning strengthens digital competence, inclusion, equality, and employment opportunities. Therefore, learner-centered e-learning is suitable for many immigrants, which are gradually scaffolded from a teacher-centered to a self-effective culture and to participate in the digital society.

Both the Flemish experience [17][18] and the data from the study showed that low-educated learners benefit from the diversity of e-learning, such as retaking lessons, studying at their own pace, or from the personal attention of the online educator.

Once the varying factors have identified, it is possible to guide the students to a group that meets their desire and to select optimally accessible, group-specific technological tools and pedagogical, lingual, and cultural-conscious choices. Observations in this research are similar, as Ilin describes [28]. Instant messaging has taught writing skills in a real context.

The strength of online training has been the flexibility, which makes it possible to provide an appropriate level of training for everyone by differentiation and combining groups. Similar findings were reported in the research of Lourenço and Martins [29]. In integration training, the group usually has 15-25 participants. In online training, the teacher needs to set aside time for speaking exercises with a peer and in a group because there are no spontaneous speaking situations. Therefore, learning arrangements need to support ways to learn productive skills. At the same time, the teacher receives confirmation that the skill has been learned.

By forming skills to be learned as a function of real-life situations, e.g., "I can book an appointment with the doctor" or "I can order in a restaurant" make it possible to learn practical communicative competence [24][26][33] in everyday life and working life situations. The pragmatic approach encourages students to expand and search for more information in a guided way, using the language they are learning. The Next steps in our research will be to pay attention to collaborative learning networks and entrepreneurial learning.

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