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The Program Analysis of The Soppi Science Centre as a Learning Environment for Immigrants in Finland

Xiaojing Wang
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Bachelor's programme Lifelong Learning and Sustainable Development
School of Educational Sciences and Psychology
Philosophical Faculty
University of Eastern Finland

Abstract

This thesis employed the program analysis method to examine the exhibition at the Soppi Science Centre in Finland and its role in promoting immigrant integration as a learning environment.

The Soppi Science Centre has a permanent exhibition in Helsinki, Finland, and organized an exhibition tour in 2024 to celebrate the year of Sivistys. The Soppi Science Centre, as a research context in this thesis, is a unique learning environment to learn more about Finnish education, culture, and society. The Soppi Science Centre is a type of museum. The displayed contents in the exhibition introduce the history of Finnish education reflectively.

The results of the program analysis found that the Soppi Science Centre is not only a great learning environment for everyone but also plays an important role in creating values to promote social inclusion, immigrant integration, educational equality, and building a democratic society.

Furthermore, this thesis showed the value of conducting program analysis on educational programs in Finland to understand the exhibition contents that program planners want to communicate with the target group and the values they intend to deliver to society. It is worth doing more studies in the future on museum programs in Finland to evaluate their roles in enhancing the learning environment for immigrants.

Keywords: Program Analysis, Museum, Learning Environment, Immigrant Integration

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1. INTRODUCTION

To help immigrants better integrate into Finnish society, the government authorities and other parties provide personalized measures and services in the integration plan according to the "Act on the Promotion of Immigrant Integration" (MEAE, 2010). Finland makes efforts to support immigrants to become familiar with the new living environment in many ways. Language learning is an important starting point for immigrants' integration into a new country (Käpplinger, 2018). Learning Finnish or Swedish is the basic learning task required in daily life in each immigrant's integration plan. The integration plan also includes other courses or self-motivated studies on social, cultural, and life management skills. The integration plan aims to provide support to immigrants, enable them to play an active role in Finnish society with knowledge and skills, and help them maintain their own cultures and languages (MEAE, 2010). Public spaces like museums, libraries, science parks, and galleries support learning outside schools and are defined as informal learning environments (Meyers et al., 2013). For example, the role of museums could provide "a free choice learning environment" for people to have an opportunity for lifelong learning, as well as offer the advantage of active engagement (Hawkey, 2004, p. 4). Museums are educational places for people to gain knowledge of local history and culture and reflect on the changing society (Vårheim & Skare, 2022).

The Finnish Lifelong Learning Foundation (Kvs) is Finland's oldest cultural foundation, established in 1874 (Kvs Foundation, 2024a). It focuses on liberal adult education and lifelong learning, as well as applying learning, innovations, and communication in various projects in Finland and abroad. It coordinated the Year of Sivistys 2024 to celebrate its 150th anniversary (Kvs Foundation, 2024b). The word Sivistys is difficult to translate directly into English in simple words. The Finnish concept of Sivistys has two definitions:

  1. A general societal aim and value: enlightenment

  2. A specific type of person who is civilized and well-behaved, who lives in harmony with other people, wider society, and nature, and who can also contribute to the preservation and development of communities, the environment, and humankind in general (Kvs Foundation, 2023).

Sivistys played an important role in building Finland as a welfare state with renowned education in the world, focusing on science and art. The Sivistys+ project was a two-and-a-half-year project completed by Kvs in the summer of 2022 (SITRA, 2024). This project tried to pursue a new understanding of the Sivistys in the current changing world. It involved comprehensive topics and problems we are facing now and inspired individuals and organizations to think about new ways of education and to work together to build a sustainable future (Tamminen, 2022).

The Soppi Science Centre opened for public visiting in August 2022, and it was established as part of the projects of Sivistys+. It is the only museum in Finland concentrating on the theme of education. The Soppi Science Centre presents the 150-year timeline of development in education in Finland and the importance of Sivistys in Finnish society.

The Soppi Science Centre, being a museum with three main themes of lifelong learning, equality in education, and education with sustainable life (Kvs Foundation, 2024b), is suitable for everyone who wants to know more about Finnish education and society. In this study, I will present a program analysis of the exhibition materials in the Soppi Science Centre to find out its aims, values, target groups, and missions in promoting immigrant integration in Finland. The methodology of the program analysis has been used in studying the educational programs in Germany and Australia (Käpplinger, 2008). Adopting the method of program analysis in analysing a Finnish education program in a museum is a new experiment in the field of study about learning environments.

2. THE RESEARCH TOPIC AND PURPOSE

2.1 The Soppi Science Centre as a Learning Environment

Museums are effective learning environments, providing real, first-hand, and interactive learning experiences to visitors. They encourage visitors to explore and interact with the displays and engage them to reflect and interpret their previous experiences (Jeffery-Clay, 1998). Earlier, Falk and Dierking (1992) emphasized that museums are excellent learning environments because they could provide "rich, multi-sensory experiences". The learning experience in museums is widely examined in many studies.

As an international student studying at a Finnish university, the experiences of visiting museums in Finland aroused my thoughts about the language settings in some exhibitions and programs held by the museums, which unfortunately excluded English. Although the exhibition's contents have a good presentation of Finnish history, art, and culture to show publicly, the language barrier makes it difficult for foreign audiences to absorb the knowledge in the displays. This kind of challenge might occur to visitors and immigrants from other non-English-speaking countries as well. The limited accessibility of language in museums will weaken its effects on motivating learners with immigrant backgrounds. In this report, I focus on the topic of museums as learning environments for immigrants in Finland by analysing the exhibitions in a science centre in Finland.

The Soppi Science Centre is an exhibition with the content of "The History and Future of the Finnish Educational System and Lifelong Learning" (Kvs Foundation, 2024b). The Soppi Science Centre is open to everyone who wants to learn more about Finnish society and education from views on the past, current, and future. This study will focus on discussing the role of the Soppi Science Centre as a learning environment supporting immigrants' learning for their integration purposes.

The Soppi Science Centre is a different learning environment for adult education and lifelong learning, and its contribution to providing a supportive learning environment for immigrants and their learning is worthy of evaluation. The exhibition materials will be examined in this study, including the analysis of their design concepts, backgrounds, program implementation methods, target audiences, and displayed results. For example, the Soppi Science Centre offers multiple choices of languages in the displayed objects and on its websites. In its exhibition tour in 2024, the Soppi Science Centre provided four languages— Finnish, Swedish, English, and Northern Sámi in the booklets and audio instructions available for visitors. The accessible languages are friendly for visitors from different backgrounds. What kind of consideration is behind this design of linguistic accessibility in the Soppi Science Centre and its exhibition tours? What kind of purposes do the planners want to achieve through accessible languages? Besides these questions, the study will try to address the program planners' choices of presenting the exhibition based on the analysis results.

The Aim of the Research

This study aims to examine the Soppi Science Centre as an education program through the method of program analysis to understand its exhibition materials and to figure out its potential values and intended support for immigrants' integration. As mentioned above, the availability of language options may have an impact on immigrants' learning results in museums. Is there any other consideration involved in the Soppi Science Centre exhibition materials for learners from immigration backgrounds? This will be considered in the process of program analysis of the Soppi Science Centre.

Since museums have notable value in providing rich learning experiences (Zipsane et al., 2015, p. 11), it is important to figure out the meanings of museums as learning environments for immigrants through the study of the Soppi Science Centre in Finland. The purpose of this study additionally strives to raise museum program planners' awareness to consider the learning demands outside schools from the perspectives of immigrants and minority groups when designing exhibitions. I hope this thesis will be the pioneering study in Finland with radiation effects on increasing more studies on the learning environments or learning programs for immigrants. The results from the program analysis could be considered by program planners when designing exhibitions in museums or other learning environments as well in the future. Moreover, I hope more museum programs in Finland will be evaluated, and the linguistic challenges will be eliminated to achieve effective learning experiences for all museum visitors.

3. THEORETICAL FRAMEWORK

3.1 Museums as Learning Environments for Immigrants

Museums as public environments support learning organized outside the schools. Various activities and wide themes could be presented in the museums to meet the different learning purposes for different target groups (Manninen et al., 2007, pp. 100-103). In Finland, museum pedagogy has been applied in the curriculum planning for basic

education for many years. (National Board of Education, 2016; Immonen & Sivula, 2024). Learning programs in museums for schoolchildren are indicated in Finnish cultural strategy and policies (Zipsane et al., 2015, p. 12). Since 2005, the Finnish Association for Museum Education, Pedaali, has applied museum pedagogy to their training courses and network activities to support museum educators' professional development (Pedaali, 2025). Museum pedagogy and learning in museums play significant roles in the Finnish education system. Finland has 22 museums in regions providing museum activities and another 39 museums offering a cultural environment and learning in the arts (Ministry of Education and Culture, 2025).

Learning in museums is not only important for students to build their knowledge systems in a new way, but also crucial for immigrants. Learners with immigrant backgrounds have their own cultures, languages, and life experiences, and the learning process of acquiring new knowledge in a new country is full of constructivist learning. They perceive each new experience, then connect with the old ones, reflect on the new information, and update the mental world in their minds, as Driscoll (2000) explained the links between the constructivist theory and learning in museums. It is a dilemma for immigrants to acquire new culture and language skills while they need to maintain their original culture and language in the integration process. It requires immigrants to transmit two different cultures and at least two languages into a balanced level via the experience of reflection and abstraction.

Jeffery-Clay (1998) emphasized the important role that museums play as effective learning environments, which are important in encouraging learning, integrating knowledge, and experiencing real feelings for visitors. He pointed out that museums are "the perfect environments" for using the constructivist theory in creating meaningful learning environments (Jeffery-Clay, 1998). Constructivist learning is affected by the learning context and requires the learner's self-motivation and self-regulation (Bada & Olusegun, 2015; von Glasersfeld, 1995). Self-motivated studies in Finnish immigrants' integration plans are driven by immigrants' attitudes and initiatives to connect with real experiences, which is indicated in their integration plans. Self-motivated learning would enhance immigrants' abilities to acquire reflective thinking skills, collaborative learning skills, problem-solving skills, and communication skills in integrating what they learned in the environment (Applefield, Huber & Moallem, 2000; Kara, 2008; Tsai et al., 2023).

Helping immigrants construct their learning in a new cultural environment, the demands for establishing suitable learning environments are raised to promote immigrants' self-learning motivation in public places. Museums could provide a supportive environment to nurture immigrants' confidence and self-identity (Labadi, 2021). They need to have these skills, knowledge, and awareness in playing their social roles in the new country.

Additionally, museums as learning environments have value-added roles in supporting intergenerational learning and models of family learning among immigrant groups when the museums could provide bilingual interpretation (Stein et al., 2008).

Considering immigrant groups in the museum programs showcases the social value of building an inclusive environment. Reza (2023) pointed out that immigrants are usually not regarded as the main target group or primarily considered when designing a museum program; therefore, they are called marginalized groups. To achieve the goal of establishing an inclusive environment in museums, it is vital to involve immigrants in the programs organized in the museums in various ways, for example, by recruiting working staff with immigrant backgrounds for the museum projects or having a person in the program working team to collaboratively communicate with immigrant communities or groups to collect immigrants' needs (Stein et al., 2008; Reza, 2023).

In addition, museums are designed environments (Bell et al., 2009, p. 48) that reflect the intended results of communication and learning goals that planners or educators want to achieve. The designed places, including museums and Science Centres, could provide distinctive learning possibilities to motivate visitors' learning interests to explore deeper information and to broaden the ways of thinking about topics related to current social status and challenges. The interactive exhibits and displayed contents in the museums could allow the learners to have a free choice to acquire knowledge and support their self-learning goals (Vartiainen, 2014, p. 8).

3.2 **Previous Studies Review**

When reviewing the importance of museums as learning environments, it is proven that numerous studies emphasized the crucial roles that museums play in supporting learning. However, the amount of research on museums as learning spaces for immigrants is limited.

Some researchers have examined learning outside schools for immigrants. Lauterbach, Fandrem, and Dettweiler (2023) published their article, "Does 'Out' Get You 'In'? Education Outside the Classroom as a Means of Inclusion for Students with Immigrant Backgrounds." The topic of inclusion and education outside the classroom through interviews with 16 students from immigrant backgrounds was discussed in the article. They focused on two students' stories to examine "place-based education", a relational pedagogical model that has practical meanings in helping children from different cultural backgrounds enhance their learning experience and feelings of joy. Their research pointed out the clear information that education outside the classroom could foster inclusion and development for children with immigrant backgrounds. Earlier, Tedeschi and his co-authors (2022) focused their study on immigrants' well-being enhancement in a natural-based environment. They agreed that learning or interactive opportunities outside naturally will enhance the immigrants' participation experiences. They proposed that city planners could consider multiple languages in natural places to increase the interaction levels with foreign visitors and immigrants.

Ollaiver (2016) assessed the pedagogy programs in two museums, respectively in Finland and Sweden, to explore the connections between ideals and practices in the programs. The studies highlighted that the museum has a role in society to reflect cultural diversity and integration. In this case, she used the research method of text analysis on interviews and observations to reveal the challenges existing in Finnish and Swedish museums in their aims of presenting a diverse society. Although program curators' main ideas of implementing the pedagogy programs have considered immigrants, the shortage of effective intercultural dialogue became a problem in establishing a mutual process for integration (Ollaiver, 2016, p. 80).

Turning to the studies about the usage of program analysis as a methodology, several researchers have performed the program analysis of museums and adult education programs for refugees previously. In Käpplinger's (2018) research "Addressing refugees and non-refugees in adult education programs: A longitudinal analysis on shifting public concerns," he analysed 47 samples of programs from public adult education centres in Germany for refugees from 1947 to 2015. He conducted a method of program analysis to see the adult education practice for refugees and non-refugees in

past practices and encouraged current program planners to think about the present and future modes differently in national contexts.

Regarding the analysis work on the museum's programs, Specht and Fleige (2016) applied the program analysis to identify the planning criteria and educational concepts in the cultural institution, the Cologne Museum Service in Germany. They underlined that a program analysis could examine the planning criteria and settings in the institution and support their study. In the research, the comprehensive code system was adopted in the data analysis of the 487 announcement texts, offering the possibility of comparative studies in various cultural institutions. They also pointed out that the program analysis could allow the researcher to conclude with findings for different target groups; it provides flexibility in the analysis.

These studies hugely supported me in implementing program analysis for the Soppi Science Centre as a learning environment for immigrants in Finland. So far, I have not seen relevant research discussed in Finland. Ollaiver also pointed out similar observations in her studies, that limited studies of integration in the museology field were found in Finland (Ollaiver, 2016, p. 13). I hope this thesis will bring benefits as a sample for employing the approach of program analysis in future studies on the topic of museums as learning environments for immigrants. On the other hand, the findings in this program analysis would stimulate museum exhibit curators or planners to create new ideas about promoting learning for different target groups.

4. RESEARCH TASK AND RESEARCH QUESTIONS

The research task is to find out whether the exhibition materials, leaflets, workshop guidelines, and other facilities in the Soppi Science Centre indicate any aims or ideas on how it could be used as a learning environment for immigrants to help with their integration.

The research questions are:

1. Are there any contents potentially supporting immigrants' learning and integration into Finnish society in the Soppi Science Centre contents?
2. If there are, what kind of content?

The analysis of documents will focus on, for example, whether and how immigrants are considered potential audiences and whether their needs are taken into account in the Soppi exhibition contents (for example, the different language versions of Soppi exhibition materials). What could be the potential integration benefits of the Soppi Science Centre for immigrants in Finland?

5. RESEARCH DESIGN

5.1 Program Analysis as the Research Method

Program analysis is a core method for studying adult education practice (Käpplinger, 2018). Program analysis has been used by Gieseke (2000), Käpplinger (2008), Nolda (2011), and Schrader (2014) in research in various fields. The program analysis has been applied in different ways. The program analysis in continuing education was primarily used in 2004 for the investigative work of the Pedagogical Office of the German Institute for Adult Education (Nolda, 2011). Käpplinger described the relevance of program analysis to educational research in 2008. He mentioned that the program in continuing education aimed at attracting people who are interested in education to be participants through various learning objectives involved in the program (Käpplinger, 2008). Käpplinger also pointed out that the program analyses could be applied to various research purposes based on the different objects, covering wide topics, subjects in training programs, target groups, religions, and different institutions.

Käpplinger (2018) applied program analysis as a method to analyse different national measures for refugees in a historical comparison. He indicated that the program and connected program planning contain "past experiences and present proposals for the future" (Käpplinger, 2018). Programs and program planning indicate the public representations of societal topics and statements from educational providers. The program planning plays a key part in educational practice (Sork, 2010; Käpplinger & Sork, 2015). Program planning is used by adult educators to prepare courses or programs in different ways (Sork & Käpplinger, 2019). To explore the importance of program planning, Sork and Käpplinger (2019) examined the power and responsibility involved in program planning in the adult education field. A successful process of program planning cannot avoid the negotiation and selection of complex conflicts with different directions of values,

goals, and ethical considerations. Furthermore, in the program's planning, the program has set a target group to be the potential visitors. The program is designed to attract their attention or interest.

The program analysis is suitable for researchers to deal with the document data to look at past practices. Turning to my study on the Soppi Science Centre, which provides learning activities, program analysis is a suitable approach to analysing its exhibition results. The Soppi Science Centre was established in the Sivistys+ project, which is a completed project. It is valuable to examine the exhibition results presented in the Soppi Science Centre and its touring exhibitions through the approach of program analysis. By using this approach, the planners' values, aims, and visions indicated in the exhibitions could be investigated in the procedure of content analysis. The Soppi Science Centre and its exhibition tours performed as an educational program, illustrating the results of the program planners' trade-off after balancing the different demands. The exhibition, as an educational program in the museum, displays the social interpretation of education because it is a marketing tool (Nolda, 2011) designed by the provider, and results are filtered by political, social, and cultural factors (Käpplinger, 2008). From the perspective of development, the program analysis result will also be part of historical data for planners' future considerations in educational program planning (Tietgens, 1998).

Program analysis has a unique value in supporting many research purposes. However, its analysis pitfalls, such as neglecting the participants' involvement and feedback on programs, are regarded as the main concern in conducting program analysis in the research of the program development (Gieseke & Opelt, 2003; Käpplinger, 2008). This disadvantage also exists in this study topic because no interviews or questionnaires were used to collect feedback from immigrants to reveal their perceptions of learning experiences in the Soppi Science Centre.

The program analysis could be implemented in qualitative, quantitative, or combined methods based on the type of data collected in the program. The program analysis can be treated as a method of content analysis (Käpplinger, 2008). Käpplinger introduced three types of program analyses in his article: qualitative methods, qualitative-quantitative combined methods, and triangulation of qualitative-quantitative with a single or combined method. According to the data collected in this thesis, I will use qualitative methods to work on a content analysis of the exhibition materials.

Data Collection

Non-formal adult education programs are normally organized through various activities with learning objectives to support individual skills learning or social and cultural developments outside the formal education system. The programs in non-formal education could be planned for minorities in society for training or learning pathways to formal education (Evans, 1981, p.63; ISCED, 2011, p.11; Werquin & OECD, 2010, p.7). Non-formal education programs do not have a formal curriculum approved by the state, but their program planning documents are critical data for analysis because they reveal the procedure, approaches, purposes, and strategies of the program. The Soppi Science Centre is a learning environment, and its exhibition is shown as an educational program. Therefore, its open-access materials about the Soppi Science Centre and Sivistys+ project on websites (Table 1) and final exhibition materials are selected for data analysis in this study.

Table 1. Online materials about the Soppi Science Centre

Category of data	Contents	Links to materials
Website	Sivistys+ Project	https://www.sitra.fi/aiheet/sivistys/
Website	-Projects and partners -Cultural space workshops	https://kansanvalistusseura.fi/hankkeet/sivistystilat yopajat-2021-2022/
Website	the Soppi Science Centre	https://tiedekeskussoppi.fi/ajankohtaista/
Website	Soppi's in-depth contents	https://tiedekeskussoppi.fi/syventavat-sisallot/

Since I worked as a tour guide in the Soppi Exhibition tour in Joensuu, I could access the final exhibition materials (Table 2), including the visitors' leaflets, displays, and introduction for tours and workshops for tour guides shared by the project team. In this study, I focus on analysing the final documents presented to the visitors, which reflected planners' decisions for showcasing their aims and visions; hence, exhibition materials become the main data for analysis in the study.

Table 2. The document data for the Soppi Exhibition 2024 Tour

Category of data	Name of the data	Note
pdf file	Soppi sivistysdioja	Project information
pdf file	Soppi_aikajanaseinake	Exhibition materials-timeline
pdf file	Soppi infoseinake	Exhibition materials-information wall
pdf file	Soppi_kuvaseinake	Exhibition materials-picture wall
pdf file	Soppi_nayttelykirjanen	Visitor leaflets in four languages
pdf file	Ääniopastus_QR_koodit	Audio guide in four languages
Word file	SOPPI_OPASTUKSET JA TYÖPAJAT RYHMILLE_Nina Hjelt	Guiding materials_Guided guides and workshops for groups
Word file	Soppi_Opastusehdotus_heidi Kinnunen	Soppi Tours _Instructions

5.3 **Data Analysis**

The present study utilized the procedure of abductive content analysis to interpret the collected document data. The approach combined the data-driven analysis via open coding and the theoretical framework of program planning in categorizing the findings from the data (van Hulst & Visser, 2025). The previous theoretical studies in program analysis are particularly useful in this study.

Based on the analysis of the data and theoretical backgrounds, the categories are listed below:

C1: Language accessibility (functional settings)

C2: Target groups (audience)

C3: Exhibition goals (aims, values, and visions)

C4: Themed topics in the exhibition

C5: Exhibition work model

The defined categories cover the study purpose of figuring out the general settings, program goals and contents, and exhibition visiting model embedded in the program materials.

The Soppi Exhibition presented fruitful information about Finnish education and culture, and its development under the influence of European social changes. It provided an overview of the Finnish education in history and pulled out the discussion for the current and further modes of education regarding the social problems. The pre-defined

categories enable the study to focus on the central part during data review and data sorting.

The exhibition data have been divided into four types (Table 3): exhibition wall texts, visitors' leaflets, guiding materials, and a guideline for the Soppi exhibition organizers. These materials were reviewed line by line, coded systematically, and formed into different themes in understanding and interpreting the program materials according to the guidelines for tackling the research task and questions. The content analysis procedure gave me flexibility in coding, but it has challenges in grouping the codes into core themes according to theoretical categories (Holton, 2010).

Table 3. Four types of exhibition data

Number	The Types of Data	Data File name
1	Exhibition wall texts	Soppi_infoseinake (Soppi_infowall)
		Soppi_kuvaseinake (Soppi_picturewall)
		Soppi_kiertonayttelyn_kayttoohje_A4 (Soppi_tour_show_instructions_A4)
2	Visitors' Leaflets	SOPPI_nayttelykirjanen_englanti (SOPPI_display_booklet_english)
3	Guiding materials	SOPPI_Opastukset ja Työpajat ryhmille_Nina Hjelt (SOPPI_Guided guides and workshops for groups_Nina Hjelt)
4	Guidelines for Soppi exhibition organizers	Soppi_Opastusehdotus_heidi Kinnunen (Soppi tours - instructions)

The current study employed a single research method of qualitative analysis in focusing on investigating the exhibition data. Some research suggested that the program analysis combining qualitative and quantitative research would produce better results in analysing the program (Mayring, 2001). I will consider applying quantitative research supplementarily by conducting a questionnaire or survey to collect data from program planners and exhibition visitors for the next step of the research.

6. RESEARCH RESULTS

To generally answer the research question, the topics about immigrants, immigrants' learning, and integration are elucidated in the Soppi Exhibition data throughout the five categories in the analysis. The findings of the program analysis are drawn into a map (Figure 1) for a better illustration of the results.
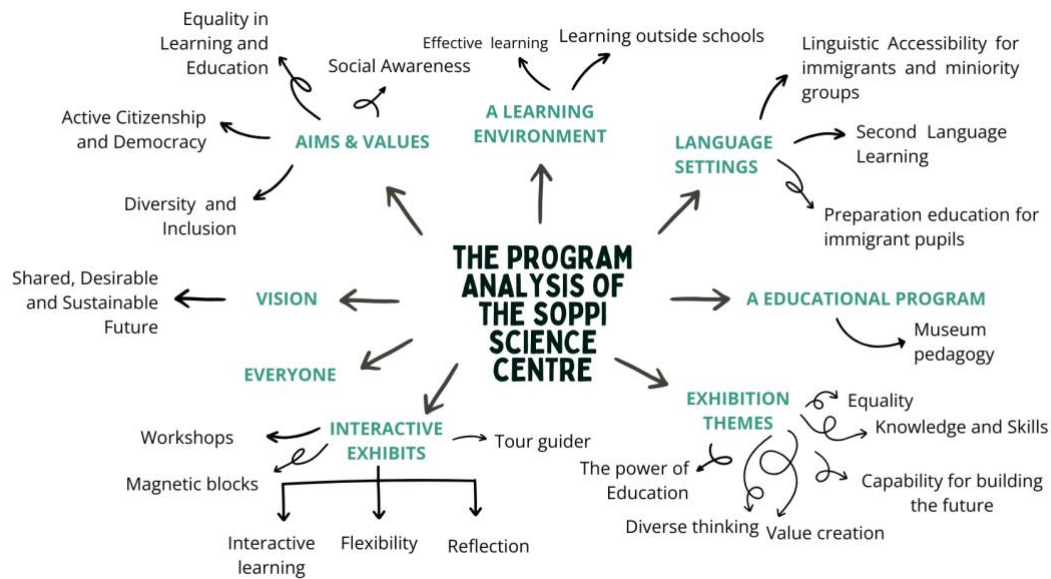
Figure 1. The map showing the analysis results of the Soppi Science Centre

Although there are no direct words or specific themes indicating its unique meaning for immigrants' integration and enhancing their public learning environments in Finland, the language setting, visions, and exhibition themes of the program reflected that the Soppi Science Centre considered immigrants as one of the target groups in its visiting audiences; its structured exhibition mode and thematic contents also created the value in supporting immigrants' learning in museums. The Soppi Science Centre is not only an exhibition and a museum; it is an education program as well as a learning environment publicly accessible to immigrants in supporting their acquisition of knowledge, skills, and capability for successful integration into Finland.

Picture 1. The Soppi Exhibition in Joensuu City main library (the photo by Xiaojing Wang)

6.1 Inclusive and Equal Learning Environment for Immigrants and Minority Groups

The Soppi Exhibition materials emphasized the importance of equality in learning and education clearly and repeatedly. The Soppi Science Centre and the touring exhibitions tried to create an inclusive and equal learning environment for everyone visiting the museum. Starting from visitors' leaflets, the Soppi exhibitions provided some questions for discussing and reflecting on the ideas on equality from the view of visitors; for example, it questioned," What does equality look like? How would you describe equality? What kind of Sivistys could be in pursuit of equality and justice?" (Visitors' leaflets; Picture 2 as below). The questions lured immigrants and minority groups to think about their current social status and then form their desired future, while those questions also have effects on inspiring other residents to rethink the Finnish system and policies in promoting equality and democracy.

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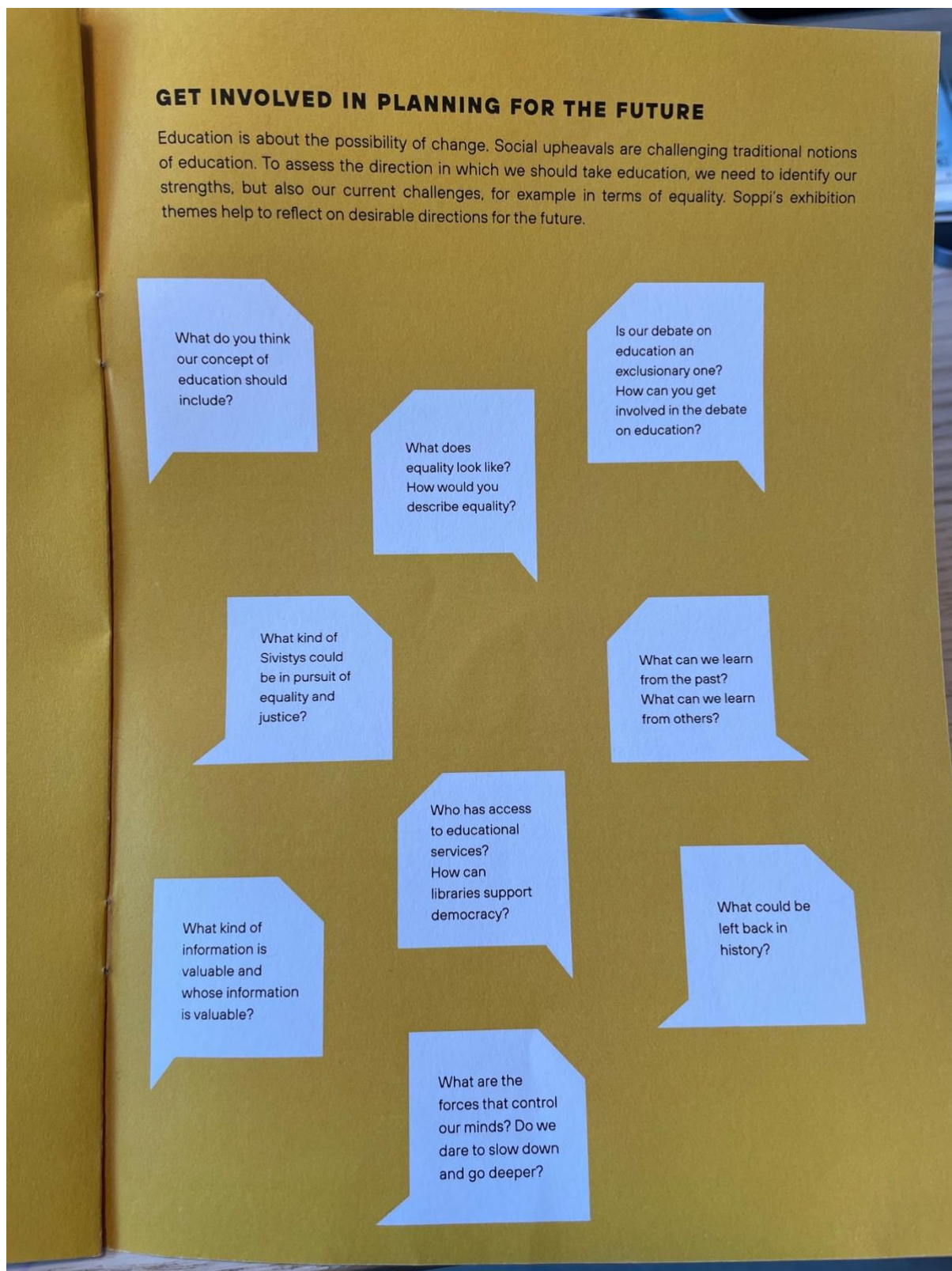
Picture 2. Questions shown on the visitors' leaflets

The Soppi program planners highlighted the importance of achieving the goal of inclusion and equality by following points. The accessibility of the learning environment

and critical information is one of the key points that support citizens and immigrants in building a society and a sustainable future (Visitors' Leaflets). It is also important to establish opportunities for individuals' active involvement and participation in acquiring the necessary skills and knowledge. Nonetheless, immigrants are required to learn new knowledge and skills to adapt to the new environment in a new country (MEAE, 2010). Finland was not a desired migration destination for foreigners before. There were only about 4500 foreign residents in Finland recorded in 1957 (Latomaa & Nuolijärvi, 2002). But now, the Official Statistics of Finland (2024) released the population of immigrants in Finland in 2023, which reached the number of 73,236. The total number of persons with foreign backgrounds in Finland by the end of 2023 has reached 571,268, comprising about 10% of the total population (OSF, 2024). It calls for immigrants to become an important group of people to be considered for building a shared future in Finland. Under a multicultural background, inclusion in the social environment and education is the core to successful integration. Mezzanotte (2022) illustrated that the purpose of inclusion in education is to have a systematic process for overcoming the exclusion and barriers in the education system, or even changing the system, to help all learners have an environment of participation and involvement, and to fit their own pursuit of achievements according to their personality. Learning environments in museums or other public places expanded the possibility for all audiences to look for inclusive places for learning. For instance, the touring Soppi exhibitions in various cities were set up in the city's main libraries, the University Science Museum, City Hall Exhibition Spaces, or other public spaces (Kvs Foundation, 2024b). It provided convenience and free-charged accessibility for people to visit at any time during the opening hours.

Meanwhile, sufficient involvement and participation from diverse groups were mentioned many times in the displays of the exhibition wall texts. The data of the Soppi information wall clearly stated that it is accessible in four languages, and the target audience covers everyone without limitation in age or specific attractions for certain groups with most suitability. It offered the Finnish language originally and translations in Swedish, English, and Northern Sámi, which were used in exhibition displays, audio introductions, and workshops.

TURVALLISEMMAN TILAN PERIAATTEET

Soppi on kiusaamisesta, rasismista, seksismistä ja syrjinnästä vapaa tila.
- Otathan huomioon tilan muut käyttäjät käytöksessäsi ja puheessasi.
- Voimme ja saamme olla toistemme kanssa kunnioittavasti eri mieltä.
- Näyttelyä saa kuvata. Kysy lupa, ennen kuin kuvaat tilanteita tai ihmisiä.

Kerro henkilökunnalle, jos kohtaat asiatonta käytöstä tai epäasiallista kohtelua. Voit myös antaa palautetta sähköpostilla: soppi@kvs.fi

Tehdään yhdessä Sopesta turvallinen tila kaikille!

PRINCIPER FÖR EN TRYGG PLATS

Soppi motsätter sig mobbning, rasism, sexism och diskriminering.
- Ta andra i beaktande i ditt beteende och tal.
- Vi kan och får tycka olika på ett respektfullt sätt.
- Utställningen får filmas. Be om tillstånd innan du filmar situationer eller människor.

Berätta för personalen om du upplever osakligt beteende eller bemötande. Du kan också ge respons per e-post: soppi@kvs.fi

Låt oss tillsammans göra Soppi till en trygg plats för var och en!

PRINCIPLES FOR A SAFE SPACE

Soppi is a space free from bullying, racism, sexism and any discrimination.
- Please be considerate towards others in your behaviour and communication.
- When your opinions do not align with others' viewpoints, you can respectfully disagree.
- Photography is allowed at the exhibition. Please ask permission before photographing situations or people.

Tell staff if you encounter inappropriate behaviour or treatment. You can also give feedback by email at soppi@kvs.fi

DORVVOLUT SAJI PRINSIHPAT

Soppi lea givssideamis, rasismmas, seksismmas ja vealaheamis friddja sadji.
- Amma válddát vuhtii saji earáá geavaheaddjiid iežat láhttemis ja ságain.
- Mii sáhttit ja oažžut leat gudnejahttimiin sierraoaivilis nubbi nuppiideametguin.
- Čájáhusa oažžu govvet. Jeara lobi, ovdal go govvet diliid dahje olbmuid

Muital bargiide, juos deaivvadat ášhehis láhttema dahje eahpeášhálaš giehdahallama. Sáhtát maiddái addit máhcahaga šleadgapoasttain: soppi@kvs.fi

Dahkkut ovttas Soppis dorvvolaš saji buohkaide!

Picture 3. Visiting tips in four languages are shown on the Soppi Exhibition walls

It is worth mentioning that the Soppi Science Centre and touring exhibitions not only consider immigrants and foreign visitors in the program but also inclusively include minority groups. Finnish and Swedish are the national languages in Finland; they should be taken into account in the language accessibility in the exhibitions without saying. Saami is a minority group living in Finland. Northern Sámi is one of the ten Saami languages, and it is the main spoken language for the Saami living in Finland (Latomaa & Nuolijärvi, 2002, p. 15). The Saami Language has been facing a challenge in that many Saami people in Finland do not use the Saami Language as their first language anymore. Olthusi (2000) suggested a supportive environment for using the Saami Language at

home and the society will help retain the language for generations. Thus, the Nordic countries are making efforts to preserve the Saami languages through policies. The new Sámi Language Act (2003), which was approved for implementation, required the municipalities to provide necessary services in Saami languages when the population of Sámi language-speaking people exceeds one-third. North Sámi, as one of the languages of instruction, audio text, and workshop activities used in the Soppi Science Centre, considered the demands of the spread of minority languages and revealed its aim in promoting equality in learning and education.

The touring exhibition provided a service for the visiting introduction in digital audio. It might consider visitors with disability backgrounds in the difficulty of reading. However, the audio information did not cover all the displayed materials, for example, the timeline of learning and education in Western and Finnish educational history and the key research and analysis themes in the exhibition.

The audio service did not cover all the contents in the exhibitions, but it is still a good start. Considering people with disabilities in public spaces is a learning design, with the value of showing the social inclusion level and the reality of accessibility in those learning environments, especially for cultural spaces, which should bear a social value in presenting the culture (González-Herrera et al., 2013). The Soppi exhibition materials concluded the contents about Finnish education and culture, nonetheless, it reflected the values in Finnish society. And the values are created jointly to build a common benefit, and a shared future for immigrants and minority groups, which is embedded tightly with the exhibition settings in content, language, and facilities.

6.2 **Language Accessibility in Museums Supports Immigrants' Integration**

The language setting in the Soppi Exhibition showed one of their main aims to remove linguistic barriers to visitors at a certain level. Language is one of the powerful tools in leading information dissemination widely and is regarded as a manipulation tool playing a critical role in social and political influences (Dann, 1996; Fowler et al., 2018; Ozhohan et al., 2023). The language accessibility in the museums could be seen as a reflective way to know the planners' purpose. The activity of learning in the museums was led by the language setting in various visible or audible presentation materials. The language in

museums is a critical tool affecting the learning or visiting experience that planners want to deliver to the visitors. The experience could be inclusive or exclusive in considering visitors' language choices (Kelly-Holmes & Pietikäinen, 2016).

Finnish language learning as a mainstream language in Finland, acting as a key part of the immigration integration plan, is continuously an inevitable challenge for most immigrants living in Finland as their second language. Latomaa and Nuolijärvi (2002) gave us an understanding of equality in education: "Education aims to provide immigrants with the skills and knowledge they need to be able to function fully as equal members of Finnish Society". The immigrants are expected to drive their self-motivation to learn Finnish or Swedish to achieve successful integration and to maintain their own language and culture (MEAE, 2010; National Board of Education, 2001) suggested that Finnish as a second language learning program for adult immigrants should combine both language and social skills. Although, in a language studying program with 40 credits, there are only 10 credits required in everyday life studies, social and cultural studies at maximum (Latomaa & Nuolijärvi, 2002, p. 41).

A country's language learning for immigrants is a fundamental requirement for removing social exclusion and gaining personal well-being (Mezzanotte, 2022, p. 45). However, language learning requires a long-term process of getting proficiency. How could immigrants be treated equally and have the same rights as other residents in Finland when they transition from mastering the Finnish or Swedish languages to a native level? And how could teaching and learning support immigrants' proficiency level in a new language? It is necessary to adopt flexible methods and sufficient resources to consider immigrants' various backgrounds and levels of learning capability (Latomaa & Nuolijärvi, 2002, p. 43). Taking the example of preparatory education for pupils in pre-primary, primary, or lower secondary education level, the tailored learning plan for achieving language skills in Finnish or Swedish would be made individually and inclusively based on children's background and social status (National Board of Education, 2025). Aligning with the immigrants' integration plan for adults, immigrants' native language is critical in supporting the acknowledged level of mastering a second language. The acquisition of new language skills is not limited to schooling; it could be widely learned in public environments (MEAE, 2010; National Board of Education, 2025).

Although the planners' previous language choice of adopting English was mainly considering English as a global tourism language, the accessibility in English has created a better learning opportunity for immigrants in Finland. At least, choosing English in the museums revealed that the planners chose a neutral response to visitors with immigrant backgrounds (Kelly-Holmes & Pietikäinen, 2016). Considering the key research and analysis discussed in the Soppi Science Centre, it was obvious to understand that the planners' purpose of using the English language is not only just to offer convenience for foreign tourists, but also, they are eager to bring accessible information and sufficient involvement for people from diverse backgrounds, including immigrants and minority groups living in Finland.
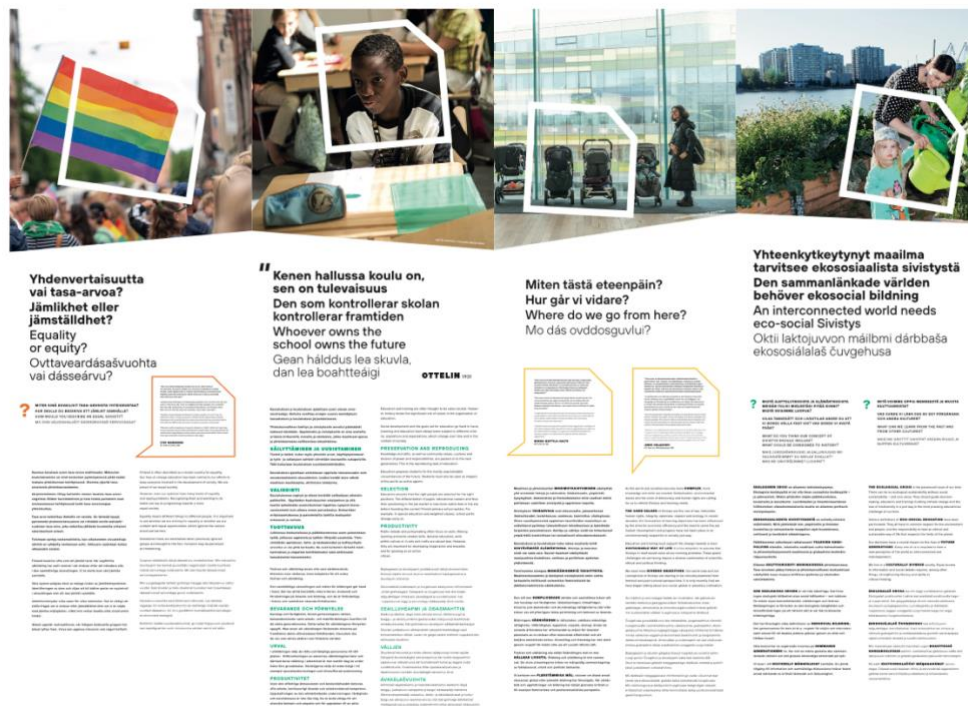
Picture 4. One example of the Soppi Exhibition picture wall.

Our opportunities and even rights in society are influenced by many factors, such as our parents' educational level, income levels and where we live. Education is known to be hereditary and cumulative. There are many ways in which a welfare state can strengthen the accessibility of culture and education for all.

INTERSECTIONALITY

A person's identity and status are shaped by many interconnected cultural roles and starting points that which, although linked, may act intertemporally. For example, 'woman' as a category does not mean sharing the same status with, say, a woman of another religion. A single classification is not sufficient to fully explain identity formation, social status, treatment received or possible discrimination.

INCLUSION AND ACCESSIBILITY

Accessibility refers to the ease of access to services. It includes the accessibility of the environment as well as the ease of finding and presenting necessary information. Inclusion means, for example, that general and special education are merged so that teaching is organised according to individual needs.

They are both based on the value of equality. The aim is to not exclude anyone from public life. Barriers to participation and learning are broken down, both at school and in society as a whole. Finding the best solutions requires both knowledge and will.

Picture 5. Part of the English text about the theme of "People do not start on an equal footing" from the exhibition picture wall

In the workshop of the Soppi Science Centre and exhibitions, the visitors are encouraged to participate in a small activity to reflect their thoughts and desires by using a language they are familiar with. The activity is to use magnetic cubes to build a structure for the Finnish education system or present the values they would like to have in the future education scheme in Finland. The magnetic cubes are accessible in four languages as well as the instructions and other displayed texts. The participants do not need to

understand each meaning of words in the cubes in Finnish or Swedish if they want to join the workshop; the availability of the English language is a considerable choice for them to decide to participate easily. Of course, there is a possibility that some immigrants do not understand English well. In this case, they may have better proficiency in the Finnish or Swedish language learned from vocational schools or language courses arranged by the government. Additionally, the cubes with four languages are effective tools for visitors who are interested in learning two or three new languages.

Picture 6. The magnetic cubes used in the Soppi Exhibition at Joensuu Main Library

(Photo by Xiaojing Wang)

Picture 7. The blocks built by a visitor in the exhibition (Photo by Xiaojing Wang)

6.3 **Learning in Museums Enables Immigrants' Active Participation**

The key themes of the displayed contents in the Soppi Science Centre focused on discussing education in the present issues and future exploration. Program planners selected the interactive mode of questions with answers from Finnish educators to present their values and aims in the thoughts of Sivistys, Finnish education. The questions could also be answered by visitors to have actively reflective thinking and enhance their learning experience in the exhibitions. The design of learning engagement in the Soppi Exhibitions through the questions and workshops is the way to meet the planner's goals of arranging a successful exhibition and ensuring sufficient involvement for a wide and

potential group of audiences (Haywood & Cairns, 2006). The value of learning for immigrants in the Soppi Exhibitions is also decided by the displayed contents, which consistently introduce Finnish education, culture, and society as well as equality, inclusion, and democracy. These topics correspond to the immigrants' integration process in a new country; hence, they could attract immigrants' attention to visit.

The places of exhibitions were mainly organized in the main library, the university museum, art places, or science centres in the touring cities. The public spaces are easily accessible for visitors of all ages and different backgrounds to participate flexibly. The relaxing visiting atmosphere encourages casual discussions among immigrants during the tour. The exchange of values, behaviors, experiences, feelings, and expectations for the future in Finland and their challenges will stimulate their active learning from the exhibitions. The purpose of setting interactive exhibits from the program planners' views is to encourage visitors' active participation and to perform effective learning. Learning in museums is regarded as an "educational experience," providing affective and cognitive results and accumulating social capital through communication, cooperation, and interactions with other visitors (Gammon, 2003).

Picture 8. One interactive corner in the Joensuu Soppi exhibition

(Photo by Xiaojing Wang)

Picture 9. A visitor is checking the notebook in the exhibition

(Photo by Xiaojing Wang)

Another mission of the Soppi Science Centre and Exhibitions indicated in the displayed contents revealed the program planners' strong ambitions in engaging everyone, including immigrants to act as active citizens and develop their capability for "building a desired and sustainable future" (Visitors' Leaflets). In the exhibition context, it explained in the theme of "from passive objects to active citizens", that active citizenship and democracy are the goals of Sivistys and "everyone must be equipped with the knowledge and skills needed to participate fully and equally in democracy" (Exhibition wall texts). It is highlighted that the core value of Sivistys in the Finnish context is to increase people's willingness to take an active part in critical thinking in a diverse way, to be open to evaluating or solving social problems from different perspectives, and to be ready to change or transform previous experiences and knowledge when facing the challenges. Learning in museums or other education and training programs could support audiences in establishing a diverse understanding and promoting critical thinking from societal, ethical, and political perspectives.

6.4 Summary of the Results

When evaluating the Soppi Science Centre, the study mainly focused on the touring exhibitions held in the year of 2024, and the Soppi Science Centre along with the Sivistys+ project. The program materials revealed planners' aims at promoting equality in learning and education, consideration of inclusion in education for diverse groups, and international development. The aims, values, and missions are seen in the linguistic settings, work models, and fruitful themed topics of the key research and analysis on the current social and educational issues in Finland. The Soppi Science Centre is trying to invite everyone to join to create the value of education for a sustainable future, since education is a huge, powerful engine driving a country to develop in achieve everyone's benefits and belongings in the state.

The Soppi Science Centre emphasized the importance of inclusion and equality through engagement. The insufficient participation and attainment would lead to a continuously low involvement in education and social activities among the groups of immigrants and minorities, resulting in social outcomes. The exhibition materials obviously expressed the aims and values of the Sivistys and the Soppi Science Centre in advocating the accessible acquisition of knowledge and skills, sufficient involvement, and active participation for everyone in achieving equality and democracy. The consideration of minority groups and immigrants in learning and social inclusion is reflected in the designed themes in exhibition contents and modes.

Further, the Soppi Science Centre as a form of museum, showcased its values in driving interactive learning in terms of open workshops and self-reflections. It is not only a temporary exhibition happening in the past; the permanent exhibition in the Soppi Science Centre located in Helsinki is available for more audiences from local or abroad to get familiar with the education development in Finland. Continuously, visitors still have an accessible approach to think and reflect a desirable future.

7. DISCUSSION

7.1 Reliability and Validity of Results

The findings of this study addressed the research questions with evidence and samples in the data. The design of the data analysis follows the procedure of content analysis. The methodology in program analysis was properly used in the data analysis; for example, the pre-defined categories were confirmed according to the main features in conducting a program analysis in educational programs. Although the perceptions of each category during the process of open coding may vary by different interpreters, the grouped themes are formed to support the findings and results to answer the research question. Hence, the results are addressed appropriately and validly based on the consistent structure and methodology (Leung, 2015).

The reliability of the results in the study relies on the detailed review of the documents. The original resources from the data were captured clearly in the analysis table with a clear list. It is verifiable as per the requirement of traceability even after a long time.

7.2 Limitations of the Study

This study may have limitations at two points. As mentioned in Chapter 5.1, the lack of participants' feedback and involvement in the analysis is a drawback to the method of program analysis in the present research. Although the current study is based on exhibition materials in the Soppi Science Centre, the findings sufficiently addressed the research question and properly employed the method of program analysis for an educational program.

The other potential limit is related to the research context. The study focuses on the Soppi Science Centre as a learning environment for immigrants' integration in Finland. The permanent Soppi Science Centre is located in Helsinki, presenting as a permanent exhibition space like a museum. However, the main part of the data used in the analysis is from Joensuu Soppi exhibitions. Although I have participated in Joensuu Soppi exhibitions as a tour guide, I did not have a chance to visit the Soppi Science Centre in Helsinki and be involved in exhibition tours in other cities. It might cause concerns about

evaluating the permanent Soppi Science Centre's operational modes in promoting visitors' active participation in Helsinki.

7.3 **Conclusions**

This study aims to use the methodology of program analysis to examine the values, ambitions, and settings entailed in the Soppi Science Centre and its exhibition tours in 2024, and to figure out its role in promoting the learning environment in museums for immigrants.

In order to achieve the goals of the study, I have investigated the exhibition materials and accessible online information on the websites of the Soppi Science Centre and the Sivistys+ project as supplementary data. Moreover, I have worked as a tour guide for the Soppi exhibitions in the city of Joensuu in Finland during the exhibition period. The experience in the Soppi exhibitions enriched my understanding of the materials, interactive workshops, and other activities.

The Soppi Science Centre as an extended educational program of the Sivistys+ project, is a museum as well as a valuable learning environment. It is suitable for immigrants to visit and participate in the activities in the exhibitions. The analysis results in this study show that the Soppi Science Centre aims to foster equality in learning and education and to increase social awareness by providing sufficient and accessible resources for everyone to have the capability, knowledge, and skills to create a shared sustainable future. The Soppi Science Centre has a significant, meaningful role in supporting the social inclusion and diversity of immigrants and minority groups in Finland. The Soppi Science Centre and the Sivistys+ project emphasized the power of education through the displayed materials to the audience calling for a critical approach to thinking about current social, ethical, and political issues and challenges. Education has the power to change. Everyone should acquire the necessary knowledge, skills, and social awareness to actively participate in social development and to pursue democracy, equality, and social rights.

Finland is not an immigration country, but its reality in population, labor force structure, and challenges of the decreased birth rate stimulate the inevitable development in creating a shared future from a diverse perspective internationally. The

existence of the Soppi Science Centre offers an open place for interactive thinking about education, culture, and society in a diverse background. It also provided learning places for immigrants to discuss their belongings and new identities in a democratic state.

7.4 **Suggestions for Future Research**

Following up on the limitations of this study, the next step could be to conduct questionnaires or interviews to collect the learning experiences from immigrants who have visited the Soppi Science Centre or touring exhibitions. Then, the research questions could be extended in analysing immigrants' perceptions of learning effectiveness from the Soppi Science Centre as a learning environment in promoting their integration.

In addition, surveys or interviews with the main planners in the Soppi Science Centre could be considered to validate their views in planning the program or have a dialogue in discussing the key reasons and main purposes based on the analysis results indicated in this thesis.

The other possible tasks could be continued for further research in implementing the program analysis in other educational programs or museums in Finland on a wider scale of research.

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