Beyond disciplinary boundaries: Language-aware choirs driving transformative change in music education

JOHANNA LEHTINEN-SCHNABEL

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BEYOND DISCIPLINARY BOUNDARIES: LANGUAGE-AWARE CHOIRS DRIVING TRANSFORMATIVE CHANGE IN MUSIC EDUCATION

JOHANNA LEHTINEN-SCHNABEL

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Abstract

This article-based doctoral dissertation aims to contribute to reconsidering established musical practice and forms of music education in the face of the interconnected challenges of contemporary societies, and to promote new, reconfigured practices that address wider societal challenges. The objective of the practitioner inquiry is to generate new understanding of transdisciplinary and systems-aware approach in music education through an intercultural, multilingual choir practice that integrates music and second-language learning, acknowledging the direct social needs and wishes of the participants who have migrated to Finland as adults. This dissertation asks: How can second-language (Finnish) learning be supported within a multilingual choir practice? What new insights can a language-aware choir generate for music educational thinking and actions?

Methodologically, the explorative research is grounded in activity theory and the idea of activity systems, being further informed by the theorisation of systems praxis, which together enable the linking of individual actions and broader social structures, as well as the communication of social changes. Multimethod and mixed-methods approaches are used to explore the phenomenon from diverse angles. The research materials comprise 24 semi-structured pre-, middle- and post-interviews with 11 choir participants and a second-language teacher, 57 Phonology pre- and post-tests, a researcher's journal, field notes and material, and 18 videos of choir rehearsals, one concert, and a virtual choir performance. The findings have been reported in four peer-reviewed international articles, each based on a distinct sub-study and sub-questions.

The findings demonstrate that a language-aware approach in a choir has multiple potentials to support second-language learning, but requires music educators to move beyond professional boundaries. They show how a double meaning when integrating two distinct activity systems – language learning and meaningful musical experiences in a choir – can improve phonological processing and the production of spoken language in various ways, as well as encourage overall language use in new social contexts, while simultaneously fostering positive transformations in cultural, social, and societal participation and active citizenship in everyday life. The analysis illustrates how transdisciplinarity disrupts habitual actions and established principles of both musical practices and language learning, reconstructing the historical idea of art for art's sake as well as the dominant notions of praxis in music education. The research contributes to the expanding understanding of music professionalism by arguing for sustainability-linked transdisciplinary transitions and systems awareness for professional practice to better respond to the new needs of society.

Keywords: activity theory, choir, (second) language, music education, systems change, systems praxis, transdisciplinarity

Tiivistelmä

Tämän artikkelipohjaisen väitöskirjan tavoitteena on arvioida vakiintuneita musiikkikäytäntöjä ja musiikkikasvatuksen muotoja nyky-yhteiskuntia kohtaavien, toisiinsa kytkeytyneiden haasteiden valossa sekä edistää uudelleen muotoutuvien käytäntöjen kehittämistä vastattaessa näihin laajempiin yhteiskunnallisiin haasteisiin. Tutkimus, johon yhdistyy käytännön toimijuus (*practitioner inquiry*), luo uuden, ylialaisen (*transdisciplinary*) ja systeemitietoisen lähestymistavan musiikkikasvatukseen tarkastelemalla monikielisiä ja kulttuurienvälisiä kuoroja, joissa toisen kielen (suomi) oppiminen on integroitu kuorokäytäntöön aikuisina Suomeen muuttaneiden kuorolaisten sosiaalisten tarpeiden ja toiveiden pohjalta. Tutkimus kysyy: Miten toisen kielen (suomi) oppimista voidaan tukea monikielisissä kuoroissa? ja Millaista uutta näkemystä kielitietoinen kuorotoiminta voi tuottaa musiikkikasvatuksen ajatteluun ja toimintaan?

Menetelmällisesti eksploratiivinen tutkimus nojaa toiminnan teoriaan, jota on täydennetty myös systeemipraksiksen (*systems praxis*) teoretisoinnilla, mahdollistaen yksilöllisen toiminnan, sosiaalisten rakenteiden ja yhteiskunnallisten muutosten yhteenkytkemisen. Moni- ja sekamenetelmällisiä lähestymistapoja käyttäen ilmiötä tarkastellaan eri näkökulmista. Tutkimusaineisto koostuu 24 puolistrukturoidusta 11 kuorolaisen ja toisen kielen opettajan yksilöhaastattelusta (alku-, väli- ja loppuhaastattelut), 57 fonologiatestistä (esi- ja jälkitestit), tutkija-kuoronjohtajan päiväkirjasta, kenttämuistiinpanoista ja videoaineistosta, johon kuuluu 18 videota opetustilanteista, yhdestä konsertista sekä virtuaalikuoroesityksestä. Tulokset on raportoitu neljässä vertaisarvioidussa kansainvälisessä artikkelissa, jotka perustuvat neljään alatutkimukseen ja tutkimuskysymykseen.

Tutkimustulokset osoittavat, että kielitietoinen lähestymistapa kuorotoiminnassa tarjoaa monenlaisia mahdollisuuksia tukea toisen kielen oppimista, edellyttäen kuitenkin kuoronjohtajalta ammatillisten rajojen ylittämistä. Kuorotoiminnan kaksoismerkitys kahden erillisen toimintajärjestelmän – kielen oppimisen ja merkityksellisten musiikillisten kuorokokemusten – yhdistyminen voi monin tavoin edistää fonologista prosessointia ja puhutun kielen kokonaisvaltaista tuottamista sekä lisätä rohkeutta käyttää kieltä uusissa konteksteissa. Samalla tulokset ilmentävät myönteisiä muutoksia sosiaalisessa, kulttuurisessa ja yhteiskunnallisessa osallisuudessa sekä arjen aktiivisessa kansalaisuudessa. Analyysi osoittaa, kuinka ylialaisuus (*transdisciplinarity*) haastaa totuttuja toimintatapoja ja vakiintuneita periaatteita niin musiikillisiin käytäntöihin kuin kielenoppimiseen liittyen sekä muokkaa uudelleen historiallista taidetta taiteen vuoksi -ajattelua ja musiikkikasvatuksessa vallitsevia *praxis*-käsityksiä. Tutkimus laajentaa ymmärrystä musiikin ammatillisuudesta tuomalla kestävyysajattelusta nousevat ylialaiset

siirtymät ja systeemitietoisuuden osaksi ammatillisia käytäntöjä, jotta ne voisivat paremmin vastata yhteiskunnan muuttuviin tarpeisiin.

Avainsanat: kieli, kuoro, musiikkikasvatus, suomi toisena kielenä, systeeminen muutos, systems praxis, toiminnan teoria, ylialaisuus

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Statement of contribution to the co-authored articles

I was the sole author in the Articles 1 and 3 and responsible for all parts in them. Article 2 was co-authored with Dr Sari Levänen and Article 4 with Professor Heidi Westerlund and Dr Sari Levänen. Both Westerlund and Levänen were supervisors of the work. As the first author in Article 2, I bore responsibility for the content, data, analysis, writing the manuscript, results, and conclusions. As the second writer in Article 4 I bore responsibility for co-writing, co-editing, and bringing examples from data.

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PART I

SUMMARY OF THE DISSERTATION

1 Introduction: Changing music education in the diversifying Finnish society

To open up our minds, bodies, and voices to singing and language expression, the language-aware choir often starts the rehearsals by creative playing with "the difficult/funny/important words of the week", which the choir participants suggest and bring to the rehearsals. By exploring and experimenting, we approach the suggested words by focusing on the challenges and other relevant aspects experienced by the choir participants, such as hearing and pronouncing difficult and strange speech sounds that they may involve, and becoming familiar with previously unknown spoken Finnish that differs considerably from the written Finnish language. We diversely rap and vocalise the words and use body percussion to get a feel for the spoken rhythm, pacing, and word stress. We then sing them through co-creating little ostinatos (short repetitive melodies or rhythms) that exaggerate the linguistic pitfalls so that we can gain a good taste of the spoken sounds with our tongues, lips, and the whole body. We also add suitable movements and emotional expression (suggested by anyone in the choir) to support the holistic sensing, and production of the language, and to facilitate understanding and communication of the word's meanings. We may even write the words down and project them on the wall, allowing for visual – and eventually, multisensory – coupling with long and short speech sounds. We also make sentences out of the words and then improvise melodies and tunes for them, adding harmonies as well. The second-language teacher engaged within this experimental process with me is helping with the sentences and is adding linguistic ideas and cues, which we simultaneously translate into musical expression. As a choir conductor with many roles (e.g., arranger, pedagogue, accompanist), I consider how it is possible to merge musical and linguistic engagement in novel ways, as well as approach Finnish-as-a-second-language in dialogue with the rich diversity of different languages and cultures of the choir context. The adventurous introduction, accompanied by much joy, playfulness and laughter, focuses the choir participants' attention on sound discrimination, pronunciation and rhythm of language. After that, we are attuned to practising all kinds of songs, including improvised and co-composed ones, through which dynamic and holistic language expression and production can be further encouraged, for which we create and recreate new lyrics and develop our own distinct musical arrangements based on emerging ideas and intercultural negotiation within the choir community, and which we regularly perform at public concerts.

This doctoral dissertation is about a new music education practice: language-aware choirs. I therefore wish to begin with a description of the language-aware choir rehearsals, emphasising that my practitioner research (Cochran-Smith & Lytle, 2009) journey is also entwined with the process of re-configuring choir practice. The motivation for this research project stems from my own professional practice and over 20 years of experiences as a choir conductor and music educator in multiple contexts of music education. More precisely, this research work is the result of a long meandering journey, begun in an educational situation I encountered as a music teacher/educator when newly arrived residents wondered why they needed to join music lessons as part of integration training,[1] when their only goal was to become familiar with the Finnish language and the basic habits of their new home country in order to manage their everyday lives. These pilot experiences during integration training sessions, along with the wishes expressed by the participants, led me, together with a second-language teacher, to establish Learn-Finnish-by-Singing (henceforth LFBS) groups, which eventually evolved into the LFBS choirs[2], with which I later began the journey of this research project (see Chapter 1.5). These open-access, inclusive adult immigrant choirs, provided by two public organizations in the capital region, are characterised by high diversity in terms of the participants' linguistic, musical, cultural, social, and educational backgrounds, age (20–70 years), as well as years of residence in Finland. In these choirs, Finnish-as-a-second-language is integrated into choir practice based on the choir participants'[3] needs, desires, and real-life experiences, highlighting the linguistic challenges in their everyday lives and addressing a shared and multivoiced learning process (e.g., Lerman, 2011) among the whole choir community.

Choir singing is a popular hobby, not just in Finland but worldwide. Voice is also the most easily accessible musical instrument, as it exists within everyone's body (e.g., Juan-Morera et al., 2023a). For instance, in Finland, with its about 5,6 million people, 5 % percent (over 270 000 people) are singing in a choir (Nenola, 2019). At the European level, the amount of active chorists is 37 million[4], which is about 4,5 % of the whole population, ranging nationally from 2,4% to 11% (European Choral Association, 2015, 2024). Choirs vary from professional ensembles to community choirs, each characterized by distinct interests and triggers that also reflect the breadth of social practices.

This dissertation directly addresses the need for reconsidering the established practices in music education and choir singing in times of rapid changes in population, globally. There are various reasons for voluntary or involuntary migration in the face of global interconnectedness (e.g., Triandafyllidou, 2025) and multiple intersecting crises, such as natural, humanitarian, environmental, and geopolitical crises (cf. polycrises, e.g., Westerlund et al., 2025; Wray et al., 2023). In Finland, the context of this research, the number of immigrants has grown over the past decade to a historically high level

1 Integration training aims to give better possibilities for immigrants (unemployed, at least 17 years old, living less than three years in Finland) to integrate into Finnish society. The requirement to participate stems from both the labour market and independent training funded through the unemployment benefit. https://www.te-palvelut.fi/en/jobseekers/career-education-training/integration-training-immigrants

2 I will use both 'Learn-Finnish-by-Singing (LFBS) choirs' and 'language-aware choirs' interchangeably, referring to the same choirs.

3 There are different ways to refer to individuals singing in a choir (e.g., choir singer, choir participant, choir member, a chorist). In this study, I use the term choir participant and choir member when referring to individuals participating in language-aware (LFBS) choirs.

4 https://europeanchoralassociation.org/cooperation-projects/singing-europe/

(Tilastot [Statistics], 2025), as is also reflected in ongoing demographic changes: more than every 10th person of the population speaks a foreign language – other than the official languages of Finnish, Swedish, and Sámi – as their native (first) language (Tilastot [Statistics], 2025). The significance of strengthening immigrants' social participation and inclusion is emphasised in national-level policy documents such as Finland's strategy for sustainable development (Prime Minister's Office, 2022), building on the goals of United Nation's global 2030 Agenda for sustainable development (United Nations, 2015). These policy frameworks underscore the urgent, shared responsibility of all people and parties – from governments and international institutions to civil societies, local authorities, the private sector, and academic communities – to take actions and implement steps towards social, environmental, and economic sustainability. Such collective actions highlight "the future of humanity and of our planet" (p. n.p.) in an era of great social challenges, characterised by increasing polarisation, poverty, and various forms of inequalities (e.g., growing income differentials, in the Finnish context see, e.g., Paukkeri et al., 2024), also strengthened further by "the rise of populism and authoritarian politics" (p. 58, Westerlund et al., 2025).

One critical barrier to the social participation and inclusion of adult immigrants living in Finland is the acquisition of Finnish-as-a-second-language skills (e.g., Leinonen, 2020; Yijälä, 2023), as the lack of skills in the official languages[5] not only substantially weakens employment prospects (e.g., Könönen & Himanen, 2019; Larja, 2019; Lehmuskunnas et al., 2020) but also contributes to social and societal exclusion, and isolation in general (e.g., Leinonen, 2020), including in arts and cultural services. Moreover, the diversity of newly arrived residents – ranging from illiterates to employees with high levels of academic education – requires the development of novel second-language teaching and learning approaches that could better acknowledge the variety of needs and desires in the immigrant population and encourage language use and communication in everyday life. Accordingly, language-sensitive approaches in the context of arts and arts education can also support inclusiveness and socially engaged orientation in arts practices. This dissertation addresses the need to investigate the potential of music education in supporting the transitions required of Finnish society to respond to such changing expectations, and to reconsider established musical practices and forms of music education in the face of the interconnected challenges of contemporary societies. In this respect the project aligns with the UNESCO Framework for Culture and Arts Education (2024, 2025), which recognises the importance of strengthening inter- and transdisciplinary research related to "culture and arts education" (2024, p. 9) by reflecting current times of increasing changes and complex interrelated challenges. Drawing on the legacy of the ArtsEqual research initiative (2015–2021)[6] in the Finnish context, the research is rooted in *socially engaged music education* that acknowledges the social challenges of contemporary society through the lens of music education.

Arising from a practical problem within a work context, this practitioner research follows the principle of inquiry as stance (Cochran-Smith & Lytle, 2009), being also informed at its latter stage by systems practice and thinking in line with systems praxis (see Ison, 2010, 2017). Practitioner research encompasses diverse "genres and forms of research" (Cochran-Smith & Lytle, 2009, p. viii).[7] In this tradition, the context of the professional practice "functions as the site for research and the focus of study" (pp. 99–100). In turn, inquiry as a stance helps cope with changing situations and rapidly developing societal conditions in teaching and learning contexts (see in the Finnish music education context, e.g., Koskela, 2022; Kuoppamäki, 2015; Muhonen, 2016; Nikkanen, 2014) by blurring the traditional boundaries between "research (or theory) and practice, researchers and practitioners, knowing and doing, analysing and acting, and conceptual and empirical research" (Cochran-Smith & Lytle 2009, p. 123), as these are not viewed as dichotomies, but rather form "a reciprocal, recursive, and symbiotic relationship" (pp. 94–95).

Theoretically, this research can be located within the Deweyan pragmatist framework, in which the *inseparability* of theory and practice, thinking and actions, social and educational change (e.g., Dewey, 1937), as well as diverse interests within holistic experience (e.g., Dewey, 1916, 1938) are significant aspects. Methodologically, the research draws primarily from *activity theory* thinking (e.g., Engeström, 1987, 1999, 2001; Leont'ev, 1978, 1981; Vygotsky, 1978).

1.1 Language-aware choir

The notion of a *language-aware choir*, which emerged during the research process, depicts the core phenomenon underpinning this project. I have used it interchangeably with the notion of LFBS choir, however, addressing language-awareness in a choir more broadly, not only related to Finnish-as-a-second-language and language learning but also emphasising the notion of *translanguaging* (e.g., García & Wei, 2014; Wei, 2018). In the intercultural and multilingual choir context, translanguaging highlights the harnessing of all available resources, such as the different first (native) languages of the choir participants and different modes of expression (embodied, emotional, spatial, material), to support and enhance communication, as well as dialogue across languages and cultures.

The merging of music and second-language learning non-hierarchically in a language-aware choir context emphasises change and moving beyond established and

5 Finnish is the major official language, with over 84% of the population speaking as their first language. Swedish is spoken by about 5% of the population, and Sámi about 0,04%.

6 www.artsequal.fi

7 Practitioner research is thus also theoretically hybrid, being grounded on "the dialectic of critical inquiry and practice" (p. 93).

accustomed thinking and actions, both in music and second-language education. For instance, in contrast to an ordinary choir, where typically the focus is on music and language is related to articulation, in language-aware choirs music and language are approached equally and reciprocally throughout the choir practice, being also explicated in the underlying, constantly evolving pedagogical principles (the Six Fields of Action, Appendix A). Moreover, whereas an ordinary choir often strives to avoid mistakes and embraces tonal homogeneity, language-aware choirs embrace a "mistake-is-a-gift" approach and ground itself on diversity at all levels. In comparison to language-class contexts that typically are based on pre-defined language levels[8] and/or a top-down curriculum, the experiences and skills of Finnish-as-a-second-language in language-aware choirs are fully heterogenous, and the language approach is based on the real-life needs and wishes of the choir participants (cf. bottom-up approach), as noted earlier. Such an approach draws on intercultural, transdisciplinary, and transprofessional collaboration between the choir participants, the choir conductor, and second-language teachers. Accordingly, language in and through music and music-making is approached holistically, emphasising embodied language learning, (e.g., Jusslin et al., 2022), which has only gradually found its adaptations in language learning contexts (e.g., Macedonia, 2019; Macrine & Fugate, 2021), despite the growing body of research emphasising the potential of embodied approaches to language learning (Atkinson, 2010; Jusslin et al., 2022; Kosmas & Zaphiris, 2020).

Altogether, a language-aware choir, as understood in this study, aims to provide authentic (out-of-language-class) (e.g., Hua & Jankowicz-Pytel, 2020; Lilja et al., 2020) and inclusive (e.g., Juan-Morera et al., 2023a, 2023b, 2024) conditions for socially sustainable music and language learning, in which joy, playfulness, dialogue between languages and cultures, cultural and social well-being (e.g. Daykin et al., 2020; Fancourt, 2017, Heydon et al., 2020), and holistic (embodied) learning (e.g., Dewey, 1916; in arts education see e.g., Anttila, 2018; Juntunen, 2023) through meaningful musical activities are at the heart of the practice.

The transdisciplinary nature of this research stems from its non-hierarchical and reciprocal integration of two disciples, music and language education, "in a holistic and integrated manner" (Leavy, 2011, p. 30), referring to the integration of both theory and practice. In other words, the transdisciplinary orientation here comprises both "a mode of thought and action" (Klein, 2004, p. 24). The understanding of transdisciplinarity in this dissertation thus addresses the synergistic and holistic collaboration between different disciplines "in relational terms" (p. 27) at the "high levels of integration" (Leavy, 2011, p. 9), with the original aim of "transcending disciplinary knowledge production in order

8 Language course levels are classified based on the rating scale of the Common European Framework of Reference for Languages (CEFR), which describes language ability on a six point scale, from A1 for beginners up to C2 for those who have mastered a language. https://www.coe.int/en/web/common-european-framework-reference-languages/level-descriptions

to more effectively address real-world issues and problems" (p. 24). As the approach to transdisciplinarity in music and music education still remains complex, it also reflects the problems motivating this music education research. Throughout the research process, I have thus needed to engage with and, particularly, move beyond diverse boundary judgements *in theory and practice*, including the constant extension of my professional comfort zones as a choir conductor and a music education researcher. However, as Hesse-Biber (2015) and many others argue, navigating different boundaries indicates tensions that can also provide new insights, while requiring "creativity and risk taking as researchers negotiate a balance between being "at home" and being "in exile" (p. xxxiv).

This doctoral project's transdisciplinary orientation has also influenced the methodological choices, addressing the landscape of multimethod and mixed method research MMMR (e.g., Hesse-Biber & Johnson, 2015). Researchers argue that transdisciplinary research projects, while addressing complex and multifaceted problems, "typically require the use of more than one method" (Leavy, 2011, p. 71). Aligning with this trend, this research also aims to tackle "complex analytical and interpretative issues" with multiple different methods to provide "holistic approaches to research", where "each method informs the use of the other methods" (pp. 72-73, see also Hesse-Biber & Leavy, 2011).

Within the activity-theoretical framework, language-aware choirs will be examined through the lenses of activity systems (Engeström, 1987, 1999, 2001), which have also been used and adapted as a methodological device. Through activity theory, it has been possible to connect the collective choir activity, and the individual actions in it (on a very local and situated level), with broader social structures, as well as communicate changes in the broader society, which the choir activity reflects. For the purposes of this research, activity theory thinking is also informed by systems praxis (Ison, 2017), as well as expanded with other theoretical concepts such as wide awakeness and social imagination (Greene, 1995, 2001) and invitational practice (Purkey & Novak, 1993; Purkey & Stanley, 1991; Purkey & Aspy, 2003) in order to bring new perspectives to further develop and expand the understanding of "professionalism in music" (Westerlund & Gaunt, 2021).

1.2 Transitions towards a more sustainable society

This research can be located within the trend of transition research, interested in "large-scale societal transformation toward sustainability" (Loorbach et al., 2017, p. 599) in the long term. However, current conditions – associated with various upheavals and extreme events that have lately been experienced worldwide, whether environmental, (geo)political, or economic (e.g., related to climate change, geopolitical conflicts, increasing polarisation) – appear to emerge in quite unexpected ways, and often seem

impossible to understand through the traditional logic of cause-and-effect (cf. causal, linear) thinking to which we are quite accustomed (e.g., Hodgson, 2020). Diverse turbulences, and other interconnected changes in the rapidly changing world, thus pose new challenges to the existing institutions (e.g., norms, rules, standards), systems of governance, and knowledge on which we have built our thinking and actions (e.g., Ison & Straw, 2020), since they are no longer adequate to the task in contemporary situations. The interest of this research lies in how, and in what ways, habitual and established musical practices and related music professionalism could be reconsidered, recreated, and reframed in relation to changing contemporary situations.

Systems researchers (e.g., Forrester, 1971; Ison, 2001, 2010; Meadows, 2009; Senge et al., 2011) have already argued for decades that sudden upheavals typically manifest complex and interconnected processes of change that do not emerge stepwise, but in *non-linear and circular ways*. In other words, they "develop in a shock-wise manner (rather than in a gradual way)" (Loorbach et al., 2017, p. 607). Accordingly, this nonlinear stream of increasing changes also reflects multiple simultaneous *transitions* that occur at diverse levels, as "the outcome of all sorts of actions and changes that somehow lead to new structures in a way that was not foreseen or planned in advance" (p. 608). In transition research, which is a rapidly growing field (see e.g., Escobar, 2022; Köhler et al., 2019; Lachman, 2013; Loorbach et al. 2017, Zolfagharian et al., 2019), these simultaneous transitions are described as presenting "the process of change from one system state to another via a period of nonlinear disruptive change" (Loorbach et al., 2017, p. 605). They also indicate that systemic changes are "the result of an interplay of a variety of changes at different levels and in different domains that somehow interact and reinforce each other to produce a fundamental qualitative change in a societal system" (p. 605). As systems scholars have highlighted (Goleman & Senge, 2014; Hodgson, 2020; Ison, 2010, 2017; Jackson, 2020; Van der Leeuw, 2020), in order to cope with the complexities and uncertainties typifying current times, we should enhance our systemic sensibilities and, for instance, get rid of seeing cause-and-effect operating everywhere, as well as appropriate the multiplicity of "the independencies between people, events and things" (Ison, 2017, p. 20).

This doctoral project joins the emerging transition reflecting wider social structures and changing societal situations in Finland, which mirrors global situations and upheavals. As transition research, it comprises "a large variety of approaches and perspectives" (Loorbach et al. 2017, p. 601) that in different ways provide further insights "into the persistency of unsustainable societal regimes and possible transition pathways … to escape lock-in" (p. 601). As Köhler et al. (2019) note, "a core issue in transitions research is the relation between stability and change" (p. 4). Transitions towards *sustainable societies* are typically oriented to transdisciplinary and holistic engagements with complex social issues, not only at the theoretical level, but also at practical and policy levels (e.g., Grin et al., 2010; Loorbach et al., 2017; TWI2050 – The World in 2050, 2018; UNESCO Framework for Culture and Arts Education, 2024, 2025). Hence, this research project's approach to transitions also emphasises "the necessity to engage deeply in practical contexts where actors deal with transitions" (Loorbach et al., 2017, p. 601). Overall, transitions in this research are related to transformation from the stable and narrow understanding of disciplinary boundaries in music education towards transdisciplinary thinking and actions in professional practice and expertise. Importantly, from the transdisciplinary perspective, this research project joins a broader transition towards systems change in music education (e.g., Laes et al., 2025; Odendaal & Treacy, 2026; Westerlund et al., 2025), aiming for more sustainable societies.

As the focus of this study is on specific co-constructive choir practices in the Finnish context, the research also aligns with what Escobar (2022) calls transitions at the local level; in other words, transitions that emerge through the "recommunalization of social life" in "forms of collective actions" (n.p.). They address a significant dimension of relationality while responding to the "co-emergence of living beings and their worlds" (the we condition of being, n.p.).

1.3 Research context

Language-aware choirs formed the immediate context for this research project. The choirs would not, however, have emerged without the influence of larger contexts, including a collection of networks, institutional frameworks, even suitable societal conditions. The choirs were established during a period when immigration to Finland was beginning to rise. By 2026, 13 years later, the number of immigrants has reached a record high, with the latest statistics showing that the majority belong to working-age adults (Tilastot [Statistics], 2025). The diversifying social reality in Finland has given rise to the need to develop new pedagogical approaches that could better acknowledge the different social needs of newly arrived residents moving to and staying in Finland for various reasons. Examples of these approaches also include many social innovations designed particularly for children, such as the Tempo Orchestra, featured as Finland's El Sistema orchestra (e.g., Puronmies & Juvonen, 2023), and the Floora project, which has improved access to instrument tuition for "socially and/or economically marginalised children" (Väkevä et al., 2022, p. 424) through collaboration among extracurricular music institutions, social sectors, and schools in basic education (see also Backer Johnsen, 2026; Väkevä et al., 2017; Westerlund, et al., 2019). However, adult immigrants in Finland still lack cultural and educational contexts where they could at the same time actively learn and practice spoken Finnish. The use of spoken Finnish is also not supported by Finnish

people, who typically switch to English when communicating with non-native speakers (e.g., Kim et al., 2022).

The two choirs that participated in this study were initiated as part of my professional work at the second largest Adult Education centre in Finland in the field of liberal adult education, and at the cultural centre as part of municipal cultural services in the Helsinki metropolitan area. In both choirs, the participation was a leisure pursuit, free of charge, and required no prior skills in music or Finnish-as-a-second-language. The teaching was subsidized by a special grant of the National Board of Education and the city of Helsinki. The weekly rehearsals lasted for 1.5 hours, and the choirs had regular public concerts and other performances in various venues. One choir had rehearsals in a large music classroom in the evenings, the other in a music hall in the afternoons.[9]

The language-aware choirs were embedded within broader public systems, encompassing extensive networks and stakeholders. The adult education centre where one of the LFBS choirs operated is part of a network of 174 adult education centres[10] that operate across the length and breadth of the whole country, subsidised by the Ministry of Education and Culture and local authorities. These centres are governed by the Act on Liberal Adult Education (632/1998), setting the legal framework for this form of educational provision with the overall aim of supporting the multi-faceted development of individuals by nurturing well-being and democracy, the implementation of sustainable development, and promoting interculturalism and internationalisation. With more students than any other form of educational establishment in Finland, adult education centres have a total of a half million people attending their courses every year. Since the first adult education centre was founded as early as 1899, these institutions have in this way become an integral part of Finnish culture, offering a wide range of open-access cultural services tailored to local needs, including concerts, theatre performances, and art exhibitions. They also employ a significant number of teachers (cf. music teachers), musicians, and artists. Tuition is offered in a wide variety of subjects, such as arts, crafts, a multiplicity of languages including Finnish-as-a-second-language, social studies, physical education, media, and so on. In 2024 music was the most popular subject, with 22% of all participants, followed by crafts at 20%, and language courses at 19%. Adult education centres also provide basic education in the arts (BEA), open-university studies, and integration training. In the context of music education, a wide variety of courses are offered, including, for instance, choirs and singing ensembles, orchestras, bands, singing and instrumental tuition, lectures, music theory and solfeggio, music theatre and improvisation, music technology, composition and song writing, global music courses, and music courses for families.

Of the two choirs participating in this research project, the other choir was affiliated with cultural services at the vibrant and international cultural centre, which is one of the eight major public culture centres in Helsinki. These culture centres operate under the cultural department of Helsinki,[11] which is responsible for the city's public cultural policy and cultural affairs, the Helsinki philharmonic orchestra, and the operation of museums and art museums. The events at the cultural centres are organised in close cooperation with Helsinki's arts and cultural sector, as well as with the local communities. The cultural centre to which the choir was related offers a wide range of cultural services, such as concerts, dance and theatre performances, exhibitions, children's events, and arts education.

1.4 Research aim, objectives, and core questions

The broad aim of this explorative research project is to contribute to reconsidering established musical practice and forms of music education in the face of the interconnected challenges confronting contemporary societies, and to promote new, reconfigured practices that address wider societal challenges.
The objectives supporting this aim are:

- To expand understanding of transdisciplinary approaches in relation to the theory and practice of music education, in order to allow moving beyond disciplinary boundaries in the pursuit of socially responsive and responsible music education;

- To contribute to systems-aware music education and professionalism, so that music education can be seen as a co-evolving part of a sustainable society.

Enlightening the overarching aims and objectives, the following research questions have guided this work:

1. How can second-language (Finnish) learning be supported within a multilingual choir practice?

2. What new insights can a language-aware choir generate for music educational thinking and actions?

The overarching research questions are unfolded in four sub-studies, reported in four peer-reviewed articles, each having a different methodological approach and purpose in the whole of the dissertation.

9 During the COVID-19 lockdown the choir rehearsals took place over Zoom.
10 https://kansalaisopistot.fi/kielet/english/what-can-i-study-at-an-adult-education-centre/
11 https://www.hel.fi/en/decision-making/city-organisation/divisions/culture-and-leisure-division/introduction-to-the-culture-and-leisure-division

1.5 Researcher position

My researcher position, drawing from the design of this practitioner research and the *inquiry as a stance* approach (Cochran-Smith & Lytle, 2009), emphasises my dual role as a practitioner (a choir conductor) and a researcher. This role has enabled me to participate in the research process "from the inside" (p. 41) and focus on emerging "problems and issues that arise from practice" (p. 42). Being a practitioner-researcher has been criticised – particularly by those who "safeguard traditional approaches to knowledge generation and teacher development", as well as those who advocate "outside expertise" (p. 47) – for being insufficiently scientific, hindering generalisation across different contexts, and raising concerns about validity and generalisability due to being too close to the emerging issues. This study therefore challenges the traditional understanding of "disembodied knowledge production" (p. 95), highlighting the subjectivity and "interrogations of researcher's own assumptions, beliefs, values, practices, and theories" (p. 107) in line with practitioner research.

I am, however, aware that being an inside 'knower' and actor in my own professional context also challenges me to face complex and somewhat unique ethical issues and the self-critique[12] that this position entails. According to Cochran-Smith and Lytle (2009), "it is never possible to divorce the self either from the research process or from educational practice" (p. 40), which is emphasized to an increasing extent in different research fields and paradigms (e.g., post-qualitative perspectives, second order cybernetics) challenging "objective knowledge about the 'real' world" (Hodgson, 2020, p. 29) and the old mechanistic worldview grounded on the "Newton/Cartesian legacy of mechanistic determinism" (p. xiv). As a researcher, I thus acknowledge a holistic approach in which "the researcher is fully entangled with the research, not only as a research cognition capable of critically reflecting on their own influence on the research, but also as an affected researcher-body" (Østern et. al 2021, p. 2; see also Lakoff & Johnson, 1999; Maturana & Verden-Zoeller, 2008).

In addition to the practitioner inquiry design, my researcher position is informed by systems practice (Ison, 2017) that adds a third role, the 'observer', to the practitioner-research role, acknowledging the constant moving back and forth between the different layers from practice to systems thinking. That lens of a systems practitioner (Ison, 2017) adds a critical and reflexive 'learning device' to my practitioner-researcher position to uncover and reflect on my presumptions and pre-understandings, as well as choices in relation to this research project and my deeply held mental models as a music professional and practitioner-researcher.

As discussed in the beginning of this chapter, the impetus for the topic of my doctoral research originates in a very concrete and unpredictable situation that I faced as a music teacher when I taught music to adults with linguistically and culturally diverse backgrounds for the first time. At that point I was enthusiastic to start making and creating 'global music' with the intercultural groups that I believed were equally eager to share their musical experiences from all over the world. However, my assumptions of music as 'a universal language' were radically challenged, leading not only to a new direction in the pilot music course, but also the start of the transformation of my position as a music educator, and then, later, as a researcher.

Another, although more theoretical way to illuminate my becoming a practitioner-researcher occurred when I familiarized myself with cultural-historical activity theory (see more Vygotsky, 1978, Leont'ev 1978, 1981, Engeström 1999). I was struck by the notion of an "expansive cycle" (Engeström 1999, p. 33), referring to the internalization and externalization (Vygotsky, 1978) processes of an activity. Coincidentally, I ended up painting my Easter egg within this topic, as it was Easter time. In terms of activity theory, I made an artifact (Vygotsky, 1978), a kind of concrete symbol, of the theoretical idea. This material entanglement, which at first seemed to have no connection with the abstract idea, helped, however, to mediate my understanding of the symbolic meaning of the externalization process in relation to my research journey.

According to Yrjö Engeström (1999), the developer of the activity theory and an adult education scholar, an externalization process typically starts with "the form of discrete individual innovations" (p. 34) that could be related to the grounding of a language-aware choir after the experiences in integration training. The creative externalisation process is akin to a search for novel solutions to earlier internalized (learned) conditions, and emerges "as the disruptions and contradictions of the activity become more demanding" (p. 34). For me, the critical and disruptive moment emerged when I recognized the professional limitations that challenged, in particular, my earlier internalized assumptions and values as a musician and music educator, when I stepped beyond my disciplinary comfort zones "under conditions of uncertainty and intensive search" (p. 34) and within the changing context of a wider society that was simultaneously undergoing the flows of increasing immigration. Altogether, the orchestration of multiple simultaneous voices – both inside and outside myself – led me to explore this intriguing yet highly complex transdisciplinary topic not only in practice, but also theoretically, ultimately in order to combine the two.

As such, my education in music has followed quite conventional steps within the Finnish music education system,[13] starting from musical playschool in early childhood, attending pop/jazz-emphasised music classes (7-9th grades) in secondary school, playing classical piano and violin in the local music school throughout adolescence, and ending up in professional studies and graduating from the department of music education at the

12 Ethical issues and self-critique will be presented in Chapters 4 and 7.

13 The formal Finnish music education system has been defined as comprising music education in comprehensive schools, music schools providing extra-curricular music education, and higher education offered by universities and other tertiary organisations (see more Väkevä et al., 2017; Westerlund et al., 2019).

Sibelius Academy. I began my path as a researcher only after having 20 years of experiences in practice as musician, choir conductor, and music teacher in multiple contexts and diverse fields of music education, such as upper secondary school, extracurricular music school, the tertiary level at the university of the arts, and, for the longest part, in the field of public liberal adult education since 1999.

In addition to this formal part of my music education, choirs in a variety of contexts – including informal ones – have played a particular role in my journey as a musician, a music teacher, and finally as a researcher. Singing in diverse forms of choirs – including children's, youth, female, and mixed choirs since childhood – changed in my 20s to conducting and grounding diverse choirs when there was a need for a new group to 'come into being', for example with the first LFBS choir in 2012. One pivotal influence in my long-term journey related to choirs stems, however, from my contradictory experiences in the Radio Children's Choir, where I sang and earned monthly pocket money for six years during my adolescence. These experiences also played a role in my becoming a socially engaged choir conductor. In the Radio Children's Choir I, together with other young enthusiastic chorists, received high-quality musical training through a singing repertoire ranging from Bach's Cantatas and Passions to the world premieres of contemporary Finnish and international composers. I can recall the unforgettable concert tours around Europe, participation in international choral competitions, two-times-per-week rehearsals, and Friday recordings once a month in the tiny studio of Finnish Radio, where all selected 'A-choir singers' gave their best not only for the sake of the music, but also for the responsive collaboration with the others, who became like family members by sharing so much together during those intensive years. The choir was conducted by an East German choir professor whose musical aims, reflecting his own background and history, emphasised authoritarian and teacher-led orientations, in contrast to student-centred ones (see more Yilmaz, 2009; Krahenbuhl, 2016; Klemenčič, 2017).

In those early days of my musical experiences in a choir, I was exposed to both the beauty of collaborative music making and the meaning of other singers strengthening and supporting each other to the very last, and, on the other hand, also how teaching music and the use of arbitrary power are deeply embedded in the cost of making perfectly-sounding mistake-free music praised by the audience. I recall thinking that even if I would 'never ever' teach music in my own life, I knew at least how not to do it. Indeed, seven years later, when I founded my first children's choir, the "Choir of Expression", at an extra-curricular music school in Helsinki as part of a music theatre project, I recalled this promise. In collaboration with the children, we started a search for music educational approaches that foster wellbeing and creativity by experimenting with all kinds of possible and impossible ideas and the wishes of the children, ranging from composing to combinations of diverse art forms and embodiment through music. Instead

of aiming for perfectly-sounding harmonies or highlighting the mastery of technical skills and musicality, like in the Radio Children's Choir, my conducting has aimed at envisioning and seeking for musical practices and forms of making music together in ways that stem from the diverse voices, experiences, needs, and wishes of my students in local and situated choir contexts.

Two of my experiences related to learning Finnish-as-a-second-language were pivotal for this research. The first time I encountered learning Finnish-as-a-second-language was from the perspective of my German husband. In those days, I remember wondering why it took him over ten years to get the courage to start speaking and using Finnish. Afterwards, there followed my experiences of teaching adult immigrants – including those in language-aware choirs – and working with second-language teachers, as well as familiarising myself with a range of research on Finnish-as-a-second-language. Based on these experiences, I have started to better understand the major challenges of becoming familiar with Finnish-as-a-second-language. I also know that the focus in Finnish language courses is on grammar and, particularly, on written language that radically differs from the spoken language (e.g., Lehtonen, 2015), which can cause major challenges for non-native speakers to start using and comprehending spoken Finnish in their everyday lives. In addition, I am aware that there are only a few opportunities to practice Finnish pronunciation and speaking in real life (see Virkkunen & Toivola 2020), as English is so commonly used in Finland, slowing down active second-language use, which, in turn, can contribute to undermining the complex process of integration into Finnish society (e.g., Kim et al., 2022).

Based on my experiences today, I know that linguistic barriers seldom derive from disinterest or difficulties in studying Finnish, but rather stem from structural, educational, and prejudiced issues in the very societal environment where immigrants are expected to use the language (see e.g., Ruuska, 2020). Therefore, the complex language issue that I approach through the choir practice in this study also refers to broader social aspects, highlighting how local knowledge "can function as public knowledge by informing practice and policy beyond the immediate context" (Cochran-Smith & Lytle, 2009, p. 42).

To summarise, my position on Finnish-as-a-second-language can be best described through the concept of a *resourceful practitioner*, emphasising the need for contemporary professionals to learn through practice in inter/trans/multi-professional work with other professionals (Edwards, 2012). In my case, this reflects learning through collaboration with Finnish-as-a-second-language teachers and choir participants with culturally and linguistically diverse backgrounds in multiple music groups, including the language-aware choirs, with whom I have had the privilege to work. Moreover, my researcher position reflects in various ways the notion of a *boundary-crossing individual* (Akkerman & Bakker, 2011) who takes "the risk of not being accepted" (p. 140; see also Edwards

et al., 2010) in any context and navigates "between worlds but also simultaneously represent the very division of related worlds" (Akkerman & Bakker, 2011, p. 140). The non-hierarchical and reciprocal merging of music and language provides for me, however, a meaningful socially responsive and systems-aware way to engage with music education in the current world, emphasising multilevel collaboration, shared exploration, and a related ongoing creative quest striving towards "what is not yet there" (Engeström, 2010, p. 74).

1.6 Structure of the dissertation

This article-based dissertation consists of four sub-studies (four articles), which were published in international peer-reviewed journals (Articles 1-3) and an edited volume (Article 4). The first published article is a theoretical study, laying the groundwork for the theoretical basis of the research project. The second article reports on a mixed-methods study exploring choir participants' experiences with linguistic challenges and the possible changes in these challenges after joining a language-aware choir for the autumn and spring semesters (one academic year). The third article, a narratively-oriented study, explores the meanings that the individual members of the choir community members give to joining and co-constructing the language-aware choir practice. The fourth article widens the theoretical framing of the study by exploring transdisciplinary professional repositioning through the example of language-aware choirs, and by synthesizing the content of the previous articles within a philosophical framework of music education.

This summary of the dissertation is structured as follows. Chapter 2 reviews previous research on fields and domains that are related to this research project, including previous research on 1) embodiment and embodied learning, 2) arts-based language learning, 3) integrating singing and language or language learning, and 4) choirs that acknowledge not only music but also other purposes in their practices. Chapter 3 describes in more detail the theoretical starting points. Chapter 4 justifies the methodological choice, presents the participants and empirical research material, and reviews the associated ethical considerations. Chapter 5 introduces the analytical approaches, including their triangulation. In Chapter 6, the main results of the sub-studies will be presented, with Chapter 7 reflecting on and summarising their contributions through different perspectives, such as the systems practitioner perspective (Ison, 2017), and outlining the limitations of and futural visions arising from this research project. Chapter 8 concludes this dissertation with final remarks.

2 Earlier research prompting language-awareness in a choir context

Earlier research reflecting the transdisciplinary orientation of this research includes studies that integrate music and language learning. In Chapter 2.1, I will first review research on embodiment and embodied (holistic) learning that encapsulates the approach to second-language learning in a language-aware choir. Chapter 2.2 relates to earlier research on arts-based approaches to language learning that intersect with this research project's arts (choir) context. Chapter 2.3 will focus on previous scholarly work on music and language, or language learning across various fields, and Chapter 2.4 outlines research on inclusive choirs, including choirs where not only music but also other dimensions are acknowledged within the choir practice. Chapter 2.5 provides an overview of research on choirs and language.

2.1 Research on embodiment and embodied learning

Embodied learning[14] and embodiment are central concepts and frameworks in this research context. First, they are an integral part of musical experiencing, musicking,[15] and music-making (e.g., Juntunen, 2023; see also Juntunen, 2017), as is also highlighted in the extensive body of music education research focusing on embodied-centred musical practices (e.g., Abril, 2011; Juntunen, 2004, 2011, 2015, 2016, 2018; Juntunen & Hyvönen, 2004; Juntunen & Westerlund, 2001; Sutela, 2020; Sutela et al., 2021). Second, these concepts characterise the approach to language in language-aware choirs. Embodied language learning, in which language learning is conceptualised as a holistic process with all bodily faculties fully harnessed within the learning process (see Jusslin et al., 2022), is often considered a counter-weight to language learning approaches that draw from the cognitivist (brain-bound) tradition (e.g., Atkinson, 2010; Macedonia, 2019; Nevile, 2015).

Since the embodied turn in the beginning of 21th century – rooted in the fields of phenomenology (Merleau-Ponty, 1945/2013) and cognitive sciences (Lakoff & Johnson, 1999; Shapiro, 2010) – there has been a growing interest in the humanities for studying embodiment in diverse disciplines and from different philosophical and

14 I am aware that learning, for instance, in arts contexts, is a broad and complex concept (see e.g., Juntunen, 2023; see also Anttila, 2022), without any commonly understood definition. Some education scholars even avoid using the term (e.g., Biesta, 2005, 2012, 2017). From the perspective of embodied learning, I use the concept of learning as being no longer related to solely mental processes and the development of knowledge and skills, but rather being associated with holistic (embodied) processes and approaches, rooted in the embodied turn, and, in a broader sense, in much wider social and societal dimensions (see Juntunen, 2023, see also Partti et al., 2013).

15 See Small (1998).

theoretical perspectives. Already a century ago, John Dewey highlighted the significance of embodiment from the perspective of holistic experience (Dewey, 1938, see also 1916, MW 9, p. 254), emphasising embodiment as being inescapably entangled with a material environment from which it cannot be separated (e.g., Westerlund & Juntunen, 2005; Väkevä, 2004). According to Juntunen (2023), the philosophical and theoretical concept of embodiment has more recently become a paradigm in a number of scholarly fields and contexts, such as education, psychology, neurosciences, and philosophy, in a broad sense comprising the exploration and theorisation of relationships between the human mind, body, and the world (pp. 78-79). In that sense, embodiment is also interconnected with the understanding of how we are dependent on one another, on other species/organisms and our environment, which further provides a foundation for a responsible relationship with the world - one that fosters the conditions for a good life (p. 77, see also Salonen, 2015).

This kind of wide systemic interconnectedness underlies the understanding of embodiment in this research project. It also reflects the approach to embodied learning in language-aware choirs as a holistic and relational process, which "takes place within the entire human being and between human beings, and in connection with the social and physical reality" (Anttila, 2018, p. 3). This line of thought also emphasises that all knowing and knowledge is deeply rooted in embodiment (see Lakoff & Johnson, 1999), which, in turn, encourages approaching language holistically in and through embodiment as "an activity of human beings in the world" (Maturana & Varela, 1980, p. 34, see also Wei, 2018). In other words, language is understood as an ongoing process of "languaging" (p. 210, Maturana & Varela, 1987), that is, an active doing to which multisensory and multimodal ways of meaning making are also interwoven. Accordingly, the concept of translanguaging, which was already discussed in the first chapter, is rooted in understanding language through *languaging* (Wei, 2018).

The mind–body connection has also been increasingly centred in research fields such as neuroscience and cognitive psychology (e.g., Gallagher, 2017; Thompson, 2007, 2017; Varela et al., 1991/2016), emphasising the understanding of cognition as embodied (cf. *embodied cognition*). In this view, the brain is linked both to the body and environment, no longer being seen as "a separate module where the mind is situated" (Jusslin et al., 2022, p. 2). The cognitive psychologist Barsalou (2020), among many others (cf. enactivists), has replaced the notion of embodied cognition with the notion of *grounded cognition* (cf. 4E, mind is embodied, embedded, extended, and enacted) to highlight that the body does not provide the only grounding for cognition, but also includes different modalities (e.g., vision, hearing, emotions) intertwined with social and physical environments (see also Newen et al., 2018). Following this line of thought, embodied activity does not refer to merely visible bodily actions (e.g., movement and motor actions), but also underscores the role of affect (cf. emotions, feelings, and moods) and recognises all kinds of "inner

bodily sensations, experiences, and physiological changes" (Jusslin et al., 2022, p. 2).

In the context of music education research, *embodiment* has been approached from different research perspectives, ranging from the philosophy of music education (e.g., Bowman, 2004; Van der Schyff et al., 2022; Westerlund & Juntunen, 2005) to empirical studies in different areas of music education related to specific musical methods, such as Dalcroze and Orff (Abril, 2011; Altenmüller, 2015, Juntunen, 2004, 2011, 2016, 2022; Juntunen & Hyvönen, 2004), music and movement (e.g., Juntunen, 2016, 2022), integrating embodiment with instrumental, singing and composing activities (e.g., Juntunen, 2015, 2018; Nenonen, 2018), and with the contexts of special education in music (e.g., Sutela, 2020; Sutela et al., 2021), among others.

The embodied turn (e.g., Lakoff & Johnson, 1999; Merleau-Ponty, 1945/2013; Nevile, 2015; Shapiro, 2010; Sheets-Johnstone, 2022) that challenged the separation of mind and body (cf. Cartesian dualism) has also raised growing interest in embodied learning research (Jusslin et al., 2022; see also Juntunen, 2023) in different educational domains (e.g., Aartun & al., 2022; Hegna & Orbæk, 2021; Kraus & Wulf, 2022; Stolz, 2021). According to Juntunen (2023), music education that nurtures *embodied learning* provides an environment and activities that acknowledge learners holistically and activate sensing and perception, raise awareness, and encourage reflection, while also integrating these with prior knowledge and know-how (p. 84). Such activities include, for instance, wordless communication, movement, and creative approaches (see e.g., Johnson-Glenberg et al., 2014; Juntunen, 2015, 2018, 2020; Juntunen & Hyvönen, 2004; Lehtonen et al., 2020; Skulmowski & Rey, 2018).

From the perspective of language education, embodied (language) learning - as proposed in a recent review by Jusslin and colleagues, and which I also co-authored, (2022) - focuses on approaches that are capable of engaging language learners in holistic ways. This review included 41 empirical studies that divided embodied approaches into two strands, in which embodied language learning was either orchestrated (e.g., including specific activities) or occurring through natural interactions in the learning context. Second-language learning among adults, which is also the linguistic focus of this doctoral research, was primarily associated with the latter strand, encompassing various embodied activities that integrated gestures and materials, embodied actions, movement and arts teaching (e.g., drama, circus) with language learning activities. According to this review, embodied approaches were particularly capable of improving vocabulary learning in all levels of language education (e.g., primary school, formal or non-formal adult education, higher education), including second-language learning (see e.g., Andrä et al., 2020; Cannon, 2017; Hanks & Eckstein, 2019; Haught & McCafferty, 2008; Rothwell, 2011; Scally, 2019), which was also associated with experiential improvements in pronunciation and grammar (e.g., Nguyen, 2016; Smotrova, 2017; Suñer & Roche, 2019). Importantly, embodied approaches seemed to contribute to a more positive attitude towards language learning that, in the context of second-language learning, was related to enthusiasm, overcoming anxiety, growing interest, and enjoyment (Hanks & Eckstein, 2019; Haught & McCafferty, 2008; Kosmas & Zaphiris, 2020; Lilja et al., 2020; Smotrova, 2017). These various motivational and emotional benefits were typically linked to physical and arts-based activities (e.g., Hanks & Eckstein, 2019; Lilja et al., 2020; Cannon, 2017; Scally, 2019; Wei et al., 2019). No studies on music-based approaches to language learning were included in this literature review, because "they did not explicitly use an embodied framework" (p. 17), showing how embodiment in musical activities – to which it is always related (Juntunen, 2023), and not merely in terms of motor actions – remains unarticulated, uncontextualized, and unconceptualized, probably also taken-for-granted, unless being the focus of 'embodiment-centred' musical practices and related methods (e.g., Dalcroze). The literature review, however, encompassed studies based on other art forms, such as dance (Hanks & Eckstein, 2019), theatre and drama (e.g., Cannon, 2017; Haught & McCafferty, 2008; Rothwell, 2011; Scally, 2019), comic production (Shiang, 2018), and social circus (Lilja et al., 2020), articulating their potentials to contribute to this area of research.

All in all, the growing body of research on embodied language learning that focuses on arts-based approaches from different theoretical and philosophical perspectives (e.g., Jusslin et al., 2022; Jusslin et al., 2024a; Jusslin & Höglund, 2020; Korpinen & Anttila, 2022; Makopoulou et al., 2021; Sharma et al., 2023; Sila & Lenard, 2020) typically takes place in language education environments, but is expanding into arts and arts education contexts as well, a trend of which this research project is a part. This research project thus aims to contribute to this movement, and address the existing gap in research on integrating music and language learning within the framework of *embodied language learning*.

2.2 Research on arts-based language learning

Accepting the fact that all art forms are integrally related to embodiment (e.g., Juntunen, 2023; Juntunen & Westerlund, 2001), I will next look at how the intersection of arts and language has been approached in different arts, arts education, and language teaching and learning contexts. It has been asserted that all arts education could be regarded as language education (Anttila, 2025, p. 24). This suggestion should not, however, be understood as a straightforward expression, but instead as a result of a careful theoretical, empirical, and experiential exploration. It is based on the extensive idea of (trans)languaging being "pivotal to understanding and articulating how art works in educational situations related to language learning and beyond" (p. 8). *Translanguaging* (Creese & Blackledge, 2015; García & Wei, 2014; Wei, 2018) has also been regarded as a practical theory (e.g., Wei, 2018) for applied linguistics, coming "out of practical concerns of understanding the creative and dynamic practices human beings engage in

with multiple named languages and multiple semiotic and cognitive resources" (p. 27). According to Wei (2018), the practice of translanguaging emphasises its multimodal and multisensory nature in multilinguistic use.

The practice of translanguaging thus breaks "the artificial and ideological divides between indigenous versus immigrant, majority versus minority, and target versus mother tongue languages" (Wei, 2018, p. 15). As previously indicated, this concept is grounded on the notion of languaging (Maturana & Varela, 1980), by reiterating Ortega y Gasset's (1957) argument that language is not "a thing made and finished, but as in the process of being made'" (p. 242, see also Wei, 2018). Accordingly, the prefix of 'trans' is important; for instance, by highlighting "the transdisciplinary consequences of re-conceptualizing language, language learning, and language use, and working across the divides between linguistics, psychology, sociology, and education" (Wei, 2018, p. 27). As noted in Chapter 1, translanguaging is an essential concept in this research project, holistically referring to language-awareness in the LFBS choirs.

As this research project's approach to language, language use, and language learning is located in choir practice in a music education context, a review article by Bradley and Harvey (2019) on different arts practices in relation to language in the field of applied linguistics[16] creates a reasonable starting point for this topic (see also Pöyhönen & Paulasto, 2020). In this review article, Bradley and Harvey (2019) engage with various arts contexts and forms of arts practices (except music) by considering how creative inquiry (Leavy, 2009, 2015) can "extend understandings of communication and language" (p. 91). Pöyhönen and Paulasto (2020, p. ii) also note that research on diverse arts integrations, as well as the use arts-informed methods, are becoming increasingly common, not only among applied linguistics but across the human sciences, such as social sciences, educational research, leadership and occupational well-being studies, social and health care research, as well as medical humanities.

Bradley and Harvey (2019) further suggest that the endeavour of transdisciplinary research is having "a creative turn" in applied linguistics (p. 103). They introduce distinct categories to approach research on arts and arts practices and language: 1) research *with* the arts, 2) research *into* the arts, 3) and research *through* the arts. The first two categories deal with arts contexts – and are more related to this research project – and the third category with arts-informed methods is used more in other language learning contexts. In short, the first category of research (*with* the arts) considers how artistic artefacts (e.g., pieces of visual arts, photos) illustrate "creative practices and understanding of communication" (p. 94). Studies in this category (e.g., Jaworski, 2014; Lee, 2015) conceive the "relationship of language to other modes of communication, to humans, nonhumans, objects, materiality and embodiment" (Bradley & Harvey, 2019, p. 96), thereby challenging the understanding of language as a privileged vehicle for "knowing the world" (p. 96).

The second category of research (*into* the arts) – using the research methods of applied linguistics – approaches creative arts practices as sites of "real-life problems" (p. 96), in which language has a crucial role. One example of such research in Finland was the theatre piece "Other Home", co-created and performed by refugees with previous experience in the arts in collaboration with the Finnish National Theatre, focusing on the themes of communication and miscommunication. As a hybrid of linguistic ethnography and applied theatre, this transdisciplinary joint inquiry (e.g., Haapakangas et al., 2017; Lehtonen & Pöyhönen, 2019) considered what integration means, how it is understood, and how it relates to the notion of home, as well as what being mobile and establishing a new life as a refugee entails in times that are becoming increasingly hostile. In general, the examples of this category deal with collaborative arts practices (see also Hazel, 2017), moving beyond language, and shedding light on "how collaboration, making and learning take place across, through and beyond various boundaries" (Bradley & Harvey, 2019, p. 98, see also Jones, 2016).

The third category of research (*through* the arts) focuses on the use of different arts-informed methods as a means for "understanding and researching communication". For instance, Bradley and Atkinson (2020) use methods of collage (see also Prasad, 2018) and linguistic ethnography to engage young people in exploring linguistic landscapes in their surroundings. Working with collage provided young people with the opportunity to reimagine their environment using material they collected themselves (e.g., photographs, drawings) to deepen the understanding of language and multilingualism in their everyday lives. Taken together, Bradley & Harvey's (2019) examples highlight how using arts and arts practices in relation to language and language learning can expand the understanding of language and communication "in relation to real-life problems" (p. 101). They also emphasise transdisciplinarity as a "border-crossing" (p. 103) endeavour that is a significant framework for this kind of research work.

Integrating the arts and other subjects has further been argued to enable novel teaching and learning opportunities (e.g., Bresler, 1995; Buck & Snook, 2020; Höglund & Jusslin, 2022, 2023; Sanz-Camarero et al., 2023; Svendler Nielsen et al., 2021). The concepts of arts-integrated, arts-based, and arts-informed, have, however, been used variously in research on integrating arts, language, or language learning. Although their meanings vary considerably (Jusslin et al., 2024b), arts integration, in general, refers to approaches that have more 'co-equal' emphasis on art forms and other subjects (see e.g., Bresler, 1995; Jusslin et al., 2024b; Sanz-Camarero et al., 2023). In turn, the concepts of arts-based, and particularly arts-informed, has been associated with looser connections between arts and other subjects, sometimes even, according to Jusslin et al. (2024b), conceptualised as having a subservient (e.g., Bresler, 1995) or subordinate

16 Applied linguistics aims to "understand how language works and issues in relation to language use and learning" (Bradley & Harley, 2019, p. 102).

(Sanz-Camarero et al., 2023) orientation to arts. That is, arts are only used as means to learn something else, and no arts or artistic learning is incorporated.

Overall, arts-based language learning has been diversely approached, particularly in language classrooms, but also in out-of-language-class contexts, for instance, through the lenses of the social circus (Lilja et al., 2020) and social theatre (Lehtonen & Pöyhönen, 2019), visual arts (e.g., Gardner-Chloros 2014; Hatakka, 2020; Karjalainen, 2020; Latomaa et al., 2016; Mikkola & Nissi, 2020), and also as related to literature (e.g., Höglund & Jusslin, 2023; Kastari 2020). A growing body of studies, drawing from various theoretical perspectives,[17] also combines dance and language teaching and learning at different educational levels, from early childhood to university (e.g., teacher education). In these studies, engagement with language typically emphasises other aspects, such as motivation, dialogue, and holistic communication, rather than the development of 'technical' skills (e.g., Anttila, 2013, 2015; Jusslin & Höglund, 2020), although being also linked, for instance, to literacy in vocabulary learning, facilitating reading and speaking skills, and deepening writing processes (e.g. Hannuksela et al; 2024; Jusslin & Höglund, 2020; Jusslin et al., 2024a; Korpinen & Anttila, 2022; Korpinen; 2024; Makopoulou et al., 2021; Sharma et al., 2023; Sila & Lenard, 2020; Vaattovaara & Syrjä, 2020). Haught and McCafferty (2008, see also Haught, 2005) explored second-language learning through drama workshops among adult English-as-second-language language students in the university context in the USA, using sociocultural theory (e.g., Vygotsky, 1978) as a theoretical framework and an analytical lens. The authors argued that language, when engaged with through drama, is always a holistic and embodied phenomenon, where mind, body, and language create an inseparable wholeness "in engendering a thought and its production in linguistic and imagistic form through speech and gesture" (p. 139), contributing to the idea of language teaching and learning as an embodied activity (see also Scally, 2019).

This doctoral research contributes to the growing body of research on arts-based language teaching and learning from the perspective of music (see also Paalanen, 2020); however with an emphasis on the non-hierarchical merging of music and language education in and through the arts (music) in the context of music education. This approach aims to exceed merely the 'co-equal' integration of arts (music) and language education by underscoring *the transformation of both disciplines* that can be accomplished by exceeding traditional disciplinary thinking.

17 E.g., post-perspectives such as new materialism and post-humanism.

2.3 Research on integrating music and language or language learning

A variety of studies in different fields and disciplines, and particularly their different intersections in the humanities, social sciences, and behavioural, cognitive, and neurosciences suggest that music and language have diverse interconnections, and music-making, particularly singing, which intertwines music and language, manifests various potentials for supporting and encouraging language use and learning. This chapter addresses this broad research area of combining music and language or language learning from perspectives that are pertinent in this present research project and its focal phenomenon (language-aware choir).

2.3.1 The relationship of music and language

The research on the relationship of music and language (e.g., similarities of music and language processing in the brain) is extensive, ever-expanding across the fields of cognitive science, neuroscience, and cognitive psychology (e.g., Arbib, 2013; Besson et al., 2017; Jäncke, 2012; Patel, 2008, 2014; Patel & Morgan, 2017; Peretz & al., 2015; Roncaglia-Denissen, 2016; Slevc et al., 2009; Tallal & Gaab, 2006). Their close relationship, and the potential of music to nurture different cognitive processes, is also diversely stressed in music psychology (e.g., Dingle et al., 2017; Gabrielsson , 2011; Slobova & Juslin, 2001; Warran et al., 2019), "providing insights on a wide range of topics underpinning the perception, cognition, and production of music" (Jakubowski et al., 2025, p. 1) by intersecting with multiple subdisciplines of psychology (e.g., cognitive, social, developmental, evolutionary, clinical) and by "drawing upon methods and theories from a range of other fields" (p. 2), including neuroscience. However, as Gabrielsson (2011) notes from his music psychological stance – underlining the strong affective power of music and the uniqueness and diversity of musical experiences and reactions – while measuring brain or heart activity "can have great value" (p. 3) in revealing physiological responses, there is considerably more to music than such measurements can ever capture. In this regard, Odendaal et al. (2019) also remark that research based on brain imaging[18] cannot address "social and contextual processes" (p. 14) typical to music education environments, such as the social context of language-aware choirs in this research project.

Music-language cognitive studies often compare the commonalities and differences of music and language as two different systems, both including "complex and meaningful sound sequences" (Patel, 2008, p. 3) and common elements (e.g., pitch, rhythm, melody, intonation), with music having, however, a very specific way of organising pitch and rhythm, deep emotional power and repetition, and language involving specificity in

18 https://www.jneuropsychiatry.org/peer-review/the-science-of-brain-imaging-techniques-and-limitations-16327.html

semantic meanings and grammar categories, among others (see Patel, 2008, 2014). Comparing music and language as close cognitive and neural systems can offer "a powerful way to study the mechanisms that the mind uses to make sense out of sound" (Patel, 2008, p. 417). According to Patel and Morgan (2017), research on the cognitive relationship between music and language has shed light, for instance, on the evolutionary roots of music and language and, from a practical perspective, on the efficacy of music-driven therapies for individuals with disorders (e.g., Bregman et al., 2016; Flaugnacco et al., 2015; Koelsch et al., 2005, Kunert & Slevc, 2015; Peretz et al., 2015). Likewise, approaching the relationship of music and language, and particularly the reciprocity of speech and music functions from neurocognitive and related perspectives, a special issue[19] of 23 studies addressed how musical engagement and training can diversely help with "the prevention, rehabilitation, and remediation of a wide range of language, listening, and learning impairments" (Jäncke, 2012, n.p.). Yet, Besson et al. (2018) point out that a language system is not encapsulated from other cognitive functions (e.g., Fodor, 2000), because "language comprehension and production are processed in interaction with other cognitive abilities such as attention, memory, emotions and actions" (p. 285). In that sense, they suggest that musical expertise or musical training at any level can also influence language processing, including pitch, rhythm, and phonological representations.

Overall, the growing body of research on the music-language relationship in neuroscientific research underscores the benefits of musical training and the potentials of musically trained individuals in relation to language processing, for instance related to vocabulary learning, reading, phonological awareness, discrimination of sounds and speech in noise, spelling, and the modification of pitch (e.g., Benz et al., 2016; Chobert et al., 2014; Clayton et al., 2016; Dawson, 2011; Flaugnacco et al., 2015; Fogel et al., 2015; François et al., 2013; Jentschke & Koelsch, 2009; Kraus & Chandrasekaran, 2010; Moreno et al., 2009; Patel, 2014; Perrot & Collet, 2014; Putkinen et al., 2015; Thompson et al., 2004). In their theoretical review study, Patel and Morgan (2017) suggest that musical training might also be associated with "stronger prediction" (p. 315) of linguistic material, that is, "what is coming next in a sentence" (p. 305). In this regard, they also acknowledge the repetition so inherent in music as being one important factor in their justification. Repetition, whether related to becoming familiar with and learning music (listening, singing, or playing an instrument) or addressing the repetitive structure of a song, has been recognised in neuroscientific research and linguistics to support mnemonic processes related to speech, such as memorising and recalling sounds, words, vocabulary, and sentences, as well as facilitating hearing and pronunciation (e.g., Patel, 2008, 2014; Schön et al., 2008; in linguistics see Ludke, 2018; Ludke et al., 2014).

In neuroscience, psychology, and linguistics, experimental studies suggest that musical abilities, such as pitch and rhythm perception, could be "transferred" to phonological skills in a second or foreign language (e.g., Chobert et al., 2014; Tierney & Kraus, 2014) and to vocabulary learning (e.g., Kang & Williamson, 2014), and vice versa (e.g., Bidelman et al., 2013; Liu et al., 2023). Zhang et al. (2023) approach this transfer effect by suggesting that singing is able to engage "brain networks that facilitate auditory–motor mapping procedures" (p. 14) and, therefore, may also support speech production (see also Gordon et al., 2018). Furthermore, the dual integration hypothesis (e.g., Thiessen & Saffran, 2009; see also Ginsborg & Sloboda, 2007) proposes that the concurrent input of "related aspects of a complex stimulus" (Thiessen & Saffran, 2009, p. 226), such as melody and lyrics in singing, can mutually facilitate music and language learning.

Researchers in music education (Westerlund & Odendaal, 2025; Odendaal et al., 2019) have showed how findings from brain and neuroscientific research can be easily misused and uncritically "translated into music education advocacy" (p. 35) when emphasizing the all-encompassing "benefits of music and music education" (Odendaal et al., 2019, p. 5) to other domains (e.g., to language learning), as well as presenting musical experiences and engagement as being primarily and only positive. In public discourse, such advocacy perpetuates neuromyths[20] (also e.g., Papatzikis 2017; Pasquinelli 2012; Peterson 2011) that refer to "popular misconceptions about neuroscience, including how music has the power to make individuals smarter, happier, more hopeful, more powerful, and more productive" (Odendaal et al., 2019, p. 5). When misinterpreted, popularised (e.g., by media), or inaccurately reported by researchers, neuromusical research can thus be assumed to relate to all kinds musical practices, even though the research has often been conducted in specific, often experimental settings, that influence the research participants as well, as well as focusing on "a single musical stimulus" (Westerlund & Odendaal, 2025, p. 34), such as a specific musical instrument or genre. Such aspects should be openly reported, and transparently articulated, to create essential limits on "what can be said about the results of specific studies" (p. 34). Moreover, when studies focus on the brain functions of professional musicians – as is often the case – the results should also be explicitly communicated as only reflecting long-term musical practices and specialisation, through which professional individuals have become "the expert to their expertise" (p. 35).

In summary, this study acknowledges the extensive and continually expanding body of neuroscientific and related research on the relationship of music and language, and how it can illuminate the neural mechanisms and brain functions associated with the interconnectedness of music and language processing. However, this research also emphasises the great challenges of this field of research that arise when attempting to

19 See Frontiers in Psychology, 3, 2012, https://doi.org/10.3389/fpsyg.2012.00123

20 Neuromyths "are the result of misinterpretations or overstatements of research results in the popular domain" (Odendaal et al., 2019, p. 6).

artificially attach research findings to music educational and pedagogical practices and contexts (Odendaal et al., 2019; Westerlund & Odendaal, 2025; in linguistics see Ludke, 2020) without carefully recognising their locally and situationally specific and complex nature, contextual and cultural divergencies, and the diversity of individual interests, needs, and experiences. This study also recognises that neuroscientific studies do not give any evidence for practitioners to transform their practices; rather, their logic for the future is based on the idea of 'more of the same'. This dissertation underlines that the evolving language-aware choir practice is in a state of constant change, and that the contextual factors are specific, heterogeneous, and diverse, thus differing in many ways from an ordinary choir or a language classroom context. In addition, music and language are also equally focused on during the choir rehearsals. Therefore, this study does not aim at making generalisations concerning the transfer effects or benefits of choir singing as such, but rather argues for the benefits when the relationship of music, singing, and language is reconsidered in the context of choir singing, and when such reconsidering aims at taking into account the participants' suggestions and life situation.

2.3.2 Singing and language learning (focus on second-language)

It is assumed in this study that in a language-aware choir, language can be approached collaboratively through singing, and that singing draws on the idea that "the voice is an instrument that we all possess, and one of the most important to generate feelings and emotions" (Juan-Morera et al., 2023a, p. 11). Singing in the context of this study's choirs is therefore approached not only through singing songs in unison and in voices across and beyond different music genres, but also through playing and exploring sounds, including language sounds and sound combinations, with a creative and experimental mindset (see the beginning of Chapter 1). Singing is also constantly connected with improvising, creating and re-creating (e.g., arranging) songs and song lyrics. Language through singing is then regarded as part of wider holistic communication, interwoven with different modes and ways of expression (e.g., verbal, vocal, bodily, emotional, multisensory) as well as with the social and material resources that this specific choir context provides.

Numerous studies in linguistics, education, and psychology suggest that singing and listening to songs can facilitate various aspects of foreign and second-language learning in language classroom contexts, for instance, pronunciation, syllable, word, and sentence perception, phonological awareness, recalling and memorising sounds, words and phrases, new vocabulary acquisition, grammar learning, and writing and speaking skills (e.g., Alisaari, 2016; Busse et al., 2021; Coyle & Gómez Gracia, 2014; Good et al., 2015; Ludke, 2010, 2018, 2020; Ludke et al., 2014). Alisaari & Heikkola (2016) showed how singing can support writing fluency in Finnish among international university students,

however it was also rarely used in Finnish language classes (Alisaari & Heikkola, 2017). Ludke et al. (2014) in their experimental psycholinguistic study with 60 randomly assigned adults with diverse musical and non-musical backgrounds, demonstrated how 'listen-and-sing' conditions in foreign (unfamiliar) language could better support short-term memory for learning novel phrases in comparison with similar conditions where only speaking or rhythmic speaking were used. A range of studies in kindergarten and primary school contexts demonstrate how musical actions, such as singing and rhythmics, encourage spelling, writing skills, vocabulary knowledge, and oracy (e.g., Bhide et al., 2013; Gaboury et al., 2020; McCormack & Klopper, 2016; Moritz et al., 2013; Bagheri Nevisi & Izadi, 2018), and can aid in children's phonological awareness and auditory perception (e.g., Bhide et al., 2013; Bolduc, 2009; Degé & Schwarzer, 2011; Gromko, 2005; Moritz et al., 2013). The study of Gaboury et al. (2020) addressed how lexial spelling in French was significantly improved through musical activities – developed in co-operation with a music teacher and a regular teacher – in a second grade class, in comparison to a normal class where music was not used. Hannon and colleagues' study (2016) on the rhythmic relationship between song and language in children's songs set to French or English lyrics showed that the rhythmic structures of the native language not only appear in children's songs from that culture but are also enhanced, exhibiting 'greater rhythmic regularity' (p. 1) than folk songs, which tend to align more closely with natural speech rhythms. Accordingly, in their cross-cultural study spanning psychology, linguistics, and musicology, Ozaki et al. (2024) concluded that even though there are similarities, there are also many differences between song and speech, such as rhythmic pace, which in songs is slower than in speech across languages worldwide.

Reviews focusing on singing and music in relation to language learning (e.g., Engh, 2013; Davis, 2017), which typically encompass the vast heterogeneity of studies (e.g., linguistics, psychology, neuroscience) conducted in settings ranging from classrooms to laboratories, also argue for the use of songs and singing in language teaching, not only to be able to advance language skills but also due to other benefits. Such benefits can refer, for instance, to fostering motivation, enjoyment, and joy in language learning (see also Cores-Bilbao et al., 2019; Fonseca-Mora & Machancoses, 2016), enhancing cultural and intercultural awareness (Ilari et al., 2013; Joseph & Trinick, 2018; Marsh, 2012, 2017), and promoting wellbeing and health (e.g., Daykin et al., 2020; Heydon et al., 2020) and social bonding (e.g., Bailey & Davidson, 2005; Davidson & Leske, 2020; Fancourt & Perkins, 2018; Launay & Pearce, 2020) through collaborative singing. Busse et al. (2021), in their quasi-experimental study with primary school learners focusing on English as a foreign language grammar learning through singing a simple song, noted that evidence-based empirical research on "the usefulness of singing" (p. 3) and song-related activities in contexts of language learning is needed, being "still scarce" (p. 2), as it is for other arts activities as well (see Ludke, 2018). Pöyhönen and Paulasto (2020)

likewise assert that, compared to early childhood and school settings, research on arts integration (cf. music) in language teaching and learning processes in adult education contexts still remains very limited.

This research project acknowledges the gaps in the evidence-based literature on the use and usefulness of songs and singing related to language learning processes. These gaps refer, for instance, to the scarcity of long-term interventions where versatile repertoire and approaches to singing and songs are explored in relation to language processing. The gaps also indicate a limited focus on the reciprocity and non-hierarchy of meaningful musical experiences and language learning. This research project aims to expand practice-focused, longitudinal research on singing and second-language learning from the perspective of a music education context (a choir) that integrates adult immigrant choir participants' linguistic challenges (bottom-up approach) into constantly evolving, co-created approaches to songs and singing.

2.3.3 Language production and phonetics (focus on second-language)

Similar to music learning, in which hearing and attentive listening form an integral part of music-making, learning to pronounce a new language primarily hinges on a matter of learning to hear it (Kachlicka et al., 2019; Vihanta, 1990). As Temperley (2022) puts it, both music and language are "auditory modes of communication" (p. 158). Recent cross-disciplinary research supports this notion by emphasising the significance of attending to auditory processing (Saito et al., 2022) and discrimination (e.g., Zheng et al., 2022) in the development of second-language speech acquisition (Saito et al., 2022). As indicated earlier (Chapters 2.1 and 2.2), the use of bodily (e.g., gestures, movements), visual, and material resources in language teaching and learning within a language classroom context can facilitate second-language pronunciation (e.g., Nguyen, 2016; Smotrova, 2017). According to a variety of earlier research, fragmented across different disciplines from linguistics to phonetics, factors that can support and facilitate the auditory processing and pronunciation of second and foreign languages are related to the active practice of motor and audio-motor competencies (e.g., Aho et al., 2016; Kissling, 2013, 2018; Munro et al., 2015; Shao et al., 2023; Yule et al., 1987), a conscious and analytical focus on hearing (e.g., Saito et al., 2022; Thomson, 2011; Yule et al., 1987), motivation (e.g., Saito et al., 2017, 2018; Yousofi & Naderifarjad, 2015), and a learning environment that is supportive and mistake-tolerant (e.g., Baran-Łucarz, 2017; Horwitz et al., 1986; Wrember, 2001). Such an environment also acknowledges the role of different first (native) languages and other individual differences in phonological challenges (e.g., Aho et al., 2016; Derwing & Munro, 2015, Munro et al., 2015; Suzukida, 2021).

In language-aware choirs, Finnish-as-a-second-language learning has been merged into the language-aware choir practice based on the adult choir participants' needs, wishes, and experiences, as discussed in Chapter 1. Thus, the linguistic focus is on aspects that adult choir participants find challenging in their everyday language use and may have received less recognition in other language learning contexts, such as active language use, pronunciation (e.g., Aho et al., 2016; Virkkunen & Toivola, 2020), and spoken Finnish language[21] (e.g., Vihanta, 1990), which radically differs from written Finnish (Lehtonen, 2015; Vihanta, 1990; an unitary language, see Moro, 1999).

While Finnish is the primary official language of Finland, it is, however, a marginal minor language on a global scale[22] (e.g., Ruuska, 2020, see also Saarinen, 2012). The typical character of Finnish as a quantity language (Vihanta, 1990) is the phonemic length (relative duration, Hakulinen et al., 2004) of its vowels and consonants sounds (e.g., Vihanta, 1990), which is pivotal not only phonetically, but also when separating the meaning of the words (e.g., Hakulinen et al., 2004) (e.g., in Finnish language [tuma] [tuuma] [tumma] – nucleus, inch or thought, dark). In other words, this phonemic nature of long and short vowels and consonants is also regarded as creating a very common phonetic difficulty, irrespective of the first language of adult Finnish-as-a-second-language learners (Aho et al., 2016), while also influencing both the comprehension of the speech of others as well as the intelligibility of one's own speech. Other hearing- and pronunciation-related challenges in Finnish include, for instance, the perception of long words (Aho et al., 2016), which highlights compound words and suffixes at the end of the word. The suffixes in the Finnish language replace prepositions, simultaneously changing the whole body of words (e.g., Karlsson, 1977, 1982), thus complicating the perception of spoken language even more. Earlier research also shows that there is a lack of out-of-language-class contexts, where adult immigrants could practice and gain confidence in speaking Finnish (e.g., Mustonen, 2015; Tammelin-Laine, 2014), this being hindered by Finns who easily shift to English when talking with non-native speakers (e.g., Kim et al., 2022; Toivola, 2011), as previously noted (Chapter 1). It is noteworthy that adults, in comparison to children, typically acquire pronunciation more slowly but tend to learn grammatical structures more quickly (Pietilä, 2014).

In line with Virkkunen and Toivola (2020), research on teaching pronunciation (in a classroom context) in Finland has primarily been focused on the English language (e.g., Tergujeff, 2013), not on Finnish-as-a-second-language (e.g., Aho et al., 2016; Tiermas, 2008; Virkkunen & Toivola, 2020), and to a large extent lacks the phonetical perspective. In general, earlier studies in phonetics, linguistics, and psychology address a need for more research on actual teaching strategies and practices in pronunciation (e.g., Aho et al., 2016; Baker, 2011, 2014; Derwing & Munro, 2015; Virkkunen & Toivola, 2020). It is also suggested that the instruction of phonetics should be incorporated into

21 Spoken Finnish is characterised by its own distinctive expressions, vocabulary, and subtle grammatical features (e.g., Lehtonen, 2015).

22 Finnish is spoken by around 4.9 million people as a first language, mostly in Finland, and about 0.5 million speak it as a second language (https://en.kotus.fi/on-language/languages-of-finland-and-language-policy/).

overall language learning processes in meaningful ways, emphasising prosodic features[23] that do not treat phonetics as an isolated component devoid of contextual integration (e.g., Derwing & Munro, 2009; Kissling, 2018; Ullakonoja & Dufva, 2016; Virkkunen & Toivola, 2020; Jones, 1997).

This transdisciplinary research project recognises these gaps in the literature and the challenges associated with the teaching and learning language production (e.g., pronunciation) and phonetics of Finnish-as-a-second-language. The research project aims to contribute to this research field through the lenses of a language aware-choir practice where both the sounds and phonemes (segmental level) and larger phonetic entities (prosodic level) are in focus, and where hearing and language expression are holistically practiced and integrated into singing and musical activities.

2.4 Research on inclusive, socially engaged, and activist choirs

In professional singing and formal music education contexts, choirs are often characterised by requirements regarding musical skills, including auditions or other access criteria, and by an emphasis on musical outcomes, whereas community choirs and community singing in informal contexts are typically associated with promoting open access (for an opposing viewpoint, see Yerichuk & Krar, 2019) or catering "to a specific group" (Bloska et al., 2025, p. 478), as well as emphasising "participation rather than technical skill" (Dore et al., 2010, n.p.; see also Higgins, 2007, 2012). Community choirs, however, have been argued to promote purposes beyond music learning, such as "political resistance, consciousness-raising, creating social change, breaking down social barriers and uniting communities" (Dore et al., 2010, n.p.). A growing body of scholarly literature on choirs deals with the wellbeing and health benefits of choral singing (Bloska et al., 2025; Clift et al., 2012; Juan-Morera et al., 2024), related, for instance, to social bonding (e.g., Davidson & Leske, 2020; Fancourt & Perkins, 2018; Launay & Pearce, 2020), physical health (Clift et al., 2012; Cohen et al., 2006; Fancourt & Warran, 2020), and emotion regulation (Dingle et al., 2017; Gabrielsson, 2011; Warran et al., 2019), as also recognised in reports by the World Health Organisation (Fancourt & Finna, 2019). Despite these benefits (Bloska et al., 2025), research that draws attention to existing access barriers or inclusivity challenges in choir contexts reveal a lack of participation opportunities related to ethnic and gender diversity (e.g., Bloska et al., 2025; Yerichuk & Krar, 2019), and dismissive acknowledgement of the non-musical factors that serve as an important motivation for broader participation in adult amateur choirs (Bloska et al., 2025). Indeed, according to Juan-Morera et al. (2023a), inclusive education[24] should be understood not merely as expanding access opportunities within conventional education, but as addressing much broader issues related to transforming "educational systems and other learning environments, in order to respond to the diversity of students" (p. 2). However, as Juan-Morera and colleagues (2023b) note, inclusive practices have been widely studied in compulsory education, but research in non-formal and adult education is still limited.

The need for integrating collaborative singing with other, societally important purposes also reflects a need for creating new social contexts that are based on the specific needs of the choir participants, as is the case in language-aware choirs of this study. In the qualitative music education study exploring choirs for children with diverse learning difficulties, Quigley and MacDonald (2022) integrated a sign language called Makaton into collaborative singing to facilitate overall communication and help with understanding the lyrics of songs. The results of interviews with choir members and a choir leader showed that this kind of social context has the potential to advance the health and well-being of choir participants with learning difficulties by offering possibilities for new social relationships and for enlarging the modes of communication and understanding of emotional experiences using Makaton sign language embedded in musical expression. Abrahams et al. (2012) examined a community choir of male inmates, creating a special space where community music practice was framed through the lens of social justice, with the aim to create novel opportunities for inmates to express hope and beauty in a prison context (see also Silber, 2005). Reflecting the experiences of two preservice music education majors, music in this context was regarded as much as an agent of change as a subject. The study raised the appreciation and recognition of diverse individual voices, through which choir leaders started viewing their roles anew as collaborators in a reciprocal/mutual learning process. Cronley et al. (2018), in their exploratory quantitative study in the field of social work, explored a street choir as a social context for homeless and formerly homeless with the aim of supporting their social inclusion and building resilience. The study identified different profiles[25] of the choir members and compared these profiles with their attendance in choir rehearsals. Based on the findings, the study highlighted the potential for new programs that go beyond merely basic survival factors (e.g., housing), and address higher-order needs, including individual human needs, desires, and social relationships shared by all people, no matter their housing situation.

In the field of child health nursing, Bowden et al. (2019) explored a choir for children with asthma and their families as a new social context for breathing exercises. The

23 A phonetic entity larger than a single sound, such as the rhythm of a language, word, and sentence, stress overall fluency in the language (e.g., Ullakonoja & Dufva, 2016).

24 Inclusive education promotes, in line with the notion of inclusion, "the participation and recognition of all groups on equal terms, eliminating all forms of discrimination" (Juan-Morera et al., 2023b, p.1). In arts contexts, it endorses "equal access to artistic training" (p. 3) and "the full participation of all people, regardless of their personal characteristics or profiles" (pp. 3–4), thus recognising diverse perspectives, voices, and needs that are reflected in and through artistic activity.

25 These profiles comprised, for instance, resilience, social support, stress, and mental health concerns (Cronley, et al. , 2018, p. 69).

findings of this mixed methods study revealed enhancement in asthma management along with an effect on self-esteem, as well as enjoyment of participation in the group together with family members that also could broaden their shared awareness of asthma. The study contributed to shifting attention toward non-medical interventions that can also be delivered outside formal healthcare settings, enhancing the clinical care of individuals with long-term conditions. The empirical qualitative study of Balsnes and Jansson (2015) in the field of music education explored two workplace choirs (see also Moss & O'Donoghue, 2020) at the settings of a governmental agency and a health department. Their findings showed that work choirs provided enjoyment, a sense of stepping beyond one's comfort zone, communality, and opportunities to shape new identities and roles in work contexts. In other words, participation in a workplace choir challenged existing perceptions of colleagues and how individuals view themselves in this context, thus enabling the unfreezing of individual and collective identities that may also have contributed to the reconfiguration of the whole workplace as a 'community of practice' (see Wenger, 1988).

Some of the inclusive choirs could be seen as activist choirs that create new social contexts, giving voices to socially, societally, and politically sensitive and critical issues that are diversely intertwined with the choir practices and repertoire (e.g., Hilder, 2023; Hofman, 2020; Reitsamer, 2015; Rickwood, 2014). For instance, Reitsamer's (2015) qualitative study investigated an Austrian activist choir[26] that was characterised by cultural and social diversity, and in which aspects of "migration, national identity, popular music history, and contemporary society in Austria" (p. 59) were incorporated into the choir practice and repertoire. The music sociological study explored Do-It-Yourself (DIY)[27] musical heritages by outlining this particular choir`s collective cultural identity, and by discussing the commemoration practices and musical repertoire, which aimed at challenging the nationalistic cultural heritage and prevailing political representations of migrants in Austria. By drawing from a wide range of data, the study showed how the choir reflects a politically engaged popular music heritage, making migrants' cultural and (pop) musical history more visible and nurturing dialogues between different generations of migrants in Austria. In the field of ecomusicology, Rickwood (2014) explored environmental activism in an Australian community choir ('choralecology'), in which "environmentalism and music making equally guided the choir's 'direct action`" (p. 32) as a whole, also encompassing repertoire and performances. Different songs that were partly created by choir participants manifested multiple perspectives of ecological issues

26 The choir was originally founded by a group of immigrants from the former Yugoslavia. The name of the choir, Hor 29 Novembar, symbolises "Yugoslavia's Republic Day" (Reitsamer, 2015, p. 61).

27 DIY is a signifier "for the analysis of localized and vernacular forms of music heritages characterized by self-organization, self-empowerment, and initiative and positioning themselves against dominant ideologies" (Reitsamer, 2015, p. 59). DIY was "originally associated with punk and rock scenes and music-making (pp. 59–60). The little h in the word heritage "challenges and subverts the dominant and ideological assumptions of authorized heritage discourses" (p. 60, see also Smith, 2006).

(e.g., an ethical lifestyle, with a moral valuing of and care for the planet). Although it was uncertain whether the environmental message of choirs had an impact on the audience, the findings emphasise the shared commitment of the choir community to environmental issues, the connection with like-minded individuals, and the fun of simultaneous music-making as a great way to support and encourage ecological awareness.

As these examples from the research literature on choirs demonstrate, integrating choir practice with other life goals is not uncommon, having been explored from diverse (inter)disciplinary viewpoints. The so-called non-musical aspects typically reflect the needs and desires of the participating individuals, as well as broader societal conditions and issues surrounding the practice, but which have traditionally been of interest in the social sciences and sociology. This research project aims to contribute to this scholarship through its transdisciplinary approach by focusing on how integrating language learning as a goal requires a reconfiguration of choir practice. The research also contributes to the theoretical and practical understanding of inclusive choirs in non-formal contexts.

2.5 Research on choirs and language

Although research on music, singing, and language learning is extensive, it is fragmented across different fields (see Chapter 2.3), and studies on language learning in a choir context remain limited, although language use, articulation (pronunciation), and the related repetition in rehearsals is an inherent part of choir singing. In a school context, Scheckel and Kula's (2021) preliminary study showed how a choir of sixth graders could form a conducive and stress-free learning environment for long-term English learners, especially related to their speaking (oral learning). Likewise in a school setting, Serna (2019), who explored in her doctoral dissertation the role of choir education in developing English language skills (speaking, listening, reading, and writing) among newcomer English learners in a high school context, suggested that through the development of social capital in a choir context the teenagers could also gain confidence in their speaking and singing skills in English (related to the Turkish setting, see also Gül, & Arc, 2024). Kennedy and Miceli (2017), focusing on a adult choir of Italian native speakers and learners in the university context, proposed that such a choir context can enhance the input and output of Italian language, as well as contribute to intercultural competence among the participants (see also Southcott & Joseph, 2014).

Studies on choirs and second-language learning among adult immigrants is, however, scarcely available. There is a wide range of research on multi- and intercultural choirs that reveal their potential to support well-being, communality, social and cultural participation, and inclusion among adult immigrants, refugees, and asylum seekers (e.g., Balsnes, 2016; de Quadros & Vu, 2017; Raanaas et al., 2018; Schuff, 2014). Quadros and Vu (2017) illustrated how selected choir conductors in Sweden had created

various hospitable practices as community music initiatives for refugees – including some examples involving second-language learning. The study described these choral initiatives as only "gestures of inclusion" (p. 1121), as inclusion is multilayered and needs to go hand in hand with an "active policy of inclusion developed by government and enacted at every level of Swedish social fabric" (p. 1124). Addressing multiple forms of diversity (e.g., functional, cultural, generational, socioeconomical, musical, age-related, educational), Juan-Morera and colleagues (2024) explored over the course of six years the impact on emotional health of participating in *Cantatutti* inclusive choir in Spain. The findings of this long-term qualitative study showed that such an inclusive choir, where the participation can also imply "a sense of social responsibility" (Juan-Morera et al., 2023b, p. 3), had a significant impact on the emotional well-being as well as the personal and social development of the choir members, including improvements in communication competencies in Spanish, self-esteem, and attitudes towards diversity, among other effects.

Ruuska (2020), working through the lens of sociolinguistics and focusing on everyday Finnish-as-a-second-language use by advanced Finnish language learners, noted that, in a similar way to joining aerobic lessons, participation in an established Finnish choir in Finland can only support "basic receptive language skills" (p. 235), primarily involving listening to the choir conductor's instructions while rehearsing both the musical and linguistic aspects of songs. However, singing in an ordinary choir, according to Ruuska's interpretation, did not really focus on language production (e.g., pronunciation). This research project therefore contributes to the gap in research on choir singing and language learning, particularly from the perspective of adult immigrant choirs.

3 Expanding the lenses of activity theory: Linking individual actions, social structures, and systems change

This chapter discusses the theoretical foundations of this dissertation in activity theory. Chapter 3.1 presents the historical development of activity theory across its different generations, focusing on its second and third generations as developed by the adult education scholar Yrjö Engström (e.g., 1987, 1999, 2001). Within this context, attention is also given to *expansive learning* (Engeström, 1987) related to developmental work research and *historicity* as a key feature of activity theory (Engeström, 1999, p. 25). Chapter 3.2 introduces the concepts of the *boundary crossing* and *boundary object,* particularly in the light of activity theory.

3.1 Activity theory and activity systems thinking

A language-aware choir, the phenomenon that is the focus of this research project, reflects both the individual needs of the choir participants as well as the rapidly changing social reality in its home context, in this case Finland. Further to that purpose, systems/ systemic thinking was regarded as a suitable frame of reference, while emphasising the need to see "both the forest and trees" (e.g., Richmond, 1984, n.p.). In the terms of systems scholar Ray Ison (2017), understanding "things systemically literally means to put them into a context, to establish the nature of their relationships" (p. 24). Originally, cultural-historical activity theory elaborated "a need for an approach that can dialectically link the individual and the social structure" (Engeström, 1999, p. 19). Highlighting systems thinking on the approachable level of activity was considered to be a suitable theoretical starting point for this research project. Activity theory has been applied in multiple fields of research, such as psychology, learning and teaching, language acquisition, and, to the greatest extent, on work and work-based learning (e.g., Edwards, 2010; Engeström, 2005; Engeström & Sannino, 2021) in different settings, such as health care, social work, the private sector, and education (e.g., Daniels, 2004; Daniels & al., 2010; Edwards, 2010; Engeström, 1995, 1996, 2001, Engeström & Engeström, 1986; FitzSimons, 2003; Haavisto, 2002; Sannino & Engeström, 2017, 2018). It has also been used in music education research to a growing extent (e.g., Heikinheimo, 2009; Johansen, 2018, 2019, 2021, 2024; Kinsella & Fautley, 2016; Latukefu & Verenikina, 2013; Thorpe, 2018; Tuovinen, 2026; Welch, 2007). For instance, Johansen (2018, 2019, 2021, 2024)[28] deployed activity theory, including the lens of the activity system and related concepts, such as expansive learning, to explore practising, teaching, and learning jazz improvisation, and to develop new knowledge in jazz education.

Activity theory's origins lie in the Russian cultural-historical school of psychology (e.g., Leont'ev, 1978, 1981; Luria, 1979; Vygotsky, 1978). According to Engeström and Miettinen (1999), the theory has "a nondogmatic nature" (p. 2), encompassing features from diverse perspectives. The central ideas, however, refer to the German philosophy "from Kant to Hegel" (Engeström, 1999, p. 20) and, particularly, to the writings of Marx and Engels, where the concept of activity was thought to "transcend the dualism between the individual subject and objective societal circumstances", and to open up "a new way to understand change" (Engeström & Miettinen 1999, p. 3). Accordingly, activity theory shares features and concepts with pragmatism, particularly in the writings of Dewey and Mead. In addition, activity theory draws on dialectical philosophy (e.g., Davydov & Kilpatrick, 1990; Ilyenkov, 1977), embodying dialectic dynamics, for instance, between "micro-level processes and macro-structures" (Engeström, 2020, p. 960), the local and global, and the theoretical and practical (e.g., Engeström, 2020; Engeström & Engeström, 1986).

3.1.1 From action via activity to interacting activities

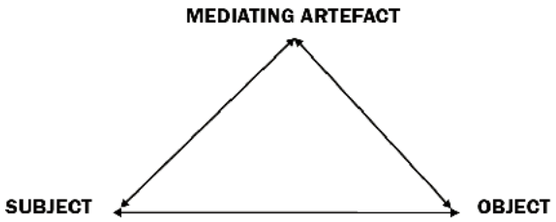
As a framework, activity theory has developed through different generations of research. Each generation has "its own prime unit of analysis" (Engeström & Sannino, 2021, p. 5). The very beginning of this "emerging theory" (Engeström, 1999, p. 20) is associated with Vygotsky's (1978) triangular model for actions (Figure 1), where "cultural mediation of actions is commonly expressed as the triad of subject, object, and mediating artifact" (Engeström, 2001, p. 134). This first-generation model presented a revolutionary idea of cultural artifacts in human actions, breaking down "the Cartesian walls that isolate the individual mind from the culture and the society" (Engeström 1999, p. 29). The unit of analysis in this model was focused on object-oriented individual action (Engeström, 2010). Dealing with "a discourse of vertical development toward 'higher psychological functions'" (Engeström 2001, p. 135), the problem with the first-generation theory was

28 The studies approached activity through the lenses of individuals (e.g., students, teachers), but also as a collective unit, a large jazz ensemble formed by different jazz ensembles (Johansen, 2024). They addressed various types of contradictions in approaching jazz improvisation (e.g. from free creation to genre- and tradition-based improvisation), being related, for instance, to "internalized cultural values embedded in the formal education system" (Johansen, 2018, p. 61) as well as to "horizontal movements of knowledge, where the new that is learnt does not follow a pathway from simple to complex" (Johansen 2019, p. 255). A recent study (Johansen, 2024) raised the importance of mutual trust and having the time to build a community when developing "democratic, student-centered large jazz ensembles" (p. 54) that allow "safety to experiment" (p. 54).

"that it does not fully explicate the societal and collaborative nature" (Engeström, 2001, p. 30) of actions.

Figure 1

Vygotsky's (1978) Triangular Model for Actions



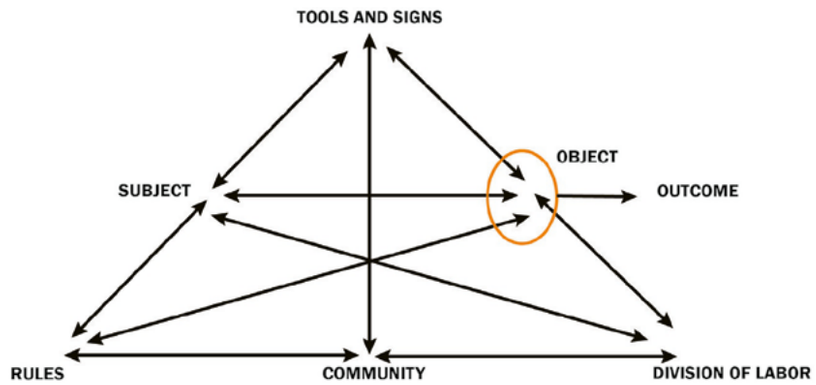
Note. The figure is adapted from Engeström (2001, p. 134).

Leont'ev (1978; 1981) extended the theory by highlighting divergences between "an individual *action* and a collective *activity*" (Engeström, 2001, p. 134), and "proclaiming that activity is a superior level of analysis" (Engeström, 1999, p. 23). To put it simply, in the second generation of activity theory, Leont'ev "formulated the concept of activity" (Engeström & Miettinen, 1999, p. 3) as a collective actor, being "a relatively durable system in which the division of labour separates different goal-oriented actions and combines them to serve a collective object" (Engeström & Sannino, 2021, p. 5). Based on both Vygotsky`s and Leont'ev's ideas, Engström (1987) generated his complex model of an *activity system* (Figure 2) as "a graphic representation" (Sannino, 2011, p. xx), where both the individual and collective actions are dialectically intertwined. In other words, an activity system "calls for complementarity of the system view and the subject's view" (Engeström & Miettinen, 1999, p. 10).

An activity system includes elements, such as the subject, object, mediating tools and signs (artifacts), community, rules, and division of labour, constituting a unified system that highlights the relations and interactions of these different elements. However, the system is not "a mechanical sum of these components" (Engeström & Sannino, 2021, p. 5). It is the object under transformation that integrates the diverse elements, indicating "that object-oriented actions are always, explicitly or implicitly, characterized by ambiguity, surprise, interpretation, sense making, and potential for change" (Engeström, 1999, p. 134). As "a community of multiple points of view, traditions and interests" (Engeström, 2001, p.136), an activity system always stresses multi-voicedness. According to Engeström and Miettinen (1999), "the internal tensions and contradictions of such a system are the force of change and development" (p. 9) within the activity. In other words, tensions between interacting elements of an activity system act as indicators of "developmentally significant systemic contradictions and change potentials within the activity" (Engeström 2020, p. 964).

Figure 2

A Complex Model of an Activity System

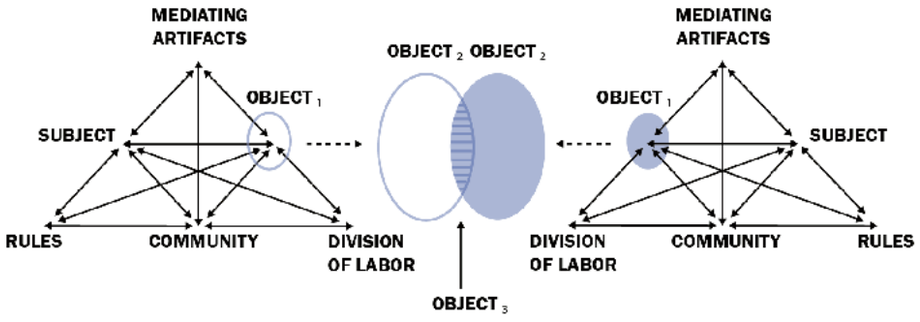


Note. The figure is adapted from Engeström (1999, p. 31).

The third generation of activity theory evolved to deal with "questions of diversity and dialogue between different traditions or perspectives" (Engeström, 2001, p. 135). In this theoretical formation, the analytical focus is on two or more activity systems simultaneously, enabling the exploration of not only "inter-organisational learning" (Engeström & Glăveanu, 2012, p. 516; see also Engeström, 2001) but also "interactions across the boundaries between participating activity systems" (Engeström & Sannino, 2021, p. 13). The formation of broader social frameworks "involves the construction of new social relations by means of debate, negotiation and shared experimentation" (p. 13). In *interacting activity systems* (Figure 3), the multivoicedness of a single activity system "is multiplied" (Engeström, 2001, p. 136), creating "a source of trouble and a source of innovation" that require constant "actions of translation and negotiation" (Engeström, 2001, p. 136) between the interacting systems.

Figure 3

Interacting Activity Systems



Note. The figure is adapted from Engeström (2001, p. 136).

In summary, activity theory has evolved from the concept of the mediated action of an individual (first generation approach) to a collective activity system (second generation approach), and then to interacting activity systems (third generation approach), of which the two latter generations are related to the development of activity theory in Finland (Engeström & Sannino, 2021, p. 4). Most recently, activity theory has been moving towards its fourth generation formulation, which "builds on ideas and instruments developed by the preceding generations" (p. 4), being simultaneously involved in critical societal challenges and wicked problems through "heterogeneous work coalitions" (p. 4). By acknowledging these challenges, activity theorists have sought to connect numerous activity systems across national boundaries and address "increasingly complex runaway objects[29] with broad societal ramifications" (p. 5, see also Engeström, 2009).

The theorisation of this research project used versions of the second and third generation of activity theory. In other words, both the activity theory model (Figure 2) as well as the interacting activity systems model (Figure 3) were used to conceptualise the language-aware choir practice and the double meaning (non-hierarchical entanglements of music and Finnish-as-a-second-language) in it. This theoretical frame will also be expanded later and further discussed through the lenses of broader systems thinking and systems praxis (Ison, 2017).

29 Runaway objects (Engeström, 2008) are exemplified by, for instance, global warming, new pandemic diseases, and global financial disasters (Engeström, 2010, p. 76).

3.1.2 Expansive learning in developmental work research

All generations of activity theory share foundational ideas related to developmental work research, in which "work is to be understood in its constant development and transformation, making learning a central aspect of work" (Engeström & Sannino, 2021, p. 5) that "needs to be analyzed as object-oriented practice, mediated by instruments, and changing through its inherent contradictions" (p. 5). This kind of work-based learning is also called *expansive learning* (see the theory of expansive learning, Engeström, 1987), viewed as a creative process of "learning what is not yet there" (e.g., Engeström, 2010, p. 79). The idea builds on Davydov's (1988) dialectical principle of "ascending from the abstract to the concrete" (Engeström, 2020, p. 31), which highlights "an open-ended expansive cycle" (Engeström, 2020, p. 37). This expansive cycle comprises the processes of internalization ("socializing and training the novices to become competent members of the activity", see Engeström, 1999, p. 33) and externalization ("a search for new solutions", Engeström, 1999, p. 34), both always "inseparably intertwined" (Engeström & Miettinen, 1999, p. 11); in other words, "they merge" (Engeström, 2010, p. 75).

In comparison to Vygotsky's *zone of proximal development* (Vygotsky, 1978), referring to learning at the individual level, the expansive cycle addresses expansive learning at the collective activity systems level. That is, the duality of "systemic and subjective-partisan views bring the researcher into a dialogical relationship with the local activity under investigation" (Engeström & Miettinen, 1999, p.10), in which an activity system "becomes a collective, multivoiced construction of its past, present, and future zones of proximal development" (p.10, see also Engeström, 1987). An expansive cycle involves "a reorchestration of those multiple voices, of the different viewpoints and approaches of the various participants" (Engeström, 1999, p. 35).

All in all, expansive learning in the context of work research emphasises the mastering of "a new way of working while designing and implementing that new way of working" (Engeström & Glăveanu, 2012, p. 516). Simultaneous collective designing and implementation also reflect the learning processes related to language-aware choir activity as a whole, as well as the work-related learning of the choir conductor-researcher (and the second-language teacher), in which various voices (e.g., individual, social, intercultural, transdisciplinary, transprofessional) are constantly encountered and need to be newly reorchestrated. This kind of learning differs from learning in curriculum-based contexts, where "the contents to be learned are well known ahead of time" (Engeström, 2010, p. 75).

Drawing on cultural-historical approaches to professional learning in work-related settings, Ann Edwards (2010) has raised the concept of *relational expertise*, in which worker-learners act as *resourceful practitioners*, learning through practice and acquiring diverse resources by interacting and negotiating with "other practitioners and clients"

(p. 13) across disciplinary and professional boundaries. Through this multi-layered collaboration, professionals can expand their understanding and enrich their approaches to the complex, ever-changing challenges of work-life, enabling them better to align with current purposes and intentions (p. 13), for which their old disciplinary-specific practices are no longer adequate.

Aligning with this view of a practitioner, in this research project both the choir conductor (myself) and the second-language teacher of the language-aware choirs can be considered as resourceful practitioners who have expanded their professionalism through relational expertise towards new transdisciplinary perspectives, within which ongoing intercultural negotiation with choir participants and their real-life needs is interwoven. In order to further extend the theoretical lens of work-related research towards the end of this research project, I adopted the lens of a systems practitioner (Ison, 2017), which allows me to critically reflect on this research work and its related working processes. This expansion will be discussed in the discussion chapter (Chapter 7).

3.1.3 Past and future cycles of an activity

A key principle of activity theory is historicity. Historicity in this context is "understood as concrete historical analysis of the activities under investigation" (Engeström, 1999, p. 25) to comprehend the historical evolution and transformation of the investigated activity. Compared to exploring the history of a society or a culture, examining the historicity of an activity, such as language-aware choir activity, is "more manageable in size" (e.g., De Fina & Georgakopoulou, 2008, p. 384). Historicity thus addresses identifying the past cycles of an activity system, which in this research project is conceived of as the activity system of a language-aware choir. The internal contradictions of an activity system at a given stage of its development can be identified, with the future dimension being continuously shaped "under conditions of uncertainty and intensive search" (Engeström, 1999, p. 34) within local contexts. Overall, extending beyond merely local micro-level scrutiny, the activity theory lens aims "to include both historical continuity and local, situated contingency in the analysis" (Engeström & Miettinen, 1999, p. 9). The activity system thus always carries "multiple layers and strands of history engraved in its diverse elements" (Engeström, 2001, p. 136) from the object of the activity to the division of labour, artifacts, and signs and rules.

In this research project, the historicity of a language-aware choir activity reflects its past and present forms: on the one hand the activities of an ordinary choir, and on the other hand a second-language class (past forms) in relation to a language-aware choir activity (present form). Specifically, the changes in the elements of the present system reveal the historicity of the past forms.

3.2 Boundary crossing and boundary object

Central to conceptually revealing both the challenges and resources of the double-meaning in the language-aware choir activity and the non-hierarchical merging of music and language education, are the concepts of boundary, boundary crossing, and boundary object (Akkerman & Bakker, 2011; Star, 2010; Star & Griesemer, 1989). That is, when approaching a choir through the lenses of an activity system (e.g., Engestrom, 1987, 1999), boundaries are delineated around the choir activity. When two activities are integrated, as in the language-aware choir activity, the boundaries of the choir activity need to be expanded as well.

In activity theory, boundary has been conceptualised as "the creation of a space where understandings are negotiated", as "zones for co-design" and as "sites of action" (see Daniels & Edwards, 2010, p. 2). According to the seminal review study by Akkerman and Bakker (2011), the boundary between different domains addresses "a sociocultural difference leading to discontinuity in action and interaction", while at the same time functioning as a resource "for development of intersecting identities and practices" (p. 132). This conceptualisation conceives boundaries through both the micro and macro perspectives, the former through individual experiences of action and interaction, and the latter through focusing on sociocultural differences. Seen through the lens of the Bakhtinian concept of dialogicality (Bakhtin, 1981, 1986), boundaries can serve as "a dialogical learning resource" (Akkerman & Bakker, p. 137) that acknowledges the diversity of perspectives and encourages a dialogue where "meanings have to be negotiated and from which something new may emerge" (p. 142). Boundaries thus encompass both potential and challenges for learning, while being "ambiguous in nature" (p. 138) and belonging to "both one world and another" (p. 141), simultaneously dividing and connecting (see Kerosuo, 2001). As related to third-generation activity theory (interacting activity systems), boundaries manifest contradictions between different activity systems as potentials for change and development. In other words, two activity systems represent "the cultural difference and the potential difficulty of action and interaction across these systems but also represent the potential value of establishing communication and collaboration" (Akkerman & Bakker, 2011, p. 139).

In boundary literature based on activity theory (e.g., Akkerman & Bakker, 2011; Engeström et al., 1995; Engeström & Käyhkö, 2021; Edwards, 2010; Edwards & Kinti, 2009; Star, 2010; Star & Griesemer, 1989), the notions of *boundary crossing* and *boundary object* are typically used to emphasise "the continuity in action and interaction" across the different sites "despite sociocultural differences" (Akkerman & Bakker, p. 133). Boundary crossing thus includes "stepping into unfamiliar domains" (p. 133) and facing uncertainty and unqualification (Suchman, 1994). It also refers to the notion of the "horizontal dimension of expertise" (Engeström & Käyhkö, 2021, p. 333), which challenges

traditional disciplinary orientation associated with 'vertical expertise'. In the context of work, boundary crossing can trigger professional transformation where "boundaries and the crossing of boundaries mediate a deliberate target of change" (Akkerman & Bakker, p. 148), which requires negotiation from diverse professional "contexts to achieve hybrid situations" (Engeström et al., 1995, p. 319, see also Engestöm 2001).

Star (2010; see also Star & Griesemer, 1989) has suggested through the concept of *boundary object* that it is not only people and their boundary-crossing competence (e.g., Walker & Nocon, 2007; Fortuin & Bush, 2010) that allow boundary crossing. Boundary objects that have both an abstract/immaterial and concrete/material nature (e.g., technologies, drawings and models, teaching methods, see Kimble et al., 2010; Loughland & Nguyen, 2018) can act as mediating artifacts enacting mutual communication between different social worlds, and also fulfil "specific functions bridging intersecting practices" (Akkerman & Bakker, 2011, p. 134). As Star (1989) stresses, boundary objects "are both plastic enough to adapt to local needs and constraints of the several parties employing them, yet robust enough to maintain a common identity across site" (p. 46). Ultimately, it is the dynamic and organic nature that lie at the heart of the conceptualisation of the boundary object (Star, 2010) and their actualisation. According to Engeström & Käyhkö (2021), "a boundary object is something people act on and something that functions as communal tools and comprises a set of social arrangements" (p. 408).

In this research, the constantly evolving pedagogical principles that underlie the language-aware choir practice, called the Six Fields of Action (Appendix A), are conceptualised through the lens of a boundary object. This concept is, in principle, used as related to the professional boundaries of the choir conductor and second-language teacher.

4 Transdisciplinary methodological framework, empirical material, and ethics

This chapter presents the overall methodological framework of this research project, comprising its transdisciplinary nature (Chapter 4.1) and its mixed and multimethods design (Chapter 4.2). The chapter also illustrates the generation of the empirical research material, the participants, and the empirical material used (Chapters 4.3-4.5), and discusses the associated ethical considerations (Chapters 4.6).

4.1. Transdisciplinarity as an issue- or problem-centred approach

This research is transdisciplinary in nature, since "transdisciplinary projects typically require the use of more than one method" (Leavy, 2011, p. 71; see also Hesse-Biber & Johnson, 2015), and since it is "an issue- or problem-centred approach to research" (p. 49), often requiring "the use of multiple methods because the problem or issue addressed is complex and multi-faceted" (p. 71), hence bearing "a moral and ethical responsibility to employ all available means to respond to urgent societal needs" (p. 51). Transdisciplinary researchers therefore often need to move beyond their familiar methodological comfort zones (Hesse-Biber & Leavy, 2006a) in order to "learn new viewpoints, methods and approaches" (Leavy, 2011, p. 72). However, as Hesse-Biber (2015) highlights, "dialoguing across our differences serves to draw on the strengths of its diversity" (p. xx).

The transdisciplinary orientation of this research project stems from the non-hierarchical merging of two disciples (music and language education) "in a holistic and integrated manner" (Leavy, 2011, p. 30) both in theory and practice. In contemporary discourse, transdisciplinarity differs from multidisciplinarity and interdisciplinarity, where approaches to integration range from disregarding it (the former) to "varying levels of integration" (the latter, p. 31). Transdisciplinary approaches are typically "social justice oriented" and "issue-generated, not disciplinary driven" (p. 29), putting issues, topics, and questions "at the center of the research process irrespective of one's "home" discipline" (p. 29). However, this does not mean "cutting the ground where one stands" ('home discipline') but instead, "widening one's horizons" (pp. 34–35) and making them more "instrumental to the larger framework" (Greckhamer et al., 2008, p. 313). As Leavy (2011) emphasises, transdisciplinary researchers need to "become hyper-aware of their disciplinary lenses and then combine those perspectives with others, without privileging one way of looking at the issue over another" (p. 35). Moreover, approaches to

"transdisciplinarity, vary greatly in the literature" (p. 26); but, overall, they aim "to bridge the academic world and the needs of different social bodies in order to address real-world issues and problems" (p. 26, see also Hirsch Hadorn et al., 2008; Rezaei, 2022), which is also the case of this transdisciplinary-oriented music education research project. Leavy (2011) further suggests that transdisciplinary research is typically "responsive to (public) needs" (p. 14) that strongly resonates with this research project as a whole, where the merging of music and second-language education originates in responses to the social needs and wishes of newly arrived residents.

Although the transdisciplinary nature of this research presents significant challenges, it also allows the "deep sharing of information and research tools across disciplinary borders and the development of new conceptual frameworks" (Leavy, 2011, p. 14). The boundaries are thus regarded as an innovative and prominent site (Akkerman & Bakker, 2011; Higonett, 1994) "to tackle complex analytical and interpretative issues that arise when bringing diverse ways of thinking and different types of data to bear in seeking answers to multifaceted questions" (Hesse-Biber, 2015, p. xxxiv). At best, this kind of disciplinary boundary work allows "the researcher to engage with a range of differences, and in doing so, act to change the world" (p. xxxiv).

4.2 Multimethod and mixed methods design

This dissertation research project resides in the methodological landscape of a multi-method[30] and a mixed methods[31] research (MMMR) (Hesse-Biber & Johnson, 2015; Leavy, 2011). In other words, to find different perspectives to approach the two overarching research questions (see Chapter 1.4), I have used different methods. The use of multiple methods in one project enables various viewpoints that may otherwise be left out of a research process that strives to present "a plurality of interests, voices and perspectives" (Greene & Caracelli, 1997, p. 14), as also in this research project. According to Hesse-Biber and Leavy (2006a), combining diverse methods can aid the researcher in dealing with complex problems that "involve several layers of understanding" and "may require different levels of analytical techniques" (p. 317). Both mixed and multimethod designs stress using multiple methods, although "most commonly in the literature "mixed methods" is used to refer to mixing quantitative and a qualitative method, while

30 In the terms of Leavy (2011) "multi-method designs also involve the use of at least two methods but do not involve the mixing of paradigmatic viewpoints" (p. 72) of qualitative and quantitative research designs. Multimethod research differentiates itself from mixed methods in that its definitional borders do not require having at least one quantitative/qualitative method in any given research project. (Hesse-Biber, 2015, p. xxxix, see also Collier & Elman, 2008).

31 Mixed methods design uses "methods from at least two different paradigms (typically, a qualitative and quantitaive method)" (Leavy, 2011, p. 71, see also Hesse-Biber, & Leavy, 2006a). Mixed methods is a research design that "usually refers to the use of both qualitative and quantitative methods in one study or sequentially in two or more studies" (Hesse-Biber & Leavy, 2006a, p. 316, see also Leavy, 2011). In addition, some definitions of mixed methods go on to state that such a mixing can provide a "fuller", more "synergistic", "better" understanding than using just one approach/method (Hesse-Biber, 2015, p. xxxix, see also Creswell & Plano Clark, 2007, 2011; Greene, 2007).

"multimethod" more broadly refers to a mixing of two or more methods – regardless of whether they are qualitative or quantitative" (Hunter & Brewer, 2015, p. 187). In other words, as Hunter and Bremer (2015) explain, mixed method as "a subset of multimethod" (p. 187) in which a clear mixed methods design is used while also mixing the methods (e.g., Creswell, 2015), as in this doctoral project.

The relationship between multimethod and mixed methods research has, however, different interpretations. For instance, Creswell (2015) notes that "the label "mixed methods" seems to be popularly used in the field" although it is also "called other names - such as multimethod, integrated, or mixed research" (p. 60), and Johnson (2015) refers to "multimethod research, interdisciplinary research, multiple level research, multiple paradigm research, multiple nation and people research" (p. 680) as the siblings and relatives of mixed methods research. Even though these definitions seem to overlap, the overall methodological landscape of MMMR aspires to point out that "multiple is a necessary but not sufficient condition for mixed" (Johnson, 2015, p. 690). In this research project I have thus employed various methodological approaches in line with MMMR, such as empirical and narrative, as well as philosophical-theoretical ones that, however, aim to go beyond the emphasis on the "two-part taxonomy" (Björk et al., 2021, p. 376) of qualitative and/or quantitative designs, while still sharing the goal of enhancing the overall rigor of the research (e.g., Creswell & Plano Clark, 2011; Hesse-Biber & Johnson, 2015; Hesse-Biber & Leavy, 2006a; Hunter & Brewer, 2015).

In the landscape of MMMR there are also deep epistemic, theoretical, and methods divides (Hesse-Biber, 2015, p. xxxiii). Scholars in MMMR research have even been occupied by paradigm wars in the 1970s and 1980s (see Greene, 2015). According to Creswell (2015), these debates have, however, proceeded to "allowing researchers to adopt the philosophical approach with which they feel most comfortable" (p. 61). For instance, pragmatism (e.g., Dewey) has often been used as a philosophical starting point in MMMR (e.g., Creswell & Plano Clark, 2011; Morgan, 2007), while encouraging researchers "to begin by concentrating on the research problem and its foundational substructure" (Hesse-Biber, 2015, p. xiii) and highlighting "the practical value of research designs that combine different methods" (Morgan, 2007, p. 62).

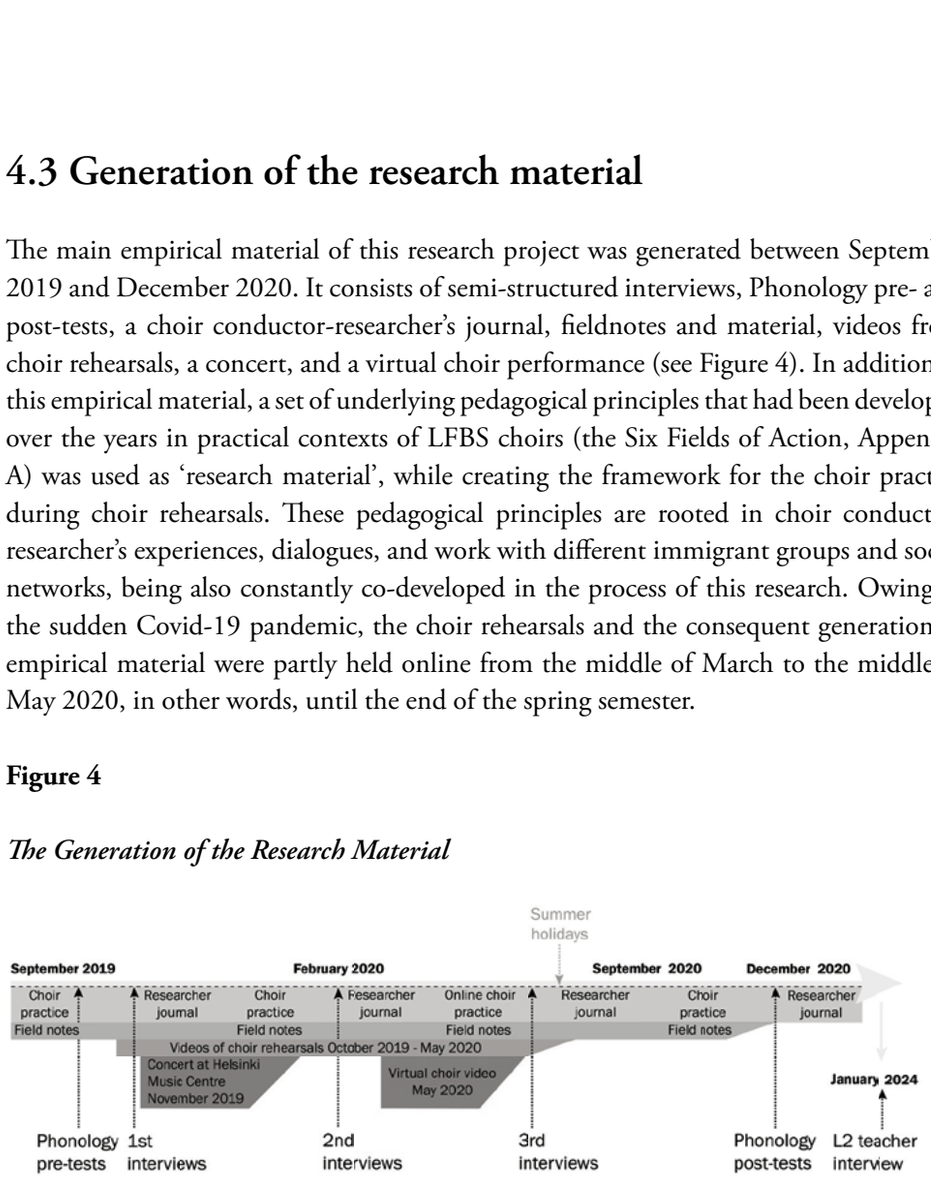
This practitioner research indeed shares the pragmatist view, which "centers on the research question and advocates using a range of methods that best meet its needs and research purpose" (Hesse-Biber, 2015, p. xxxvi). Accordingly, following the tradition of grounded theory (Ison, 2017, p. 105), the overall methodological choices in this dissertation have sought to "create a manner of practice in which an attitude of openness to the phenomena distinguishable in a situation is adopted" (p. 105). Within the eclectic landscape of the chosen methodological approaches, I have sought for "the best method or methods" (Hesse-Biber, 2015, xxxvi) for each of the four sub-studies of this article-based dissertation in order to respond from diverse perspectives to the overall research questions.

4.3 Generation of the research material

The main empirical material of this research project was generated between September 2019 and December 2020. It consists of semi-structured interviews, Phonology pre- and post-tests, a choir conductor-researcher's journal, fieldnotes and material, videos from choir rehearsals, a concert, and a virtual choir performance (see Figure 4). In addition to this empirical material, a set of underlying pedagogical principles that had been developed over the years in practical contexts of LFBS choirs (the Six Fields of Action, Appendix A) was used as 'research material', while creating the framework for the choir practice during choir rehearsals. These pedagogical principles are rooted in choir conductor-researcher's experiences, dialogues, and work with different immigrant groups and social networks, being also constantly co-developed in the process of this research. Owing to the sudden Covid-19 pandemic, the choir rehearsals and the consequent generation of empirical material were partly held online from the middle of March to the middle of May 2020, in other words, until the end of the spring semester.

Figure 4

The Generation of the Research Material



Note. The figure is adapted from Lehtinen-Schnabel & Levänen (2024, p. 4).

4.4 Participants

The research project focused on two language-aware choirs (LFBS choirs) in the Helsinki metropolitan area in Finland (see Chapter 1.3). The first choir had around 40 members, while the newly formed one had about half as many. The participants who volunteered to take part in the research included 62 choir participants and a Finnish-as-a-second-language teacher, who joined the choir every other time. All choir members were invited both orally during rehearsals and in written form via an information letter

(Appendix 7), but a couple of individuals (1–3) per choir did not want to join the research. All volunteering choir participants (62 in total) took part in video recordings during the choir rehearsals, and 41 of them joined the Phonology pre-tests when the testing was conducted in connection with the choir rehearsals. Because of the Covid-19 lockdown, only 16 of the participants were able to join the Phonology post-tests. Eleven volunteer choir participants[32] and the second-language teacher took part in the interviews.

In general, the participants of the interviews and Phonology tests (altogether 41) well represented the diversity of the choir community. Their age varied from 20 to 70 years, all had immigrated to Finland as adults (Table 1)[33] for various reasons, and had diverse educational and social backgrounds. The participants spoke over 20 different first (native) languages, and some of them (30%) also had bilingual backgrounds. The native/first languages encompassed Arabic, Chinese, different dialects of Spanish, Dutch, French, Georgian, German, Hindi, Italian, Japanese, Latvian, Lithuanian, Malay, Portuguese, Russian, Ukrainian, Taiwanese, Telugu, Turkish, Vietnamese, and different dialects of English. Experience with the Finnish language among the participants ranged from newly arrived residents with minimal exposure to long-term residents who had lived in Finland for over 16 years. Most participants had participated in Finnish-as-a-second-language classes at diverse levels of the CEFR (the Common European Framework of Reference for Languages, see p. 13). Based on these earlier experiences, they could also compare learning Finnish-as-a-second-language in the language classroom with their new experiences in a language-aware choir. The musical experiences of the participants also varied greatly. Some participants had not attended any music lessons, while others were advanced singers, and some even professional musicians.

The Finnish-as-a-second-language teacher who participated in the research attended every second choir rehearsal as a full choir member, enjoying music-making and integrating her language professional perspective into the development of choir activities (a resourceful practitioner, Edwards, 2010), while getting new ideas and inspirations for her own work as a second-language teacher. The Finnish-as-a second-language teacher, for instance, proposed new songs, assisted choir participants when creating and re-creating new lyrics, when necessary clarified second-language issues related to song texts (such as grammatical and structural particularities), supported the translation of lyrics, addressed other linguistic matters that arose during rehearsals, and, in collaboration with the choir conductor, developed "funny language songs".

32 All interviewees participated in Phonology tests.

33 Due to ethical reasons, a more detailed breakdown of the choir participants cannot be provided.

Table 1

Participants Grouped by Age and Time Living in Finland

Choir participants	Living in Finland less than a year (< 1 year)	Living in Finland more than a year (> 1 year)	N
20–35 years	5	7	12
35–50 years	4	17	21
+50 years	0	8	8
N	9	32	41

4.5 Empirical material

4.5.1 Interviews

The material of the 24 individual interviews included one to three semi-structured interviews (pre-, middle- and post-interviews) with 11 choir participants (approximately 60–90 minutes each), conducted between the end of September 2019 and the end of May 2020 (see Figure 4 for the schedule), and one post-interview with a second-language teacher (150 minutes) in 2024. The semi-structured interviews sought "to obtain descriptions of the interviewees' lived world with respect to interpretation of the meaning of the described phenomena" (Kvale & Brinkman, 2009, p. 27). The interviews encompassed various themes (see Appendix B). The questions of the first interview concentrated on the interviewee's experiences related to music and Finnish-as-a-second-language learning (e.g., challenges) before joining the LFBS choir, as well as the reasons for joining the choir, and their expectations and wishes, whereas the second and third interviews focused on experiences in the LFBS choirs. The questions included topics such as the challenges and supporting aspects of learning Finnish in a choir, experiential changes in language use and learning since joining the choir, as well as out-of-the-choir-context experiences, and possible surprises that joining the choir had provided for the interviewees (for an example, see a transcription in Appendix C).

The number of interviewees changed between the pre- and middle/post-interviews (see Table 2) due to sudden changes in the life situations of some participants (e.g., moving back to their home country, to another country, or inside Finland; unexpected family affairs), which is also a typical character of LFBS choirs. In addition, Covid-19 pandemic affected the total number of choir participants, including interviewees, due to being unable to continue because of the necessity of resorting to online rehearsals, for reasons ranging from the lack of a workable network, or digital devices, or having

sufficient physical or mental space to join the choir rehearsals at home. As both the middle- and post-interviews focused on the choir participants' experiences, they were equally acknowledged in the analysis, although the middle interviews were originally (before the pandemic) regarded more as 'mid-term' ones. One participant who joined a LFBS choir for over two years only participated in the pre- and post-interviews.

Table 2

Interviews and interviewees

Interviews N = 24	Pre-interviews N = 11	Middle interviews N = 7	Post-interviews N = 5	Extra interview N = 1
Interviewees	11 interviewees	7 interviewees	5 interviewees	1 interviewee
N = 12	7 females 4 males	5 females 2 males	4 females 1 male	second-language teacher

The interviews of the choir participants were conducted in English, as all interviewees could also adequately speak English, as did the majority of the choir community. Although English language skill was not a research criterion, it may have affected the volunteer participation. To facilitate mutual understanding, the interviews utilised holistic communication such as bodily (gestures and movements) and vocal (singing and sounds) expressions to expand and support a wider range of verbal expressions. The interview with the second-language teacher was conducted in Finnish. The parts of the interview material that were used were translated into English by the researcher.

The individual interviews were carried out by the researcher/choir conductor either before or after the choir rehearsals, in a peaceful space in the same building where the choir rehearsals took place, in order to make them accessible to the choir participants in terms of time and place. Owing to the Covid-19 lockdown, the third (post-)interviews took place online (in Zoom). The first and second interviews were audio/sound recorded, and the third interview video and audio/sound recorded. All the interviews were transcripted verbatim, three of them by the researcher and all the others by a company specialized in audio recorded research transcriptions, from which a nondisclosure agreement was received. All clarifications that were needed related to transcriptions (e.g., unclear English words or their meanings) were discussed personally when meeting in the weekly choir rehearsals. If needed and asked for, they were also given in written forms.

4.5.2 Pre- and post-Phonology tests

Pre- and post-Phonology tests (Kunnari et al., 2012) were used in the project to evaluate the choir participants' challenges in Finnish pronunciation (pre-test) and the possible changes in these challenges after actively participating in the LFBS choirs (post-test). It was hypothesised that singing in a language-aware choir might have a positive effect on the ability to correctly discriminate and consequently produce difficult Finnish language speech sounds. The linguistic challenges, such as double sounds (consonants and vowels), and specific challenges in perceiving and pronouncing long words, were also practiced and focused on through the choir practice. The Phonology test was chosen because foreign language tests do not acknowledge the specific phonological structure of Finnish in a sufficient way (see Kunnari et al., 2012, p. 6). The shorter 10-min version of the Phonology test with 36 pictures, including 31 nouns, 3 verbs, and 2 onomatopoeic expressions, was used, since it could be presented to the participants before, during, or straight after the weekly choir rehearsals in a quiet space suitable for the purpose near the choir rehearsal space.

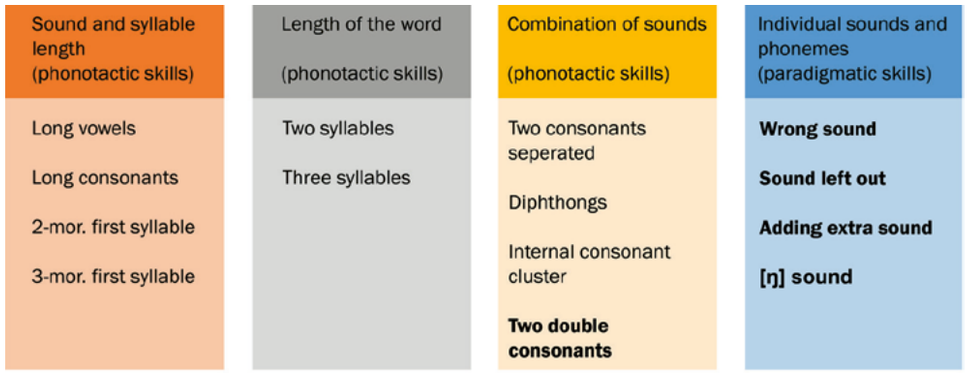
The pre-tests were administered by the researcher (choir conductor) or an assisting student from the Helsinki University Department of Logopedics, who also used parts of the pre-test results in her master's thesis,[34] showing that the test in its current form is moderately suitable for assessing adult immigrants' Finnish pronunciation. The post-tests were presented online (via Zoom) by the researcher. All Phonology tests were recorded and transcribed in the standardized test form (see Appendix D).

The original material of the Phonology test was employed, as it was suitable for adult individuals with little experience in Finnish. However, the scoring of the test was completely changed to better demonstrate all the difficulties in Finnish pronunciation faced by adult immigrants, and not by Finnish children, for whom the test was originally developed (Kunnari et al., 2012, p. 15). Previous research also indicates that learning foreign language pronunciation is generally easier for children than for adults (Pietilä, 2014; Virkkunen & Toivola, 2020). Altogether 14 sound categories were scored, of which nine were from the original Phonology test (Kunnari et al., 2012) and five (in bolded text) were new added sound categories (Figure 5).

34 The Suitability of the Phonology test for assessing the Finnish pronunciation of adult immigrants (Ihalin, 2020).

Figure 5

The Fourteen Sound Categories Used for the Scoring of the Phonology Pre- and Post-Tests



Note. The figure is from Lehtinen-Schnabel & Levänen (2024, p. 6).

As indicated earlier, the Covid-19 pandemic and the subsequent lockdowns had an influence on the number of the choir participants.[35] Sixteen out of the 41 volunteer participants who had joined the Phonology pre-test could participate in the post-test (see Chapter 4.4). The post-test was also postponed to enable more face-to-face choir rehearsals, where speech sound hearing and pronunciation could be actively supported and practiced in collaboration with others. Although the pre- and post-test groups were small for reliable statistical analysis, the Phonology test was included along with the interviews for the empirical material. Specifically, the core interest was in knowing whether the results would indicate any changes between the pre- and post-test scores, on the one hand, and on the other hand whether it was possible to acknowledge any relationship between the experiential and test-based results.

4.5.3 Choir conductor-researcher's journal

The choir conductor-researcher's journal included reflections on the experiences of joining, conducting, and exploring the language-aware choirs, as well as conducting this research project as a whole. The reflections on choir experiences were mostly related to feelings before and after the choir rehearsals (for an example, see Appendix E). They also consisted of challenges and surprises encountered when generating the research material (e.g., the sudden lockdown). Moreover, they included experiences of the transprofessional collaboration with the second-language teacher, negotiations with the choir participants, as well as communication with multiple stakeholders and staff from public organizations where the choirs operated, added by WhatsApp and emails as well as Facebook discussions. All in all, the research journal acted as a reflective underpinning when interpreting the findings in relation to the choir practice and my thinking and actions as a music professional, hence, implicitly serving as an underpinning for uncovering the process of becoming a language-aware choir conductor.

4.5.4 Field notes and material

The field notes and material encompass notes, reflections, and all material that were generated based on the here-and-now experiences, desires, and needs that emerged in the choir rehearsals. In other words, they consist of my teachers' notes, but also collaboratively created musical materials (e.g., choir improvisations), created and re-created song lyrics, and recordings taken from them in the choir rehearsals (for an example, see Appendix F), including the online rehearsals. These materials have been used hand-in-hand with the researcher journal and contribute to the overall understanding of the language-aware practice.

4.5.5 Videos from the choir rehearsals, a concert, and a virtual choir performance

The empirical material also includes 16 videos of the choir rehearsals (1.5 hours per video), a video of a concert at the Helsinki Music Centre in November 2019 (45-minute video), and a virtual choir video (6-minute video), which was collaboratively created as the Covid-19 pandemic lockdown in Spring 2020 prevented implementing the planned Spring concert. Of the 16 videos of the choir rehearsals, 10 were face-to-face recordings from Autumn 2019 and Spring 2020, and six from the online interactions in Spring 2020. As a small number of choir participants (1–3 per choir) did not consent to participate in the research, the video camera was positioned to ensure that these individuals were not visible in the recordings. The videos were not transcripted, as they were only used to reflect the outcomes in real life, that is, how the double meaning and the linguistic challenges were actualised and addressed in and through the choir practice. Table 3 summarises the information of the video recordings as well as of the empirical research material as a whole.

35 The lockdowns also prevented the original intention of comparing choir participants' Phonology test results with those of adult learners in a normal second-language class.

Table 3

Empirical Research material

Empirical material	Interviews	Phonology tests	Choir conductor-researcher's journal	Field notes and material	Videos
	11 pre-interviews (September 2019) 7 middle-interviews (February 2020) 5 post-interviews (May 2020) 1 interview afterwards (January 2024)	Pre-test: 41 participants (September 2019) Post-test: 16 participants (December 2020)	Reflections on experiences of joining and exploring the two language-aware choirs (August 2019-December 2020)	Choir conductor's notes and material co-created and re-created during the choir rehearsals e.g., new lyrics (September 2019-December 2020)	10 face-to-face rehearsals (1.5-hour/video) 6 online rehearsals (1.5-hour/video) 1 concert 26.11.2019 (45min. /video) 1 virtual choir video (6 min.) 31.5.2020
Sum	24	57	254 pages	Notes, recordings, Power-point slides, sheet music, material for online rehearsals	18

4.6 Research ethics

The research ethics of this research work comprise both 'formal' ethics as well as more informal and "situational ethics" (Allsup & Westerlund, 2012). The latter reflects the Deweyan understanding of ethics as "a project of inquiry concerned with the solution of practical problems based on a variety of "morally transformed" interests and aspirations" (p. 125, see also Putnam, 2004).

The formal part of the research ethics concerns the official procedures and guidelines for research integrity following the principles of reliability, honesty, respect, and accountability (ALLEA, 2017/2023; TENK, 2023), as well as specific guidelines for "human participants or research methods used in human sciences" (TENK, 2019, p. 47). Following them, this research project aligns with the responsible conduct of research following the code of ethics of the European Commission in Research (ALLEA, 2017/2023), the RCR guidelines of the Finnish Advisory Board on Research Integrity (TENK, 2019, 2023), and the Ethical Instructions of the University of the Arts (UNIARTS, 2024). The research project received an approved ethical statement from the Ethics Committee of the University of the Arts Helsinki (June 17, 2019). Subsequently, the organizations where the language-aware choirs operated (Espoo Adult Education Centre and the City of Helsinki) granted their research permits according to their research integrity guidelines. In addition, a DPIA (Data Processing Impact Assessment) was processed and approved by the Data Protection Officer at the University of the Arts Helsinki (March 20, 2020). All choir members, including the second-language teacher who agreed to join the research, signed written consent forms (Appendix H), in which the possibility to decline or withdraw from participation at any time during the research process was emphasized, and which was also brought up again throughout the process of data generation.

The situational ethics acknowledged that "ethical behaviour cannot be specifically prescribed" (Ison, 2017, p. 106), as it is always dependent on a specific situation. That is, choices made by a researcher and practitioner (choir conductor) in relation to specific situations always carry "ethical implications" (p. 109), and thus need the cultivation of ethical sensitivity and practical wisdom, including the language we choose and use. In the intercultural and multilinguistic choir context of language-aware choirs, a special ethical attention was needed for language use and communication to honour and acknowledge the diversity of the choir context. As indicated earlier, all available resources, including embodied, material, and spatial resources and the choir participants' first (native) languages were harnessed (e.g., translanguaging, see García & Wei, 2014; Wei, 2018) to strengthen inclusive and participatory orientations in all possible ways. This also included the use of multisensory resources. For instance, the song lyrics accompanied by supportive visuals were projected on the wall while singing without sheet music, acknowledging the cultural diversity inherent in this respect (e.g., Dore et al., 2010). The professional support of the second-language teacher was pivotal when conducting multimodal and embodied conversations. The idea of translanguaging was also employed next to English and Finnish when informing the choir community about the research project, both orally and in writing, regarding the consent, purpose, aims of the research, main features, schedule, possible outcomes of the research project, and the right to withdraw from the research process. In the written information sheet, the visuals played an important role in supporting comprehension (see Appendix G). Consequently, the individual interviews employed diverse modes of expression, ranging from embodied expression to singing to expand the aspects of verbal communication (Chapter 4.5.1).

Thinking and acting with translanguaging was also related to another ethically

important aspect: the overcoming of the monolingual bias[36] in teaching and learning (e.g., Hua & Jankowicz-Pytel, 2020). Accordingly, focusing on the Finnish language, including Finnish music, required constant awareness and ethical sensitivity, as well as "situational negotiation" (Westerlund et al., 2021a, p. 16) to avoid associations with nationalism or colonialistic thinking (e.g., Patel, 2014). This involved, for instance, careful ethical consideration related to the choices of songs and musical material. Importantly, the intercultural and multilingual dialogue was also fostered by "letting the context teach" (Westerlund et al., 2021a, p. 1). That is, the choir practice was based on the continuous negotiation on the here-and-now needs, experiences, and desires of the choir participants, as well as on supporting the dialogue between Finnish and the languages and cultures of the choir participants. For instance, the cultural, social, and language issues raised by the song lyrics were also discussed and critically reflected upon in relation to the choir participants' experiences in their previous or new home countries. Based on these experiences, new song lyrics were created. As noted earlier, this was also highlighted by encouraging the choir participants to bring and share songs in their first languages, which were also translated into Finnish afterwards with the help of the choir community.

Following the tradition of practitioner research and inquiry as a stance (Cochran-Smith & Lytle, 2009), where the researcher and practitioner roles are deeply intertwined, also raised ethical deliberation related to my positionality and related power dynamics when conducting the research in my own professional teaching context (see also Koskela, 2022; Kuoppamäki, 2015; Muhonen, 2016). The existing power relations may have influenced choir participants volunteer participation in the research project (Cochran-Smith & Lytle, 2009, p. 47) in terms of feeling obliged to join, although it was clearly highlighted that choir participants had an equal right not to participate as well as the freedom to withdraw from it at any time, without any impact on their involvement in the choirs. These power relations, which are also always inherent in interviews (e.g., Kvale & Brinkmann, 2009), were further accentuated due to my dual role as the interviewer and the choir conductor. Therefore, this dual role may have influenced the interviewees' willingness to share their negative or critical aspects, despite my persistent efforts throughout the interviews to emphasise the importance of honest and critical discussion in order to best serve the purposes of the research project.

I also tried to keep these power dynamics in mind when analysing and interpreting the interview material. On the other hand, the dual role and our prior familiarity (Koskela, 2022) may have encouraged trustful and open interaction, enabling a more relaxed and uninhibited atmosphere during the interviews. Making the videos during the choir rehearsals also raised ethical concerns. For instance, the equal position among choir participants was challenged when needing to ask non-participating individuals, although only a few (1–3 persons/choir), to reposition themselves at the sides of the space to avoid being seen on the video. The use of video recordings also caused extra excitement and a sense of discomfort among the choir community members, particularly during the first times. Therefore, I decided to ask, each time a recording was to be made, whether it was acceptable to everyone present (despite the consented participation), and if anyone felt unsure or uncomfortable then the recording was cancelled. I also reminded the choir participants that the video material was used solely as a supporting material to reflect on the choir practice as a whole, not on individual actions. In addition, my position of power applied to my non-immigrant background when working with choir participants from immigrant backgrounds (see e.g., Balsnes, 2016), including the use of Finnish language as previously discussed – being an ongoing process of being and becoming aware of, always anew.

It was also an ethical choice to conduct and continue the collaborative journey together with the choirs throughout this research process, which enabled constant shared discussions and evolving reflections (Mustajoki & Mustajoki, 2017) with the choir community. This ongoing engagement also enabled the choir practice to transform alongside the research, thereby emphasising, in line with Maturana (1988), the significance of a recursive dynamic between "theorising and practicing" (Ison, 2017, p. 105). Accordingly, as a practitioner-researcher, it was pivotal to maintain a close connection and 'sense' to practice, and also to enable the sharing of the research results (see also Cochran-Smith & Lytle, 2009) with the choir community. Consequently, the volunteer choir participants were invited to perform at and attend one research conference and one arts seminar where the research project was presented.

36 "Monolingual bias (MB) refers to the viewpoint that people who speak only one language, that is, monolinguals, are the norm, and that bilinguals and multilinguals are exceptions to that norm. That is, the prototypical human is seen as having only one language. This bias can be found in the assumptions, hypotheses, and practices of many fields connected to language" (Barratt, 2018, part of Abstract text, online).

5 Approaches of the sub-studies

This chapter presents the specific research questions (Chapter 5.1.) and theoretical and methodological approaches of the four sub-studies (Chapters 5.1.1–5.1.4). Chapter 5.2 explains in more detail the need for the triangulation of methods and discusses the challenges of using multiple methods in this research project.

5.1 Sub-studies and their research questions

I have used multiple methods to answer the main questions of this project: How can second-language (Finnish) learning be supported within a multilingual choir practice? What new insights can a language-aware choir generate for music educational thinking and actions? These overarching research questions were divided during the research process into four sub-studies, each posing its own tasks and sub-question(s) (Figure 6).

Figure 6

Overarching Research Questions in Relation to the Sub-Questions of the Sub-Studies

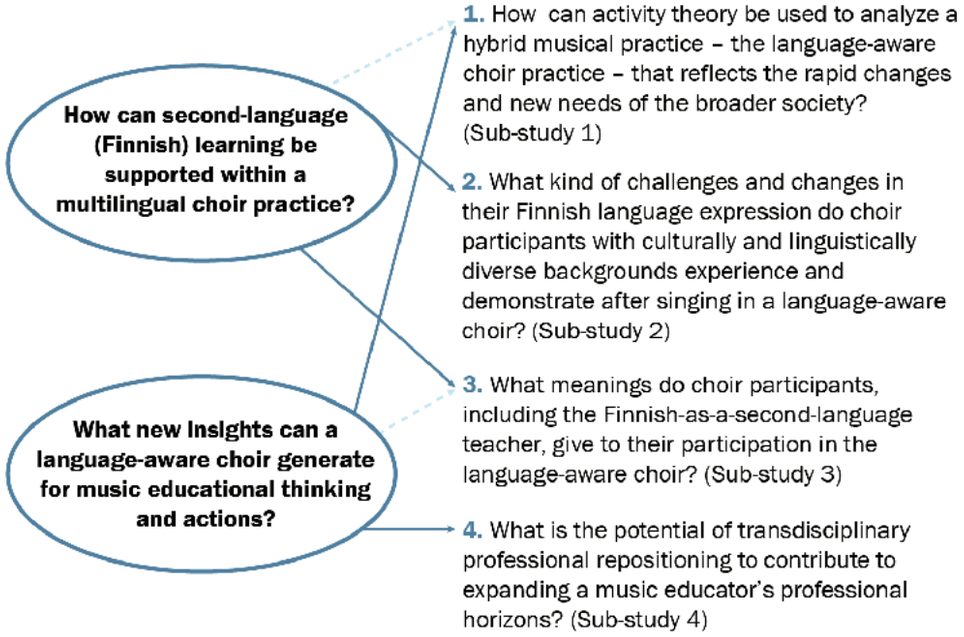


Table 4 summarises the analyses used to approach the sub-questions in the four sub-studies that enable different analytical perspectives to the overall research questions, including theoretical, empirical, and narrative approaches. A more detailed discussion of these approaches is provided in the following chapters.

Table 4

Summary of the sub-studies, their research questions and analytical approaches

	Research sub-questions	Analysis
Sub-study 1	How can *activity theory* be used to analyze a hybrid musical practice – the language-aware choir practice – that reflects the rapid changes and new needs of the broader society?	Practice-based theorizing (Gheraldi & Nicolini, 2014) 1. phase: Emerging hybrid musical practice 2. phase: The dual meaning object of Learn-Finnish-by-Singing 3. phase: Generating Learn-Finnish-by-Singing (LFBS) choir practice as an activity system
Sub-study 2	What kind of challenges and changes in their Finnish language expression do choir participants with culturally and linguistically diverse backgrounds experience and demonstrate after singing in a language-aware choir?	Mixed-methods (Creswell, 2014, 2015) using both thematic analysis (Braun & Clarke, 2006) of interviews and different statistical analyses (SPSS)
Sub-study 3	What meanings do choir participants, including the Finnish as a second-language teacher, give to their participation in the language-aware choirs?	Narrative analysis (Polkinghorne, 1995) 1. phase: Horizontal analysis following paradigmatic mode of thought (Bruner, 1985) 2. phase: Vertical analysis following narrative mode of thought (Bruner, 1985)
Sub-study 4	What is the potential of transdisciplinary professional repositioning to contribute to expanding a music educator's professional horizons?	Conceptual elaboration (e.g., Hirschheim, 2008) engaging diverse concepts, insights, literature streams, and theories and illustrative examples of the interview data (e.g., Gilson & Goldberg 2015; Jaakkola, 2020)

5.1.1 Practice-based theorising: Language-aware choir within activity theory thinking

The first, theory-driven sub-study, used practice-based theorizing (Gheraldi & Nicolini, 2014) to elucidate how "knowing-in-practice is constructed" (p. 134). The analysis reflected my own practitioner-researcher's experiences of planning and implementing language-aware (Learning-Finnish-by-Singing) choir practice with practice-based theoretical interest in the emerging complexity of hybrid musical practice, associated with the changes in and new needs of the broader society. It emphasised the need for new theorisation to make sense and communicate the changes in practices and professional thinking that emerge from LFBS (language-aware) choir practice, and especially when considering both the musical and non-musical components of the outcomes.

The analysis, deploying activity theory thinking as an analytical device, was divided into three phases. The first phase of the analysis, called "Emerging hybrid musical practice", rested on my triple role (choir conductor/music educator, researcher, and language teacher), allowing an insider perspective into the choir practice. This phase focused on conceptualising the pedagogical principles underlying the LFBS choir practice through the concepts of *boundary object* and *boundary crossing* (Star, 2010; Star & Griesemer, 1989). The second phase of analysis, "The dual[37] meaning object of Learn-Finnish-by-Singing", dealt with conceptualizing the double meaning in the choir practice through *interacting activity systems* (Engeström, 2001). In the third analytical phase, called "Generating Learn-Finnish-by-Singing (LFBS) Choir Practice as an Activity System", I explored LFBS choir practice through the lenses of a *single activity system* (Engeström, 1999). Finally, I summarised the three-phase analysis through six reflections, illuminating how the double meaning was actualized during choir rehearsals. These reflections underlined: 1) an equal and reciprocal focus on music and language expression; 2) an embodied and multisensory approach; 3) a creative and playful orientation, featuring humour, enjoyment, and tolerance of mistakes; 4) an intercultural dialogue; 5) a polyphony of repetitions; and 6) heteroglossia (Bakhtin, 1981), combining songs in different music genres with different sublanguages.

In summary, through the three-phase theoretical analysis I aimed to theorise the double meaning of the choir practice through 1) the concepts of boundary object and boundary crossing (Star, 2010; Star & Griesemer, 1989), 2) interacting activity systems (Engeström, 2001), and 3) a single activity system (Engeström, 1999). The analysis strived to highlight the significance of connecting the individual and social structures – the original idea from which activity theory thinking stems (Engeström, 1999) – and the subject-community relationships within LFBS choirs.

37 Here the terms 'dual' and 'double' are used interchangeably, representing the same concept.

5.1.2 Mixed methods approach: Challenges and improvements in second-language expression

In the second, empirical sub-study, I employed both qualitative and quantitative approaches in "data collection and analysis" (Hesse-Biber & Leavy, 2006a, p. 316) in line with mixed methods design (e.g.; Creswell, 2014, 2015; Greene et al., 1989; Hesse-Biber & Leavy, 2006a, Leavy, 2011; Creswell & Plano Clark, 2011). The 23 interviews with the choir participants were analysed through thematic analysis (Braun & Clarke, 2006), which reports the "experiences, meanings and the reality of participants" (p. 9). The analysis focused on both challenges and changes in second-language learning and use after participating in the language-aware choir from five to nine months. All instances across the interviews referring to these analytic interests were included. First, the experiences of the most difficult aspects of the Finnish language (first/pre-interviews) were identified, coded, and thematically organised. Second, the choir participants' experiences of change in the challenges of their Finnish language production and use after joining the LFBS choir were coded and thematically organised, first into sub-themes, and then into broader main themes.

The Phonology pre- and post-tests were analysed using different statistical analyses via IBM SPSS Statistics. First, the means and standard deviations of the different sound categories (variables) were evaluated for the entire participant group. Second, ANOVA tests were used to examine whether there were significant differences in test scores among three participant subgroups, defined by the length of residence in Finland and timing of LFBS choir participation. Third, a paired samples t-test was conducted to assess whether statistically significant differences existed between the Phonology pre- and post-tests scores. Statistical significance was set at $p < .05$.

5.1.3 Narrative approach: From individual stories to emerging theorisation

The analysis in the third sub-study comprised both paradigmatic and narrative modes of reasoning (Polkinghorne, 1995) by focusing on the interview material of five interviewees, four choir singers, and the second-language teacher. The selection of the interview material was based on theoretical sampling (Coyne, 1997), with the criteria of including different perspectives, rich descriptions, and aspects relevant to the needs of the emerging theory. Although the English language competence of the interviewees was not a criterion, it may have contributed to the richness of the interview material, as the interviews were conducted in English; therefore, some of the interviews provided significantly more dimensions and richer experiential explanations to the phenomenon than others, and therefore provided more suitable material for narrative analysis. The sampling can in this sense be seen as a purposeful "second stage sampling" (Barbour

2022, p. 3) that seeks to deepen and expand the understanding of the complexity of meanings from the participants' perspective that was already touched upon in the second sub-study.

In the first phase of the analysis – emphasising the paradigmatic mode of thought (Bruner, 1985) – all the interview material of the five interviewees were horizontally coded through the lens of the research question. The coded parts included, for instance, aspects related to choir experiences of music and second-language learning, social participation in the choir community, and linking the choir experiences to everyday life and the surrounding society. By also viewing the coded parts through the concept of *wide-awakeness* (Greene, 1978, 1995) and the *activity theory* lens (Engeström, 1999, 2001), a common theme – that seemed to offer, to some extent, a 'transformative force' in the interviewee's lives – emerged. The first phase thus followed thematic analysis (e.g., Braun & Clarke, 2006) in line with an abductive approach (see Alvesson & Skjöldberg, 2009, p. 4).

In the second phase of the analysis, adhering to the narrative mode of thinking (Bruner, 1985), I vertically organised the parts that represented the 'transformative force' into a story form. That is, the focus was now on the interview material of each interviewee. I constructed a story from the parts that illustrated aspects of personal transformation that joining the language-aware choir had initiated. This process required constant consideration of what to include and exclude (narrative smoothing, Spence, 1986) from the interview material, "to-and-from movement from parts to whole" (Polkinghorne, 1995, p. 16). It also required me to synthesise and relate "events and actions to one another by configuring them as contributors to the advancement of a plot" (p. 16).

Overall, the two-phase, narrative-oriented analysis of the third sub-study aimed to show how "each story told and lived is situated and understood within larger cultural, social, and institutional narratives" (Clandinin & Caine, 2008, p. 542), and reinforces or balances "the big picture" (Stroh, 2015, p. 43) as part of a wider systems framework.

5.1.4 Conceptual reconfiguration: Critical argumentation for music professional repositioning

The fourth theory-oriented sub-study is a conceptual elaboration (e.g., Hirschheim, 2008; Jaakkola, 2020), involving "the assimilation and combination of evidence in the form of previously developed concepts and theories"(Jaakkola, 2020, p. 19) for a further critical argumentation. The secondary analysis (Heaton, 2008) of the interview material provided illustrations to further support, explicate, and strengthen the theoretical argumentation. The conceptual approach integrated diverse concepts, insights, literature streams, and theories (e.g., Gilson & Goldberg 2015; Jaakkkola, 2020) with the

interview material, which was reused to exemplify the participant perspective in the language-aware choir.

Theoretically, the analytical exploration revisited the historical overview of *l'art pour l'art* autonomy discourse in music education, which the language-aware choir clearly challenges, denoting the impact of this discourse on the *distinction between musical and non-musical values* (e.g., Reimer, 1989; Westerlund, 2002, 2003, 2008) and *professional adiaphora* (Bauman & Donskis, 2013), the latter referring to "the placing of action outside of the universe of moral obligations and evaluations that take place elsewhere in society" (Westerlund & Odendaal, 2025, p. 29). Moreover, the analysis also critically (re) considered the understanding of musical praxis in praxial music education (e.g., Elliott, 1995).

Second, besides an *activity system* (see Sub-studies 1 & 2), which is grounded on activity theory thinking (see Engeström, 2001), the language-aware choir practice was further articulated through the concepts of *invitational practice* (Purkey & Novak, 1993; Purkey & Stanley, 1991; Purkey & Aspy, 2003). Third, the combination of *activity theory* and *affordance theory* (Pedersen & Bang, 2016) was employed to revisit and analyse the interview data of seven choir participants in relation to their self-evaluated benefits of the choir practice. The study therefore expanded the theorisation of the third sub-study in which participants' self-evaluations and reflections provided material for the narrative analysis.

5.2. Triangulation of methods

When using multiple methods within the framework of multimethod and mixed methods research, the triangulation of methods is emphasised. Triangulation highlights the use of more-than-one-method to examine the same question "to enhance the credibility of the research findings" (Hesse-Biber & Leavy, 2006a, p. 318; see also Creswell, 2015; Plano Clark & Creswell, 2008). It is also regarded as building "trustworthiness and validity into the findings" (Leavy, 2011, p. 71, see also, Greene et al., 1989). According to Greene et al. (1989), the main premise behind the benefits of method triangulation is that "all methods have inherent biases and limitations" (p. 256). Thus, using multiple methods can offset each other's weaknesses when approaching a given phenomenon and "the results of these methods converge and corroborate one another" (p. 257).

In this research project, method triangulation reflected the aim to "fuller understanding of the research problem and/or to clarify a given research result" (Hesse-Biber & Leavy, 2006a, p. 319), enabling various perspectives to approach the overarching research questions, as also referred to in the beginning of this chapter (see also Chapter 4). In addition, the second sub-study deployed a mixed-methods design as such in order to clarify whether the findings of using different methods as well as different empirical

materials could complement each other. Finally, method triangulation also allowed the findings of one method to "develop and inform the other method" (Greene et al., 1989, p. 259), which was the case, for instance, in the third and fourth sub-studies, where the narratives and interview findings informed the theoretical approaches.

Using multiple methods includes diverse challenges. For instance, it requires immersion in various methods and methodologies related to both data generation and analyses (e.g., Hesse-Biber, 2015), and thus highlights being in constant "dialogue across methodological and methods divides" (p. xxii). As also noted earlier, the use of multiple methods is much criticised for advocating "a variety of philosophical and practical research positions" (Pearce, 2015, p. 42). The methodological approach of MMMR in this research project, however, strived – in line with Hesse-Biber (2015) – towards "critical and emerging perspectives…without privileging one type of knowledge building" (xiii; see also Hesse-Biber & Leavy, 2006b), thus requiring constant reflexivity of the researcher's own standpoints and values related to the research practice "at all stages of the research" (p. xliii). This also included open critical reflection on the conceptual and contextual choices (e.g., theoretical, methodological), which will be explored in more detail as part of the Discussion (Chapter 7).

In addition, the transdisciplinary nature of this research project supports "an evolving methodology that follows an iterative or responsive process where the methodology evolves over the course of the research process as a result of new learning" (Leavy, 2011, p. 57). For instance, in the first sub-study, where the activity systems lens as a methodological tool was modified and adopted, no ready-made procedure existed; rather, the design was created in the course of the research process. Methodological development was also needed when adopting the narratively-oriented approach that combined both the horizontal and vertical dimensions in the third sub-study, as well as partially when making various modifications to the existing Phonology test (Kunnari et al., 2012) and the related analyses in the second sub-study. The Covid-19 pandemic also caused multiple challenges for and changes to the data generation process, as noted in Chapter 4.

6 Main findings and key contributions

This chapter presents an overview of the key findings and contributions from the sub-studies (Chapters 6.1-6.4), which were reported in four peer-reviewed, international articles (Articles 1-4), including one book chapter.

6.1 Article 1: Novel opportunities for intercultural music education through the integration of singing and a language-aware approach in a multilingual choir

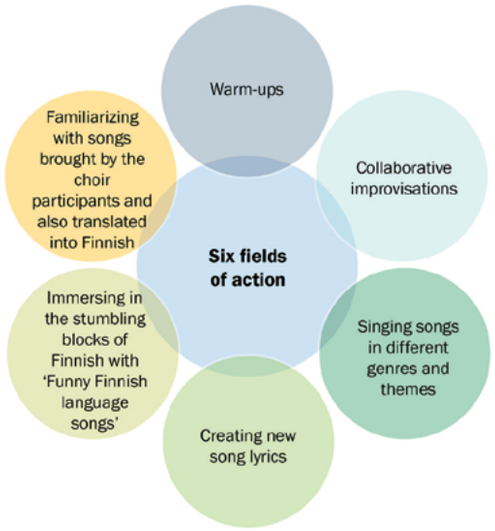
By addressing the question 'How can *activity theory* be used to analyse a hybrid musical practice – language-aware choir practice – that reflects the rapid changes and new needs of the broader society?', the first sub-study established the activity theory basis for the whole research project. As discussed in the previous chapter, I adapted activity theory and, specifically, the lenses of a single activity system (Engeström, 1987,1999), interacting activity systems (Engeström, 2001), and the concepts of boundary crossing and boundary object (Star, 2010; Star & Griesemer, 1989) for the first conceptualisation of the LFBS choir practice and its previously unrecognised double meaning.

Reflecting my practitioner-researcher's professional and interdisciplinary experiences with diverse groups of participants and social networks, I first articulated, categorised, and conceptualised the underlying, constantly emerging pedagogical principles of the LFBS choir practice as *a boundary object* (Star, 2010; Star & Griesemer, 1989) that enables boundary crossing (Akkerman & Bakker, 2011) in and through the choir practice. These underlying principles were divided into the Six Fields of Action (Figure 7) in the processes of the LFBS choir activity, articulating how musical and linguistic actions were holistically and non-hierarchically integrated in and through the choir practice. In line with the notion of boundary object (Akkerman & Bakker, 2011), they highlighted the overcoming of discontinuities and the bridging of "intersecting practices" (p. 134) within the distinct sociocultural worlds (e.g., Engeström & Käyhkö, 2021) of music and language education.

The six continually evolving, developing, and expanding fields of actions were approached in diverse ways and combinations, also intertwined with each other, in every choir rehearsal (Figure 7; see also Appendix A). *Warm-ups* (the first field of action) aimed at "opening of the voice, body, and mind for singing and language use in creative ways, by playing with musical sounds and language through holistic expression" (Lehtinen-Schnabel, 2023, p. 482). *Collaborative improvisations* (the second field of action), highlighting mistake-is-a-gift mindset strived for encouraging the use "various ways and modes of communication" (p. 482), and "sensitive listening to others" (Lehtinen-Schnabel & Levänen, 2024, p. 5). *Singing songs in different genres and themes* (the third field of action) and beyond, which formed the major field within which all of the other action fields were engaged, aspired to supporting the dynamic and embodied "use of language through singing in collaboration with others in a safe and supportive environment" (Lehtinen-Schnabel, 2023, p. 482), while also focusing on the resemblances of music and language such as melody, rhythm, articulation/pronunciation, phrase/sentence, and cultural contents. Singing songs, including collaboratively improvised and composed songs, also enabled becoming familiar with sub-languages (e.g., spoken language and different dialects). *Creating new lyrics* (the fourth field of action) strived to support language production in oral, verbal, and written forms, encouraging the expression of one's own thoughts and experiences, the use of spoken utterances, and intercultural negotiation. *Immersing in the stumbling blocks of Finnish with "Funny Finnish language songs"* (the fifth field of action) made by the choir conductor and second-language teacher aspired to "memorizing and recalling the most challenging aspects of the Finnish language" (p. 483), as well as common idioms in Finnish, "with humorous lyrics and gripping melodies that…follow the rhythm of the spoken language" (p. 483). *Familiarizing with songs brought by the choir participants and translated into Finnish* (the sixth field of action) aimed to open up a dialogue between choir participants' languages, cultures and Finnish, "as well as between the musical and linguistic features of the songs from which the translations arise" (p. 483).

Figure 7

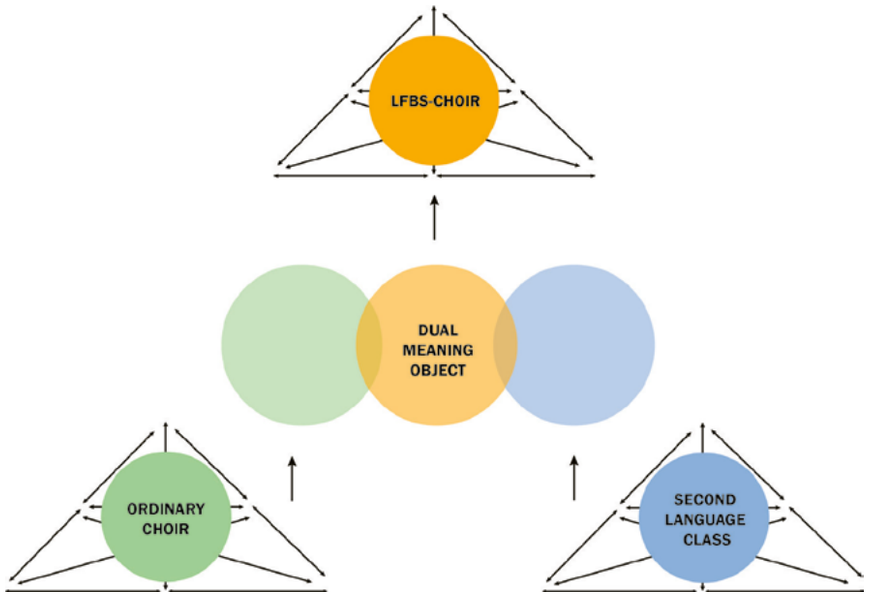
The Six Fields of Action as Constantly Developing Pedagogical Principles of LFBS Choir Practice



Second, I conceptualised the double meaning (the merging of music and second-language learning) in the choir practice (Figure 8) through the interacting activity systems (Engeström, 2001) of two institutionally established activity systems (ordinary choir activity and a second-language class). As the activity theory lens emphasises (Engeström, 1999), an object of an activity system is the force that integrates the system's different elements, pointing to the meaning of the activity (*raison d'être*). The double-meaning object becomes the driving force for the generation of an *integrated activity system*, which is no longer merely the sum of the two *interacting systems* with only a shared new object. Rather, the integrated activity system is a radically *new* activity system that merges music and second-language teaching and learning in reciprocal ways, and can no longer be separated into the earlier forms of individual activity systems and their components. In other words, the double meaning object requires extending theoretical thinking beyond the two interacting activity systems in order to capture the merging of the two systems.

Figure 8

The Double-Meaning Object of LFBS Choir Activity

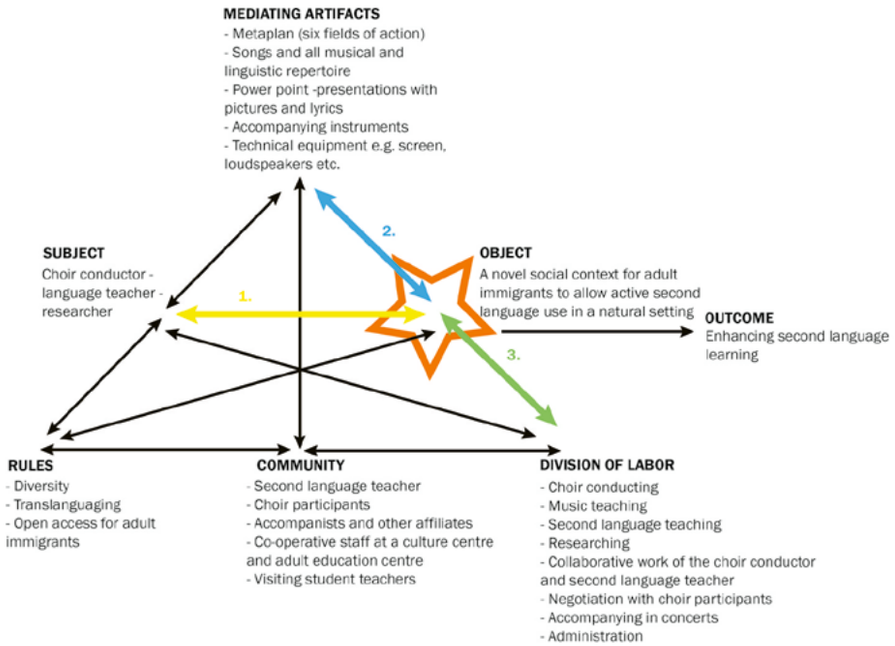


Note. The figure is from Lehtinen-Schnabel (2023, p. 483).

Third, I viewed LFBS activity as a new joint activity, in which I organised the different elements of the LFBS activity system "in relation to each other from the perspective of my triple role[38]" (Lehtinen-Schnabel, 2023, p. 484) as part of a broader social network (see Figure 9). The object of this single system manifested *a novel social context for second-language use in an authentic setting* (out-of-language-class context), enhancing overall opportunities for second-language learning as its outcome. According to Engeström (1999), an activity system demonstrates internal tensions between its elements (subject, object, mediating artifacts, division of labour, community and rules) as forces of "change and development" (Engeström & Miettinen, 1999, p. 9) in the activity. In the LFBS activity system, these tensions (coloured arrows, Figure 9) referred to "historically accumulating structural tensions" (Engeström, 2001, p. 137) manifesting a need for changes (Engeström, 1999). At the practical level, they pointed to local working environments (Engeström, 2005) and showed a need to expand norms and principles of teaching and learning music and second language due to the new needs of the diversifying society. These tensions also manifested a need for broadening professional tasks and responsibilities, and at the disciplinary level, for dismantling siloed ways in thinking and acting as well as hierarchies between disciplines.

Figure 9

Generating LFBS Choir Practice as an Activity System



Note. The figure is from Lehtinen-Schnabel (2023, p. 484).

38 choir conductor/music educator, researcher, and language teacher

Overall, adopting activity systems lenses (and the related notions of boundary object and boundary crossing) as a specific methodological tool for an elaborative process of theorising the LFBS choir practice enabled the articulation of change that the double meaning – the holistic merging of music and language learning – triggers not only for choir activity as a collective unit of actions, but also for music and language educational thinking and practice more broadly. The main contribution of the first sub-study is to communicate through the conceptualising of LFBS choir practice the need "to dismantle the still-prevalent dichotomous view of the musical versus non-musical ends of music and music education" (Lehtinen-Schnabel, 2023, p. 489; see also Westerlund et al., 2021b), and to provide an alternative theoretical approach for emerging practices. In other words, the conceptualisation emphasises the need to look beyond purely musical values, and to take a more holistic approach (see Westerlund, 2005, 2008) that embraces holistic experience[39] (Dewey, 1916) and can also acknowledge the wider systems stance of "the good of the whole" (Meadows, 2009, p. 184) beyond a disciplinary good. The study demonstrates that disrupting traditional binaries that uphold the fear of the instrumentalisation of music and music education may require crossing and blurring boundaries between disciplines and professions, hence expanding professional boundaries in music and music education (Westerlund & Gaunt, 2021). In practice, the study suggests moving beyond the existing norms and established principles of musical practices when addressing new societal needs that may require widening disciplinary understanding towards out-of-the-box perspectives, novel insights and the emergence of new hybrid musical practices.

Moreover, conceptualising the constantly developing pedagogical principles of the LFBS choir practice (the Six Fields of Action) helps communicate the embodied (holistic) approach to language learning and the understanding of language[40] in and through music and in a music educational context. Therefore, the first sub-study also contributes to articulating the relationship between music, musical activity, and embodied language learning – an aspect that has not been acknowledged in previous research connecting music and musical activities to language learning processes (see Jusslin et al., 2022) across different research fields. Furthermore, when elaborating the idea of boundary object (Star, 2010; Star & Griesemer, 1989) – through which the study conceptualised the constantly evolving pedagogical principles – the analysis also reveals that the LFBS choir activity as a whole could provide a boundary object for music and second-language learning (as distinct and established social systems) by facilitating reciprocal communication between these two systems in tackling the interconnected social challenges of Finnish society. Such boundary objects may pave the way for wider systems change while enabling transitions (e.g., Grin et al., 2010, Loorbach et al., 2017) in local practices (Escobar, 2022) by

39 Holistic experience here refers to the inseparability of different interests that create different meanings (Dewey, 1916, MW 9, p. 254).

40 Language is understood here as an action, a verb, not just an abstract 'thing' (e.g., Maturana & Varela, 1980).

shifting from stable disciplinary understandings towards more holistic engagement, and by illustrating the benefits of boundary objects.

6.2 Article 2: Language-aware choir practice for supporting spoken second-language use and production

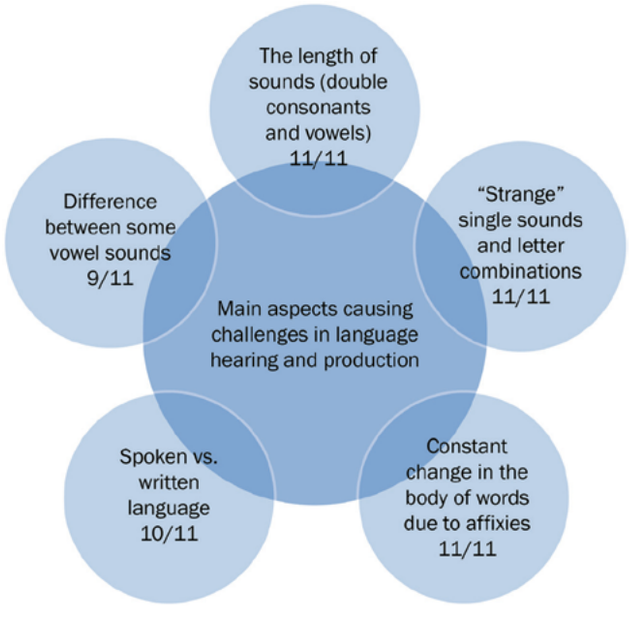
By addressing the question, 'What kind of challenges and changes in their Finnish language expression do choir participants with culturally and linguistically diverse backgrounds experience and demonstrate after singing in a language-aware choir?', the second sub-study focuses on providing evidence related to the potential benefits of integrating choir singing with second-language learning. The findings of this empirical mixed-methods study were divided into 1) difficulties in Finnish pronunciation, and 2) changes in phonological processing (hearing and discriminating speech sounds) and use of Finnish language after participating in a LFBS choir.

The identified difficulties in pronunciation (Figure 10), which both the experienced (interviews) and test-based (Phonology pre-test scores) findings confirmed, encompassed 1) sound lengths, 2) unfamiliar single sounds such as [æ], [h], [r], [y], and [ø], and 3) vowel discrimination such as [a-æ] and [o-ø]. These findings align with previous studies on difficulties in Finnish-as-a-second-language pronunciation among adult immigrants (e.g., Aho et al., 2016), also revealing the influences of individual differences and the first language of participants on second-language phonological processing (e.g., Aho et al., 2016; Derwing & Munro, 2015, Munro et al., 2015; Suzukida, 2021). The findings also stress the inseparable connection between second-language speech acquisition and auditory discrimination (see also Zheng et al., 2022). They further demonstrate, in line with earlier research on language production and phonetics (Chapter 2.3.3), that difficulties related to the length of consonant and vowel sounds, typical of Finnish as a quantity language (Vihanta, 1990), influences verbal and aural processing as well as the understanding of the meanings of words (e.g., Tiermas, 2008; Venkatagiri & Levis, 2007; Vihanta, 1990).

According to the interview material of this study, the difficulties in Finnish language also underline the participants' unfamiliarity with spoken Finnish language (see also Vihanta, 1990), which significantly differs from written Finnish (e.g., Lehtonen, 2015) and is typically not the focus of Finnish language classroom contexts (e.g., Chapter 2.3.3). Interviews (Figure 10) also referred, in line with earlier research, to challenges in the constant changes to the body of words (e.g., Karlsson, 1977, 1982) due to affixes, making Finnish words long and hard to hear and perceive.

Figure 10

Main Aspects Causing Challenges in Hearing and Producing Finnish Language among 11 Interviewees



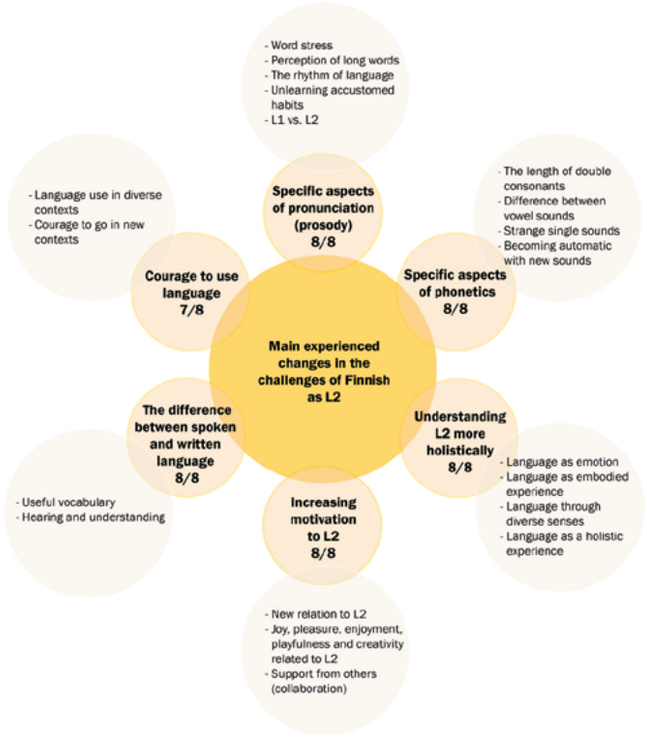
Note. The figure is from Lehtinen-Schnabel & Levänen (2024, p. 8).

The core findings of the second sub-study pertain to the improvements in phonological processing (hearing and discriminating speech sounds) and spoken language use after singing in a language-aware choir from 5 to 9 months, a phenomenon not previously explored in a multilingual choir context. Both the interviews and phonology tests showed that embodied (holistic) and active second-language use in an authentic (out-of-language-class) context of a language-aware choir could significantly decrease challenges in language production (pronunciation) and phonetic awareness (speech sound hearing and discrimination). Although the sample size in the Phonology post-test was small, the results aligned with the experiences of the interviewees and revealed a clear trend: "the scores in 12 out of 14 sound categories improved, nine of them statistically significantly, and eight of them with a large effect size. Importantly, the greatest improvements occurred in sound categories that were rated as the most difficult ones by the participants in the pre-interviews" (see Lehtinen-Schnabel & Levänen, 2024, p. 14). The interviews revealed that the spoken Finnish language, which is mostly learned through oracy, had become more approachable. Overall, they emphasised that the attitudes towards the Finnish language had become more positive, and that the participants' motivation for second-language learning and their courage and confidence to use Finnish in new contexts had increased (see Figure 11).

Importantly, these findings cannot be directly transferred to other contexts without careful consideration of the specific language-aware orientation in the choir, the characteristics of the language in question, and the cultural and contextual distinctions as well as needs and wishes of the participants, which were constantly acknowledged in and through the choir practice. Moreover, the improvements in Finnish-as-a-second-language skills should not be taken as direct "transfer effects" (e.g., Besson et al., 2011, 2018; Chobert et al., 2014; Gordon et al., 2018; Kang & Williamson, 2014; Zhang et al., 2023) of music to language, "since music and language were equally and reciprocally focused throughout the LFBS choir practice" (Lehtinen-Schnabel & Levänen,. 2024, p. 16) in which the tests were conducted.

Figure 11

Main Experienced Changes in the Challenges of Finnish-as-a-Second-Language Reported by the Eight Interviewees, Combining Middle- and Post-Interviews



Note. Both the main and subthemes are presented in the figure. The figure is from Lehtinen-Schnabel & Levänen (2024, p. 69).

The second sub-study contributes in different ways to the research on integrating music and second-language learning, particularly from the perspective of evidence-based empirical research,[41] including mixed methods research, a field in which earlier research had left various gaps (Jusslin et al., 2022, see Chapter 2). In addition, the second sub-study shows that prosodic features[42] that do not treat phonetics as an isolated component devoid of contextual integration (e.g., Derwing & Munro, 2009; Kissling, 2018; Ullakonoja & Dufva, 2016; Virkkunen & Toivola 2020; Jones, 1997) can be combined with musical expression in meaningful and comprehensive ways, also contributing to the scarce research on this field (e.g., Aho et al., 2016; Baker, 2011, 2014; Derwing & Munro, 2015; Virkkunen & Toivola, 2020). Above all, the second sub-study emphasises, by describing, testing, and analysing how integrating music and second-language learning in a multilingual choir for adult immigrants has a very specific character in terms of second-language learning: although the choir participants' second-language classroom experience (from beginner to advanced level) and their time living in Finland (from newcomers to individuals living in Finland for over 16 years) varied greatly, they all significantly improved their confidence and performance in second-language "sound hearing, pronunciation, spoken language, and communication" (Lehtinen-Schnabel & Levänen, 2024, p. 16). These aspects of language learning may even be more difficult to approach in traditional language classroom contexts. It should be noted that in the language-aware choir, all participants independent of their level of language and musical skills, contribute equally to ongoing co-construction of the practice, which is not the case in curriculum-driven language classes or in formal music education.

Furthermore, the analysis of the research material revealed how the process of translating linguistic needs and challenges into musical actions could transfer the shared joy, enjoyment, and enthusiasm of collaborative music-making (e.g., Bailey & Davidson, 2005; Davidson & Leske, 2020; Daykin et al., 2020; Judd & Pooley, 2014) to the engagements with language, and eventually to language learning, thus making the choir practice more meaningful for the choir participants. In other words, the holistic (embodied) engagement, not only with music but also with language, underscores the inseparability of the different interests and disciplines (holistic experience, Dewey, 1916, MW 9, p. 254) in and through a choir practice. From the activity theory point of view, the second sub-study highlights the experienced outcome of the ongoing process of collaboration among the choir participants, the choir conductor, and the second-language teacher in the emergence of the double-meaning object of the language-aware (LFBS) choir activity.

41 Evidence-based empirical research here refers to connecting the findings with the actual practices.

42 A phonetic unit greater than a single sound, such as the rhythm of a language, word, or sentence, stress the overall fluency in a language (e.g., Ullakonoja & Dufva, 2016).

6.3 Article 3: Co-constructed, boundary-crossing choir actions triggering various transformative processes at individual and disciplinary levels

By posing the question 'What meanings do choir participants, including the Finnish-as-a-second-language teacher, give to their participation in the language-aware choir?', the third narratively-oriented sub-study focuses on choir community members' experiences of language-aware choir and its co-constructed practice. The five stories (Polkinghorne, 1995), composed through purposeful "second stage sampling" (Barbour 2022, p. 3), depicted meanings that move far beyond the mere teaching and learning of competencies, comprising various individual processes of transformation in 1) self-image as a second-language user; 2) musical identity; 3) the integration process; 4) a sense of social and cultural participation; and 5) understanding second-language learning. In order to emphasize that researchers can "enrich their research by mobilizing their pre-understanding more actively and systematically" (Alvesson & Sandberg, 2022, p. 396), this study also illustrated my own transformative process, which language-awareness in a choir practice had triggered in me as a choir conductor-researcher, in relation to my earlier professional thinking about music education. Based on the transformative stories of the individual choir participants and second-language teacher, together with my own choir conductor's reflections, as well as the "theoretical meeting" (Pedersen & Bang, 2016) between *activity theory* (Engeström, 1987, 1999, 2001) and Greene's (1978, 1995, 2001) concepts of *wide-awakeness* and *social imagination*, the third article constructed an emerging theorisation (Figure 12) of a transdisciplinary choir practice.

The concepts of wide-awakeness and its enlarged form of social imagination (Greene, 1978, 1995, 2001) highlight the personal experiences (and various meanings embedded within these experiences) of joining language-aware choirs. They also emphasise the subjective perspective, the omission of which activity theory has been criticized (e.g., Larkin, 2019; Murphy, 2022). Greene's concepts enabled me to articulate an arts (music) education context as a fundamentally different environment for approaching second-language use and learning than, for instance, a language classroom setting. In other words, a language-aware choir, which merges language use and learning holistically through meaningful musical actions, allows what, according to Greene (2001), are "experiences evoked what you have encountered in the domains of art" (p. 84), and that can feed imagination and open up new "possibilities of meaning, of vision, of alternative realities" (Greene, 1995, p. 75).

Greene's concept of wide-awakeness (Greene, 1978, 1995, 2001) relates to heightened consciousness through the evolving process of expanding one's knowledge and knowing towards the new, unfamiliar, and 'as if' perspectives that reach beyond taken-for-granted

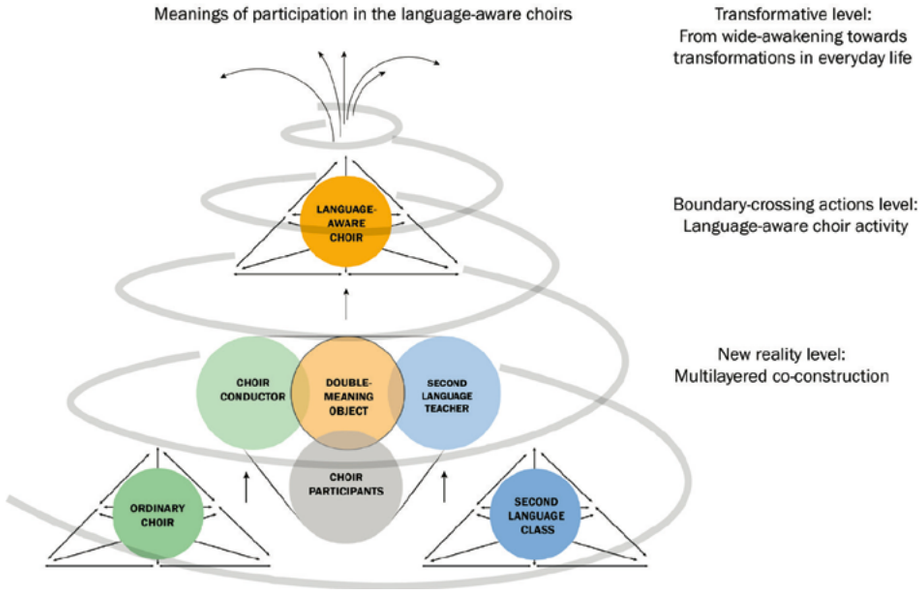
and habitual thinking. This process is typically triggered by "moments of awakening" (Greene, 1995, p. 6), also called "shocking moments" (p. 29), where the ""why" arises and everything begins in that weariness tinged with amazement" (p. 6). To clarify her thinking, Greene used the metaphor of a poem by Wallace Stevens (1954), in which a man with a blue guitar calls upon the audience's imaginative capacity "to look at things as if they could be otherwise" (Greene, 1995, p. 19), while responding to their expectations to play in a familiar way by saying: "the blue guitar surprises you" (Stevens, 1954, p. 165). Although for Greene (1995, 2001) encounters with the arts, in particular, can initiate awakening moments, the original concept of wide-awakeness by sociologist Alfred Schütz (1962), on which Greene grounds her thinking, leaves the triggering enactment open to occur in any context, denoting wide-awakeness as "an alternate mode of existence that transcends the passive attitude so easily assumed in relation to one's surroundings" (Williams, 2017, p. 3).

Greene (1995) also enlarged her interpretation of wide-awakeness by underscoring the role of imagination in reinforcing the sense of empathy "to invent visions of what should be and might be in our deficient society" (p. 5). Social imagination, to which social empathy also refers, allows us to envision ourselves in someone else's position, and to view life from their perspective (see also Scarlato, 2022); in other words, becoming "a friend of someone else's mind" (Greene, 1995, p. 38). Taken together, through the concepts of wide-awakeness and social imagination, Greene conveyed the process of breaking free from "the limits of the conventional and the taken for granted" (p. 109) to engage with what lies "beyond where we are" (p. 110), in pursuit of a better state of things "for the world we share" (p. 1). In theoretical elaboration of the third sub-study, these concepts enabled me not only to reflect on the ongoing transformation in my own professional thinking and actions, but also to articulate various personal awakenings "as a kind of metaphor" (Greene, 2001, p. 177) for embarking on new beginnings related to the transformative processes in the lives of the choir participants and the participating second-language teacher.

The emerging theorisation of the third sub-study suggests a new understanding of transdisciplinarity, particularly the transformative processes which it triggers, related to music education research and practice. It addresses a co-evolving process with three interrelated levels (Figure 12), in which the first level, the new reality level, highlights a multilayered co-construction of the practice that breaks free from, and is not predetermined by, well-established principles, norms, or habitual actions associated with disciplinary traditions. This co-construction also fosters a creative mindset and openness to experimentation when merging different disciplines in novel ways. In language-aware choirs, the choir reality is collaboratively re-created based on the intercultural, transprofessional, and transdisciplinary co-construction, drawing from the emerging real-life needs and experiences of adult immigrant choir participants (Sub-studies 1 & 2). In this way, the new reality level lays the ground for boundary-crossing actions (see the Six Fields of Action, Appendix A), embedded in a language-aware choir activity. Together, the two levels generate transformative potential (the transformative level in Figure 12) not only for the choir practice and the personal, social, and professional lives of the choir community members, but also for broadening the opportunities of socially engaged and responsible music education. This transformative level emerged through the analysis of the research material used to compose the individual narratives, and especially through reflecting on my own process towards becoming a language-aware choir conductor, hence expanding the earlier activity theory elaboration of the research project towards the diversity of individual experiences of collective musical actions within an integrated activity system.

Figure 12

Emerging Theorisation of a Transdisciplinary Choir Practice: From a New Reality Towards Various Individual Transformations



Note. The figure is adapted from Lehtinen-Schnabel (2025).

Overall, the emerging theorisation of a language-aware choir practice, presented in the third sub-study, articulates the transformative potential of transdisciplinary and transprofessional practices, supporting further engagements with the complex transdisciplinarity in music education research. The third sub-study, and the theorisation

thereof, also encourages the development of new transdisciplinary approaches to music education that reflect the complex interconnected challenges "that affect society and individuals" (Rezaei, 2022, p. 6).

6.4 Article 4: Professional repositioning as building bridges to the future

By answering the question 'What is the potential of transdisciplinary professional repositioning to contribute to expanding a music educator's professional horizons?', the fourth sub-study contributes to the emerging field of expanding professionalism in music and music education (Westerlund & Gaunt, 2021; Barrett & Westerlund, 2024). The study is built upon two key arguments. First, referring to the idea of artistic autonomy and professional adiaphora (Bauman & Donskis, 2013), it is stated "that for music education to fully utilise its ethico-political potential there is a need to 'rethink the trends of the past' (p. 211) and strengthen the 'transition from the art-for-art's-sake assumptions' (Gablik, 1991, p. 7) towards a better understanding of how the complex array of issues around (un)sustainability may also permeate music education" (Westerlund et al., 2026, p. 125). Second, the study assumes that "music education could play a central role in transdisciplinary approaches when seeking ways out of 'unsustainability', since transitions towards sustainability increasingly call for complex issues and problem-generated transdisciplinarity" (pp. 124-125, see also e.g. Kagan, 2014; Kueffer & Wiedmer, 2022; Schlüter et al., 2021).

To justify the argumentation, the study demonstrates how the *l'art pour l'art* autonomy discourse has steered music professionals' attention away from social, political, religious, and other out-of-musical-world issues and focused on the aesthetic qualities of music (e.g., Reimer, 1989), and hence strengthened the distinction between musical and non-musical values in music education (Westerlund, 2002, 2003, 2008). It also demonstrates how the emphasis on purely musical values has reinforced "the insulation and separatism of music and music education practices" (Westerlund et al., 2026, p. 127) from the rest of society, including a disregard for "how music education can reproduce unwanted societal structures" (p. 127, see also e.g., Väkevä et al., 2017; Barrett & Westerlund, 2024). The study suggests that the adherence to intrinsic musical values may have hindered music professionals from recognising meaningful possibilities for new practices with interconnected divergent goals in times of crises.

Through the lenses of activity theory (Engeström 1987, 1999, 2001), the language-aware choir activity was approached as a co-created activity system that holistically integrates the activity systems of an ordinary choir and a second-language class (see also the first sub-study). This view was further expanded by also conceptualising the language-aware choir practice as an *invitational practice* (Purkey & Novak, 1993; Purkey & Stanley, 1991; Purkey & Aspy, 2003), in which reciprocal respect, trust, optimism, and a purposeful commitment to democratic hope and cooperation lie at its heart. Taken together, a double-focused invitational choir practice diversely challenges and disrupts the historical, but yet still prevalent, ideals of 'arts for art's sake ideology' related to intrinsic musical values, established musical practices, and professional adiaphora. The language-aware choir practice thus calls for "a radical reframing" (Westerlund et al., 2026, p. 129) of professional mental models.

To illustrate the participant view, the secondary analysis of the interview material combined activity theory with affordance theory (see Pedersen & Bang, 2016) to interpret the interview data from choir community members, including different meanings that joining the language-aware choir as a co-created activity system afforded them. These multilevel meanings were not simply about musical experiences and knowledge, but uncovered active and meaningful engagement within societal ecosystems, connecting individuals' past, present, and future lives, while at the same time aligning with national and global policies (Kagan, 2014).

In summary, the fourth sub-study synthetises the theoretical dimensions of the previously conducted analyses through the philosophical framework of music education, arguing for a need for a transdisciplinary transition away from the established but narrow disciplinary-focused "understanding of professional expertise in music education" (Westerlund et al., 2026, p. 133). The study promotes the future potential of music education as part of transdisciplinary research and practices for seeking ways out of unsustainability, which requires active involvement from all areas of society to build "bridges to the future" (Sugrue & Solbrekke, 2011, p. 194) within rapidly changing ecosystems. Accordingly, the study highlights the need to view musical and music education praxis – cf. Elliott (1995) – as a process of change and transformation in which the social designs of music and music education are intertwined with broader societal changes and future visions. The study thus emphasises that the praxis in music education cannot simply take the principles of past musical traditions as its guideline, but that the past, present, and future must be constantly critically reflected on in relation to each other. In a similar vein, thinking with activity systems (Engeström, 1999, 2001), on which this dissertation builds, highlights such continuous negotiation between the past cycles (historicity) of an activity system and its present stage – revealing contradictions in its elements and the consequent need for change – and its orientation towards the future (e.g., creative externalisation process, e.g., Engström, 1999) as an ongoing process.

7 Discussion

This chapter reflects on the whole research project on a broader theoretical, conceptual, and reflexive level. The aim is to critically look at the findings and the analytic choices provided by the individual sub-studies, as well as to discuss the project as a whole within the second-order cybernetic perspective of a *systems practitioner* (Ison, 2017). More specifically, Chapter 7.1 revisits the main contributions of the sub-study findings according to the research questions. Chapter 7.2 discusses the findings in relation to the claimed transfer effects. Chapter 7.3 repositions language-aware choir practice as a form of *praxis* inclined towards new fusions of praxis. In Chapter 7.4, the main part of this discussion, the whole research project will be reflected on by taking up the reflexive lens of a systems practitioner (Ison, 2017) and exploring the concept of *systems praxis*. Chapter 7.5 examines the overall (de)limitations and challenges of this research project, and Chapter 7.6 strives to envision future research ideas.

7.1 Transdisciplinary transitions towards systems change in music education

> *Does art…contribute, as art, to the solution of worldly problems (by, for example, affording therapeutic release, clarifying emotions, raising moral or political consciousness, and so on)? and Does art have to be useful in this way in order to be fully valuable as art? Those who incline toward the instrumentalist pole of the dialectic (which, like any dialectic, projects a spectrum of more nuanced positions in practice) tend traditionally to answer yes to both questions. Those who incline toward autonomism tend to answer no, emphasizing that the kind of experience that good art affords–aesthetic experience–is valuable only for its own sake and prized by all suitably sensitized people (what this might mean is a dialectic in itself) for that reason. (Haskins, 2021, p. 67)*

In this explorative doctoral research project, both of the above questions by Haskins are answered with a Yes. It is also suggested that transdisciplinarity, emphasising the relational and holistic merging of different co-existing interests, including their transformations, can be seen as a way to move beyond binary distinctions related to the *art for art's sake* philosophy and the specific aesthetic experience[43] it advocates (see e.g., Northrop, 1968).

43 This kind of aesthetic experience emphasises art's unique capacity to convey "immediate experience" (Northrop, 1968, p. 8) through materials such as sounds, colours, flavours, and odours. It has been used as "a reasonable and defensible dictum within the field of art" (Broudy, 1968, p. 13), justifying the integrity of the arts. A more holistic approach, however, "denies the existence of a distinctive type of experience to be called aesthetic" (p. 10); see also (e.g., Väkevä 2004; Westerlund, 2003, 2012), while irreducibly including it within holistic experience (e.g., Dewey, 1916, 1938).

As noted in the introduction (Chapter 1) of this dissertation, I have aspired to expand, as well as generate, a new understanding of transdisciplinary and systems-aware approaches to music education in theory and practice. On a broader scale, this objective is intended to contribute to reconsidering established musical practice and forms of music education in the context of complex and interconnected challenges related to sustainability. The overall research questions have focused on how music education can support second-language learning in a multilingual choir context, and on what new insights such a context (a language-aware choir) can generate for music educational thinking, actions, and beyond. The overarching aims and research questions that were approached through the four sub-studies, and reported in four peer-reviewed articles, engaged with diverse perspectives in the methodological landscape of multimethod and mixed-methods research (MMMR) (Hesse-Biber & Johnson, 2015).

Throughout this article-based dissertation, I have explored how second-language learning in a language-aware choir (a music educational context) is reciprocally and non-hierarchically merged within the choir practice, and what it means for the participating adults, the second-language teacher, and me as a practitioner researcher. In other words, this merging has highlighted the integration of two activity systems (an ordinary choir and a second-language class) with a double-meaning object (Article 1). The double-meaning object in the theorisation has pointed to transdisciplinarity – a high-level integration between the disciplines (e.g., Hirsch Hadorn et al., 2008; Leavy, 2011; Rezaei, 2022). Thus, the emerging potentials and identified challenges of music education in supporting second-language learning are interwoven with *the readiness of music education as a discipline* to deal with such transdisciplinarity that is complex and ambiguous, as the four sub-studies (Articles 1-4) also reveal.

In general, the *systems-aware approach* in this dissertation, at the level of activity system, has helped communicate transdisciplinarity within the local and situated choir practice in relation "to larger social and structural issues" (p. 62, Westerlund et al., 2025). Stemming from the everyday social needs and desires of adult immigrants, the double meaning in such a choir extends well beyond the neoliberal logic of reducing the purpose of music education as a means to advance performance in other academic subjects (pp. 70-71), or reinforcing the neuromyths concerning the all-encompassing benefits of music and music education (Odendaal et al., 2019; Westerlund & Odendaal, 2025; see also Chapter 2.3.1).

That being said, the findings demonstrate that a language-aware choir can provide an out-of-language-class (e.g., Hua & Jankowicz-Pytel, 2020; Lilja et al., 2020), inclusive, and open-access social context where dynamic second-language use and learning can be approached in holistic (embodied) ways (e.g., Jusslin et al, 2022; Bradley & Harvey, 2019; Pöyhönen & Paulasto, 2020) through co-created collective choir actions (Articles 1-4). According to the findings, this new context, where language production

(e.g., pronunciation) can be practiced together with others in a safe and supportive environment, has the potential to improve the auditory processing of speech sounds and to encourage oral language expression (production), the acquisition of spoken (non-formal) language, and the promotion of holistic communication (Article 2). These aspects are typically less emphasised – and may even be more difficult to approach – in ordinary language classroom contexts. This research project thus responds to the research gaps in literature associated with teaching and learning second-language production (e.g., pronunciation) in authentic learning contexts (e.g., Aho et al., 2016; Baker, 2011, 2014; Derwing & Munro, 2015), including the phonetics of Finnish-as-a-second-language (e.g., Virkkunen & Toivola, 2020). In a language-aware choir, both the difficult speech sounds and phonemes, as well as larger phonetic entities, can be meaningfully integrated, practiced, and repeated through collaborative musical actions while singing.

Moreover, the findings underscore that the potential of a language-aware choir to support second-language learning extends far beyond technical rationality and explicit 'technical skills' of language learning (e.g., Anttila, 2013, 2015; Jusslin et al., 2024a). They address positive changes in the courage (e.g., willingness to take risks and not being afraid of making mistakes) to use the language within novel social contexts, and in the attitude towards the second language and its learning, intertwined with the complex process of identity transformation as well (Articles 2–3). The findings refer to broadening opportunities for cultural (including arts), social, and societal participation and offering novel resources for "active citizenship" (Peters, 2016) and "communal forms of happiness" (Escobar, 2022, p. n.p.) (Articles 1–3). These findings are integrated into the opportunities that collaborative music-making in an inclusive choir context (e.g., Juan-Morera et al., 2024) can provide for supporting wellbeing and health (e.g., by decreasing stress and anxiety), enabling new social bonds (e.g., Bloska et al., 2025; Davidson & Leske, 2020; Daykin et al., 2020; Dingle et al., 2017; Fancourt & Perkins, 2018; Gabrielsson, 2011; Heydon et al., 2020; Launay & Pearce, 2020; Siljamäki, 2021a, 2021b; Warran et al., 2019), fostering joy, optimism, and motivation for learning (e.g., Cores-Bilbao et al., 2019; Fonseca-Mora & Machancoses, 2016), and enhancing cultural and intercultural awareness (Ilari et al., 2013; Joseph & Trinick, 2018; Marsh, 2012, 2017). Highlighting meaningful musical experiences in relation to language learning, this dissertation contributes to the growing body of research on arts-integrated language teaching and learning (e.g., Jusslin et al., 2024b; Paulasto & Pöyhönen, 2020) from the perspective of music, while also expanding the idea of merely music-integration towards practices that can transform both integrating disciplines, music and language education. In this research area, this study also contributes to the limited body of research that concerns adult education (Paulasto & Pöyhönen, 2020).

The challenges of music education in supporting second-language learning are related to its *disciplinary boundaries*, which transdisciplinary thinking and actions in a language-aware choir practice diversely disrupt. At the professional level, the findings show that the boundary concerns the deeply learned mental models of *music professionals* (Article 3, see also Laes et al., 2025; Väkevä et al., 2017; Westerlund et al., 2021b; Westerlund et al., 2025), as my own ongoing process of becoming a language-aware choir conductor also exemplifies. These mental models are related, for instance, to upholding the division of intrinsic (musical) and extrinsic (instrumental) values of music and music education (Reimer, 2009; Article 4), which reinforce other deeply ingrained dichotomies, such as the musical versus non-musical ends of musical practice (Article 1). Maintaining such distinctions in an unreflected manner, however, does not contribute to the emergence of novel practices integrating diverse ideas and insights, emerging needs and interests, and 'out-of-the-box' perspectives.

Seeking new (hybrid) practices is a marginal activity in music education, which relies on existing musical practices and traditions (Article 4). The tendency to stay in 'what is' has been emphasised in prior praxial understanding of music education. Thus, the boundary at the practical level that language-aware choir practice challenges pertains to the habitual actions, accustomed norms, and well-established principles associated with musical practices, and also refers to those related to second-language learning in general (Articles 1 & 3). In language-aware choirs, the choir reality is constantly re-created anew through continuous intercultural, transdisciplinary, and transprofessional collaboration (Article 3) to enable boundary-crossing choir actions (see the Six Fields of Action, Appendix A) that act as a boundary object (Akkerman & Bakker, 2011; Star, 2010; Star & Griesemer, 1989) between the disciplines of music and language education. Elaborating further on the idea of boundary-crossing choir actions, the Six Fields of Action could even be seen as leverage points "where a small shift in one thing can produce big changes in everything" (p. 1, Meadows, 1999). Thus, a change in choir actions in relation to transdisciplinarity may contribute to broader systems change in music education towards more holistic engagement as part of sustainability.

At the broader systems level, the boundary that the findings of the sub-studies raise engages with the broader framework of music education and its relationship to, and responsibilities within, social and societal changes of contemporary times. Through the merging of the disciplines as articulated by a co-constructed, double-focused activity system (Articles 1 & 4), a language-aware choir reflects changes in social conditions at a local and situated level, thus engaging with *systems thinking* as a framework of crossing, dismantling, and even denying "traditional disciplinary lines" (Meadows, 2009, p. 183) when making "sense of our world and its complex interconnections" (Westerlund et al., 2025, p. 57).

Taken together, the findings show that the potentials and challenges of music education in supporting second-language learning – more broadly reflecting the motivation of music education to deal with transdisciplinarity – diversely problematise the disciplinary

boundaries of established professional practices. Moving beyond these boundaries, as this dissertation suggests, engages with various processes of change within the discipline of music education. In line with transition research (e.g., Escobar, 2022; Köhler et al., 2019; Lachman, 2013; Loorbach et al., 2017, Zolfagharian et al., 2019), these smaller and larger changes indicate a transition from stable established disciplinary boundaries towards the recognition of transdisciplinary thinking and actions in professional practices (Article 4). As this kind of *transdisciplinary transition* is, in this case, motivated by rapid changes in the population, it is therefore also linked to a wider transition towards sustainability (e.g., Laes et al., 2025; Odendaal & Treacy, 2026; Westerlund et al., 2025). It arises from new emerging social and societal needs and challenges emphasising "the profound interdependence of everything that exists" (Escobar, 2022, p. n.p.), thus also requiring music professionals to reconsider and reframe their practices in relation to the "bigger picture" (Stroh, 2015, p. 43).

This kind of horizontal thinking (see also Lerman, 2011) resonates with the emergence of a language-aware choir practice, building on the new social needs of its adult immigrant participants. In a similar vein, the transdisciplinary transition encourages music professionals to use their "imagination, craft-skills, and systems thinking beyond known world" (Westerlund et al., 2025, p. 60) to seek out the co-development of novel practices that can co-evolve as part of initiatives addressing socially sustainable collective futures (UNESCO, 2021). At the same time, such a transdisciplinary transition challenges music professionals and researchers to reflexively and critically rethink how the rationale for the integrity of music and music education can take on new forms, and to avoid reinforcing any problematic agendas, such as neoliberal advocacy or careless neuromyths, as referred to in the beginning of this chapter.

7.2 Critical approach to the claimed transfer effect

As shown in Chapter 2, there is a wide and constantly growing scholarly literature in various fields, such as neurosciences, cognitive science, cognitive psychology, and linguistics, that demonstrates the potential of musical training, expertise, and aptitude for supporting cognitive processes related to language acquisition and learning (e.g., Dawson 2011; Bildelman et al., 2014; Benz et al., 2016; Dittinger et al., 2018; François et al., 2013; Gordon et al., 2018; Jäncke, 2012; Kempe et al., 2015; Patel, 2008, 2011; Peretz et al., 2015; Schön & Francois, 2011; Slevc & at., 2009; for a more critical review see Trofimovich et al., 2015; Zheng & al., 2022). These studies, being mostly conducted in experimental conditions, also refer directly or indirectly to the *transfer effect* (e.g., Besson et al., 2011, 2018), whereby musical skills (e.g., perception of rhythm and pitch) are considered – or at least predicted to be – transferable to different language learning skills, for instance as related to auditory processes, vocabulary learning, reading, and speaking (e.g., Chobert et al., 2014; Kang & Williamson, 2014; Roncaglia-Denissen et al., 2016, Tierney & Kraus, 2014). To justify the transfer effect, Besson et al. (2018) highlight that language processing does not operate independently, but in interaction with other cognitive abilities (e.g., emotions, attention, and memory, see also Fodor, 2000), and is thus influenced by musical experiences and training as well. However, Ludke (2020) notes in the context of language teaching and learning that "learning is an inherently active and dynamic process that always involves the transfer of prior learning" (p. 561, see also Bransford et al., 2000).

Through the empirical findings of this research project, the potential of a language-aware choir to support second-language learning should not be associated with the claimed transfer effect (Odendaal et al., 2019, see also Westerlund & Odendaal, 2025) from music to language learning, or vice versa, as both music and language are focused on and practiced at the same time (the Six Fields of Action, Appendix A), being holistically interwoven with each other. As noted previously, approaching music and language learning in non-hierarchical and reciprocal ways[44] highlights the transformation of both disciplines (music and language education) towards new paths, thus moving beyond traditional disciplinary thinking (Article 3). Hence, a transdisciplinary orientation to music and language learning differs significantly from using music only as a subservient or subordinate factor (Bresler, 1995; Sanz-Camarero et al., 2023), as underlined in studies conducted in second and foreign language classroom contexts (e.g., Alisaari, 2016; Busse et al., 2021; Coyle & Gómez Gracia, 2014; Good & Ludke, 2020; Ludke, 2010, 2018, 2020; Ludke et al., 2014, Schön et al., 2008; see also reviews Engh, 2013; Davis, 2017).

Language-aware choir practice encompasses singing a wide range of songs across and beyond different genres and sub-languages, which enables various approaches to entanglements of both music and language (Articles 1-3). Diverse songs that are always sung without sheet music also acknowledge the wishes of the choir participants, who also bring songs in their different first languages, which are translated into and sung in Finnish as well. The songs, which are sung both in unison and in parts (two- to four-part harmony), are not, as is often the case in studies drawing on short-term interventions, merely simple songs "with very simple melodies" (e.g., Busse et al., 2021, p. 9; Tamminen et al., 2017). In a language-aware choir, songs are repeated over time from diverse perspectives in line with musical repetition (Article 1); they are also collaboratively improvised, composed, and, in particular, constantly arranged to make them more approachable as well as responsive to the linguistic and musical needs and arising ideas of the adult choir community members, including ongoing transprofessional collaboration with the second-language teacher. This practice-focused research project thus responds

44 Through language, music is simultaneously focused on in multiple ways: the sense of rhythm, in relation to word rhythm; the perception of melody, with the help of syllable-per-tone singing (as typical in songs); musical phrasing as related to sentence structure; and musical expression through interpretations of song lyrics, among other ways.

to the need for more research on the use and usefulness of songs and singing related to language learning (e.g., Alisaari, 2016, Busse et al., 2021), acknowledging the various opportunities that a music education environment (in this case a choir) can provide in this regard. The dissertation also responds to the gap in the scarcity of longitudinal research on the versatile use of songs and approaches to singing and their reciprocal relationship with language learning processes, reconsidering how singing can be integrated into language learning as a transformative practice that co-evolves with the emerging linguistic needs, desires, and experiences of the participants. Overall, this dissertation contributes to the scarce research on choir singing and second-language learning, particularly from the perspective of adult multilingual and intercultural choirs.

As discussed already, the language approach in a language-aware choir highlights its holistic nature,[45] harnessing all bodily faculties in line with its embodied language learning (Jusslin et al., 2022). This kind of approach differs considerably from the cognitively-oriented approaches that are still quite dominant in language classroom contexts, although – based on the growing number of empirical studies on embodied approaches (Jusslin et al., 2022) – change towards more holistic approaches in various contexts of language learning have begun to take root (see also Chapter 2.1). In addition, although embodiment is always engaged with musical activities (Juntunen, 2023), embodied learning, including its theoretical framework, is barely articulated in studies combining music with processes of language learning in different educational contexts (e.g., Bolduc, 2009; Degé & Schwarzer, 2011; Gaboury et al., 2020; Ludke, 2010, 2020; Ludke et al., 2014; McCormack & Klopper, 2016; Moritz et al., 2013), in contrast to many other art forms such as dance, theatre, and visual arts (Cannon, 2017; Hanks & Eckstein, 2019; Haught & McCafferty, 2008; Jusslin et al., 2024a; Jusslin & Höglund, 2020; Korpinen & Anttila, 2022; Makopoulou et al., 2021; Rothwell, 2011; Sharma et al., 2023).

This dissertation has brought into focus – when integrating collaborative musical and linguistic actions – embodiment and embodied learning, which have been shown in various ways to motivate and provide novel insights into the processes of language learning and teaching (in the context of language education, see, e.g., Andrä et al., 2020; Cannon, 2017; Hanks & Eckstein, 2019; Haught & McCafferty, 2008; Jusslin et al., 2024a; Korpinen & Anttila, 2022; Nguyen, 2016; Rothwell, 2011; Scally, 2019; Sharma et al., 2023; Sila & Lenard, 2020; Smotrova, 2017; Suñer & Roche, 2019). Moreover, this dissertation suggests that embodied approach and understanding (e.g., Lakoff & Johnson, 1999; Maturana & Varela, 1980), emphasising the interconnectedness and relationality from holistic experience (e.g., Dewey, 1916, 1938) to a responsible relationship with the world (e.g., Salonen, 2015), should also be extended to broader concerns, including the policy and systems levels.

In the context of music education, a language-aware choir is best illustrated through the lenses of a socially-engaged, inclusive community choir. This special choir context stresses open-access participation associated with community choirs (e.g., Bloska et al., 2025, Dore et al., 2010; Higgins 2007; 2012), in which the specific needs and interests of choir community members can be addressed as well (e.g., Bowden et al., 2019; Hilder, 2023; Hofman, 2020; Quigley & MacDonald, 2022; Reitsamer, 2015; Rickwood, 2014). The inclusive approach in language-aware choirs is, however, not merely related to its open-access and attention to specific needs, but also to the diversity and heterogeneity of the choir community (e.g., age, cultural, linguistic, and educational backgrounds, and the multiplicity of musical or second-language experiences), as reflected in and through the emerging choir practice. As Juan-Morera et al. (2023b) note, inclusive practices, broadly conceived, mirror change in existing learning environments and education systems. This dissertation contributes to expanding the theoretical and practical understanding of inclusive choir through the lens of a language-aware choir and its reconfigured, transdisciplinary choir practice, where the societally important purposes surrounding the practice are interwoven. In this regard, this research also responds to the research gap (Juan-Morera et al., 2023b) concerning inclusive practices, particularly in non-formal environments.

In summary, emphasising the specific nature and characteristics of a language-aware choir context and its new co-evolving, transdisciplinary practice – which radically differs from established and habitual, disciplinary-oriented choir practices, as well as approaches to second-language learning in language classroom contexts – I have aimed to avoid associating the empirical results of this research project with any straightforward transfer from singing-in-a-choir to second-language learning. In other words, the findings cannot be uncritically transferred to other contexts without careful attention to the characteristics of the practice, the language, cultural and contextual distinctions, as well as the specific needs and individual differences of the participants that continuously shape the practice (Aho et al., 2016; Derwing & Munro, 2015; Ullakonoja & Dufva, 2016). The empirical findings of this research also do not support the neuromyths (see Chapter 2.3.1) that advocate for music's and music education's wide-ranging positive effects on language learning and wellbeing through "oversimplifications and over-generalisations of research findings" (p. 4, Odendaal et al., 2019). Such neuromyths easily emerge when research results are communicated without care and the limitations related to research design, contextual boundaries, and research participants are not clearly articulated. In addition, illustrating how language is kept in focus in and through the language-aware choir practice (Articles 1–3) this study contributes to evidence-based empirical research on second-language learning, as underscored by previous studies in phonetics, psychology, and linguistics (e.g., Aho et al., 2016; Baker, 2011, 2014; Derwing & Munro, 2015; Virkkunen & Toivola, 2020).

45 Holistic nature here also refers to holistic experience (Dewey, 1916, 1938; Haskins, 2021; Westerlund, 2003), also including aesthetic experience as associated with encounters with the arts (e.g., Greene, 1995, 2001).

7.3 From language-aware choir practice towards new fusions of praxis

The findings and contributions of the four sub-studies can also be illuminated through the lens of *praxis* (e.g., Kemmis and Smith, 2008; Mahon et al., 2019, 2020). As discussed previously, the first sub-study (Article 1) emphasises the significance of dismantling and moving beyond the dichotomy of musical versus non-musical ends of musical practices (see also Westerlund et al., 2021b) in order to contribute to the boundary-crossing hybrid practices that can reflect contemporary social situations, including the theorisation of such practices. The feared instrumentalisation of music versus its *raison d'être* for purely musical purposes has also long justified "what we do – and why we do not do other things" (Westerlund & Odendaal, 2025, p. 26) when upholding the status quo of the existing musical practices. In scholarly literature concerning, for instance, education and professionalism, boundary-crossing and alternative practices focusing on "matters of moral, social, and political importance for contemporary society" (Mahon et al., 2020, p. 17) have been looked at through the lens of a praxis (e.g., Kemmis, 2012; Sugrue & Solbrekke, 2011; Westerlund & Partti, 2018; Mahon et al., 2020). In the terms of Westerlund and Odendaal (2025), such praxis in the context of music education can also be called a "critical practice" (p. 27). Moving beyond the known and purely music educational world, boundary-crossing choir actions in language-aware choirs thus pursue "morally-politically informed and oriented, reflective, agentic, context-specific, and transformative…working towards positive change" (Mahon et al., 2020, p. 17). Such choir actions also reflect the "transformation of the taken-for-granted discourses/ideologies, practices, structures, and relationships that shape and characterise educational practices" (Mahon et al, 2019, p. 467), in line with *critical praxis* (e.g., McLaren, 2008).

As the second sub-study (Article 2) demonstrates, integrating second-language learning with choir practice acknowledges various challenges in the choir participants' everyday lives that differently shape their participation and inclusion in Finnish society. In other words, their new social needs act as a moral imperative that has been taken into account in "the broadest view they can of what is best to do" (Kemmis & Smith, 2008, p. 4) in order to make the choir practice more meaningful for its participants. Being originally rooted in Aristotle's view (2011, 1140b1-6) on *phronesis*,[46] the concept of praxis is related to action that takes into account the consequences of one's actions in terms of "living a virtuous life through choices and action based on judgements about what is wise and 'right' in everyday dilemmas and situations" (Mahon, et al., 2019, p. 466). In educational contexts, according to Kemmis and Smith (2008), such praxis highlights people's doings "when they take into account all the circumstances and exigencies that confront them in a particular moment" (Kemmis and Smith, 2008, p. 4, see also Mahon et al., 2019). From this perspective, language-aware choir practice presents a form of praxis grounded in choir actions that are attentive to the choir participants' current life situations.

In line with Mahon and colleagues (2020), *praxis* differs from "habitual social action which follows given patterns, or customs and routines" (p. 18). As the third sub-study (Article 3) suggests, co-constructing a new choir reality that does not rely on well-established disciplinary principles and habitual actions can provide an approach to complex transdisciplinarity in music education contexts. Transdisciplinarity in the choir practice is then not guided by the existing norms and principles of individual disciplines, but rather by employing the best possible combination of tools from various fields to address the problems at hand (Kueffer & Wiedmer, 2022). Moreover, transdisciplinary approach in a choir practice, responding to the new individual and educational needs of contemporary societies, calls for system reflexivity (Westerlund et al., 2021b), where "the macro- and micro-elements of professional work can be seen as being in dialogue when navigating the emergent" (p. 3, see also Moore et al., 2018).

Leaning on the above logic, the fourth sub-study (Article 4) argued for a need for transdisciplinary transition towards "new fusions of praxis" (Sugrue & Solbrekke, 2011, p. 194). The study also argued for the future potential of music education to move beyond its disciplinary boundaries in the pursuit of a more sustainable society. New fusions of praxis, referring to fresh and transformative insights related to praxis, however, differ substantially from the praxial understanding of *praxis* in music education (e.g., Bowman, 2009; Elliott, 1995; Regelski & Gates, 2009). According to the praxial perspective, musical practice, providing the foundation for morally/ethically informed musical actions (e.g., Bowman, 2009; Elliott, 1995), is rooted in upholding the authenticity of past and present musical traditions rather than in the creation or re-creation of new forms of musical practices (e.g., Westerlund & Gaunt, 2021). This dissertation instead suggests expanding the praxial understanding of praxis from an emphasis on maintaining tradition and the stability of 'the existing' and 'established' practices towards change and processes of transformation, and acknowledging aspects such as 'emerging', 'not-yet-known', 'out-of-the-box-thinking', 'new becomings', and 'collaborative search' in relation to musical practice. Such understanding of praxis, as this dissertation suggests, can be better engaged with envisioning future possibilities of music education through the collective pursuit of building bridges to transdisciplinary approaches, as also suggested at the policy level (e.g., TWI2050 – The World in 2050, 2018; UNESCO Framework for Culture and Arts Education, 2024, 2025).

46 Phronēsis (practical wisdom) reflects "the disposition to seek/know how to live a meaningful, happy, and worthy life together with others, that is, how to live a 'good life'" (p. Mahon et al., 2019, p. 466).

7.4 From reflective practitioner to systems practitioner

As the findings show, this transdisciplinary-oriented research operates at different layers, including *choir practice* (collective musical actions in and around the choir rehearsals; see also the Six Fields of Action, Appendix A), *choir activity* (activity systems framework), and *systems change* (music education as a discipline linked to broader social structures and institutional frameworks). The lens of *systems praxis* that integrates systems thinking and practice as an "effective form of praxis" (p. 14, Ison, 2017) can recognise all these layers at the same time, adding the perspective of systems thinking to the discussion of praxis (Chapter 7.3). Systems praxis is what a systems practitioner aims to enact (Ison, 2017) by combining systems thinking with practice. The lens of systems practitioner has also informed my role as a practitioner-researcher in this research 'work', expanding the frame of reference related to developmental work research based on activity theory thinking (e.g., Engeström, 1999, 2001; Edwards, 2010, 2012). In other words, the lens of systems praxis can create an umbrella when aiming to combine the different layers of this research project with the findings and my own 'workings' as a systems practitioner in this research project as a whole.

7.4.1 Crossing the boundaries of understanding

Following the path of a systems practitioner, I will next further broaden the perspective of this research project and, particularly, reflect on it through the lens of a second order[47] question (Ison, 2017, p. 6): *What did I do when I did what I did?* Engaging with this question and following the tradition of second order cybernetics ("a theory of the observer rather than what is being observed", Fell & Russell, 2000) challenges me to enhance my awareness of the multiple "constraints and possibilities of the observer" (p. 86) and to take responsibility as well as response-ability for the choices I have made related to this research project, both in theory and practice. In order to explore this second-order observation as a systems practitioner, I will adopt a heuristic learning device akin to the isophor[48] of a juggler, playing with four balls that symbolise moving between "different levels of abstraction" (p. 52), which also mirror the different layers of this research project, including the first-order (e.g., my researcher-practitioner) and second-order (e.g., my researcher-practitioner-observer) perspectives.

According to Ison (2017), the first ball that the juggler juggles draws the systems practitioner's attention to the meanings of "being a practitioner with a particular tradition of understanding" (p. 59), and to becoming aware of how her/his/their "social and cultural history creates constraints and possibilities to their way of 'seeing' the world" (p. 90). In other words, it invites me to consider in a reflexive manner my thinking and actions related to this research project as a practitioner-researcher-observer with a particular biological, social, and cultural (including language) history and unique life experiences. These aspects are also ingrained in my mental models and "embodied ways of knowing and acting" (p. 102, see also Lakoff & Johnson, 1999). They reflect my background as a white, middle-class music professional (choir conductor, musician, music educator) with over 25-year experience of teaching music in diverse fields of musical education, and being schooled in the Finnish education system (see Sahlberg, 2011; Thrupp et al., 2023), including multiple experiences of music education systems from elementary to higher level music education (see Väkevä et al., 2017; Westerlund & Odendaal, 2025; Westerlund et al., 2019). In short, my musical experiences (Chapter 1.5) have largely drawn from western musical traditions (e.g., Barrett & Westerlund, 2017, 2024), including pop, classical, traditional music, and from the European conservatoire tradition (see Westerlund & Odendaal, 2025; Westerlund & al., 2021b; Väkevä et al., 2022). My activities have also promoted the importance of artistic autonomy and "adiaphora" (Bauman & Donskis, 2013) in music education (see Westerlund & Odendaal, 2025, p. 29), the vertical career-oriented "linear model" (Väkevä et al. 2017, p. 137) of musical training, emphasis on musical (intrinsic) values (e.g., Reimer, 2009), and the maintenance of the ambiguous relationship between musical and non-musical outcomes of musical practices (see e.g., Westerlund et al., 2021b), among other topics. These diverse aspects, sometimes considered as "sedimented truths" (Biesta et al., 2025, p. 6) in music education systems, reflect specific historical situations, as discussed in the fourth sub-study (Article 4). As sedimented truths they have also formed my deeply ingrained mental models as a result of my career path (e.g., Väkevä et al., 2017), creating (and still continuing to do so) multiple constraints in my process of becoming a language-aware, transdisciplinary-oriented choir conductor-researcher (Article 3). This 'ongoing' transformation process has made me, little by little, become aware of, critically reconsider, deframe, and ultimately reframe these deeply learned assumptions and pre-understandings in order to be able to approach complex transdisciplinarity (e.g., Hirsch Hadorn et al., 2008; Leavy, 2011; Rezaei, 2022) in music educational thinking and the actions related to this research project. The findings in the four sub-studies reflect this professional transformation process in my thinking and actions; in the terms of Ison (2017), "changes in understanding and practice, where neither understanding or practice are prime" (p. 10). This holistic and relational process was the result of a combination of this research project, experiences of "concerted actions" (p. 11; see also Blackmore, 2010) in language-aware choirs, as well as working with different stakeholders and

47 The second-order question is related to second-order cybernetics, which is a one of systems traditions (see Ison, 2017, p. 35), highlighting the significance of the observer observing the observed. In this research, it also adds the observer perspective to the practitioner-researcher perspective (first order perspective).

48 In the terms of Ison (2017), isophor is "a proposition that takes you to another case of the same kind (in terms of relational dynamics) in another domain" (p. 61). The focus is "on the configuration of processes or relations" (p. 61) that one wants to grasp.

their organisations/establishments in formal and non-formal education that mirror the changed social situations and new social needs of the diversifying social reality in Finland.

This research project also reflects my experiences and prior understandings of Finnish-as-a-second-language learning that have been based on various trajectories (see also Chapter 1.5). These experiences and understandings comprise, for instance, working as a resourceful practitioner (Edwards, 2010, see also Article 1) in transprofessional and transdisciplinary collaboration with multiple second-language teachers related to various music groups characterised by linguistic and cultural diversity, also including the language-aware choirs, for over 15 years. Moreover, they also reflect the weekly discussions in choir rehearsals, the interview data with choir participants and a second-language teacher, and immersion in an extensive research literature on (second) language learning in different research domains (e.g., applied linguistics, language education, phonetics). My understanding in second-language learning is also intertwined with my husband's shared experiences as a Finnish-as-a-second-language learner, my own experiences as a foreign language learner, as well as becoming 'bilingual' in my everyday life as a result of the two first languages (Finnish and German) used in my family.

Starting my research project in the aftermath of the ArtsEqual initiative as noted in Chapter 1, my thinking in the context of music education research has aligned with the tradition of socially engaged music education research that is also a prevailing orientation in our doctoral school, where issues such as democratic music education and social justice are widely discussed. Also, participating in the interdisciplinary[49] research project ELLA (Embodied language learning through the arts, 2020–2024) has had an impact on my understanding, especially on embodiment and embodied language learning (see Chapter 2), and how it varies in different disciplines, theoretical perspectives, and research paradigms. These disciplinary differences have also broadened my understanding of the challenges of a transdisciplinary approach, as well as initiated new ideas in the choir practice.

7.4.2 Making choices visible

Juggling with the second ball calls for a systems practitioner to make visible their choices when "engaging the real-world situation" (Ison, 2017, p. 61) through lenses of systems thinking. Ison highlights that "we are always in situations" (39), but the question, however, is how we name these situations, as we always have choices in "how we see and relate with situation" (p. 39), and these choices inevitably carry various implications. Naming, in terms of Ison, refers to the experiences of "doing something in these situations that most would agree leads to a change for the better" (p. 125). In the context of systems thinking, where real-world (complex) situations (e.g., a complex social issue) are viewed through broader systems, it is important to be able to choose an appropriate system, because "we cannot solve all the problems of the world in one go" (Ison, 2017, p. 46).

According to Ison, a system can be seen as a *thing*, an existing system, which has a set of given interconnected elements and boundaries, or as a *process*, where it refers to a system of interest ('as if' system, p. 19) that is formed by the researcher as part of the inquiry through "thinking about the connections (relationships) between things" (p. 47). When reflecting on my research project, I can see that I have chosen the former way (system as a thing) when approaching language-aware choir activity and the real-world issue it addresses, namely, the new social needs of adult immigrants arising from challenges in their everyday lives. Using the "ready-made" model of an activity system with given elements and "boundary judgements" (p. 46), I have accepted neologisms[50] and related reified[51] concepts (e.g., elements) coined by someone else related to this system, in this case the adult education scholar and developer of the second and third generation activity theory Yrjö Engström (e.g., 1987, 1999, 2001). According to Ison (2017), seeing a system as a thing emphasises *systematic*[52] *thinking*, whereas seeing it as a process underscores *systemic thinking*[53] (see, pp. 160–161), including holistic, non-linear, non-causal, recursive, and experiential dimensions involved in systems. Both are, however, needed in systems thinking and practice that arises "from the dynamics of systemic and systematic thinking" (p. 30). In this line of thought, I have emphasised systematic thinking, when looking at language-aware choir activity (a collective unit) through lenses of an activity system and interacting activity systems (Article 1) as 'things', and I have thus left out my own "subjective element" (p. 46), that is, my own way of forming 'a system of interest' when focusing on a language-aware choir and its co-created transdisciplinary practice.

As a learning device, the juggler isophor encouraged me to learn more and expand my systems thinking by adding my subjective element through forming "a systems map" (Ison, 2017, p. 113; see also; Ison, 2008; Blackmore et al., 2017) to approach the real-world issue the language-aware choir practice reflects (the new social and educational needs of adult immigrants in the diversifying Finnish society). At this stage of my research

49 There are many ways and nuances to view inter- and transdisciplinarity. In the terms of Leavy (2011), interdisciplinarity differs from transdisciplinarity in the level of "collaboration between two or more disciplines" (p. 33). Whereas transdisciplinarity highlights high level, holistic, and transcending integration, making disciplines "instrumental to the larger framework" (Greckhamer et al., 2008), interdisciplinarity in research leaves "the disciplinary production of knowledge intact" (Leavy, 2011, p. 34). In this research project, 'interdisciplinary' highlights a great level of interaction between different disciplines, and 'transdisciplinary' is oriented towards collaboration in which merging and transformation of disciplines can occur.

50 A neologism is "new logic or new coinage" (p. 120), and neologising refers to "using or coining new words or expressions" (Ison, 2017, p. 130).

51 Reifying is the process of converting a concept mentally into a thing (Ison, 2017, p. 5).

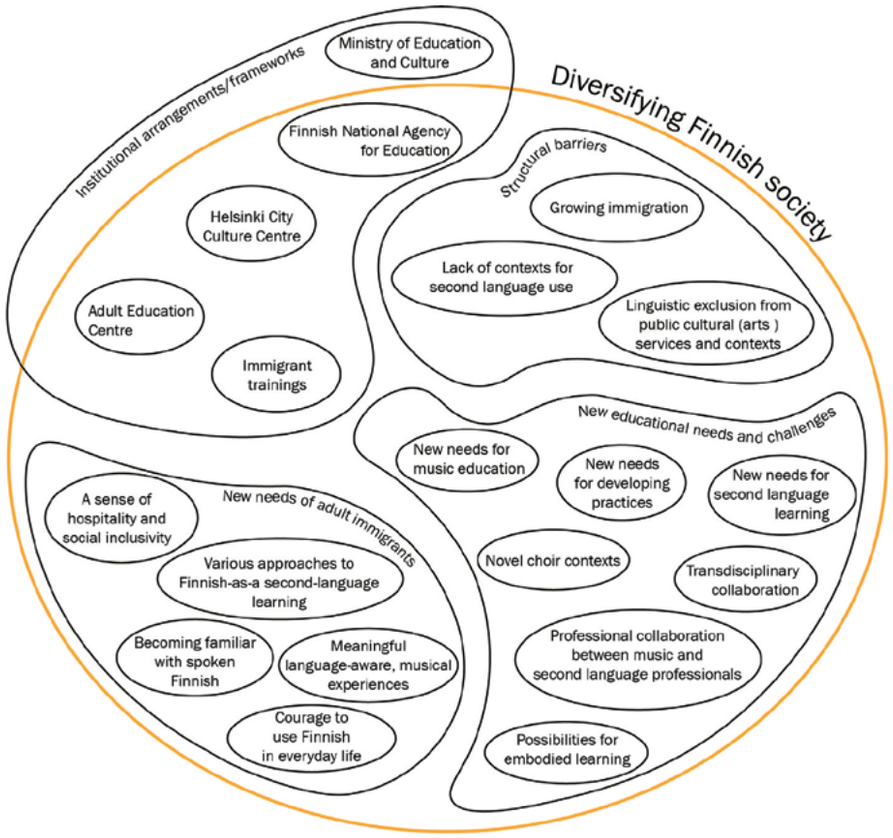
52 Systematic thinking "takes place in a linear, step-by-step manner" (Ison, 2017, p. 24).

53 In the terms of Ison (2017), "systemic thinking provides expanded context for systematic thinking and action" (p. 196).

project, I thus consider the motivations and wide-ranging relationality underlying the emergence of the double-focused language-aware choir (Figure 13) more broadly. This helped me to acknowledge the diverse smaller and larger contexts to which the very local and situated choir practice was interconnected, as well as dependent on (see Chapter 1.3).

Figure 13

Motivations Behind the Emergence of a Double-Focused Language-Aware Choir



The environment outside the boundary (orange circle) of this 'system of interest' (Ison, 2017, p. 19) comprises the diversifying Finnish society. The area inside the orange (my own boundary judgement) distinguishes the system of interest from its environment, illustrating the diverse aspects (motivations) that have led to the emergence of the language-aware choir practice. The four sub-systems inside the orange circle are divided into four categories: Structural barriers, New educational needs and challenges, New needs of adult immigrants, and Institutional arrangements/frameworks, each including diverse supra-systems, as shown in Figure 13. For instance, in the category of Structural barriers, the motivations are related to growing immigration, lack of contexts for (spoken) second-language use, and the exclusion of immigrants from public cultural and arts services and contexts due to language barriers. The category of Institutional arrangements/frameworks acknowledges such instances and organisations that have provided physical places and spaces and other supportive operations (marketing, networks etc.), as well as financial support for the emergence of the choirs, directly by the grant from the Finnish National Agency for Education, and indirectly – that is why it is located outside the circle – by the Ministry of Education and Culture subsidising the whole Adult Education Centre where one language-aware choir participating in the research project was operating. New educational needs and challenges reflect, for instance, new needs for musical practices and second-language teaching and learning, as well as transdisciplinary and professional collaboration in the emerging process of the language-aware choirs. I have deliberately not used arrows in this systems map (Figure 13) between or across the four sub-systems or supra-systems (see also Ison, 2017, p. 113), in order to highlight their non-hierarchical, non-linear, and non-causal relationships. This map is not all-encompassing, but aims to describe the broader relational and multilayered dynamics that have affected (and still do) the emergence of the language-aware practice in constant transition and development.

7.4.3 Contextualising systems approach

According to Ison (2017), juggling with the third ball derives from the idea that "effective practice is always contextual" (p. 11). Engaging in systems practice through "context sensitive" (p. 6) lenses is related to "how a systems practitioner puts particular systems approaches into a context for taking action in 'real world' situations" (p. 62). This contextualising entails responsibility not only to choose appropriate systems concepts and methods, but also, through experience, to be able to acknowledge the particularity of the context through them. In other words, when juggling the third ball, the systems practitioner is aware of being both responsible and response-able in relation to the context in which the systems approaches are engaged. As Ison (2017) highlights, the tools, methods, and concepts that are chosen to contextualise the specific situation should also be "systemically desirable, culturally feasible and ethically defensible" (p. 156).

In this research project, I have approached the specific context of a language-aware choir through using two activity systems models, a complex model of an activity system (e.g., Engeström, 1999) and interacting activity systems (e.g., Engeström, 2001) based on the cultural historical activity theory (see Chapter 3). These models enabled me at a

manageable (activity) level (e.g., De Fina & Georgakopoulou, 2008) to connect systems thinking with the language-aware choir context in question. My purpose for using these activity theory models as analytical tools was thus to conceptualise the language-aware choir and its double meaning, to address change in music and language educational thinking and actions (discussed more below, see also Chapter 6.1). Importantly, the models allowed dialectically linking the individual actions and social structures (Engeström, 1999, p. 19); in other words, the actions at the nexus of the individual and wider social transformations that the choir activity reflects.

The theoretical models were not, however, used as strict "guidelines to procedure" (Ison, 2017, p. 168) or as given techniques, but were adopted with a creative mindset in order to communicate the specific context of the two language-aware choirs. For instance, I needed to expand the model of interacting activity systems (Engeström, 2001) in two ways. First, to depict the co-construction of the constantly evolving choir practice and its pedagogical principles (the Six Fields of Action, Appendix A), I added the three-way dialogue enabling boundary-crossing actions (see Figure 12). Second, to illustrate the emphasis on the integration (not just interaction) of the two interacting activity systems (an ordinary choir and a second-language class), I formed an integrated, double-focus activity system as a radical new activity system (see Figure 8) *merging* the two activity systems. In other words, this new activity system could better address the non-hierarchical and reciprocal (transdisciplinary) merging of music and language education, not merely being a simple sum of them or just sharing a common object. Importantly, the activity systems approach was used as a 'method' and analytic approach in the MMMR methodological framework (Chapter 4.2) of this research project as well as a theoretical framework (cf. a methodological theory) for this study.

Nevertheless, during this research project, and particularly related to the process of learning about Ison's (2017) systems praxis, I have become more aware of the challenges and hindrances of choosing and using existing systems when "approaching the world systemically using systems thinking" (p. 158). Forming a systems map "as a means to engage with the situation" (p. 151) and making my own boundary judgements, as well as considering the different sub- and supra-systems conceiving its "elements and their relationships" (p. 152), enabled me to add a new perspective after the experiences of first immersing myself in activity systems models. For me, the biggest challenge in using activity systems was to become familiar with the "complexity and contestations" (e.g., Murphy, 2022, n.p.) of activity theory depicted in these models, and then expanding the process by adapting my own thinking and ways to approach these systems and their given elements. Although I depicted my role as a researcher-practitioner within activity systems as well, the process of forming my own "system of interest" (Figure 13) emphasises taking responsibility for my own systems thinking and understanding in relation to the real-world situation that the specific situation in language-aware choir practice exemplified.

However, as Ison (2017) contends, "an aware practitioner…is able to contextualise a diverse array of systems concepts and methods creating an opportunity for advantageous changes in 'real-world' situations" (p. 156). This research project therefore touches on a small part of the diversity of "different systems thinking and practice lineages" and approaches (p. 30).

7.4.4 Managing the research project while desiring transformative change

With the fourth ball, the systems practitioner's thinking and actions pertain to managing all four balls at the same time, as well as "the desired change" (Ison, 2017, p.189). In other words, at this stage, "an overall performance" (p. 189) of juggling refers to transformation – "a key concept in systems thinking" (p. 191) – towards which a systems practitioner reaches when engaging with a real-world issue. All in all, systems practice through the lenses of the overall performance of juggling the four balls promotes *systemic* thinking and actions addressing aspects such as process ("change over time", p. 189), experienced viewing, responsibility replacing objectivity, uncovering traditions of understanding, nested systems, individuals as holding partial perspectives of the whole, and contextual approach (see pp. 196-197), among others. Together the overall performance thus recognises the specific context (a language-aware choir), reflecting the real world situation not only through systems thinking but also through real-world collaborative actions "with others" (p. 189) (cf. a concerted action, pp. 10-11).

Juggling with all four balls reflects this research project as a whole, along with the changes and transformations it conveys when considering the real-world situation in an increasingly diversifying Finnish society (e.g., the new social needs of adult immigrants arising from challenges in their everyday life) through the lenses of the continuously evolving language-aware choir practice. *Change* and *transformation* emerged in different ways in the four sub-studies. In the first sub-study, change reflected the double-meaning in the choir practice as being rooted in changing "environments, both near (teaching and learning environments) and far (societal and global situations)" (Lehtinen-Schnabel, 2023, p. 489), as well as addressing "the consequential need to reach beyond existing principles" (p. 490) of established professional practices. The second sub-study depicted change in relation to linguistic challenges in Finnish-as-a-second-language auditory processing and oral language production by the choir participants after singing in a language-aware choir from five to nine months. These experienced real-life linguistic challenges, which the Phonological tests confirmed, also created the ground for the non-hierarchical and reciprocal bottom-up approach to integrate second-language learning into choir practice through collaborative co-construction with creative and experimental spirit. The third sub-study explored the transformative potential of boundary-crossing choir practice, which enabled individual transformations for the choir community

members, including the choir conductor and the second-language teacher, and provided an emerging theorisation of language-aware choir practice as an approach to the complex transdisciplinarity in the context of music education, both in theory and practice. The fourth sub-study articulated the language-aware choir practice as encouraging a transdisciplinary transition in music education expertise when seeking ways out of unsustainability through "new fusions of praxis" (Sugrue & Solbrekke, 2011, p. 194) that reflect complex, interconnected challenges of contemporary societies.

Taken together, all these changes stem from the transdisciplinary nature of the language-aware choir practice in approaching the complex social issue. They therefore emphasise the close connection of this research project with the field of transdisciplinary research (e.g., Hirsch Hadorn et al., 2008; Leavy, 2011), expanding professional practice beyond disciplinary thinking and considering the possibilities to "overcome the complexity of issues regarding the common good of society" (Rezaei & Seyedpour, 2022, p. 4). Accordingly, the changes conveyed by this research project – whether they reflect individual experiences and actions or historical and ongoing transformations in larger social environments – interconnect this research project, as noted in the introduction, to the growing field of transitions research (e.g., Escobar, 2022; Köhler et al., 2019; Lachman, 2013; Loorbach et al., 2017, Zolfagharianet al., 2019), within which transdisciplinary research is also integrated (Loorbach et al., 2017, p. 601). According to Ison (2017), the concepts of transformation, transition, and transdisciplinarity "are reliant on systems praxis" (p. vii), although, as Ison continues, "the praxis dimensions are often poorly appreciated" (p. vii). That said, the focus on the language-aware choir practice, in theory and practice, has enabled this research project to approach these "big" concepts through lenses of praxis. And, juggling with the four balls as an overall performance in line with a systems practitioner helped me realise their connections in relation to a language-aware choir.

All in all, the approach of a practitioner researcher 'juggling with the four balls' that makes "transparent what occurs in systems practice" (Ison, 2017, p. 56) reflects this project as a whole while acknowledging all the layers it operates within, as discussed in the beginning of this chapter. Moreover, the four balls in the isophor of juggling (Ison, 2017, p. 61) can also link the findings of the four sub-studies. The first ball relates to communicating the processes of developing the language-aware choir practice and my relationship as a choir conductor/music educator-researcher to it, in line with the first and third sub-studies (Articles 1 & 3). The second ball refers to the awareness of the impact of a language-aware choir practice on the choir members and the larger society with reference to the second, third and fourth sub-studies (Articles 2-4), whereas the third ball points to the awareness of the larger theoretical context that the activity theory framework provided in all four sub-studies (Articles 1-4). The fourth ball points to the overall arguments of this whole research project.

In addition, 'juggling the balls' as *a learning device* (Ison, 2017, p. 64) could also signify 'a shared home' for various expressions of learning in this research, while illustrating their different layers. On a practice level, learning is connected to language-aware choir practice, in which it emerges through the merging of music and language via embodied (holistic) and arts-related approaches (see Chapters 2.1 & 2.2). On an activity level, learning is associated with expansive learning (Engeström, 2010, see Chapter 3.1.2) related to the working processes of music and language professionals. On the level of systems change, it refers to the processes of desired transformation related to music education more broadly (as part of social structures and organisations), which this research addresses through the lens of transdisciplinary transition (see also Chapter 7.1).

7.5 Limitations, delimitations, and challenges of the research project

Among several limitations, the transdisciplinary nature of this research, which enabled me "to think disciplinarity differently" (Leavy, 2011, p. 139), also presents its main challenge. The need to become familiar with a diversity of research perspectives, methods, and analyses, and theoretical frameworks, including their divides – not only those related to the multiple disciplines connected to music education, but also to language teaching and learning – may have provided a horizontal view for this project and the "real-world issues and problems" (Leavy, 2011, p. 127) it addresses. However, I also recognise that much important research literature has been omitted which might have served as valuable resources for this project. As Maturana and Varela (1987) note, "we do not see that we do not see" (p. 93).

Transdisciplinary research also includes the challenge of a constant need "to be open to finding methods, strategies and solutions" (Leavy, 2011, p. 127) in order to remain flexible and responsive when working across disciplinary boundaries to tackle complex real-world issues (see also Chapter 4.1). Engaging in the methodological landscape of multimethod and mixed-methods research (Hesse-Biber & Johnson, 2015) has been an ambitious and challenging goal, however it has strengthened the process of learning how to use and, especially, creatively adapt various research approaches based on the emerging needs of this transdisciplinary research project. Accordingly, becoming familiar with multiple approaches has also broadened my understanding of different research perspectives and paradigms, and even steered my interest to move beyond the paradigmatic binary towards post-paradigmatic approaches in the future.

As mentioned in Chapter 6, the quantitative part in the mixed methods second sub-study (Article 2) related to the Phonology test results were to a large extent statistically

significant; however, the modest sample size (N = 16 in the post-test) – owing to the sudden Covid- 19 pandemic – limited the robustness of the statistical analyses. The results can thus only be considered indicative. However, they were consistent with the findings from interviews based on choir participants' own experiences and self-evaluation. The choir participants' Phonology test results could also not be compared to participants in a second-language class (the corona pandemic). Despite the choir participants having various levels of second-language classroom experience, ranging from beginner to advanced levels, they all exhibited phonetic difficulties in the Phonology pre-test, which showed improvement in the post-test. Therefore, the gains in pronunciation observed in the post-test could not be attributed to the length of time spent in Finland or to the time of participation in the LFBS choirs. However, since all participants chose to sing voluntarily in the language-aware choirs, this could have contributed positively to the findings (e.g., Tierney & Kraus, 2014; Zheng et al., 2022).

An important but challenging evaluation criterion for transdisciplinary research is its usefulness beyond academia, and a corresponding need for making the research findings "available to the public/relevant parties" (Leavy, 2011, p. 130). This research process has sought to address this challenge, also referring to "communications chasms" (Hesse-Biber, 2015, p. xxxvii), by disseminating the project not only within the context of its own discipline (music education), but also to an interdisciplinary research group of arts and language professionals and researchers, as well as through scholarly publications and participation in conferences within different disciplines. Especially, the research process and its findings have been continuously shared, adapted, and reflected upon in practice across various public contexts of music and language education (e.g., in immigrant education, preparatory basic education, cultural services, adult education, and universities and universities of applied sciences).

As outlined earlier (Chapter 7.4), I am aware that thinking with activity systems, and adapting it as a method, has limitations related to systems thinking, since it approaches a system as an existing "thing" (Ison, 2017, p. 47) with defined elements, instead of a process where the "system of interest" (p. 24) is constructed by someone (a researcher). A system of interest can better acknowledge subjective and context-specific aspects. As previously indicated, the activity systems approach has been diversely criticised for overlooking the subjective element and overshadowing the individual with collective activity (e.g., Bakhurst, 2009; Billett, 2006; Langemeyer & Roth, 2006; Larkin, 2019; Murphy, 2022; Valsiner & Van Der Meer, 2000). Taken together, the choice to use activity theory as the theoretical basis for this research – although expanded by other theoretical concepts and informed by systems praxis (Ison, 2017) – has both guided and constrained my thinking and the findings of this research project, which might have differed had I chosen an alternative framework.

The use of English language in the interviews, despite the acknowledgement of translanguaging (García & Wei, 2014; Wei, 2018) in communication, may have caused a selection bias[54] and limited the voluntary participation in interviews, although English skill was not a criterion for attendance, and the majority of the language-aware choir participants speak it adequately. It may also have constrained the depth and richness of the interview data.

Given the choir conductor-researcher's dual role, it is likely that unconscious biases exist in my interpretations of the empirical material, although I strived to approach it "as an expression of negotiable, perspective-dependent interpretations, and as conveyed in an ambiguous language" (Alvesson & Sköldberg, 2009, p. 304). However, as Alvesson and Sköldberg note, a central criterion for good research should entail "a strong feeling for the social reality under study" (p. 303). In line with this criterion, empirical material can contribute – if seen "as an argument" (p. 304) – to inspiring "ideas and theories, endowing them with credibility, clarifying them and, in the case of theories, making them more stringent" (p. 303). As the findings of this research project indicate, the empirical material derived from the language-aware choirs has been diversely stimulating for theoretical elaboration and "modifications of theoretical ideas" (p. 303). However, the substantial amount of theory used and developed in this research project may also be considered as a limitation, or even potential contradiction, to this practice-based research.

Overall, the special context of a language-aware choir, where both music and language learning are focused on reciprocally, and in which the practice is co-created, highlighting an ongoing creative process, restricts the generalisability of the empirical findings in relation to, for instance, ordinary choir and second-language learning contexts (see also Chapter 7.2). Stemming from a practitioner's research and inquiry as stance (Cochran-Smith & Lytle, 2009), the aim has also not been generalisability and validity across different contexts (see also Chapter 1).

Most importantly, in relation to uncovering the limitations of this research, incorporating a second-order perspective (e.g., Hodgson, 2020; Ison, 2017) and the 'observer' role within the practitioner-researcher role has enabled me to critically and in a reflexive manner to reflect on the entire project, including choices (e.g., theoretical, methodological, contextual), as well as my pre-understandings and presumptions as a professional musician and a researcher.

54 https://www.scribbr.com/research-bias/selection-bias/

7.6 Future potentials

In this chapter I will briefly consider directions for future research prompted by this doctoral dissertation, in which its limitations and challenges also indicate possible pathways forward. Focusing on 'a small' (a local and situated choir and its specific language-aware practice), which in terms of (activity) systems thinking (Engeström, 1999, 2001) reflects 'a bigger picture' (social structures and societal changes, e.g., Stroh, 2015), follows the objective of this research project to contribute to system-aware music education and advancing professionalism.

During the process of this research project, to a growing extent, new contexts for integrating music and language education in Finland have arisen. Language-aware music education has been incorporated in different ways into basic education (e.g., primary school) and, particularly, in preparatory basic education for newly arrived residents. Within public cultural services, demand for different kinds of LFBS (Learn-Finnish-by-Singing) workshops for second-language and music teachers with their learning groups has also increased. LFBS courses and choirs have become a part of the yearly choices in university (tertiary) education for international students and staff, and are integrated into second-language studies coordinated by the University of the Arts Helsinki in collaboration with Aalto University and the University of Helsinki. A course was also incorporated into applied higher education for students integrating arts into social work. In the field of church music, interest has been shown in generating novel music groups where music and language learning could be applied. All these changes indicate that systemic change in different educational contexts of music and language education is currently taking place. Recently, the idea of 'Learn-Finnish-by-doing-something-else' and the consequent development of related practices have, to an increasing extent, also been implemented in arts and language courses within the field of liberal adult education and tertiary education (e.g., University of the Arts).

The objective of this dissertation was to broaden the general understanding of transdisciplinary approaches in music education, in both theory and practice. As has been shown (Chapter 7.1), transdisciplinarity in language-aware choir practice is related to a need for various transitions in music educational thinking and actions. Leavy (2011) states that "there is a moral and ethical imperative underscoring the push for transdisciplinarity" (p. 139), when addressing complex contemporary problems and accelerating interconnected changes faced by current and future societies. As this imperative also concerns music education and the development of socially engaged and responsible music education, this research project calls for more research on transdisciplinary approaches to music education and the related development of novel transformative practices with systems awareness. This could also include, for instance, knowledge production from diverse (formal and non-formal) public spaces and novel social contexts, where music and music education, other disciplines, and/or arts forms could be interwoven, highlighting out-of-the-box thinking and broad inclusivity in participation (Juan-Morera et al., 2023b). More research is also needed on the phenomenon of inclusive choirs to broaden understanding of it from various theoretical and empirical perspectives, as well as in relation to the expanding professionalism of music and music education. Furthermore, transdisciplinary approaches to music education call for more investigation to advance novel, socially sustainable approaches to the development of future expertise in the field.

The first and second sub-studies also raised the absence of and a need for research on embodied (holistic) approaches to language learning from the perspectives of music and musical activities in an embodied framework (Jusslin et al., 2022). In this regard, this dissertation suggests that there is also a need for research on socially sustainable language learning through the arts,[55] which could further nurture systems awareness and related transdisciplinarity in the context of integrating the arts and embodied language learning. This need is based on the findings of this project, which indicate that a language-aware choir can create an inclusive social context for second-language use and learning (Article 2), where embodied (holistic) approaches (Jusslin et al., 2022), translanguaging (García & Wei, 2014; Wei, 2018), cultural and social wellbeing (e.g. Daykin et al., 2020; Fancourt, 2017, Heydon et al., 2020), dialogue between languages and cultures, as well as joy and creativity are interwoven. That is, these features, enriched with systems thinking, as well as a bottom-up approach, could generate new conditions to approach sustainable language learning (e.g., Maijala et al., 2024) from a socially sustainable perspective.

The first sub-study (Article 1) suggested the need for studies on hybrid musical practices from the students' perspectives. Additionally, studies that investigate affordances that musical and other arts-based social contexts can offer for second-language learning could be explored, as suggested in the second sub-study as well (Article 2). The mixed methods second sub-study also pointed out the need for studies with a larger sample size and a suitable control group, to allow statistically robust analyses of the gains that result from language-aware choral singing in second-language phonetic and spoken language acquisition.

Towards the end of this research project, while focusing on the systems praxis (Ison, 2017), I became aware that greater attention should be given in future music education research to "considering practices as key elements for analysing social phenomena" (Schatzki, 2015, p. n.p.), that is, how practices are interlinked with both locally situated small (micro-level) social phenomena and with large, spatially and temporally more extensive (macro-level) social phenomena. Although such a 'horizontal' view of practice is beginning to emerge (e.g., Ski-Berg, 2023; Westerlund & López-Íñiguez, 2024), the use of this kind of practice theoretical lens is scarce in music education research. In the context of arts and arts education, choreographer Liz Lerman (2011) relates behaviours,

55 This is a newly introduced notion in this dissertation.

beliefs, and practices to the notion of 'hiking the horizontal' by describing a shift "from hierarchy to a horizontal environment" (p. 292), where "one has to be flexible in a collaborative space" (p. 293) and "many ideas can co-exist" (p. xvi). Such non-hierarchical co-existence of diverse ideas and interests, also reflecting the co-evolving process of the language-aware choir practice, could address novel spaces for future exploration and the development of systems-aware, transdisciplinary approaches related to music education.

8 Conclusion

This doctoral dissertation has reflected on local-level changes in educational needs based on the diversifying social reality in Finland. In the big picture, these changes are also engaged with the accelerating transformations and interconnected challenges of today's world, characterised by polycrisis (e.g., Westerlund et al., 2025; Wray et al., 2023). Against this backdrop, this socially-engaged research project has reimagined new horizons for music professionals, and the potential and challenges of music education as part of a path towards a sustainable collective future (e.g., UNESCO, 2021), goals which the the Finland's strategy for sustainable development (Prime Minister's office, 2022) also share. Since starting this research work, the social and political conditions in Finland – following similar international developments – have become increasingly polarised, while also facing growing inequalities (e.g., the socio-economic divide). These developments have been strengthened in a political climate where rising populism and racially charged debates (against diversifying society) have increasingly gained ground. Under these "uncertainties and complexities of contemporary circumstances" (Ison, 2017, p. 3), contributing to the development of socially responsible music education as part of a more sustainable and pluralistic society, as this research project has striven to do, has become more challenging - but also more relevant.

The phenomenon explored in this article-based dissertation is a language-aware choir, conceptualised as a co-created, double-focused activity system through adapting activity-theoretical thinking, particularly the lens of interacting activity systems (Engeström, 1999, 2001). The transdisciplinary nature of this research project, which highlights the reciprocal, non-hierarchical, and holistic engagement of music and language within and through a choir practice, has created the multilayered problem motivating this research. First, at the practical level, the problem emerged from the direct social needs and experiences of the choir participants as newly arrived residents, and consequently their wish to engage in second-language learning within the choir practice. These new needs in a music educational context (a choir) also challenge the continued support for the ambiguous binaries of music and music education (e.g., Westerlund et al., 2021b), such as the musical and non-musical outcomes of musical practices. Second, at the social level, the problem was related to the changing concurrent social conditions that reflect an increasingly diversifying Finnish society. Third, at the professional level, the problem was related to my music professional horizons as a choir conductor/music educator.

This research has suggested that transdisciplinarity, from the perspective of music education, can move beyond historically formed dichotomies while addressing the all-encompassing relationality of and holistic engagement with diverse co-existing interests, as was noted already by Dewey (e.g., 1916) over 100 years ago, and as is further reinforced by contemporary systems thinking (e.g., Escobar, 2022; Hodgson, 2020; Ison, 2017; Jackson, 2020; Meadows, 2009; Senge et al., 2011; Van der Leeuw, 2020) and the embodied (holistic) understanding of knowing and knowledge production (e.g., Lakoff & Johnson, 1999; Maturana & Varela, 1980). Based on the findings of this doctoral project, it is suggested that there is a need for various 'transformative gestures' in music educational thinking and actions in order to enable a transdisciplinary transition related to professional practices. In terms of a language-aware choir, these gestures can be exemplified by the boundary-crossing processes that occur when choir practice has a double meaning with an emphasis on "the good of the whole" (Meadows, 2009, p. 184), and a choir conductor transforms into a language-aware choir conductor, which requires expanding music professional boundaries beyond the deeply ingrained disciplinary thinking, mental models, and presumed actions of the field (a resourceful practitioner, Edwards, 2010; see also Westerlund & Gaunt, 2021). In addition, this research process has reflected on a transformative process in which a practitioner-researcher (Cochran-Smith & Lytle, 2009) becomes a systems practitioner (observer-practitioner-researcher, Ison, 2017) through the lens of systems praxis. Accordingly, an emphasis on change and transformation, together with the ongoing co-creative configuration of future-oriented choir practice, not only challenges but also expands the dominant (praxial) understanding of praxis in music education, which tends to orient itself towards maintaining authenticity of the past and present musical traditions and related practices (e.g., Elliott, 1995).

As the empirical research findings demonstrate, there is a range of potentialities for music education to support second-language learning that are based on approaching and practicing music and language equally and reciprocally in a choir context. They do not denote a one-way transfer effect from musical skills to language skills, or from choir singing to language learning. Instead, this article-based dissertation highlights the potential of music education in collective and transdisciplinary actions, through which new fusions of praxis can be generated and bridges built towards more sustainable futures for all.

Postlude

If you were to ask me today what I have been doing during the seven years of my doctoral journey, I would probably borrow the words of the renowned systems scholar Donella Meadows, with which she closes one of her seminal articles: I have been deepening myself in "…disciplined thinking combined with strategically, profoundly, madly letting go" (Meadows, 1997, p. 84) – both in theory and practice. This "madly letting go" lies at the heart of my doctoral process.

Thus, after this deeply challenging, intriguing, multilayered, and transformative research process I want to end this dissertation – which might seem strange after immersing myself in a substantial amount of literature on the topic of this research project – by embracing the idea of 'not knowing'. During this research, I have become increasingly convinced of what scholars in and around systems thinking constantly bring up when discussing change and transformation: the significance of "moving beyond the known" (Westerlund et al., 2025 p. 60), of accepting "not knowing" (Meadows, 2009, p. 164), and of striving towards learning "that is not yet there" (e.g., Engeström, 2010, p. 74).

The insight of 'not knowing' and being out of one's comfort zone can, however, be regarded as "fuel for the imagination rather than fuel for humiliation" (Lerman, 2011, p. 2), and in that sense it does not mean an absence of craft-skills or 'the known'. Instead, in my understanding, such uncertainty emphasises openness and curiosity to multiple perspectives, changes, surprises, and, particularly, to the emergence of what-is-not-yet-there. These stances of uncertainty have also served in this doctoral dissertation as a way out of 'the established, known, habitual and existing' when co-creating the language-aware choir practice and approaching transdisciplinarity methodologically and theoretically – "madly letting go" (Meadows, 1997, p. 84).

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PART II

ARTICLES

ARTICLE 1

Lehtinen-Schnabel, J. (2023). Novel opportunities for intercultural music education: Integrating singing and a language-aware approach in Learn-Finnish-by-Singing choirs. Research Studies in Music Education, 45(3), 478-496. https://doi.org/10.1177/1321103X221136826

Novel opportunities for intercultural music education: Integrating singing and a language-aware approach in Learn-Finnish-by-Singing choirs

Johanna Lehtinen-Schnabel

Abstract

The topic of language awareness in intercultural music education has received surprisingly little attention in discussions on meaningful and responsive musical practices, despite language being an ubiquitous issue that every music educator encounters when entering a multilingual learning environment. This study explores a language-aware perspective that is embedded in a dynamic and dialogical choir practice drawing on the direct social needs of adult choir participants with culturally and linguistically diverse backgrounds. The analysis sets the practitioner experiences, planning, and implementation of the choir practice against *the theorisation of activity systems* and the concepts of *boundary object* and *boundary crossing*, in particular. The theoretical exploration considers how a dual meaning choir practice (a) integrates musical and linguistic activity, (b) crosses boundaries between the disciplines of music and language education, and (c) justifies change in music educational thinking. The study suggests that a dual meaning choir practice provides meaningful musical activity for adult immigrants, expanding the understanding of musical practice and the profession of music educator by blurring the dichotomous thinking of music and music education as being either instrumentalized or existing only for purely musical purposes. The study further advocates that a hybrid musical practice can widen professional understanding with novel insights, out-of-the-box perspectives, and new opportunities.

Keywords: activity theory, choir, intercultural, music education, second language

Introduction

Music education has an ambiguous relationship to practices that aim at non-musical outcomes (Westerlund et al., 2021), as musical practice typically draws on tradition and is defined against its historically and socially constructed raison d'être (e.g., Elliott, 1995, p. 45). This study addresses the dilemma between genre-related, established musical practices and emerging new practices that include seemingly distant elements and goals of music making, by focusing on a choir practice that is characterized by cultural and linguistic diversity. The investigated choir practice serves a dual purpose: to create meaningful musical experiences for adult immigrants, while at the same time supporting their second language use (second language denotes Finnish as a second language being studied in the language environment where it is spoken and as the language of schooling; Larsen-Freeman & Long, 1991). The aim is to complicate the still-prevalent dichotomous view of the musical versus non-musical ends of music and music education by exploring the Learn-Finnish-by-Singing (henceforth LFBS) choir from a theoretical perspective, as a new practice in the context of music education. Since 2011, LFBS choirs have responded to the broader need for the participatory inclusion of immigrants in Finland. Moreover, the choirs aim to serve newly arrived residents who are easily excluded from arts and cultural services. LFBS choirs have been developed based on the positive experiences of the adult immigrants, the LFBS choir conductor, and second language teachers engaging in musical activities as part of integration training.[1]

Despite Finland having a large number of choirs, these choirs typically do not address the increasing pace of immigration, and hence the diversifying reality of the country. Currently, every fourth person living in the Helsinki capital area has a foreign background (Tilastokeskus, 2021). Researchers in education and the labor market (Susanna Ahonen-Coly et al., 2020; Turja & Riikonen, 2019) emphasize the importance of second language proficiency in the integration process. Studying Finnish as a second language most often focuses on skills in grammar, reading, and writing (Mustonen, 2015; Virkkunen & Toivola, 2020) and uses a paper-based, sedentary approach (Teräs, 2012). Consequently, features that support communication such as pronunciation or spoken language, which differ remarkably from written Finnish (Lehtonen, 2015; Ruuska, 2020), are rare (Virkkunen & Toivola, 2020). Moreover, especially adult immigrants in Finland lack social contexts where they could actively use the Finnish language as it is spoken (Mustonen, 2015; Tammelin-Laine, 2014).

Studies in linguistics, psychology, cognitive science, and neuroscience suggest that music and language have cognitive relations that can enhance communicative abilities in language processing (e.g., Arbib, 2013; Patel, 2008; Patel & Morgan, 2017), and that singing, in particular, can facilitate second and foreign language learning by promoting writing skills, vocabulary acquisition, pronunciation, and grammar learning (e.g., Alisaari, 2016; Busse et al., 2021; Ludke et al., 2014; Schön et al., 2008). These studies, aligning with research on music psychology (e.g., Gabrielsson, 2011; Juslin & Sloboda, 2001), emphasize the meaning of affective resources in musical experiences. Accordingly, a variety of studies suggest that *choir singing* has potential beyond music learning to holistically promote well-being and health (e.g., Dingle et al., 2012; Siljamäki, 2021). However, in her sociolinguistic study on Finnish as a second language, Ruuska

(2020) found that being a member of an established choir did not seem to support productive language skills, but rather seemed to contribute to "basic receptive language skills" (p. 235). Nevertheless, research on choir singing and second language learning in immigrant adults remains scarce, despite the fact that language use, pronunciation through articulation, and the repetition essential for language learning are self-evidently also central to choir singing.

Aligning with the practitioner research tradition (Cochran-Smith & Lytle, 2009), this study explores a choir practice where productive language skills, such as pronunciation and the use of spoken language, are emphasized in and through collaborative, embodied music production. More specifically, this study is an analytical reflection on the specific features and underlying principles of the choir singing design that is meant to support second language learning. The study turns the perspective of music's influences on language learning toward opportunities for *musical activity* to approach challenges in second language use and learning. Importantly, in line with the growing body of research that promotes *embodied learning*, particularly in music education (e.g., Abril, 2011; Juntunen, 2020; Westerlund & Juntunen, 2005) and in language teaching and learning (e.g., Atkinson, 2010; Kosmas & Zaphiris, 2020), this study advocates a holistic approach to both musical and linguistic teaching and learning, highlighting the engagement of the whole human body through the cognitive, affective, and behavioral states embedded in the socio-material environment (e.g., Barsalou, 2020; Thompson, 2017). By and large, active music making and experiencing through singing in a (social) choir context enables a holistic approach to language use and learning as social endeavors.

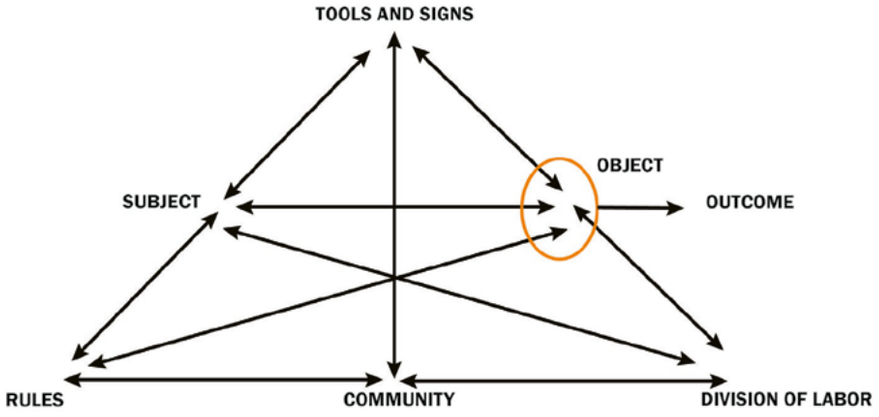
The two choirs that are the focus of the study were led by the author (as a researcher-practitioner) and housed at an Adult Education Centre and a Cultural Centre in the Helsinki capital region; the first choir engaged over 40 active participants and the other, a newly founded one, half this amount during weekly choir rehearsals. The original impetus for the choir practice was to create a novel and meaningful social context for adult immigrants to practise the use of Finnish. In this context, the lack of second language proficiency does not lead to exclusion. The members of the choirs came from every continent and spoke over 20 different native languages, including Chinese, Vietnamese, Nigerian, French, Spanish, Hindi, Malay, Kurdish, Turkish, Persian, Ukrainian, Russian, Japanese, Georgian, Portuguese, English, and German, manifesting the cultural and linguistic heterogeneity and diversity of the choir community. The attendance was voluntary, free of charge, and organized as a leisure interest once a week. The choirs were assisted by a Finnish as a second language teacher. In the choir, language was understood in a wider sense as a mode of communication, and the participants were seen as *language users* rather than language learners. Following the notion of *translanguaging* (García & Wei, 2014; Li, 2018), all modes and ways of communication, including verbal, embodied, and sensory resources, as well as the possibilities provided by the material and physical surrounding, were nurtured within the choir context.

In this article, the LFBS choir is explored through *activity theory* as a single activity system (Engeström, 1987, 1999) and as part of interacting activity systems (Engeström, 2001) in order to analyze a hybrid musical practice that reflects the rapid changes and new needs of the broader society. To approach the dual meaning of LFBS choir practice, the analysis employs the concepts of *boundary object* and *boundary crossing* (Star, 2010; Star & Griesemer, 1989). The triple role of the choir conductor and author of this study as (a) choir conductor/music educator, (b) language teacher, and (c) researcher allows a participatory perspective in the choir practice, yet without an immigrant background.

Theoretical lenses: Activity theory and boundary crossing

My first research task of analytical reflection concerns the question of how to conceptualize LFBS practice that highlights the collaborative and productive nature of language use in and with (via) singing in a choir. In the light of the activity system (Engeström, 1987), which draws upon the ideas of cultural-historical activity theory (Engeström et al., 1999), the LFBS choir conductor and the choir member can be seen as performing culturally mediated *individual actions* in the Vygotskyan sense (Vygotsky, 1978), whereas the choir as a whole performs the part of *collective actor*, functioning as a unit of analysis for individual actions. The activity system links "the individual and social structure" (Engeström, 2005, p. 17) and reflects the multi-voicedness of such a system. An activity system (see Figure 1) consists of elements such as subject, object, mediating tools and signs, community, rules, and the division of labor. An object of activity under transformation is the force that integrates different elements. To better meet challenges in exploring "questions of diversity and dialogue between different traditions or perspectives" (Engeström, 2001, p. 136), Engeström further elaborated the theory to focus on two or more activity systems functioning as intertwined, to enable conceptualizing change in relation to societal needs and developments. In this study, I use activity system analyses to reveal the subject-community relationships within LFBS choir and the significance of the individual and social structures.

Figure 1. A Complex Model of an Activity System (see Engeström, 1999, p. 31).



My second research task focuses on the question of how to broaden the understanding of the educational potential of emerging hybrid musical practice, particularly in increasingly intercultural societies. To approach this task, I use the concepts of *boundary crossing* and *boundary object* (Star, 2010; Star & Griesemer, 1989), which help to expand activity theory beyond "learning within single domains and practices" (Akkerman & Bakker, 2011, p. 150) by pinpointing the ambiguity and challenges as well as the potential of activity that intersects and crosses different disciplines and professional practices to serve multiple needs in "a horizon of possibilities" (Engeström, 2005, p. 10). Boundary crossing includes professional work that, in the current state of societal complexity, needs to deal with aspects such as unfamiliarity and unqualification (Suchman, 1994) on one hand, and on the other hand needs to overcome difficulties in dealing with "ingredients from different contexts to achieve hybrid situations" (Engeström et al., 1995, p. 319). A boundary both divides and unites different sociocultural worlds being "neither one nor the other" (Akkerman & Bakker, 2011, p. 141). Negotiation across boundaries is facilitated by boundary objects that communicate between different sociocultural worlds and that are "common enough to make them recognizable across these worlds" (p. 140, see also Engeström & Käyhkö, 2021). These conceptualizations are used to analyze language awareness in the context of intercultural music education.

Outcome of the analysis

The outcome of the analysis is presented in three phases, addressing practice-based theorizing (Gheraldi & Nicolini, 2014) that describes how "knowing-in-practice is constructed" (p. 134). The analysis reflects a practitioner-researcher's (choir conductor's) experiences of planning and implementing LFBS choir practice.

The first phase of the analysis: Emerging hybrid musical practice

In the first phase of the analysis, I use my experience of over two decades conducting different kinds of choirs, from children's to senior choirs, and working as a music teacher for immigrants in multiple contexts ranging from integration training to once-a-month open LFBS workshops for second language teachers and classes of all ages and language levels. This also includes conducting LFBS choirs and collaborating with second language teachers. In addition, diverse contemporary initiatives from international workshops, such as Choir improvisation, "Singen ohne Noten" (Singing without sheet music), and Global Choir Leadership, have influenced the planning. Earlier research on phonetics and Finnish as a second language have contributed to the linguistic orientation focusing on pronunciation and phonetic aspects (Aho et al., 2016; Virkkunen & Toivola, 2020); the courage to use the language (Mustonen, 2015; Tammelin-Laine, 2014); and spoken language (e.g., Lehtonen, 2015; Ruuska, 2020) through embodied approaches (e.g., Eilola, 2020; Lilja et al., 2020). Furthermore, studies in linguistics that discuss the benefits of visual facilitation for second language learning (e.g., Gaboury & Lessard, 2020; Smotrova, 2017) and the contributions of active language use in language ownership (Lehtonen, 2015; Ruuska, 2020) have served as references for the language approach.

Altogether, these experiences and dialogues, crossing disciplinary boundaries and working with different groups of participants and social networks, have resulted in a set of underlying pedagogical principles that have supported the construction of the hybrid musical practice. I have called this set a metaplan, which has provided a mediating tool (an artifact) for crossing the boundaries. Appropriating the definition of *boundary object* as indicating how tools and signs can "fulfill a specific function in bridging intersecting practices" (Akkerman & Bakker, 2011, p. 134), the metaplan can be considered as a boundary object for developing LFBS choir activity, while also being constantly further developed in the processes of choir activity. Boundary objects (Star & Griesemer, 1989) such as diverse technologies, drawings and models (Kimble et al., 2010), or teaching methods (Loughland & Nguyen, 2018) have the potential to overcome discontinuities, thus enabling boundary crossing as a process of establishing continuity of meaning making in a situation of multivoicedness and intersecting practices (Akkerman & Bakker, 2011).

Within the framework of a boundary object, I divide the metaplan into six fields of action in which the diverse ways of musical and linguistic actions become meaningfully integrated. These actions are voiced, embodied, and material in nature, producing a

dynamic and flexible boundary object (Star, 2010) that can be used as a tool for facing complexity and unfamiliarity in interdisciplinary domains and work, and overcoming the difficulties of dealing with hybrid situations. Here, I provide a condensed view of these fields of action (see a more detailed table in Appendix 1):

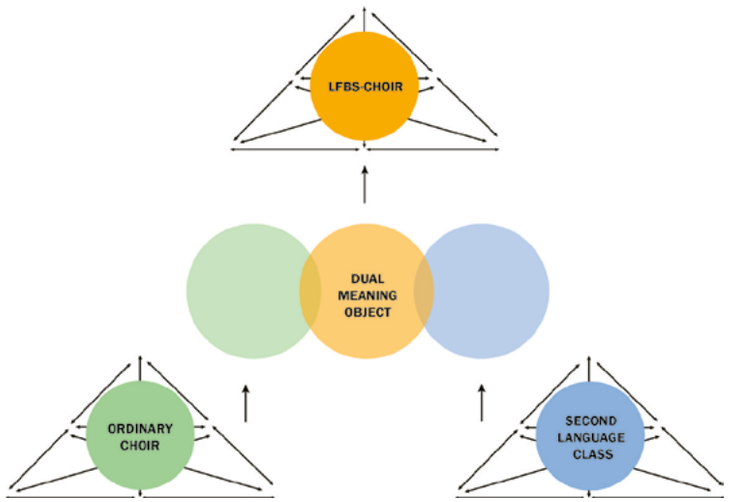
(1) *Warm-ups* aim at the holistic opening of the voice, body, and mind for singing and language use in creative ways, by playing with musical sounds and language through holistic expression while focusing on the challenging sounds of the Finnish language. (2) *Collaborative improvisations* aspire to an interactive and "mistake-is-a-gift" approach to music and language production, with the emphasis on various ways and modes of communication. (3) *Singing songs in different genres and themes*, which forms the core field wherein all of the other action fields are connected, aims at encouraging the active, embodied, and multisensory use of language through singing in collaboration with others in a safe and supportive environment, while simultaneously focusing on the multiple intertwinings of music and language such as articulation, hearing, rhythm, and the cultural content embedded in the songs. (4) *Creating new lyrics* strives to support language production in both oral and written forms by involving co-creation and re-creation of the song lyrics while encouraging intercultural dialogue and the use of spoken utterances. (5) *Immersing in the stumbling blocks of Finnish with "Funny Finnish language songs"* aims at memorizing and recalling the most challenging aspects of the Finnish language, such as its phonetic features and difficult grammatical rules, as well as everyday proverbs in Finnish, with the help of gripping melodies and lyrics that follow the rhythm of the spoken language and emphasize a relaxed and humorous approach to both language learning and singing. (6) F*amiliarizing with songs brought by the choir participants and translated into Finnish* aims to open up a dialogue between the native languages of the choir participants and Finnish, as well as between the musical and linguistic features of the songs from which the translations arise.

The underlying principle is that all six interwoven fields of action are integrated in each choir rehearsal. For example, Creating new lyrics (4) can be embedded in Singing songs in different genres (3), in Collaborative improvisations (2), and in Familiarizing with songs brought by the choir participants (6). Collaborative improvisations (2) can also be integrated with Warm-ups (1), serving as a facilitation when singing songs (3, 5, and 6) or as a break between the different fields. Moreover, LFBS choir practice is constantly developed based on the arising needs, experiences, and suggestions of the participants.

The second phase of analysis: The dual meaning object of LFBS choir activity as an outcome of interacting activity systems

Figure 2 illustrates how two institutionally established activity systems (ordinary choir activity and language learning, second language class activity) can be seen to form the broader social frame of LFBS activity and generate a dual meaning object for this choir activity.

Figure 2. The Dual Meaning Object of Learn-Finnish-by-Singing (LFBS) Activity (see Engeström, 2001, p. 136).

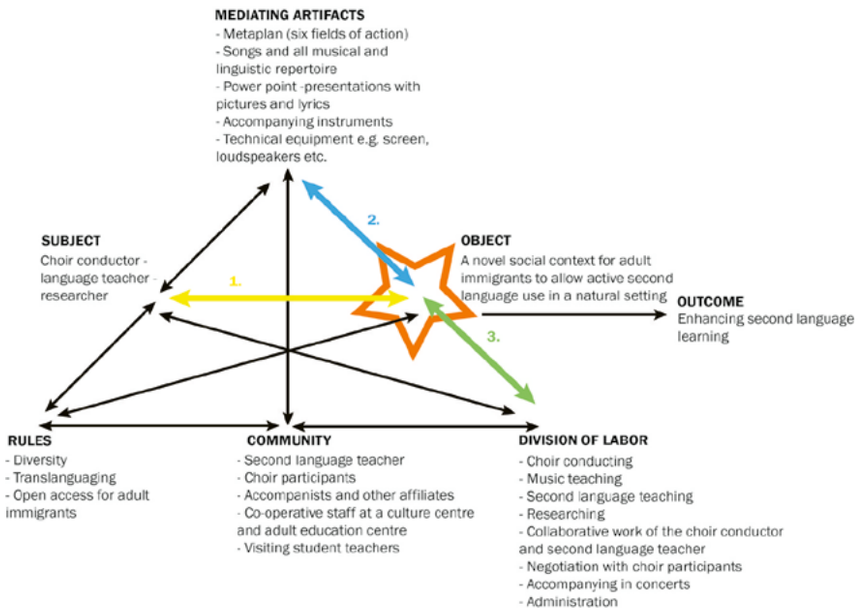


The dual meaning object is not merely the sum of two activity systems (see also Westerlund et al., 2019) but turns the focus toward those processes which allow us to recognize the possibilities and contradictions that are potentially marked by new forms of activity and ways to participate in its practices. To take an extreme example, LFBS activity that draws on diversity and the "mistake-is-a-gift" approach differs from choir activity that strives for homogeneity and avoids mistakes. Likewise, constant negotiation and reflecting on choir participants' here-and-now situational experiences forms a bedrock for constant constructing and re-constructing of LFBS activity, rather than upholding the conventional role of the choir conductor as an authority for predefined choices of repertoire and rehearsal practice. Importantly, LFBS activity involves active and embodied approaches where attention is given to spoken language instead of written language and a sedentary approach (Teräs, 2012), both more typical of teaching activity in a second language class.

The third phase of analysis: LFBS choir practice as an activity system

The activity of this study represents a new joint activity, which is anchored in the prevailing social structures of music and language education. The aim of the third phase of the analysis is to organize the elements of the activity (see Figure 3) in relation to each other from the perspective of my triple role. As a part of a social network with its interrelationships, my triple role performs as the *subject* of the LFBS activity system. The *object* of the activity is to produce a novel social context for adult immigrants to

Figure 3. Generating Learn-Finnish-by-Singing (LFBS) Choir Practice as an Activity System (see Engeström, 1999, p. 31).



allow active second language use in a natural setting. The term "natural" highlights the authentic situation of language use (Lehtonen, 2015, p. 297) through singing. The *mediating artifacts* include all musical and linguistic repertoire utilized during the rehearsals, the Powerpoint presentations with pictures and lyrics of the songs projected on the wall during the rehearsals, the accompanying musical instruments, and the technical devices such as a computer, bluetooth speaker, and smart board system that facilitate the activity. In addition, the metaplan functions as an *intermediate tool* for restructuring not only the choir practice but also its epistemological basis, by positioning LFBS choir practice within thinking that happens "in the middle of things, in a state of in-between-ness" (Jackson & Mazzei, 2017, p. 721). In Engeström's (1999) terms, the *outcome* of an activity system

consists of "societally important new objectified meanings and relatively lasting patterns of interaction" (p. 31). In the LFBS choir, the outcome extends to enhancing second language learning. The element of *community* refers to the choir itself as a social entity, including the choir participants, the assisting second language teacher, accompanists, as well as other affiliates participating in LFBS activity occasionally through concert performances and other projects, visiting student-teachers, and the cooperative staff of the public organizations. The *rules* cover aspects such as translanguaging, which acknowledges the versatile use of linguistic, embodied, multimodal, and spatial resources for communication; diversity as a guiding principle for LFBS choirs, which are characterized by linguistic, cultural, and age-related multiplicity; and open access (i.e., no requirement of earlier experiences in music or Finnish). The *division of labor* in the system includes the tasks of the choir conductor (conducting, music and language teaching, researching); language teaching by the Finnish as a second language teacher; the collaborative work of the choir conductor and language teachers; the constant negotiation with choir participants; occasional accompaniment; and the work of the administration, such as in advertising, registration, and organizing concerts.

The activity system highlights that "the internal tensions and contradictions of such a system are the force of change and development" (Engeström & Miettinen, 1999, p. 9). In LFBS activity, these tensions do not refer to problems or conflicts but to "historically accumulating structural tensions" (Engeström, 2001, p. 137); they denote the challenges that LFBS activity faces as a new orientation when intersecting with and transforming accustomed practices, pedagogical approaches, and institutional structures. These tensions are illustrated with bolded arrows in Figure 3. The first relationship *between the subject and the object* involves the need for the choir conductor to expand their professional thinking and acting toward new insights and novel perspectives when integrating the language orientation meaningfully into musical activities. The second relationship between *mediating artifacts and the object* refers to the need to engender a new practice that is based on the entanglements of music and language learning and use, and on the constant negotiation with choir participants' needs and wishes. The third relationship *between the division of labor and the object* signifies the challenges related to transforming accustomed and different habits of teaching and learning music and language into an integrated LFBS choir practice. This relationship also manifests silos between disciplines (music and language education) at the institutional level, where the required interdisciplinary collaboration lacks structures and resources.

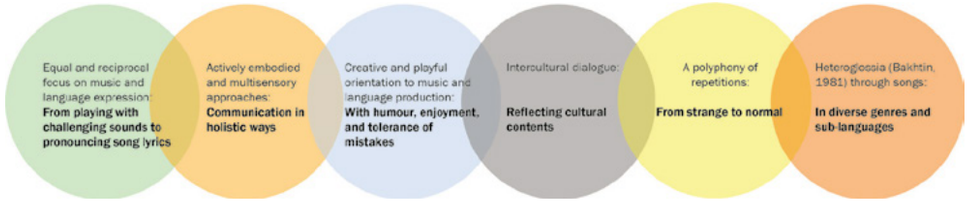
Summary of the analysis

The analysis reflects a hybrid choir practice (a) proposing a "metaplan" with six fields of action as an intermediate tool of boundary crossing between music and language education, (b) as an outcome of interacting activity systems with a dual meaning

object, and (c) as a LFBS activity system raising tensions between the elements of the system that strive to expand music educational thinking.

The starting point for the activity theoretical thinking in this study lies in the need for conceptualizing change in musical practice. In LFBS choirs, the need for change lies in the dual meaning object with respect to music and language. In line with the analysis, the dual meaning object is the driving force for the tensions in the activity system, being also a source for the constantly developing pedagogical principles of LFBS choir practice (metaplan). The analysis is synthesized through six reflections (Figure 4) that show how this dual meaning becomes actualized in and through LFBS choir practice. The reflections highlight changes that the language-aware perspective brings with it when transforming a musical practice into a hybrid practice. The six fields of action serve as a resource for these reflections being diversely included within them, as illustrated below.

Figure 4. Reflections of Dual Meaning in and through Learn-Finnish-by-Singing (LFBS) Choir Practice.



Equal and reciprocal focus on music and language expression: From playing with challenging sounds to pronouncing song lyrics. LFBS choir practice, as a form of collaborative musical practice, manifests a particular form of social language use where simultaneous hearing, listening, and sensitizing one-self to music, to language, and to others—here called "sensitised hearing"—is constantly fostered. Against this specific framework, the first reflection, *Equal and reciprocal focus on music and language expression*, highlights articulation as an equal aspect with music in singing. This emphasis on articulation, which is usually subordinated to music in an ordinary choir, is comparable to phonetic awareness (e.g., Bolduc, 2009; Gaboury & Lessard, 2020) and pronunciation in LFBS choirs. Fol-lowing the notion that practising pronunciation "should start with spoken language, not the writ-ten form" (Virkkunen & Toivola, 2020, p. 38), the phonetical orientation in LFBS choirs begins with "playing with spoken sounds." In the Warm-ups, even the smallest units of language, such as single phonemes and challenging phoneme combinations like vowels, diphthongs (two different vowels in one syllable), and double consonants (typical in the Finnish language), are embedded in musical activity such as vocalization and breathing exercises. For instance, in "The most difficult word of the week" warm-up, choir participants suggest challenging words they have encountered. Starting with the difficult sounds of the word using the Call-and-Response approach, then rhythmically "playing" with them and exaggerating mouth and lip movements, the exercise stretches toward longer units until the whole word is sung or rapped with a simple repeating ostinato (a short repeat-ing musical idea). Examples of such typically difficult words are: äiti (mother) [æiti], löyly (heat in a sauna) [løyly], or hyvää yötä (good night) [hyvæ: yøtæ].

The phonetical orientation is extended when focusing on the articulation of song lyrics. This involves approaching pronunciation in longer phonetic structures such as sentences, phrases, and verses that are embedded in the melody and phrasing of the music. In addition, attention to pronunciation while singing allows LFBS choir participants to implement word stress (always on the first syllabus in Finnish), the perception of long words, and words with endings that are typical to Finnish, without prepositions (Aho et al., 2016). Along with "sensitized hearing," the articulation is facilitated in diverse ways, for example, with the help of rhythmics, embodiment, and emotional expression.

Actively embodied and multisensory approaches: Communication in holistic ways. In LFBS choirs, embodied actions such as mimicry, gestures, and movements, as well as the use of multiple senses, are constantly integrated into the communication and musical and linguistic activity. Hence, *actively embodied and multisensory approaches* manifest the second reflection, embracing embodied learning "as a systemic and holistic process that takes place within the entire human being and between human beings, and in connection with the social and physical reality" (Anttila, 2018, p. 3). The human body is thus understood as a holistic instrument for music and language production. For instance, musical expression and the meaning of lyrics are facilitated and coupled with embodied expressions. Likewise, rhythmic challenges in music and language production are constantly reciprocally facilitated through bodily engagement such as body percussion and putting "groove in the body" to emphasize the rhythm and intonation of spoken words being linked with syncopated rhythm in music, as is typical, for instance, in Finnish pop songs.

Embodied orientation also engages the active use of learning space. For example, "Follow-and-Interrupt" collaborative improvisation draws on moving freely around the space and communicating with bodily, vocal and spatial initiatives made by someone and then followed by the others. That is, the use of diverse modes and ways of communication–or *holistic communication*–is encouraged, highlighting that the point is "not merely that language serves communicative purposes but rather that language is part of a much broader set of semiotic possibilities" (Pennycook, 2016, p. 455).

The multisensory approach manifests the active use of various senses throughout LFBS choir practice. For instance, all music is learned without notation, emphasizing the active use of Call-and-Response and repetition. Visual facilitation is supported by projecting pictures and lyrics of the songs on the wall while singing, enabling the combination of pictures and written words with audible utterance (e.g., Gaboury & Lessard, 2020).

Aligning with Toohey's (2019) description, where language "may be understood as a song, but deaf communication research reminds us that it is also more or less dance" (p. 944), the visual facilitation also manifests showing-in-front approaches that allow choir participants to see and imitate the production of music and language through embodied actions made by the choir conductor and the second language teacher. Imitation denotes creative and interactive negotiation instead of mere copying. Sense of touch refers to the intentional sensing and feeling of how music and language, such as different pitches and vowel sounds, resonate in the body. Bodily sensing is also connected to how emotional states are emphasized as a natural part of musical and embodied expression throughout LFBS choir activity.

Creative and playful orientation: With humor, enjoyment, and tolerance of mistakes. The third reflection encompasses the intertwining of music and language through *creative and playful orientation* as a general mindset in LFBS choir activity. It stems from the "mistake-is-a-gift" perspective. A creative and playful orientation, where humor and enjoyment are related to music and language production, acknowledges learning as a process where "actions do not need to be intentional in order to evoke learning processes" (Van Oers, 2009, p. 6; see also Reber, 1993). For instance, in Funny language songs, traditionally "serious" language content is turned "upside down" with gripping melo-dies that follow the humorous lyrics in various genres, indicating that language learning through singing can be accomplished in alternative (holistic) ways, in contrast to the conventional "cognitivist view" (Atkinson, 2010). These language songs are made in interprofessional collaboration with the choir conductor (music) and the second language teacher (lyrics) and act as mediating tools for memorizing and recalling essential challenges such as the grammatical rules and phonetic peculiarities of Finnish. Each song conveys a specific character of music and language.

For the most part, the creative and mistake-tolerant mindset is emphasized by encouraging choir participants to create and recreate new lyrics to familiar melodies and collaborative improvisations, to support language production, a feeling of *language ownership* (Lehtonen, 2015; Ruuska, 2020), and the expression of one's own thoughts. n this case, the melodic and rhythmic structure of a song generates a motivating base for the active language use. The lyrics are created in small groups and written down so that they can also be seen in visual forms. Individual spoken utterances are created in whole verses, or by just replacing some words. New lyrics are generated for all kinds of songs, but for the most part for folk tunes where the lyrics include difficult dialects and old-fashioned Finnish that are simultaneously translated to a more usable form.

Intercultural dialogue: Reflecting cultural contents. The *Intercultural dialogue* that emerges in various ways and situations during the choir rehearsals generates the fourth reflection, addressing both musical and linguistic aspects. That is, cultural content and meanings associated with the musical and linguistic repertoire are constantly discussed and co-reflected based on the choir participants' linguistically and culturally diverse backgrounds and previous and current experiences in living and learning (second language Finnish) in Finland. The creation and re-creation of song lyrics highlights the expression of one's own thoughts. Singing the songs that were brought and then translated into Finnish by choir participants themselves opens up a dialogue between their native languages and Finnish, diverse music cultures, and the ways in which different languages influence the musical features in songs. In this sense, the activities forge what Marsh (2012) describes as "new connections within the host culture while maintaining links with the home culture" (p. 108). Importantly, critical reflection reveals cultural assumptions in Finnish songs that, through discussions and co-constructions, can enhance cultural understanding (e.g., Ilari et al., 2013).

A polyphony of repetitions: From strange to normal. A natural way to become immersed in a piece of music, like a song, is through repetition. In LFBS choirs, the importance of musical repetition is emphasized by approaching the music without notation. However, musical repetition has multiple other meanings aside from merely facilitating the memorization of a song. Immersing individuals in a song in LFBS choirs manifests how both music and second language are mutually transformed from strange to normal. *A polyphony of repetitions* (the fifth reflection) highlights this process, which reciprocally supports both musical and linguistic expression and the choir participants' different needs and wishes.

While the repetition of songs helps with becoming familiar with challenges in music from multiple perspectives related to musical elements, it also mutually facilitates familiarity with difficult sounds and other aspects of pronunciation, providing mnemonic material for new vocabulary, "ready-made" sentences (e.g., Gaboury & Lessard, 2020; McCormack & Klopper, 2015), and grammar rules (Busse et al., 2021). Repetition also demonstrates the joy of singing songs already learned, as seen in the request raised by choir participants to repeat "old" songs and to finish every rehearsal with a "favourite" song. That is, repetition carried out from diverse perspectives nurtures not only aspects of learning but also well-being and communality. At the same time, it also allows choir members to become familiar with more challenging musical material in different musical genres, not only focusing on "songs with very simple melodies, as lyrics paired with complex or unfamiliar melodies are less likely to be remembered" (Busse et al., 2021, p. 9; see also Tamminen et al., 2017), as is often suggested in research that focuses on short-term interventions in language classrooms. The music educational environment enables the use of a wide range of songs, from children's songs to canons, circle songs, folk tunes, pop songs, rap, and songs brought or wished for by the choir participants, as well as language songs made by the choir conductor and second language teacher. Songs are also improvised and sometimes collaboratively composed. Importantly, the choices of repertoire are constantly discussed and reflected upon in relation to choir participants'

experiences and wishes. Accordingly, musical (e.g., rhythmic and melodic) and linguistic (e.g., articulative) challenges are reci-procally facilitated to support each other and to manifest the close intertwining of music and language in songs. Linguistically and ethically appropriate songs are also arranged to best reflect the situated and local circumstances, so that they can be sung in unison or with up to four voices (female and male), but always with accompanying lyrics and pictures rather than sheet music.

Heteroglossia (Bakhtin, 1981) through songs: In different genres and sublanguages. By singing Finnish songs in different genres, different sublanguages such as the spoken language in pop songs, dialects and old Finnish in traditional music, or the plain language in children's songs can be focused upon. The sixth reflection, *Heteroglossia* (Bakhtin, 1981), manifests the intertwining of musical genres and sublanguages in the Finnish songs. Heteroglossia involves the stratification of language into sublanguages or "social languages" (Bakhtin, 1981, p. 356), in contrast to "unitary language as an abstract entity often presupposed in linguistics" (Moro, 1999, p. 170). Unitary language refers to the written Finnish language being focused on in second language classes. However, it is not spoken as such (e.g., Lehtonen, 2015), so the emphasis in LFBS choirs is on the use of spoken language. Furthermore, singing songs in different genres enables one to encounter language more broadly. This allows familiarization with the specific features of sublanguages, their relationships and differences (such as those between spoken and written language), as well as their correspondent use in music. For instance, the lyrics of traditional music often include sounds, syllables, and particle-like words without meaning, serving as approachable ways to focus on phonemic peculi-arities of dialects in relation to the specific rhythmic and melodic characteristics of a folk tune.

Discussion

By exploring a new choir practice within the theorization of activity systems (Engeström, 1987, 1999, 2001) and boundary crossing (Star, 2010; Star & Griesemer, 1989), this study has strived to dismantle the still-prevalent dichotomous view of the musical versus non-musical ends of music and music education. Advocating for the purely musical (intrinsic) value of music and music education easily avoids addressing other values that call for recognizing the emerging, nonmusical aspects and needs of a society. In this way, an emphasis on the assumed intrinsic value of music tends to uphold the status quo of existing musical practices, aiming at purely musical ends. This makes difficult, and even inhibits, the emergence of novel practices. Abandoning this dichotomous view allows looking beyond purely musical or instrumental values and taking a more holistic approach (see Westerlund, 2005, 2008) that recognizes "the good of the whole" (Meadows, 2009, p. 184), not just one's own or one's discipline's good.

Contextualizing the previously unrecognized *dual meaning* of LFBS choir practice, this theoretical analysis has also aspired to reach beyond the existing norms and dominant notions of music educational practice. Moreover, the study contributes to wider interdisciplinary discus-sion on the relationship between music and language learning by addressing *the relationship between musical activity and embodied language learning*, which has not been recognized in earlier studies on this topic (Jusslin et al., 2022).

The LFBS activity system highlights that the dual purpose of LFBS choir activity generates a need to expand music educational thinking at three levels. First, at the practical level, the dual meaning conveys a tension in relation to expanding the tools underpinning LFBS activity that cannot continue to draw on the existing norms and principles of either choir or language teaching. That is, the developmental LFBS choir practice reflects changes in the local working environments (e.g., Engeström, 2005), in the needs of the students, and more broadly in society due to increasing immigration, rather than some abstract practice of music making with norms and principles related to the musical repertoire alone (cf. Elliott, 1995). Second, at the professional level, LFBS choir activity shows a need for expanding the responsibilities and tasks of the choir conductor. Through the language-aware perspective, the choir conductor becomes a *resourceful practitioner* (Edwards, 2010) through whom the interprofessional and interdisciplinary collaboration with second language teachers, as well as the constant intercultural negotiation with the choir participants, creates new resources. Third, at the disciplinary level, the dual meaning of LFBS choir practice emphasizes an equal and reciprocal approach to both music and language and reveals a tension that originates in the siloed thinking in and between the disciplines. Therefore, through LFBS choir practice the hierarchies and boundaries between music and other disciplines are blurred.

The dual meaning of LFBS choir practice does not merely combine activities of an ordinary choir and a second language class, as the underlying principles (six fields of action) and their implementations (reflections) indicate. Instead, the dual meaning emphasizes holistic experience that can be approached from both musical and linguistic perspectives, conveying the *hybridity* of LFBS choir practice. Altogether, the dual meaning object conceptualizes LFBS activity as a kind of *metamorphosis of musical activity*, where active second language use can be performed in enjoyable, uplifting, and agentic ways. In that sense, the dual meaning of LFBS choir displays a potential to transform the collaborative musical activity "into a resource for *performing citizenship*" (Peters, 2016, p. 478) that creates successful experiences and 'happiness' through acts that are constitutive in this way" (p. 477) for the choir participants.

In line with the theoretical analysis, any hybrid musical practice can comprise potential for widening music education toward novel insights, out-of-the-box perspectives, and

new opportunities. In terms of LFBS choir practice, however, this requires contesting conventional dichotomies such as music's instrumentalization, blurring and crossing boundaries between disciplines and professions, as well as transforming the accustomed habits of musical practice and expanding professional boundaries (cf. Westerlund & Gaunt, 2021). However, as the case of LFBS choir shows, this kind of expanding practice is necessary when "old practices fail to connect with current purposes and intentions" (Edwards, 2010, p. 13). Such change, like the language-aware perspective in LFBS choir practice, reflects changes that originate from outside of established professional practice, that is, from environments both near (teaching and learning environments) and far (societal and global situations). Consequently, more research is needed on hybrid musical practices and students' experiences of such practices. Moreover, the potential of musical activity for embodied language learning should be explored from diverse perspectives due to its invisibility in the fields of both music and language education.

Conclusion

To conclude, this study has provided a theorization of a dynamic and dialogical choir practice that has its origin in the needs and wishes of adult immigrants and second language teachers in an increasingly intercultural society. The analysis of LFBS choir practice in Finland exemplifies and justifies change in music educational thinking that reflects the changes in the surrounding society and the consequential need to reach beyond the existing norms and principles of commonly known music education practices, including the theorisation of such practices. The illustrated dual meaning of the hybrid LFBS choir practice reveals the potential for consciously expanding professional boundaries, and hence blurring the dichotomous thinking of music and music education. As Dewey (MW 9, p. 254) notes, we cannot separate different interests or disciplines since in our experience different aspects such as musical and non-musical are integrated holistically, generating various meanings. The hybrid nature of LFBS choir practice underlines the holistic nature of experience. In this way, it also highlights a non-hierarchical approach toward music and language education. The study further suggests that a hybrid musical practice, and an analysis thereof, can significantly broaden professional understanding through novel insights, out-of-the-box perspectives, and new opportunities. Finally, although the choir participants' motives to join the LFBS choir may have been linguistic, the targeted, holistic, here-and-now meaning and individual and collective experience in LFBS choir practice aspires to such intercultural meaningfulness that enables performing citizenship (Peters, 2016) in ways that exceed purely musical or linguistic goals.

Ethical approval
The construction and handling of unpublished data for this research adhered to the Ethical Instructions of the University of the Arts (UNIARTS 2015), the code of ethics of the European Commission (EC 2010), and the Responsible Conduct of Research (RCR) guidelines of the Finnish Advisory Board on Research Integrity (TENK 2012). The study has received the approved statement regarding the ethicality of the research from the University of the Arts Helsinki Ethics Committee, and research permissions from the related organizations according to their research integrity guidelines. In addition, DPIA (Data Processing Impact Assessment) has been processed and approved by the Data Protection Officer at the University of the Arts Helsinki. The participants have provided their written informed consent to participate in this study.

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Note
1. Integration training tries to give better possibilities for immigrants (unemployed, at least 17 years of age, living less than 3 years in Finland) to become part of Finnish society. The requirement to participate concerns both labor market and independent training funded with unemployment benefits (TE-services).

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Appendix 1

Table 1. Metaplan for the Learn-Finnish-by-Singing Practice.

Singing in this context is approached in a holistic way, emphasising diverse ways of using the voice, e.g. 'sound expression' and involving both the voice and the body.

1 Warm-ups

- Phonemes, sounds, letters, syllabus, words (phonetic orientation) are used to holistically open up the voice, body, mind, ears, and other senses
- To familiarize oneself with different phonemes, vowels, consonants, and the challenging sounds of Finnish with the help of vocalisations, breathing exercises, singing ostinatos, simples tunes, and circle songs
- To inspire language learning with the help of comprehensive "sound-expression", gestures, multi-sensory methods, games, playfulness, and the utilization of space

References to language learning: phonetic expression, familiarizing with diverse sounds, courage to use the language, listening and hearing, hearing specification

2 Collaborative choir improvisations

based on playful and creative orientation with sounds of music and language (letters, words, phrases), vocalization, circle songs, or other simple tunes with/without instrumental accompaniment

- To encourage the holistic use of language – even with a small amount of language proficiency
- To listen to each other
- To utilize all modes and ways of communication
- To react
- To strengthen the skills of interaction
- To activate creative and imaginative thinking
- To learn to tolerate mistakes and not to be scared of them

References to language learning: to find new and creative ways to express oneself in order to communicate, courage to use the language, speech production, listening and hearing

3 Singing songs in different genres and themes

- Arranged to fit varying circumstances, special needs, and the wishes of the choir members
- To practise pronunciation in collaboration with other learners
- To put the language into the mouth, to chew and taste it from different angles and directions with the help of musical expression and gestures
- To become familiar with new vocabulary and the social and cultural contents of the songs
- To perceive the Finnish language diversely, e.g., through spoken language and proverbs in pop songs, "plain language" in children's songs, dialects in folk songs
- To facilitate understanding the meaning of words with the help of musical expression
- To express feelings and share experiences while learning language

References to language learning: pronunciation, new vocabulary, cultural knowledge, spoken language and dialects, comprehension

4 Creating new lyrics to familiar melodies and collaboratively-improvised songs

- To facilitate understanding the rhythm, intonation, and structure of the language with the help of musical phrasing
- To activate language production
- To change old-fashioned utterances in songs to spoken and more useful forms
- To encourage the expression of one's own thoughts, ideas, and emotions
- To utilize learned language in creative ways

References to language learning: to activate spoken and written language production, courage to use the language, pronunciation, to recall learned words and utterances

5 Immersing in the stumbling blocks of Finnish with "Funny Finnish language songs"

- Lyrics by the S2 teacher and music composed by the choir conductor
- To facilitate memorizing and distinguishing the general challenges and "stumbling blocks" of Finnish with the help of gripping melodies and catchy rhythms
- To emphasize a relaxed, joyful, and humorous atmosphere for engaging with language learning
- To internalize basic grammar rules with the help of singing, musical expression, and supporting gestures
- To create memory points for the challenging aspects (pronunciation, grammar, vocabulary) of Finnish

References to language learning: all the aspects of language, for example, grammatical structure, vocabulary, pronunciation, stumbling blocks, the most difficult sounds and phonemes in pronunciation

6 Familiarizing with songs brought by the choir participants and translated into Finnish (with the help of the teachers)

- To share diverse languages among the choir participants in relation to the Finnish language
- To approach and perceive language through different contexts and situations
- To encourage/facilitate the wishes of the learners and intercultural dialogue

References to language learning: courage to use the language, understanding, vocabulary, dialogue between diverse languages

ARTICLE 2

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Singing Language – Integrating Second Language Learning into Choir Practice

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Abstract

Language and music are closely tied in singing. It has even been argued that without language there is no song. However, can music and language learning through singing also be seen as being closely tied without first highlighting the boundaries between these disciplines? This study emphasizes a nonhierarchical approach to music and language learning by intertwining musical and linguistic activities in a choir context. The study explores the extent to which singing in a language responsive choir can encourage productive second language use and enhance the sound hearing, phonological processing, pronunciation, and spoken language skills of adult choir participants with culturally and linguistically diverse backgrounds. The research material consists of individual pre-, middle-, and post-interviews and Phonology pre- and post-tests that were conducted with volunteer choir participants during 2019–2020. The analysis encompasses both thematic and statistical approaches. The findings are reflected through a hybrid choir practice that draws on a three-way dialogue between choir participants, the choir conductor, and the second language teacher. The results suggest that active and holistic second language use in a language-aware choir context decreases phonological challenges in second language auditory processing and verbal production, including spoken language. The findings of the interviews and the Phonology tests were in line with each other.

Keywords: Choir, holistic learning, intercultural, language production, music education, pronunciation, second language, transdisciplinary

Introduction

The world as we know it is undergoing major changes, ranging from the constant expansion of digitalization and artificial intelligence to ongoing global crises such as environmental warming and geopolitical conflicts causing, in turn, various interrelated changes such as increasing famine, energy crises, or the over two-year corona pandemic (e.g., Dufva & Rekola, 2023; WHO, 2022). Increasing immigration is clearly one of these interrelated changes, one which creates both new demands and possible benefits related, for instance, to ageing populations and declining birth rates in countries receiving immigrants. A critical challenge facing newly arrived residents is learning the official language of the country they immigrate to. The growing number of second language learners with a variety of new needs also requires the development of new pedagogical approaches to second language (henceforth L2) teaching and learning, in particular approaches that can facilitate major challenges in language use and everyday communication.

In Finland, the context of this study, the number of foreign citizens grew by about 87% (Tilastokeskus (Statistics), 2022) in the decade 2011–2021. Most foreign citizens (75%) immigrating to Finland are working-age adults (15–25 years; Tilastokeskus (Statistics), 2022). Adults, however, face different kinds of challenges in their Finnish-as-L2 learning process than children who are inte-grated into the official schooling system and are thus exposed to L2 teaching soon after entering their new country. Children also learn pronunciation easier than adults, for whom learning structures and grammar is often quicker (Pietilä, 2014; Virkkunen & Toivola, 2020). Adult immigrants in Finland often also lack social contexts where they could actively use and practice Finnish, and especially become familiar with the spoken language, which is significantly different from the written Finnish (e.g., Lehtonen, 2015) that they typically learn in L2 classes. Public discussions and media point out that Finns typically use English when communicating with immigrants, and for adult immigrants who do not speak the same native language, English is also most often the common language. A lack of Finnish skills, however, creates multiple barriers for inclusion. For instance, newly arrived residents are easily excluded from cultural and arts services.

The Learn-Finnish-by-Singing (henceforth LFBS) choirs, the focus of this study, reflect the growing diversity in Finland, with adult choir participants coming from different parts of the world and having different first (L1, native) languages. These choirs were originally created in response to the direct social needs of the newly arrived immigrants in Finland and the wishes of L2 teachers who had had positive experiences of singing related to L2 learning. The language-sensitive choir practice was developed to enable adult immigrants to actively practice their second language use in a natural social environment while at the same time participating in meaningful musical activity (cf. arts service).

Finnish, a Finno-Ugric language, is often considered as a particularly difficult language because it differs markedly from the Indo-European languages traditionally spoken in Europe (see more Dahl, 2008). At the global level, Finnish is a marginal minority language, spoken only by around 4.8 million people mainly in Finland. As a quantity language, a typical feature of the Finnish language is phonemic vowel and consonant length, which has been found to be particularly challenging for L2 speakers of

Finnish regardless of their language of origin (Aho et al., 2016).

This study explores whether musical activity in a linguistically responsive choir context can enhance the choir participants' sound hearing and production of Finnish as L2. Studies in psychology and linguistics suggest that musical skills, such as pitch and rhythm perception could be "transferred" to L2 phonological skills (e.g., Chobert et al., 2014) and to vocabulary learning (e.g., Chan et al., 1998; Kang & Williamson, 2014). The study of Zhang et al. (2023) extends the idea of "transfer effect" (e.g., Besson et al., 2011) to encompass the actual singing activity that can activate "brain networks that facilitate auditory motor mapping procedures" (p. 14) and, therefore, also speech production (see also Gordon et al., 2018). In turn, the dual integration hypothesis (e.g., Thiessen & Saffran, 2009; see also Ginsborg & Sloboda, 2007) proposes that "related aspects of a complex stimulus" (Thiessen & Saffran, 2009, p. 226), such as simultaneous input of melodic and lyrical structures through singing, can reciprocally facilitate learning of both music and language, not only in adults but also in infants. In addition to the suggested cognitive effects of musical activity, positive effects of collaborative singing on wellbeing and on psychological and physiological health (see Clift et al., 2015; Heydon et al., 2020) are widely emphasized in research of different fields (e.g., psychology, education, psychobiology, epidemiology, ethnomusicology). These effects refer, for instance, to enhanced social bonding (e.g., Davidson & Leske, 2020; Fancourt & Perkins, 2018; Launay & Pearce, 2020) and emotional resources that musical experiences provide (e.g., Dingle et al., 2017; Gabrielsson, 2011; Warran et al., 2019).

In the context of foreign language learning, numerous studies in linguistics and psychology have shown that listening to and singing songs can contribute to syllable, word, and sentence perception and pronunciation, and to memorizing and recalling them (e.g., Good et al., 2015; Ludke, 2018; Ludke et al., 2014; Schön et al., 2008). Studies of kindergarten and primary school children have shown how different musical actions related to singing and rhythmics (clapping, tapping, body percussion) support children's phonological awareness and auditory perception (e.g., Anvari et al., 2002; Bolduc, 2009; Dege & Schwarzer, 2011; Gaboury et al., 2020; Gromko, 2005; McCormack & Klopper, 2016; Moritz et al., 2013; Standley & Hughes, 1997). Moreover, a growing number of studies that acknowledge language teaching and learning as an embodied (holistic) process (e.g., Atkinson, 2010; Kosmas & Zaphiris, 2020) indicate how engaging bodily and material resources facilitate challenges in L2 pronunciation in multiple ways, for instance as related to perceiving syllables, word stress, and rhythm of language (e.g., Nguyen, 2016; Smotrova, 2017). However, research in linguistics, phonetics, and psychology focusing on L2 pronunciation often lacks evidence-based research related to actual practices and teaching strategies in authentic learning contexts (e.g., Aho et al., 2016; Baker, 2011, 2014; Derwing & Munro, 2015; Virkkunen & Toivola, 2020).

The language-aware perspective in LFBS practice acknowledges earlier research

on important factors of L2 and foreign language phonetics and pronunciation highlighting analytic and conscious hearing (e.g., Saito et al., 2022; Thomson, 2011; Yule et al., 1987), the active practice of motor skills (e.g., Aho et al., 2016; Kissling, 2013), motivation (e.g., Saito et al., 2017, 2018; Yousofi & Naderifarjad, 2015), having a supportive and mistake-tolerant learning environment (Baran-Łucarz, 2017; Horwitz et al., 1986; Wrember, 2001), and taking into account different needs related to individual challenges in pronunciation (Aho et al., 2016; Munro et al., 2015; Suzukida, 2021). Unlike ordinary choirs, where the focus is more on music than on language learning and on clear articulation of already existing lyrics at the most, the LFBS choirs' focus is on music and language learning through multiple musical activities (including inventing new lyrics, translating intercultural songs) that support language learning and not simply musical outcome. This kind of hybrid choir practice has not been systematically explored before.

Languages are traditionally taught with an emphasis on cognitivist approaches (Atkinson, 2010). Although research on language education already acknowledged the potential of embodied approaches (e.g., Atkinson, 2010; Kosmas & Zaphiris, 2020) in the beginning of the 21st century (Nevile, 2015), they have only recently found their way into language classroom practices (Macedonia, 2019; Macrine & Fugate, 2021). Since the late 2010s there has been a notable growth of empirical studies related to embodied approaches in language learning in diverse fields such as education, linguistics, and neurosciences (Jusslin et al., 2022). Teaching and learning music in the context of music education naturally promotes the holistic and embodied nature of making and experiencing music; however, studies on language learning through music have not been acknowledged as embodied because "they did not explicitly use an embodied framework" (Jusslin et al., 2022, p. 17). This study draws attention to the holistic (embodied) nature of language use and learning in a music education context.

The theoretical underpinnings of this study draw on the concept of "change" central to *activity theory and activity systems thinking* (Engeström, 1999, 2001) in the context of education. The underlying pedagogical principles of the investigated LFBS choir practice – the six fields of action – interweave musical and linguistic activity and together form a *boundary object* (Lehtinen-Schnabel, 2023) for the dual-meaning choir practice. The six fields of action are in constant "change," developing further during the choir activity and reflecting the emerging needs and here-and-now experiences of the choir participants. That is, the constant negotiation with choir participants in the transprofessional and interdisciplinary collaboration between the choir conductor and L2 teacher creates a triadic (three-way) dialogue in which the restructuring of the choir practice evolves into "something emergent, unpredictable, and always rethinkable and redoable" (Jackson & Mazzei, 2017, p. 717). This collaborative ongoing process underlines the equal and nonhierarchical nature of the LFBS choir practice into which the experimental and

creative mindset is integrated.

Figure 1 shows the three-way dialogue between all parties of the choir community related to the "dual-meaning" object of the LFBS choir activity. The triadic dialogue also foregrounds the use of translanguaging (e.g., García & Wei, 2014; Wei, 2018) within a multilingual choir context, in which all possible linguistic (e.g., L1 languages of the choir participants) and other resources (e.g., embodied, spatial, material) are harnessed to support communication and overcome the monolingual bias in teaching and learning (e.g., Hua et al., 2020).

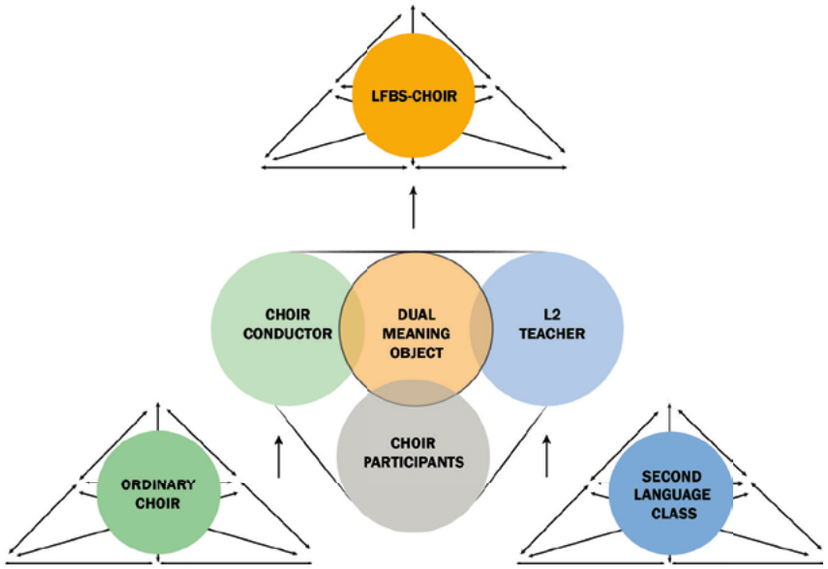


Figure 1. Three-way dialogue in and through the dual-meaning LFBS choir practice (figure adapted from Lehtinen-Schnabel, 2023).

Research Focus and Methodology

This mixed-method study highlights choir participants' experiences and usage of Finnish as L2 – sound hearing and pronunciation in particular – in relation to the musical activity in LFBS choirs. The focus of the study is L2 production[1] learned through holistic musical activity in LFBS choirs over one year. We ask: What kind of changes in the challenges of their Finnish language expression do choir participants with culturally and linguistically diverse backgrounds experience and demonstrate after singing in a language-aware choir?

Design of the Study

The empirical part of the study was implemented between September 2019 and December 2020 (Figure 2). During this time, individual semi-structured pre-, middle-, and post-interviews as well as Phonology pre- and post-tests were administered to the volunteer choir participants who provided their written informed consent for inclusion, collection and use of data, and publication.

Owing to the sudden Covid-19 pandemic, the choir practice was held online from the middle of March to the middle of May 2020, that is, until the end of the spring semester. Therefore, the original intention to compare choir participants' Phonology test results with those of adult learners in the normal L2 class was not carried out. The timing of the Phonology post-test was postponed from the end of May to December 2020 to enable more live (face-to-face) choir rehearsals, where L2 sound hearing and pronunciation could again be actively practiced in collaboration with others.

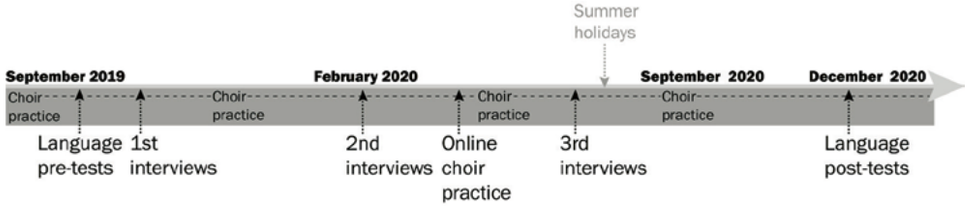


Figure 2. Design of the study.

Participants

The participants in the two LFBS choirs who volunteered for this study spoke 20 different first (native) languages, and some had bilingual backgrounds. The native languages of the volunteers included Georgian, Russian, Ukrainian, Dutch, Portuguese, Spanish, French, Chinese, Taiwanese, Vietnamese, Japanese, Lithuanian, Latvian, Telugu, Hindi, Malay, Italian, German, Turkish, and English. The participants were 21 to 70 years old and had diverse eco-nomic, educational, and social backgrounds. The choirs were open access, that is, there was no requirement to have music or Finnish-as-L2 skills. The participants included both newly arrived residents with very little expo-sure to the Finnish language as well as individuals who had already been living in Finland for 2–16 years. However, all of them had immigrated to Finland as adults and had not learned (or in some cases even heard) Finnish before that. Thirty-eight of the 41 participants had previously participated in Finnish-as-L2 classes at diverse levels of the CEFR.[2] The musical experience of the participants was also varied. Some participants

had never attended any music lessons, while others were advanced singers or musicians. Attendance in these choirs was voluntary, free of charge, and a leisure occupation once a week. The teaching was subsidized by the National Board of Education and the city of Helsinki. Table 1 describes the background of the participants with respect to years of living in Finland (less or more than one year) in relation to the time of joining a LFBS choir (beginners or continuers in autumn 2019).

Table 1. Participants grouped based on the time living in Finland vs. singing in LFBS choirs.

Choir participants	Living in Finland less than a year (< 1 year)	Living in Finland more than a year (> 1 year)	N
Beginners: Singing in a LFBS choir less than a year (< 1 year)	9	15	24
Continuers: Singing in a LFBS choir more than a year (> 1 year)	0	17	17
N	9	32	41

LFBS Choir Practice

The Setting. The two choirs in this study held 1.5-h rehearsals once a week. One choir had evening rehearsals in anormal music classroom, the other in a music hall in the afternoons. The first choir was split into two separate groups (beginners and continuers) because the size of the music classroom was too small to fit all of the participants. The physical space of both choirs was organized to enable the use of multisensory (all senses) and embodied (movements, gestures, and mimics) approaches. In the rehearsal space, the chairs were placed so that the choir participants were able to see the images and lyrics projected on the wall, and to stand up and have space for bodily expression. The space was also used for moving around and for forming a circle. A piano was placed up in front so that the participants could see the choir conductor's movements (and vice versa) while accompanying the singing. Technical equipment, such as a computer, smartboard, Bluetooth loud-speakers, and musical instruments were all placed near the piano so as to be reachable and easy to handle by the choir conductor. The Finnish-as-L2 teacher helped with the technical equipment when participating in the choir rehearsals, which was every second time.

During the Covid-19 pandemic online rehearsals, the support of being able to hear, see, and move together with other choir members disappeared, and each choir participant sang alone in front of their own digital device in varying domestic conditions, muted from each other, and hearing only one person singing or talking at a time.

Six Fields of Action Underpinning the Choir Practice. LFBS choir practice has a dual-meaning purpose: to create meaningful and responsive musical experiences for the choir participants, while at the same time supporting their L2 use. In other words, in this art-based context L2 is approached in and through musical activity with a language-aware perspective. Both input (hearing, listening, and sensing) and output (language production) of language are actively nurtured throughout the choir rehearsal. Different challenges in language production experienced by the choir participants are acknowledged and constantly collaboratively negotiated. This process involves the continuing search for new musical approaches through which to tackle these difficulties.

The underlying pedagogical principles of the LFBS choir practice are divided into six "fields of action" (Lehtinen-Schnabel, 2023) that are diversely approached during the choir rehearsals. They emphasize the intertwining of musical and linguistic actions and the natural relationship of music and language in singing. From the perspective of learning L2, *warm-ups* (the first field of action), which typically start the choir rehearsals, focus on hearing and producing challenging speech sounds such as single phonemes, double consonants and vowels, and difficult combinations of single phonemes such as diphthongs (two different vowels in a syllable) in playful and creative ways while opening voice, body, mind, ears, and other senses for singing at the same time. *Collaborative choir improvisations* (the second field of action) encourage the choir participants to explore linguistic expressions together using various ways and modes of communication (e.g., vocal, verbal, bodily, emotional) and highlighting languaging,[3] sensitive listening to others, and the encouragement of language ownership even with limited L2 abilities. *Singing songs in different genres and themes* (the third field of action) underlines active and collaborative (social) language use, where the focus is on the articulation of song lyrics at the phrase and verse level, and on the word stress and rhythm of language. Singing songs in different genres also enables familiarization with diverse sublanguages such as spoken language and the different dialects of Finnish. The creation and re-creation of song lyrics (the fourth field of action) encourages the expression of per-sonal experiences, supports intercultural dialogue, and pro-motes using spoken utterances and thus everyday communication. Immersing in the stumbling blocks of Finnish with "Funny Finnish language songs" (the fifth field of action) utilizes songs created by the choir conductor (music) and L2 teacher (lyrics) focusing on the most challenging phonetic peculiarities and grammar (e.g., consonant gradation)[4] of Finnish through humorous lyrics integrated to gripping melodies. *Familiarizing with songs brought by the choir participants and translated into Finnish* (the sixth field of action) raises the awareness of relationships and differences between choir participants' native languages and Finnish in line with musical

features that typically follow the particularities of the specific languages.

In summary, LFBS choir practice approaches L2 use from diverse perspectives and aims to encourage active and holistic L2 use by offering the choir participants an authentic and meaningful social situation (Lehtonen, 2015) into which emotional and motivational benefits of collaborative musical activity (Siljamäki, 2021) are integrated.

Research Methods

This mixed-method study combines both qualitative (interviews) and quantitative (Phonology tests) research methods to explore the LFBS choir participants' Finnish-as-L2 learning from experienced and test-based perspectives.

Interviews. We used semi-structured interviews (Kvale & Brinkmann, 2009) to explore the choir participant's experienced challenges in learning and speaking Finnish, and the possible changes they faced after singing in a LFBS choir for five to nine months. Semi-structured interviews seek "to obtain descriptions of the interviewees' lived world with respect to interpretation of the meaning of the described phenomena" (p. 27). The individual interviews were carried out three times (cf. Figure 2) by the researcher/choir conductor. The interviews were conducted either before or after the choir rehearsals, in a peaceful space in the same building where the choir rehearsals took place, in order to make them reachable for the choir participants in terms of time and place. Owing to the second corona lockdown, the third/post-interviews took place online (in Zoom).

The interviews were conducted in English. All interviewees were able to speak English at a level that made communication manageable. In addition, the interviews utilized holistic communication such as bodily (gestures and movements) and vocal (singing and sound) expression to expand their verbal expression when needed. That is, the communication and interaction in interviews was facilitated in all possible ways and with all available resources, including other possible common languages.

The first and second interviews were audio/sound recorded, and the third interviews video and audio/sound recorded. All interviews were transcripted, two of them by the researcher and the others by a company specialized in audio recorded research transcriptions, from which a nondisclosure agreement was received.

Phonology Test. We used Phonology tests (Kunnari et al., 2012) to evaluate the participants' challenges in Finnish pronunciation (pre-test) and the possible changes in these challenges after actively participating in the LFBS choirs (post-test). The Phonology test was designed to evaluate phonetic development in Finnish and was chosen because foreign language tests do not acknowledge the specific structure of Finnish in a sufficient way (Kunnari et al., 2012, p. 6). The Phonology test was originally created for monitoring the development and possible problems in phonetic skills of Finnish children (p. 15).

During such tests, children are asked to name pictures shown to them; the pictures can also be named by repeating them after the administrator of the test does so. The test is always audio recorded and transcribed onto a standardized test form. The test has two versions: one for 2-year-olds and another for 3–6-year-olds. The former (and shorter) test has 36 pictures that are related to the child's world of experience, including 31 nouns, 3 verbs, and 2 onomatopoeic expressions imitating animal voices. The latter test consists of 90 pictures representing 76 nouns, 9 verbs, 3 adjectives, and 2 onomatopoeic expressions. The pictures were chosen based on their identifiability and the prevalence of the sounds and sound combinations in Finnish.

We chose the shorter 10-min version of the Phonology test, since it could be quickly presented to the participants before, during, or after the weekly choir rehearsals. It was also considered suitable for adult individuals with little experience in Finnish by logopaedics students, and speech and language therapists use the test regularly.

The Phonology test evaluates two types of phonetic skills: phonotactic and paradigmatic skills. The evaluation of phonotactic skills includes: 1) the length of sounds and syllables (double vowels and consonants) and short and long (two-and three-moraic) first syllables; 2) the length of words (two- and three-syllables); and 3) combination of sounds (separate consonants in a word, diphthongs, and combinations of consonants). Paradigmatic skills are evaluated but not scored, and include articulation of individual phonemes (consonants at different positions in words and vowels).

Although we used the test material of the Phonology test, we changed the scoring of the test completely to better suit the aims of this study. First, since we were interested in the difficulties that adult immigrants face in Finnish pronunciation, we scored the sounds that were *not pronounced correctly*, whereas in the original Phonology test only sounds pronounced correctly are scored. Second, we added one new sound category to the phonotactic skills (two double consonants in a word), and also scored the paradigmatic skills with four new categories (wrong sound, sound left out, an extra sound, and [ŋ] sound represented by the letter combination [ŋ] in written words). Third, we evaluated and scored all sound categories in every word instead of focusing on only one or a few of them in a given word, as is done in the original test. Altogether we scored 14 sound categories, of which nine were based on the Phonology test (Kunnari et al., 2012) and five (in bolded text) on our added sound categories (see Figure 3).

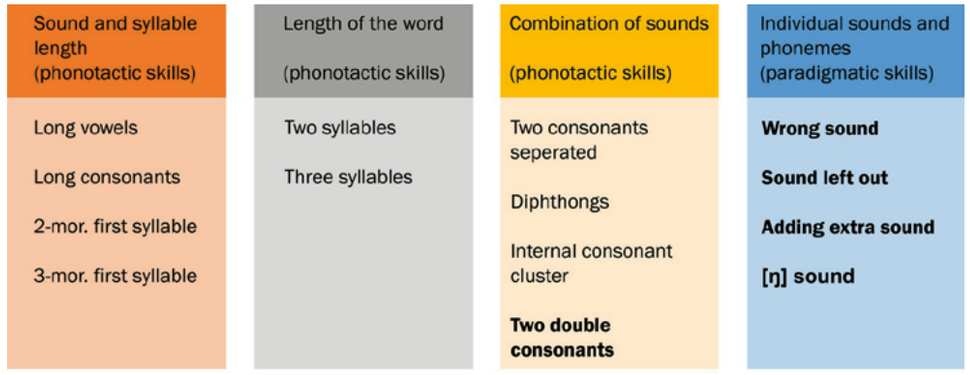


Figure 3. Fourteen sound categories (variables).

The Phonology test was presented to the choir members either before or after the choir rehearsals, either by the researcher (first author/choir conductor) or by a student from the Helsinki University Department of Logopedics, who also used parts of the pre-test results in her master' thesis titled 'The Suitability of the Phonology test for assessing the Finnish pronunciation of adult immigrants' (Ihalin, 2020). In the master's thesis, the Phonology test was compared with a Sentence test developed for the thesis, and the results showed that the Phonology test in its current form is moderately suitable for assessing adult immigrants' pronunciation of the Finnish language. The tests were administered in a quiet space suitable for the purpose near the choir rehearsal space. The post-tests were administered online (via Zoom) by the first author/choir conductor. All tests were audio recorded and transcribed on the standardized test form (see Appendix 1).

Analysis

We analyzed the empirical material both qualitatively (interviews) and statistically (Phonology tests). Twenty-three interviews of 11 choir participants (see Table 2) were analyzed using thematic analysis (Braun & Clarke, 2006) "which can potentially provide a rich and detailed, yet complex account of data" (p. 5) to report "experiences, meanings and the reality of participants" (p. 9), in this case, the self-reported articulations of language-related challenges and changes in Finnish-as-L2 learning and use. All instances across the interviews referring to these particular analytic interests were included. In relation to the first inter-views, we identified and coded the choir participants' experiences of the most difficult aspects of the Finnish language, and based on those that were

experienced by the majority of participants, five main themes were selected. These main themes showed strong coherence among the interviewees and no subthemes emerged. Related to the second and third interviews, we thematically identified and coded the choir participants' experiences of change in their L2 challenges and expression, and on a more general level in L2 use in their daily lives after joining the LFBS choir. Based on this analysis, we formed six overarching main themes out of the related subthemes called "themes-within-a-theme" (Braun & Clarke, 2006, p. 22).

Table 2. Interview participants.

Interviewees	First (pre) interview	Second (middle) interview	Third (post) interview
11	11 interviewees 7 female / 4 male	7 interviewees 5 female / 2 male	5 interviewees 4 female / 1 male

The Phonology pre-test was administered to 41 volunteer choir participants, and 16 of them also participated in the Phonology post-test. The corona pandemic and the subsequent lockdowns had an influence on the number of participants. The results of the Phonology tests were analyzed using IBM SPSS Statistics. First, we evaluated the means and standard deviations of the different sound categories (variables) in the whole participant group. Second, ANOVA tests were used to assess whether there were significant differences in the test scores between participants, who were divided into three subgroups according to how long they had lived in Finland and when they had joined the LFBS choirs (see Table 1). Third, a paired samples t-test was used to analyze the significant differences between the Phonology pre- and post-tests. All results were considered statistically significant, at significance level of $p < .05$. Although the pre- and post-test groups were small for reliable statistical analysis, we were interested in knowing whether the results would indicate any changes between the pre- and post-test scores.

Results

The results are divided into two sections: 1) difficulties in Finnish pronunciation; and 2) changes in phonological pro-cessing and Finnish-as-L2 use after singing in LFBS choir.

Difficulties in Finnish Pronunciation

Experienced Challenges: First Interviews. All 11 interviewees described Finnish language systematically as "very difficult," "complicated," "strange," or "different" in relation to their own first (native) languages and other languages they knew. Finnish was regarded, for instance, as "an alien language" (Interviewee 1), "a fairy-tale language" (Interviewee

10), "Euscara spoken by Basques" (Interviewee 6), and "an Elf language created by J. R. R. Tolkien" (Interviewee 3).

The main phonetic difficulties were associated with "hearing and implementing double consonants and vowels" (Interviewee 1), "pronunciation of some letters" (Interviewee 11), and "hearing the [a] and [æ] and those of the [ø] and [o]" (Interviewee 2). In other words, the main challenges in phonology and pronunciation were described in relation to 1) the length of sounds (especially double consonants and vowels), 2) single unfamiliar sounds such as [æ], [y], [ø], [h], and [r], and 3) hearing the difference between vowel sounds such as [a-æ], [o-ø], and [u-y]. In addition, some difficulties were associated with combinations of sounds such as two different vowels in a syllable (diphthongs). In the words of one interviewee, "Finnish is the most challenging of all languages I know, because of so many challenging sounds that we need to do in one word. The two consonants and one consonant. I can't hear a and ä and those sounds" (Interviewee 7). The feeling of strangeness when producing the "unfamiliar" sounds was experienced as a barrier which, in the words of one interviewee, was only possible to deal with by learning "words by heart, so you repeat them and repeat them and repeat them" (Interviewee 10). Hearing and pronouncing sounds were also considered difficult due to "words which are really familiar, and the difference is that kind of phonetic difference" (Interviewee 10), referring to the essential but very challenging feature of Finnish, its quantity nature (e.g., Vihanta, 1990), in which the relative duration (length) of vowel and consonant sounds separate word meanings from each other (e.g., [tili], [tiili], [tilli] / account – brick – dill) (Hakulinen et al., 2004).

All interviewees also mentioned significant challenges in the "constructs of the words," emphasizing the constant change in the word body due to the use of affixes (endings) that in Finnish replace prepositions, and typically create difficulties in comprehending the language. This change, which often makes the original word difficult to recognize, was constantly described and wondered about, with comments such as "It's amazing how one word change so many types. Difficult to me" (Interviewee 9), "The letter changes…or the letter disappears" (Interviewee 11), and "There is too much change" (Interviewee 8). In addition, long words were explained as being phonologically challenging to perceive and produce: "Sometimes the words are so big that there is no breathing space and I need to breathe in the middle of a word" (Interviewee 7).

Spoken language seemed to cause extra difficulties for speech comprehension due to its marked difference from the written language, which was more familiar to most interviewees: "It is difficult to understand so-called normal speaking when they use that 'puhekieli' (spoken language)" (Interviewee 10). For many, the most difficult aspect of Finnish as L2 was "hearing spoken language when I have learned the written language" (Interviewee 1). This difference also seemed to create a barrier to starting using the language (speaking) in real life. In the words of one choir participant, Finnish as L2 is typically "not taught as a communicative language" (Interviewee 6) but focuses on the written language, leading to the fact that "I can't use it in the streets" (Interviewee 6). In addition, a couple of interviewees highlighted the lack of possibilities for speaking Finnish because "the most difficult thing is the social environment and the fact that people speak English" (Interviewee 4).

Figure 4 summarizes the main aspects (the five main themes) that caused the phonetic challenges (both hearing and producing of L2) reported by most of the 11 interview-ees in the first interviews.

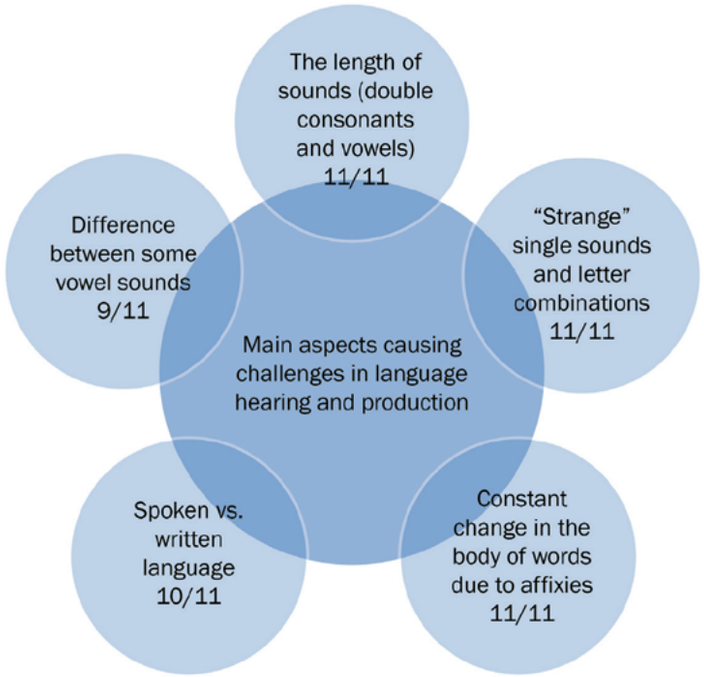


Figure 4. Main aspects causing challenges in hearing and producing Finnish language reported by the 11 interviewees.

Error Frequencies: Phonology Pre-Test. The error frequencies in the Phonology pre-test (see Table 3) demonstrated that the main phonological difficulties occurred in sound lengths. Double consonants (118 errors in 14 words of the test) were the most challenging, and were often left out in the shorter two-moraic first syllables, in the longer three-moraic first syllables, and in the second syllable of three-syllable words. Long vowels were also challenging (46 errors in eight words of the test), especially when at the end of two-syllable words. Perception of the length of two- and three-syllable words did not show consider-able challenges for most choir participants of this study.

The combination of sounds, especially different consonant sounds inside a word (47 errors in 14 words of the test), was somewhat challenging. Diphthongs (15 errors in six words of the test) did not demonstrate a particular difficulty in the Phonology pre-test, even though it is considered as a typical challenge in Finnish pronunciation (Aho et al., 2016). However, the 36-word version of the test that was used did not include diphthongs with difficult sounds such as [ie, øy]. The most typical single sound errors were related to perceiving the difference between vowel phonemes such as [a] and [æ].

Altogether, difficult sounds were mostly left out (293 errors). In double consonants and vowels, the other sound was typically left out or shortened. Single consonant sounds were also left out, in particular at the end of the word. Challenging sounds were replaced with other (wrong) sounds (203 errors) or pronounced with extra sounds (69 errors).

Differences between Participants. A one-way analysis of variance (ANOVA) was run to evaluate differences in the Phonology pre-test scores between the choir members (N= 41), who were divided into three subgroups (N = 9, N = 15, N = 17) based on the time they had lived in Finland and when they had joined the LFBS choirs (cf. Table 1). In the tests of Homogeneity of Variances (Levene), the assumption of homogeneity was not met ($p > .05$) in three sound categories (two-syllable words, two double consonants, and wrong sound). In one-way ANOVA, the assumption of equal variance needs to be met in order to avoid spurious findings. Thus, these three categories were excluded from ANOVA.

The results of one-way ANOVA (see Table 4) using all other 11 sound categories showed that the main effect of the subgroup ($F(2,38)$ $.030 \leq F \leq 2.610$, $p > .05$) was not statis-tically significant. The partial eta squared value showed small and medium effect sizes ($.002 \leq \eta_p^2 \leq .121$), indicating that only 0.2–12.1% of the variability in the scores could be explained by subgrouping the participating choir members. Post hoc comparisons (e.g., Scheffe, Games-Howell) indicated no significant differences between the subgroups in the 11 sound categories ($p > .05$). Post hoc comparisons (e.g., Scheffe, Games-Howell) indicated no significant differences between the subgroups in the 11 sound categories ($p > .05$).

Table 3. Error frequencies in the 14 sound categories.

Sound category	*N*	*M*	*SEM*	*SD*	*Min.*	*Max.*	*Sum*
Sound and syllable length							
1 long vowels	41	1.12	.182	1.166	0	4	46
2 long consonants	41	2.88	.356	2.282	0	9	118
3 2-mor. first syllables	41	1.46	.216	1.380	0	5	60
4 3-mor. first syllables	41	1.32	.189	1.213	0	4	54
Length of the word							
5 2-syllable words	41	.12	.072	.458	0	2	5
6 3-syllable words	41	.02	.024	.156	0	1	1
Combination of sounds							
7 Two separate consonants	41	.83	.167	1.070	0	4	34
8 Diphthongs	41	.37	.097	.623	0	2	15
9 Internal consonant cluster	41	1.15	.225	1.442	0	6	47
10 Two double consonants	41	.32	.074	.471	0	1	13
Individual sounds and phonemes							
11 Wrong sound	41	4.95	.764	4.894	0	18	203
12 Sound left out	41	7.15	.831	5.322	0	23	293
13 Adding extra sound	41	1.68	.287	1.836	0	8	69
14 [ŋ] sound	41	.34	.075	.480	0	1	14

Note. N = total number of cases; M = Mean; SEM = standard error of the mean; SD = standard deviation; Min.= minimum number of errors; Max. = maximum number of errors; Sum = all errors.

Table 4. Differences in the Phonology pre-test scores between the participant subgroups (ANOVA).

				Group (N = 9)		*Group (N = 15)*		*Group (N = 17)*	
Sound category	F	p	η^2_p	M	SD	M	SD	M	SD
Sound and syllable length									
1 long vowels	2.610	.087	.121	.56	.882	1.60	1.242	1.00	1.118
2 long consonants	1.081	.349	.054	3.11	2.804	2.20	2.111	3.35	2.120
3 2-mor. first syllable	.030	.970	.002	1.56	1.509	1.47	1.302	1.41	1.460
4 3-mor. first syllable	.815	.450	.041	1.44	1.590	1.00	1.134	1.53	1.068
Sound and syllable length									
6 3-syllable words	.695	.505	.035	.00	.000	.00	.000	.06	.243
Combination of sounds									
7 Two separate consonants	.303	.740	.016	.78	1.093	1.00	1.069	.71	1.105
8 Diphthongs	.199	.821	.010	.44	.726	.40	.737	.29	.470
9 Internal consonant cluster	.866	.429	.044	1.00	1.000	1.53	1.685	.88	1.409
Individual sounds and phonemes									
12 Sound left out	.363	.698	.091	6.00	4.301	7.93	6.892	7.06	4.451
13 Adding extra sound	.580	.565	.030	1.11	1.269	1.93	1.831	1.76	2.107
14 [ŋ] sound	.188	.830	.010	.33	.500	.40	.507	.29	.470

Note. N = number of subjects; F = variation within the test scores; p = probability; η2p = partial eta squared (effect size); M = Mean; SD = Standard deviation.

Changes in Phonological Processing and Finnish-as-L2 Use after Singing in a LFBS Choir

Experienced Changes in Finnish-as-L2 Use: Second and Third Interviews.

> *Getting together with a group of people who are in the same situation. From the different countries to new country. And maybe don't know so many people. Um… So, they can share experiences, um… also learning the language, of course, and through singing. It's about singing, yeah. It's just learning the language in a different way. Instead of sitting in a classroom with a book. It's active, it's not passive. It's a real active way of learning and having the words in your mouth; using the words, speaking the words. Thinking because, uh, yeah, some-times you get us into the right of our own words… Um, coming up with diverse sounds. And yeah, just being with other people in the same situation and learning something and having fun. (A choir participant describing LFBS choir practice, Interviewee 11)*

In the second and third interviews, held in the middle of March and at the end of May 2020 (12 interviews), eight choir participants described their experiences in Finnish language production after singing in a LFBS choir for 5–9 months. Only one of them had sung more than a year in an LFBS-choir. To varying degrees, they all had experiences in Finnish-as-L2 classes. In line with the thematic analysis (Braun & Clarke, 2006), the six overarching themes (see Figure 5) emphasizing the experienced changes in L2 learning and use comprised specific aspects of pronunciation (prosody), specific aspect of phonetics, understanding L2 more holistically, increasing motivation, the difference between spoken and written language, and the courage to use language. The subthemes (see the outer-most circles in Figure 5) revealed different perspectives related to the main overarching themes. For example, sub-themes "language as emotion" and "language as embodied" were related to the overarching theme "understanding L2 more holistically."

Interviewees revealed that there had been changes in their pronunciation by becoming phonetically aware of the challenging sounds and words, and word stress: "I think that I, yeah, at the phonetic level. I just see that the choir has made great…like really really a big difference" (Interviewee 6). Another interviewee referred to the same by saying: "We learn how to pronounce words while we sing and also learn the meanings. And at the same time, we have fun singing together, so I think it has all these qualities. It has the pronunciation. I would say it's the big, big thing here" (Interviewee 7). Singing was also reflected in relation to learning double consonants: "Yeah, because sometimes, yeah, my pronunciation is bad. Especially when it comes to double consonants. So, it really helps" (Interviewee 1).

Becoming familiar with Finnish as L2 was also seen as a process of unlearning accustomed habits: "Now I know this accent and why you are doing that. It's sort of like they go to this automatic mode. Then they just go, fall back to the previous, like to the natural mother tongue whatever. And I think that with the choir because you sort of, you change that sort of system where it doesn't fake anymore, and you sort of like it somehow moves from a conscious level to a more automatic level" (Interviewee 6).

The development of pronunciation also emerged through the growing awareness of the differences between the choir participants' first (native) language and Finnish: "And it's really different than when I'm trying to speak normally. So it's basically, I see that I'm stretching in a way that I wouldn't when I would use my mother tongue for instance" (Interviewee 5). In addition, some interviewees discussed the importance of encountering the differences between different languages and Finnish as an eye-opening aspect of their process of trying to overcome the phonological challenges in Finnish, as one interviewee emphasized when discussing their meaningful experiences: "I have a big one with that part that you asked me to make the native language version of that song. That was very special to me" (Interviewee 7). In terms of this interviewee, interfacing L1 and L2 through singing had been holistically motivating and helped with identifying the

relationships between native and L2, as well as how they were reflected in music.

Phonetic changes were also recognized with respect to sound hearing, in terms of better understanding and, especially, hearing the difference between sounds: "I can now distinguish some sounds that I couldn't distinguish before. I think for example the time before for me [a] it was the sound [æ], then I started to get it, yeah. And then now, one of the big differences I'm noticing is on the double consonants. I thought it was the same thing" (Interviewee 6). Some interviewees mentioned that music engenders a kind of "phonetic memory" for them: "So now I understand that what I notice is the pronunciation. Very much in this. Some words that I memorise and then suddenly realise oh, I know this, and I know that and oh, I know that word. It's really like that with the pronunciation and, but there's some kind of memory connected with the music in that. I don't know how to explain this" (Interviewee 7). The memory was also connected to words that had a slight phonemic[5] difference but sounded very similar (e.g., [tuli], [tuuli], [tulli] / fire – wind – customs) when they were practiced, for instance, with spe-cific language songs in the LFBS choir rehearsals. In the words of one interviewee, this difference is easier to com-prehend through singing and repeating "because you concentrate on how it sounds musically and at the same time linguistically" (Interviewee 3). The same experience was also expressed like this: "I think it's really this singing because we put it out. We put it out there, so then it's easier to put it out somewhere else. It's really this talking. Well, in this case it's singing, but many times I understand in the courses we are just there sitting, taking notes or we speak very little, but in the choir classes we are all the time doing this. It's like a memory it's created, yes, in fact" (Interviewee 7). Interestingly, the change in phonetic skills was also referred to as becoming familiar with the "proper" and "right" pronunciation in comparison to other experiences: "In a normal language class half of the time I'm listening, instead of talking. And, then if I am talking, half of the time I'm talking wrongly" (Interviewee 6).

The interviewees also emphasized that the active and holistic (embodied) language use related to different kinds of musical approaches that they encountered throughout the 1.5-h choir rehearsal had helped them become more confident with their language use (speaking) and under-standing (hearing and perceiving) of Finnish, including spoken language. The choir context was seen as "motivational" (Interviewee 1), "energy giving" (Interviewee 6), and an "environment that really welcomes" (Interviewee 10) because "music is there to pull you forward. To make the journey a bit easier, I think" (Interviewee 5). In particular, the interviewees highlighted that music and singing "makes easier the sounds of the language, the…the phonetics" (Interviewee 2). The LFBS choir context was described as filled with "fun," "joy," and "pleasure," as well as" full of enthusiasm," a place where language learning and enjoying are interwoven: "I really get pleasure during learning, and this is the most important thing. I just feel better, and I feel better about language also. I can't say that it's some-thing logical. It's just feeling" (Interviewee 10).

The choir participant's active and constant language use "with open heart, open mind and open body" (Interviewee 1) leads to a very "different way" of language learning in comparison to "just regurgitating the same thing whatever the teacher says from the textbook, and just copy-paste, copy-paste, copy-paste" (Interviewee 1). One interviewee summarized the experienced difference between a typical language class and the LFBS choir this way: "So in this sense this is basically almost turning around the situation. I'm actively using my voice" (Interviewee 5).

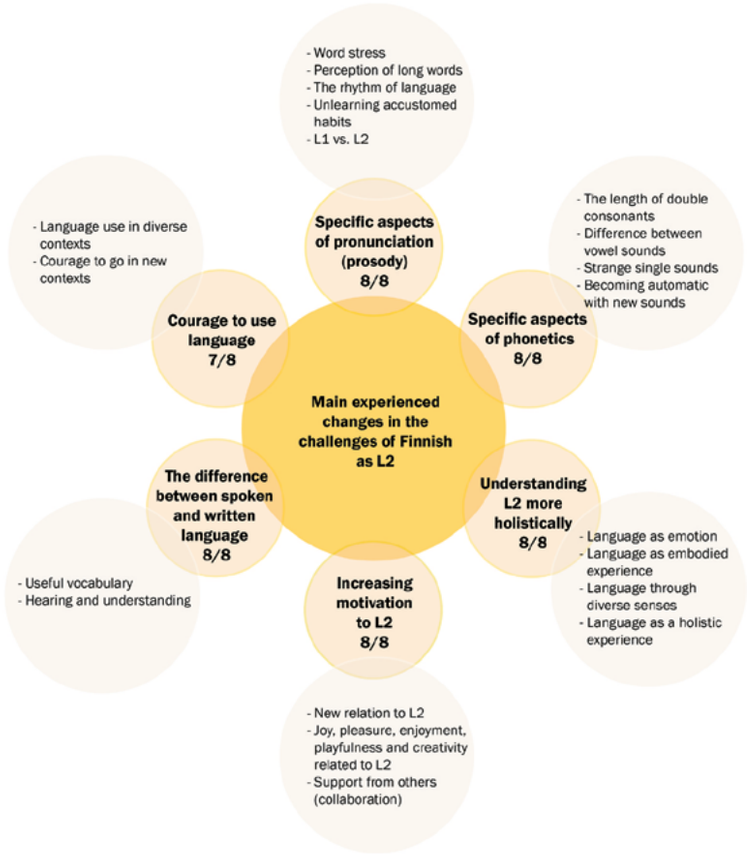


Figure 5. Main experienced changes in the challenges of Finnish as L2 reported by the eight interviewees. Both the main and subthemes are presented in the figure.

According to the interviewees, the experiences of active language use intertwined with musical activity had, in a broader sense, contributed to their courage to start using Finnish in other social contexts as well. As one interviewee described: "I can now more easily accept the challenge of speaking in Finnish, because I have already internalised the voice for Finnish speaking. So, I think it makes it easier for the mouth to go to the Finnish language. Yeah" (Interviewee 5). Another interviewee expressed her increasing

courage to use Finnish in her working environment: "I have pushed myself to it, yeah to try to formulate it in Finnish and it was easier for me, not in terms of like knowing language, but in terms of not being so shy about looking stupid, taking too long time for formulating some-thing and everybody else should be waiting. Yeah, so I just feel more relaxed in that way" (Interviewee 10). Their experiences in language use had also lowered the threshold to participate in other Finnish-speaking activities, as one participant emphasized: "It just encourages me more to do other Finnish things and, and…and in that sense it just gets more and more you do things in Finnish, and you think that you are welcome. You feel less shy" (Interviewee 6).

Some interviewees described that their whole relationship with the Finnish language had changed because of doing and experiencing language in holistic ways with joy, fun, and emotional expression. An interviewee described this change as getting better at hearing the word stress: "I wasn't like attentive enough to hear it before, but now I can hear it because it's kind of new way of processing language for me" (Interviewee 10). Thus, it was explained that the Finnish language does not feel so "weird," "forced," or "fake" anymore, instead, "when you have been doing it in the choir…you sort of internalise. Like this position of the mouth doesn't feel like weird anymore" (Interviewee 11). The change in the relationship with the Finnish language was also explained like this: "I always rely on logical things and ordering systems. And I need to process it all the time. When we sing, I just cancel these kinds of brain operations and start to just have fun and joy and pleasure and yeah it changes somehow the relationship with language. So I don't feel it is so, ah, alien now. It's not so far from me. It's closer…Bit closer. Got closer" (Interviewee 10).

By and large, the interviews revealed changes in the choir participants' use of Finnish as a spoken language, with which many of them were not familiar with before. One interviewee said that "I think most useful for me was in choir I get to learn spoken language, which I don't learn in language class" (Interviewee 1). Becoming aware of the features of spoken language was seen as important because "it is this sort of vocabulary that is learned only by hearing them and repeating them" (Interviewee 6). Also, hearing, using and knowing helped with the use of new spoken (everyday) words, sentences, and sayings in songs: "I think actually many of these words, they don't come up usually during the normal Finnish classes. So many of the words that can be used also in regular conversation" (Interviewee 5). Another interviewee described the same by saying: "Because we don't use spoken language in Finnish class. What I learn in class is very formal. Very textbook. So, in the choir it's more the words that people use in real life" (Interviewee 1).

Changes in Phonological Skills: Phonology Pre- and Post-Tests. A paired samples t-test was conducted to see if there were significant mean differences between the Phonology pre- and post-test sound category scores. The results (Table 5) showed that there was a significant ($p < .05$) mean difference in 9 out of 14 sound categories. In the categories of "two-syllable words" and "three-syllable words" the differences were not evaluated because there were no errors in the pre- and post-tests. The effect size (d = 0.8 and higher) was large in eight sound categories (Table 5), moderate (d = 0.5 to 0.8) in categories 7, 8, and 14, and small (d = 0.2 to 0.5) in category 10.

The largest significant differences ($p < .05$) in phonotactic skills were evident in the categories "Long consonants" and "3-mor. (long) first syllable" demonstrating the decrease in errors in sound length (double consonant), and in the length of the first syllable related to double consonants, long vowels, and single consonant sounds. The largest significant differences ($p < .05$) in paradigmatic skills were in the categories of "Sounds left out" and "Wrong sound."

No significant differences between the pre- and post-tests ($p > .05$) were evident in the categories "diphthongs" and "[ŋ] sound." In these sound categories, however, the average number of errors was also smaller in the Phonology post- than the pre-test.

Table 5. Paired samples t-test of Phonology pre- and post-tests scores in 16 participants.

		M	*SD*	*SEM*	*t*	*p*	*d*
Sound and syllable length							
Pair 1	Long vowels	1.063	1.289	.322	3.296	.005	1.289
Pair 2	Long consonants	2.500	1.932	.483	5.175	<.001	1.932
Pair 3	2-mor. first syllable	1.375	1.500	.375	3.667	.002	1.500
Pair 4	3-mor. first syllable	1.250	.931	.233	5.371	<.001	.931
Combination of sounds							
Pair 7	Two consonants separated	.313	.602	.151	2.076	.055	.602
Pair 8	Diphthongs	.125	.619	.155	.808	.432	.619
Pair 9	Internal consonant clusters	.688	.946	.237	2.905	.011	.946
Pair 10	Two double consonants	.313	.479	.120	2.611	.020	.479
Individual sounds and phonemes							
Pair 11	Wrong sound	3.125	2.849	.712	4.388	<.001	2.849
Pair 12	Sound left out	5.188	4.119	1.030	5.038	<.001	4.119
Pair 13	Adding extra sound	1.313	1.537	.384	3.416	.004	1.537
Pair 14	[ŋ] sound	.125	.500	.125	1.000	.333	.500

Note. N = number of subjects; F = variation within the test scores; p = probability; η2p = partial eta squared (effect size); M = Mean; SD = Standard deviation.

Discussion

This study examined the extent to which singing in a language-aware choir can encourage the Finnish-as-L2 perception and production of adults with linguistically diver-gent backgrounds. Empirical research on L2 learning and use in a choral context is very scarce. The study of Scheckel and Kula (2021) tentatively showed that a choir as an elective course for sixth graders in a school context can create a conducive and stress-free environment for long-term English language learners (LTELs), especially related to speaking in English. Another study of native speakers and learners of Italian in Australia (Kennedy & Miceli, 2017) found that a choir context has potential for nurturing foreign language input and output as well as inter-cultural competence (see also Ilari et al., 2013).

The present study contributes to the research field on integrating music and L2 learning by introducing a new context – a multilingual choir – that highlights the possibilities of an authentic and meaningful social situation for L2 learning in an "out-of-a-language-class" environment (see also Hua et al., 2020; Lilja et al., 2020). This new choir context enables a specific approach to L2 learning that is based on holistic learning (e.g., Dewey, 1916, MW 9, p. 254) through an arts-based activity (see also Haught & McCafferty, 2008; Scally, 2019), and the direct needs, wishes, and here-and-now experiences of the choir participants (cf. Aho & Toivola, 2008; Munro et al., 2015; Suzukida, 2021), as opposed to top-down curriculum learning.

Main Challenges and Changes in Finnish-as-L2 Perception and Production

The main linguistic challenges in language production brought up by the interviewees and confirmed by the Phonology pre-test scores were related to sound lengths (especially double consonants), unfamiliar single sounds, and discrimination of vowel sounds. These challenges are in line with the pioneering findings of Aho et al. (2016) on pronunciation difficulties in Finnish as L2 among adults with linguistically diverse backgrounds living in Finland (see also Ullakonoja & Dufva, 2016) and highlight the impact of different native (L1) languages as well as other individual differences (e.g., Derwing & Munro, 2015) in L2 phonological processing. In the present study, the challenges in hearing and pronouncing unfamiliar single sounds (i.e., [æ], [ø], and [y]) and short versus long consonant and vowel sounds seemed to have a close relationship with challenges in sound discrimination (i.e., [a-æ], [o-ø], and [u-y], [kuuma – kumma / hot – strange]) which is in line with recent studies on L2 speech acquisition that emphasize the specific role of auditory discrimination in L2 pronunciation (e.g., Zheng et al., 2022). Moreover, the phonological challenges expressed by the interviewees in this study were related to unfamiliarity with the spoken language (see also Vihanta, 1990) and the ever-changing body of Finnish words, which makes them hard to hear and perceive (e.g., Karlsson, 1977, 1982).

For the interviewees, these difficulties in language pro-duction had become more approachable after actively focusing on sensitive language hearing together with music hearing and actively practicing "proper" L2 pronunciation through singing in a supportive, motivational, and enthusiastic social context where learning and enjoying were intertwined (see also Scheckel & Kula, 2021). These findings are in line with previous studies on L2 pronunciation underlining the importance of active auditory-motor training (e.g., Aho et al., 2016; Kissling, 2013, 2018; Munro et al., 2015; Shao et al., 2023; Tierney & Kraus, 2014; Yule et al., 1987) and a mistake-tolerant and motivating learning environment (e.g., Baran-Łucarz, 2017; Saito et al., 2017, 2018; Wrember, 2001; Yousofi & Naderifarjad, 2015). According to Fonseca-Mora and Machancoses (2016), music fosters will-ingness and a positive attitude toward language learning by eliciting positive emotions (see also Engh, 2013).

A plethora of studies on choral singing highlight the benefits of a choir context in reducing anxiety and stress, strengthening social bonds, and promoting wellbeing, health, and inclusion (e.g., Bailey & Davidson, 2005; Dingle et al., 2012; Judd & Pooley, 2014; Livesey et al., 2012; Siljamäki, 2021). According to the interviewees of this study, learning Finnish holistically through choral singing also changed their relationship with Finnish as L2, because embodied/holistic learning was associated with feelings of pleasure and shared joy while using the language. Moreover, becoming more confident with Finnish phonetics and pronunciation encouraged the interviewees to start using Finnish in new contexts and to participate in other Finnish services outside the home (see also Passiatore et al., 2019). In the light of these findings, the affordances that musical and other arts-based social contexts can provide for L2 learning and use should be explored in more depth.

In addition to the improvements in phonetic awareness (sound hearing and discrimination) and production (pronoun-cing), the interviewees underscored that spoken language, a language that is primarily learned through oracy, had become more familiar after singing in LFBS choirs for over a year. Although the participants had lived in Finland for different amounts of time (from two months to 16 years) before joining the LFBS choir, all of them dramatically improved their skills and confidence related to L2 spoken language and communication. The interviewees pointed out that they previously had little or no experience of the spoken language and its vocabulary, because their earlier experiences of learn-ing Finnish had focused on written language. Although the differences between written and spoken language (e.g., Lehtonen, 2015) have been acknowledged in Finnish-as-L2 research for decades (cf. Vihanta, 1990), according to the interviewees, spoken language typically is not harnessed sufficiently in the traditional

L2 class practices. Our results suggest, however, that incorporating spoken language into L2 learning is important for everyday communication and social contacts, and that it can be approached through music and musical activity in various ways (see p. 00).

Despite the small sample size in the Phonology post-test, the results were in line with the experiences of the interviewees and showed a clear tendency: the scores in 12 out of 14 sound categories improved, nine of them statistically significantly, and eight of them with a large effect size. Importantly, the greatest improvements occurred in sound categories that were rated as the most difficult ones by the participants in the pre-interviews. That is, the perception of sound lengths, especially the length of double consonants but also double vowels, improved significantly. Based on these results, a language-aware choir has the potential to facilitate perception of phonetic (what the language sounds like) and phonemic (how sounds such as long and short consonants create different meanings) features, as well as prosody[6] of Finnish (e.g., Brown, 2004; Nenonen, 2001; Vihanta, 1990). These features are particularly challenging for Finnish-as-L2 learners regardless of their L1 background (e.g., Aho et al., 2016), but are also important for the comprehension of speech of others as well as the comprehensibility of one's own speech (e.g., Tiermas, 2008; Venkatagiri & Levis, 2007; Vihanta, 1990).

To our knowledge, the learning of these L2 phonological features has not been explored before in a choir context. Moreover, studies on Finnish-as-L2 pronunciation in general are rare (e.g., Aho et al., 2016; Tiermas, 2008; Virkkunen & Toivola, 2020). However, the improved Phonology test results of this longitudinal study are partly consistent with a study in the context of an L2 class (Tiermas, 2008) stressing that the essence of developing skills in vowel quantification (length difference) lies in providing sufficient time for active practice. In addition, earlier research on teaching L2 phonetics (e.g., Virkkunen & Toivola, 2020; see also Jones, 1997) underscores that explicit instructions should be meaningfully integrated into the overall language learning processes, with an emphasis on features of prosody rather than as a separate phonetic component without a broader context (see also Derwing & Munro, 2009; Kissling, 2018). By considering both articulation and pronunciation[7] of Finnish as salient parts of singing and musical activity in the LFBS choirs, the challenging aspects of L2 phonetics could be meaningfully embedded into the overall L2 learning and use. The present results are also in accord with earlier findings of Tierney and Kraus (2014) suggesting that the repetition in musical practice has a potential to support L2 phonological learning by enhancing the sensibility of fine-grained auditory-motor timing. Phonology test results showed that the number of errors related to wrong sounds decreased statistically significantly with a large effect size between the pre- and post-tests, indicating that the choir participants had become more familiar with difficult sounds, especially in differentiating unfamiliar vowel sounds ([pollo (meaningless nonword) – pøllø (owl)]). These significant improvements in L2 Finnish sound discrimination and pronunciation skills could be partly related to the positive emotions and joy experienced through singing together (e.g., Bailey & Davidson, 2005; Davidson & Leske, 2020; Daykin et al., 2020; Judd & Pooley, 2014), a suggestion that was also confirmed by the interviewees. Similarly, bodily (cf. physical) orientation as part of the more general embodied approach to language learning in the LFBS choirs may also have contributed to the improvements in L2 pronunciation (see Jusslin et al., 2022). In the LFBS-choir practice (see the six fields of action p. 5), sensing, hearing, pronouncing, and comparing challenging sounds were approached by exaggerating mimicry (e.g., lips, mouth), adding supporting gestures, movements, rhythmics, body percussion and clapping while singing, and by moving around the rehearsal space in order to put the rhythm of music and language holistically in the body.

Owing to the sudden corona pandemic, the results of the Phonology tests could not be compared with those of the normal L2 class participants. However, although the choir members had different levels of L2 classroom experience, they all had phonetic challenges in the pre-test that improved in the post-test, and there were no statistically significant differences in the pre-test scores between the three participant subgroups. Thus, the positive changes in pronunciation shown in the post-test were not explained by the time lived in Finland or the time engaged in singing in the LFBS choirs. However, all participants were singing voluntarily in the LFBS choirs, which might have had a positive impact on the findings (e.g., Tierney & Kraus, 2014; Zheng et al., 2022). More research with a larger sample and an appropriate control group is needed for statistically more reliable analyses of the gains of choral singing on L2 phonetic and spoken language learning.

The main changes in Finnish-as-L2 perception and pro-duction (including spoken language) are discussed next, through the lens of LFBS choir practice (cf. the six fields of action, see p. 5). This allows us to consider how the linguistic challenges expressed by the choir members during the choir rehearsals were addressed and linked to the ongoing choir practice.

Sound Hearing, Discrimination, and Pronunciation in and through the LFBS Choir Practice

Hearing sound lengths and differentiating the unfamiliar (vowel) sounds of Finnish were the main challenges and perceived changes after joining the choir rehearsals. As Vihanta (1990, p. 200; see also Kachlicka et al., 2019) states, learning to pronounce a foreign language primarily requires learning to hear it, which in turn is closely related to music learning, where hearing and listening are an irreducible part of music making. Recent multidisciplinary studies on L2 speech acquisition also emphasize the importance of promoting auditory processing (e.g., Saito et al., 2022). During the LFBS choir rehearsals, the essence of hearing (including sensing) was emphasized in relation to both

music and language expression, highlighting their intertwining and holistic experience while singing. Importantly, challenges in L2 perception were approached both at the segmental level, by focusing on single sounds and phonemes, and at the prosodic level related to larger entities such as sound lengths and durations, word and sentence stress, and the rhythm and fluency of language (see, e.g., Ullakonoja & Dufva, 2016; Vihanta, 1990).

In warm-ups (1st field of action), it was possible from the very beginning of the choir rehearsals to orientate sound hearing and differentiation together with pronunciation, especially emphasizing the segmental level. The challenges in hearing and pronunciation of difficult sounds and sound lengths identified by the choir participants were, for instance, used as the basis for developing new vocalizations and vocal and breathing exercises. For instance, a phonetically challenging word suggested by a choir participant was used as an impetus and was worked on through vocalizing, singing, and rapping it sound-by-sound, syllable-by-syllable, and finally as a whole word. In that sense, challenges in double consonants, for instance, could be emphasized by singing an interval in-between the double sound ([kuk-ka] / a flower) and rhythmically highlighting the difference between long and short vowel sounds. On the other hand, the discrimination of unfamiliar vowel sounds could be implemented by underlining the difference (e.g., [a-æ, u-y, o-ø]) with exaggerated articulation (the active use of mouth, lips, and tongue), focusing on sensing not only how they sound but also how they feel and resonate in the body, and by collaboratively creating supporting gestures and movements that illustrate the nature of the vowel sounds (wide / narrow) while singing. Challenging sound combinations could be focused on, for example, challenges in diphthongs (cf. Aho et al., 2016), by singing them as a single syllable (([æi]) or part of a word ([æiti] / mother)) embedded in a simple vocal exercise. Moreover, the diverse use of call-and-response (CAR) and showing-in-front (SIF) approaches were used to enable choir participants to hear how the choir conductor or the L2 teacher, as native speakers, pronounce Finnish, as well as to see their mimicry and gestures at the same time (see also Smotrova, 2017). In relation to collaborative choir improvisations (2nd field of action), CAR was used to communicate through all available modes of expression, highlighting the sensitive listening to, hearing, and sensing of others, and responding to their verbal, vocal, and embodied initiatives by imitating or creating new initiatives. In the context of a language classroom, choral repetition methods of speech such as shadowing (cf. CAR) and tracking (cf. SIF) have been found to nurture the development of L2 pronunciation by emphasizing their auditory-motor integration (see Shao et al., 2023).

At the prosodic level (cf. suprasegmental, see Derwing & Munro, 1997), the phonological challenges of L2 could be approached by focusing on the clear articulation and pronunciation of song lyrics while singing songs from diverse perspectives (3rd, 4th, 5th, and 6th fields of action). That is, singing songs enabled the emphasis on the sentence-level pronunciation, utilizing support from musical phrasing at the same time. The experienced challenges in words and sounds of the song lyrics were also used as the basis for generating warm-ups (1st field of action) in the next rehearsals. In addition, while singing songs pronunciation and articulation were supported visually by projecting the lyrics on the wall to enable the choir members to simultaneously hear and see, for instance, the length of the double sounds and difficult vowel sounds. This visual coupling was also highlighted by the interviewees. Furthermore, rhythmics such as clapping, body percussion, and embodiment (gestures and movements), as well as musical expression were integrated into the singing to add a bodily and emotional "feel of the language" in order to enhance the experience of differences between sounds and their lengths, and of word and sentence stress. While singing songs, the length of sounds and perceiving long words (another challenging feature of Finnish, see e.g., Aho et al., 2016) were denoted by varying tempos, stopping in the middle of double consonant sounds, and holding the sound in the mouth until the song continues, and by high-lighting word stress (always on the first syllable of Finnish words). Accordingly, singing funny language songs (5th field of action) enabled the choir participants to immerse themselves in playful ways into differences in sound and word lengths and the changing body of words (cf. consonant gradation) with the help of rhythm that closely followed the pace of spoken language, and with lyrics where the meaning varied according to the length of the phoneme. Moreover, in Finnish songs it is common that the melody progresses syllable per tone, meaning that in order to sing the melody of a song, each syllable (with its challenging sounds) of the word needs to be articulated. This syllabic way of singing makes it easier not only to hear and pronounce, but also to memorize and recall words and sentences and the phonetics of a foreign language (see, e.g., Ludke et al., 2014; Schön et al., 2008). Repetition, the most essential feature of music (cf. the repetitive nature of songs), and musical activity (cf. immersion in musical repertoire from various perspectives) were highly emphasized in the LFBS choir activity, where sheet music was not used, and repetition enabled choir participants to gradually become familiar with and automate the strange and unfamiliar phonetic aspects related to hearing, sensing, discriminating, perceiving, and pronouncing Finnish as L2. The importance of musical repetition in L2 learning was also underlined in the interviews.

Spoken Language in and through the LFBS Choir Practice

The other challenging linguistic issue hindering L2 learning and use expressed by the interviewees that was subjectively improved during the LFBS choir activity was *spoken language*. In the LFBS choirs, spoken language was considered a sublanguage (cf. dialect) with its own vocabulary and utterances, including the subtleties of grammar (e.g., Lehtonen, 2015), thus stressing its difference from the written language.

In the LFBS choir practice, spoken language was approached in many ways, for

instance by singing Finnish pop songs, including rap (the 3rd field of action). The lyrics of pop songs are typically based on the spoken Finnish and its idioms, and they also rhythmically follow its natural pace, which is not always the case in songs of other music genres. Importantly, when singing pop songs, the differences between spoken and written language were constantly discussed and negotiated, and were facilitated visually by projecting the lyrics on the wall. In folk songs and traditional music, the language related to spoken utterances of dialects or old Finnish were collaboratively translated to modern and more usable forms of spoken Finnish. Accordingly, by creating and re-creating song lyrics (4th field of action) reflecting the choir participants' own thoughts and experiences, the use of spoken language was encouraged. It was also supported when singing funny language songs (5th field of action) that utilized the vocabulary and the rhythm of spoken language, and when improvising (2nd field of action) or composing songs collaboratively. Moreover, when translating the songs brought by the choir participants (6th field of action), the use of spoken language was nurtured, enabling intercultural dialogue between Finnish and the native languages of the choir participants, as well as identifying the differences between them.

Conclusion

This transdisciplinary, mixed-methods study explored adult choir participants' experienced and test-based challenges in Finnish-as-L2 hearing and production focusing particularly on the changes in these challenges after participating in the LFBS choir for one year. The findings indicate that the choir practice where dynamic L2 use is entwined with meaningful musical activity can help the participants to overcome phonological challenges in L2 auditory process-ing and oral language production, both significant aspects of successful L2 learning and use, despite the fact that the participants had arrived in Finland at different times and had diverse experiences of learning Finnish before joining the choir. The research shows that participants of the LFBS choir can significantly improve their performance and confidence in L2 sound hearing, pronunciation, spoken language, and communication – aspects of language skills that can be more challenging to teach and learn in traditional classroom settings. Moreover, the findings indicate that translating choir members' needs, wishes, and experiences into musical actions makes both the choir practice and the L2 learning more meaningful for its participants. It is important to note, however, that these improvements in Finnish-as-L2 skills are not direct "transfer effects" of music to language since music and language were equally and reciprocally focused throughout the LFBS choir practice.

As a whole, the study advocates new approaches and opportunities to music education where the educational potential goes beyond "learning within single domains and practices" (Akkerman & Bakker, 2011, p. 150), and the choir practice beyond mere "performing" music well. The study contributes to the evidence-based research on L2 learning by contextualizing the empirical findings of actual practice in its authentic learning context. Importantly, the double meaning (Lehtinen-Schnabel, 2023) of the LFBS choir requires constant rethinking and restructuring of the taken-for-granted habits and principles underlying music education, choir practices, and L2 teaching. In addition, the natural social context of the choir encourages and motivates L2 learning through musical activity that promotes joy, enjoyment, and enthusiasm. The findings of this study cannot thus simply be transferred to other contexts without considering the specific nature of the given language, contextual and cultural differences, and the needs of the choir participants.

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Johanna Lehtinen-Schnabel gained ethical approval, participant recruitment and data analysis, wrote the first draft of the manuscript. Sari Levänen involved in study design, reviewed and edited the manuscript and approved the final version of the manuscript.

Data Availability Statement

Statistical data in anonymized form is available. Owing to its sensitive nature, qualitative data (interviews) cannot be shared.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Ethical Approval

The ethics committee of the University of the Arts Helsinki approved this study. The construction and handling of unpublished data for this research adhered to the Ethical Instructions of the University of the Arts (UNIARTS 2015), the code of ethics of the European Commission (EC 2010), and the Responsible Conduct of Research (RCR) guidelines of the Finnish Advisory Board on Research Integrity (TENK 2012). The study has received research permissions from the related organizations according to their

research integrity guidelines. In addition, DPIA (Data Processing Impact Assessment) has been processed and approved by the Data Protection Officer at the University of the Arts Helsinki. The participants have provided their written informed consent to participate in this study.

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Supplemental Material

Supplemental material for this article is available online.

Notes

1. Language production is a concept in psycholinguistics describing the stages of speech, from the initial mental concept to the spoken or written linguistic result. Simply put, it is the process of communicating through language (www.alleydog.com).
2. Language course levels are classified based on the rating scale of the Common European Framework of Reference for Languages (CEFR), which describes language ability on a six-point scale, from A1 for beginners, up to C2 for those who have mastered a language. https://www.coe.int/en/web/common-european-framework-reference-languages/level-descriptions
3. Languaging or language-creating highlights language as a complex system of structures that is not independent of human actions with others (García & Wei, 2014).
4. Consonant gradation refers to sound variation related to consonant sounds k, p, and t (marginally b and g) within a word. It affects both nouns and verbs. The change (variation) takes place when a suffix (ending) is added to a word (e.g., lukea – luen / to read – I'm reading). https://kaino.kotus.fi/visk/sisallys.php?p=41
5. Phonemic relates to phonemes, which can change the meaning of the words, e.g. /bɪt/ and /pɪt/ in English or /kuka/ and /kukka/ (who – flower) in Finnish. Phonetic, instead, is related to phones or sounds across different languages.
6. A phonetic entity larger than a single sound (see Ullakonoja & Dufva, 2016) includes sound lengths/durations, word and sen-tence stress, intonation, and the rhythm and fluency of speech.
7. The difference between articulation and pronunciation is that the former focuses more on the active use of speech organs (mouth, lips, tongue, and the whole embodiment), while the latter emphasises how words and speech should sound, addressing aspects such as the rhythm, word stress, and intona-tion of the language. https://www.differencebetween.com/ difference-between-articulation-and-vs-pronunciation/

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Appendix 1

FONOLOGIATESTI

Kunnari, Savinainen-Makkonen & Saaristo-Helin

3-6-vuotiaiden testilomake

Testattavan nimi:

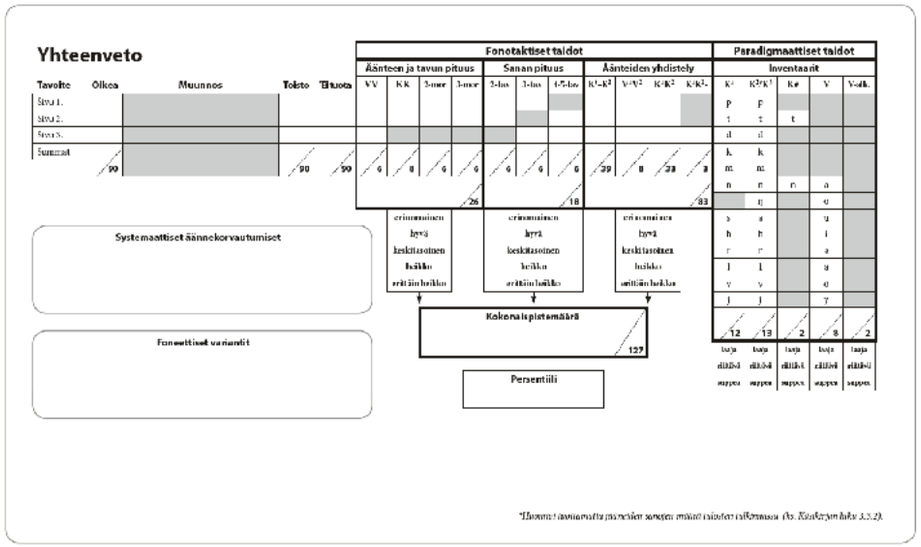
Ikä: Testauspäivämäärä:

	Tavoite	Oikea	Muunnos	Toisto	Ei tuota	Fonotaktiset taidot: Äänteen ja tavun pituus: VV	KK	2-mor	3-mor	Sanan pituus: 2-tav	3-tav	4-5-tav	Äänteiden yhdistely: K¹-K²	V¹V²	K¹K²	K²K²-	Paradigmaattiset taidot: Inventaarit: K¹	K²/K³	K#	V	V-alk.	HUOM
H1.	auto																					
H2.	koira/hiiri																					
1.	puu					VV											p			n		
2.	tuli						KK			2-t.							t	t		n		
3.	kukka						KK			2 k.							k	k				
4.	(uni)nuna																nn					
5.	lusi																l					
6.	susi																s					
7.	(hai)hau																h					
8.	vauva													nn			v	v				
9.	meitä									2 t.							m	n		s		
10.	juo													nn-vn			j					
11.	valppa						KK		3-ra.				v - p	ll			v	p				
12.	porsa												p - t				p			n		
13.	hattu												h t				h	t		s		
14.	poika												p k	ei						n		
15.	ruokoa												u - k				u	k				
16.	sukka												s k				s					
17.	luvata												l - v	ta				v	l			
18.	kissa						KK			2-t.			k - s					s		l		
19.	pyllö						KK						p - l					l		h		
20.	kala									2 l.			k l					l		s		
21.	hiiri					VV							h - r					r		i		
22.	sarvinokka						KK				3-t.		s - n					n				
23.	kampsu								3-ra.						ap			m, p				
24.	linta							2-ta.							nt		l	n				
25.	kuusk							3-ta.							sk		k	ŋ		s, ʃ		
26.	ranskalaista										3-t.				ns		rn					
	Yhteensä																					

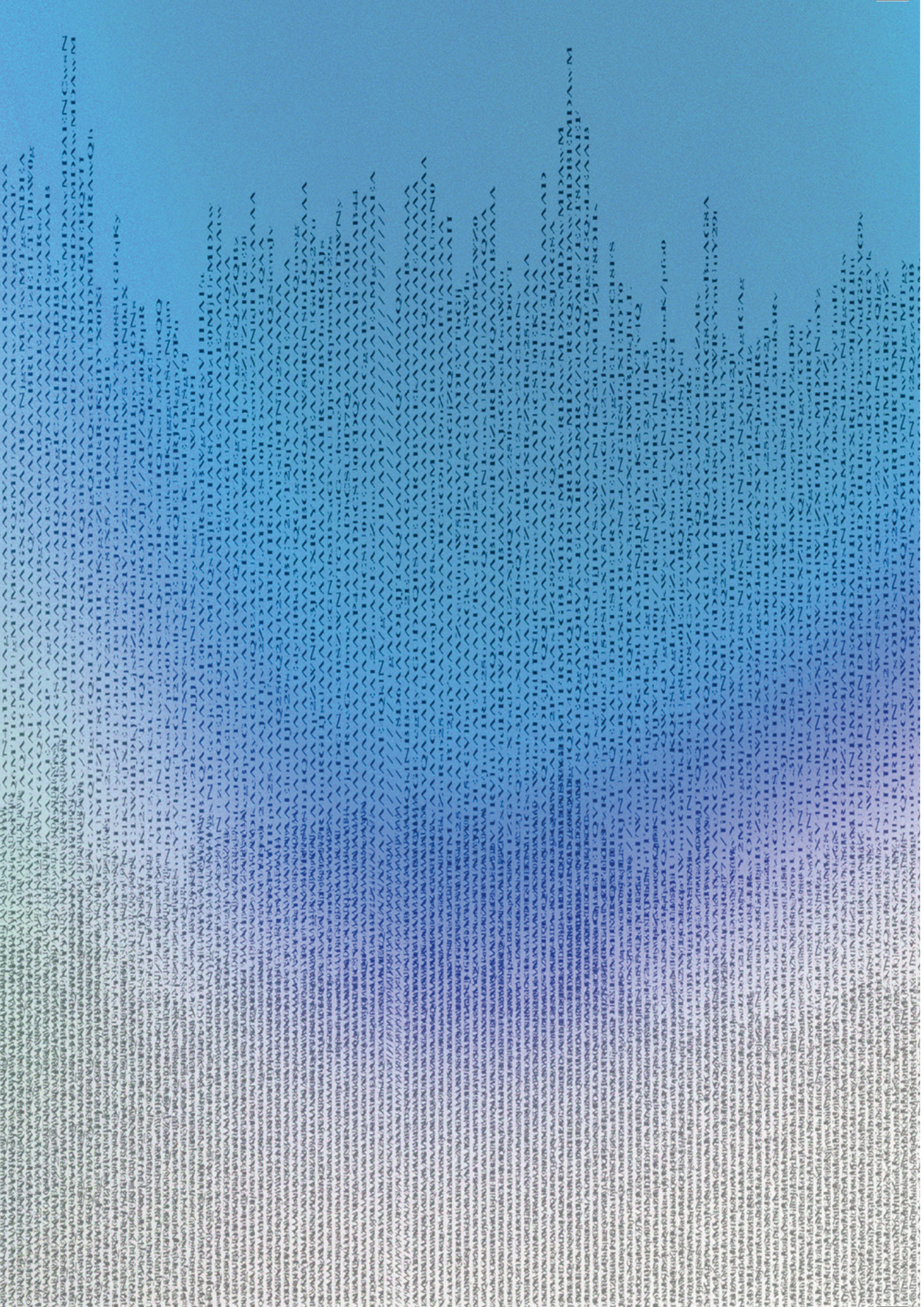
VV=pitkä vokaali, KK=pitkä konsonantti, 2 mor=2 mooraa sisältävä, 3 mor=3 mooraa sisältävä, 2 tav=2 tavuinen sana, 3 tav=3 tavuinen sana, 4-5 tav=4-5 tavuinen sana
K¹-K²=äänteiden erilaisia yhdistelmiä sanan keskimmäisissä tavuissa, V¹V²=diftongi, K¹K²=konsonanttiklusteri, K²K²-=samanlainen konsonanttiklusteri, K¹=samanlainen konsonantti
K²K²-=samanlainen konsonantti, K#=sanan/tavun konsonantti, V=vokaali, V-alk.=samanlainen yhdistelmä

	Tavoite	Oikea	Muunnos	Toisto	Ei tuota	Fonotaktiset taidot: Äänteen ja tavun pituus: VV	KK	2-mor	3-mor	Sanan pituus: 2-tav	3-tav	4-5-tav	Äänteiden yhdistely: K¹-K²	V¹V²	K¹K²	K²K²-	Paradigmaattiset taidot: Inventaarit: K¹	K²/K³	K#	V	V-alk.	HUOM
27.	juusto								3-m.						st		j					
28.	veitsi								3-m.					ei	ts							
29.	tähti							2-m.							ht		t	h		ä		
30.	sohva							2-m.							hv			h, v				
31.	pulkka								3-m.						lk(k)							
32.	sakset							2-m.							ks				t			
33.	itkee					VV									tk							
34.	kirja							2-m.		2-t.					rj			r, j				
35.	kurkku								3-m.						rk(k)							
36.	sydän																	d	n	y		
37.	dino(saurus)																d					
38.	sänky																	ŋ				
39.	kengät						KK											ŋŋ				
40.	keppi												k - p									
41.	nappi												n - p									
42.	lippu												l - p									
43.	reppu												r - p				r					
44.	hyppää												h - p									
45.	katto												k - t									
46.	matto												m - t									
47.	vettä												v - t									
48.	ratti												r - t				r					
49.	takki												t - k									
50.	mekko												m - k									
51.	lukee												l - k									
52.	lumiukko											4-t.	l - m									
53.	punaine(n)												p - n									
54.	tyyny					VV							t - n							y		
55.	kynä												k - n									
56.	muna												m - n									
57.	sieni												s - n	ie								
58.	linna						KK						l - n									
	Yhteensä																					

						Fonotaktiset taidot										Paradigmaattiset taidot					
						Äänteen ja tavun pituus				Sanan pituus			Äänteiden yhdistely				Inventaarit					
	Tavoite	Oikea	Muunnos	Toisto	Ei tuota	VV	KK	2-mor	3-mor	2-tav	3-tav	4-5-tav	K^1-K^2	V^1V^2	K^1K^2	K^2K^3	K^1	K^2/K^3	K#	V	V-alk.	HUOM
59.	vene												v - n									
60.	juna												j - n									
61.	pissaa												p - s									
62.	tuoli												t - l									
63.	maalaa					VV							m - l									
64.	nalle												n - l									
65.	laiva												l - v									
66.	orava												r - v								V-alk.	
67.	apina										3-t.										V-alk.	
68.	lentokone											4-t.										
69.	laskee														sk							
70.	suihku													ui	hk							
71.	lehmä														hm							
72.	hammastahna											4-t.			hn							
73.	lahja														hj			j				
74.	vihreä														hr							
75.	kilpikonna											4-t.			lp							
76.	keltaine(n)														lt							
77.	silmä														lm							
78.	pilvi														lv							
79.	varpaat														rp							
80.	sormi														rm							
81.	norsu														rs							
82.	korva														rv							
83.	perhone(n)										3-t.				rh				(n)			
84.	piirtää					VV									rt							
85.	seepra														pr							
86.	panda														nd			d				
87.	helikopteri											5-t.			pt							
88.	traktori										3-t.				kt	tr-						
89.	prinsessa										3-t.					pr-						
90.	krokotiili											4-t.				kr-						
	Yhteensä																					



*Ilmoita tavoitemuoto jonkin sanan sisäisiä tiedon silkkomisia (ks. Käsikirjan luku 3.3.2).



ARTICLE 3

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Language-aware choir practice triggering multilevel transformations in music education

Johanna Lehtinen-Schnabel

Abstract

Choirs are often based on well-established musical principles, repertoires, and habits of action aiming at musical quality. This narrative-oriented practitioner inquiry focuses on a distinct choir that aims to respond to the real-life needs of the participants, who are newcomers to Finnish society, by integrating Finnish-as-a-second-language learning into meaningful music-making. In language-aware choirs, the practice is continuously co-created anew by drawing from music education, the intercultural negotiation with and between the participants, and the transprofessional co-construction between the choir conductor and the Finnish language teacher. The study asks: What meanings do the participants give to language-aware choirs? The narrative analysis includes interviews of five choir participants, from which stories, each depicting various transformative meanings, were composed. Leveraging Maxine Greene's concepts of wide-awakeness and social imagination, and seen through the lens of activity theory, the study shows how choir participants, including the choir conductor and language teacher, illustrate various processes of transformation in their personal or professional lives. These individual transformations highlight how the transdisciplinary of the choir practice not only opens up novel opportunities for social and cultural participation, but also challenges the learned mental models of teaching and learning for both music and a second language. By proposing an emerging theorisation for transdisciplinary language-aware choirs, the study encourages further transdisciplinary practices in music education as it faces the interconnected challenges of contemporary societies.

Keywords: activity system, choir, music education, second language, transdisciplinary, transformation, wide-awakeness

Beginning(s)

> I will always remember this specific situation. It was the first time that I would teach music for adults with linguistically and culturally diverse backgrounds. I remember being very excited and filled with enthusiasm to start making 'global music' with these intercultural groups, who I thought were equally fascinated to share their musical experiences from all over the world. In the beginning of the first music lesson, however, an elderly person posed a question that fundamentally challenged my plans "Can you tell us what music has to do with learning Finnish?" The person also forcefully continued that learning Finnish was the one and only reason they were attending this training. By "they" the person referred to ten others (aged 20–70) who sat with arms folded at the back of the classroom. This elderly person was the only one who could speak English—the language we shared at that time. The question caught me so completely by surprise that I remember answering in a vague manner something that, in hindsight, was more like a desperate suggestion of music being "a-common-universal-language," only to realize afterwards that I hadn't even answered the question. This unexpected question, which I wrote behind a sheet of music at that moment, nevertheless started to provoke my imagination towards untapped possibilities to approach Finnish-as-a-second-language in and through music education.

This "shocking moment" (Greene, 1995, p. 27) took place in 2009, when I participated in a pilot project where arts and crafts were, for the first time, combined with integration training for immigrants[1] at an Adult Education Centre in Finland. This moment pushed me to reconsider my professional mental models as a music teacher and choir conductor, and ultimately, to explore language awareness in choir practice. The unexpected question initiated a process in me akin to *wide-awakeness*, to use educational philosopher Maxime Greene's (1978) term. While wide-awakeness originally derives from philosopher and sociologist Alfred Schütz's (1962) work, referring to "an alternate mode of existence that transcends the passive attitude so easily assumed in relation to one's surroundings" (Williams, 2017, p. 3), according to Greene (1995), wide-awakeness is a kind of heightened consciousness related to the process of breaking loose from "the habitual, the taking-for-granted, the unquestioned" (p. 23). Expanding one's knowledge and knowing towards unfamiliar and "as if " perspectives, wide-awakeness highlights expanding one's "awareness of polyphony" (Allsup, 2020, p. 33; see also Scarlato, 2022). Facing this unexpected question within the context of my daily work triggered an awareness of polyphony, beginning to transform my learned ways of thinking and acting and to heighten my "moral reflexivity and moral imagination" with regard to how my "professional work relates to wider societal issues" (Westerlund & Gaunt, 2021, p. xxiv). It awoke in me to reflect self-critically on "what I think of as a dialectic relation with the forces around that determine and condition and (every now and then) manipulate" (Greene, 1995, p. 107)—the external (the changing social reality) and internal (my deep disciplinary commitment to music and music education) forces related to music teaching and learning. I could no longer enter into intercultural musical contexts without having the unexpected question in mind, while at the same time having to ask myself a series of new questions: how can I embed the Finnish language, including Finnish music, in choir activities without subordinating meaningful music making to alien goals or a

nationalistic purpose, or, even worse, would such merging be uncritical colonialism? The more I unveiled my fixed mental models and taken-for-granted certainties as "an outcome of the career path" (Väkevä et al., 2017, p. 138), the more I became aware of the multilayered hindrances I had to cope with when expanding the disciplinary boundaries of music education towards such complex transdisciplinarity that could holistically integrate choir practice and Finnish language learning. Consequently, the movement towards wide-awakening signified what could be called "a nodal situation," a turning point that radically changed the future course of my professional actions (Westerlund, 2020, p. 16; see also Bode, 2013).

This narrative-oriented practitioner inquiry (Cochran-Smith & Lytle, 2009) aims to develop new understandings of the transformative potential of a transdisciplinary choir practice by exploring the experiences of choir participants in two language-aware choirs.[2] These choirs take the real-life social needs and desires of the choir participants as the starting point for integrating Finnish language use and learning into choir practice. In music education scholarship, linking music with social and societal issues have previously been approached, for instance, through structural-level social innovations in music education institutions (e.g., Väkevä et al., 2017; Westerlund et al., 2019, 2021) and the activist stances of individual music educators (e.g., Barrett & Westerlund, 2024; Hess, 2019; Karlsen, 2019; Laes, 2017). By connecting individual actions and structural-level changes, the present study draws from "a theoretical meeting" (Pedersen & Bang, 2016) between Greene's concepts of wide-awakeness and social imagination (Greene, 1978, 1995, 2001) on the one hand, and the activity systems framework (Engeström, 1999, 2001, 2014) on the other. To approach this nexus of individual and wider structural transformation, this study asks:

> What meanings[3] do choir participants, including the Finnish-as-a-second-language teacher, give to their participation in the language-aware choir?

The context of language-aware choirs

The first language-aware choir, which I founded together with a second-language teacher, aimed to provide a new social context for adults with immigrant backgrounds to practice active and holistic language use through musical activity in a relaxed and mistake-tolerant atmosphere, at a time when immigration to Finland was starting to increase. More than 10 years later, in 2024, the number of immigrants has risen to a record high, and according to the latest statistics the largest group of immigrants comprises working-age adults (Tilastot [Statistics], 2024). Adult immigrants typically lack social contexts where they can actively use their second language, practice spoken Finnish in collaboration with others, and address-related challenges, such as phonetics and pronunciation, within a motivating social environment (Lehtinen-Schnabel & Levänen, 2024). Due to lack of second-language skills, newly arrived residents are therefore easily excluded from various social contexts (e.g., Leinonen, 2020), including arts and cultural services, and Finnish-as-a-second-language competence also directly affects their employability (e.g., Könönen & Himanen, 2019; Larja, 2019; Lehmuskunnas et al., 2020; Tarnanen & Pöyhönen, 2011). Consequently, diverse language-integrated musical activities, such as those in choirs, have gradually increased across different educational levels, including adult, basic, and higher education.

This study uses empirical material from two language-aware choirs that I conducted (and still do) as part of my work in the field of liberal adult education and municipal cultural services in the Helsinki metropolitan region. The choir participants, aged 21 to 70, had diverse social and educational backgrounds, some of whom were newly arrived residents and some having been living in Finland for up to 16 years. The fee-free choirs had open access, with no requirements for musical or Finnish-as-a-second-language skills and musical and linguistic skills varied among the participants. While most of them had previously taken Finnish-as-a-second-language classes, not all had. Similarly, musical experiences varied, with some participants having never had any music lessons, while others were advanced musicians. The weekly rehearsals lasted 1.5 hr, and the choirs had public concerts and other performances regularly in various venues. The Finnish-as-a-second-language teacher attended every other choir rehearsal, integrating her professional perspective[4] to the development of choir activities as a resourceful practitioner (Edwards, 2010). At the same time, she also was a full choir participant, enjoying music-making and getting new ideas and inspirations for her own work as a second-language teacher.

The underlying pedagogical principles of the choir practice can be divided into six "fields of action" (see Table 1; see also Lehtinen-Schnabel, 2023), which together encompass multiple approaches to the entanglements of music and language with experimental and creative mindsets. The fields of action, which can also be interwoven, are incorporated in diverse ways in every choir rehearsal, reflecting the emerging needs, wishes, and real-life experiences of the choir participants. Hence, the choir practice is a result of an ongoing process of co-construction based on intercultural exchange and transdisciplinary, transprofessional collaboration between the choir participants, choir conductor, and Finnish-as-a-second-language teacher (see Lehtinen-Schnabel & Levänen, 2024). This co-construction underlines the equal, reciprocal, and nonhierarchical nature of the choir practice and the wide-ranging diversity within the choirs.

Table 1. Six fields of action in the language-aware choir practice

Six fields of action	Focus
1. Warm-ups	Address holistic opening of voice, body, and mind for singing and active language use by creatively and playfully approaching challenging sounds, words, and sayings of the Finnish language (as experienced by choir participants) as parts of vocalisations, vocal and breathing exercises.
2. Collaborative choir improvisations	Approach music and language production with a relaxed, playful, and "mistake-is-a-gift" mindset by focusing on interaction, collaboration, and communication through various ways and modes of expression (vocal, verbal, embodied, material, spatial).
3. Singing songs in different genres and themes	Focuses on a dynamic, multisensory, and embodied (holistic) approach to language use through singing in collaboration with others (in one to four voices) and addressing the interfaces of music and language (rhythm, durations, melody, expression, hearing and listening, articulation and pronunciation, phrase and sentence structure, and the cultural content, as well as becoming familiar with diverse genres and sub-languages, such as spoken language and the different dialects. Repertoire consist of a wide range drawn from canons, circle songs, children's songs, folk tunes, pop songs (including rap) and evergreens, to songs chosen and introduced by the choir participants, or improvised and sometimes collaboratively composed. They are sung a cappella or with accompaniment by the choir conductor (piano) or by the choir participants (e.g., strings, guitar, percussion). Using accompaniment is important to support singing and music learning, which is approached without sheet music in order to acknowledge the diversity of cultural backgrounds and to emphasise the focus on "sensitised hearing," not only in music but also in language expression.
4. Creating new lyrics	Highlights the creation and re-creation of song lyrics while encouraging the expression of individual thoughts, intercultural dialogue, and the use of spoken utterances that nurture language production and ownership in both oral and written forms, as well as creative approaches.
5. Becoming immersed in the stumbling blocks of Finnish with "funny language songs"	Supports memorising and recalling the most difficult phonemic, phonetic and grammatical aspects of the Finnish language with the help of memorable melodies and the rhythms of the spoken language, as created by the L2 teacher (lyrics) and choir conductor (music).
6. Becoming familiar with songs brought by the choir participants and translated into Finnish	Affirms the dialogue between the musical, cultural, and linguistic features in songs as well as between the choir participants' native languages and Finnish

Research approach

Integraed activity systems

The *double meaning* of the language-aware choir practice denotes the integration of two activity systems (Engeström, 2001)–an ordinary choir and a second-language class–which together engender a new activity system (a language-aware choir) and dismantle and blur the boundaries between music and language education (Figure 1; see also Lehtinen-Schnabel, 2023, p. 483). The boundary between activity systems creates a space "where understandings are negotiated" (Daniels & Edwards, 2010, p. 2). This space (presented in the middle of Figure 1) takes place between the choir participants, the Finnish-as-a-second-language teacher, and the choir conductor, addressing the ongoing process of co-construction. A framework of interacting activity systems is typically used when focusing on practices that seek to generate and mobilise knowledge from different settings (see Daniels & Edwards, 2010; Edwards, 2010), as is also the case in language-aware choirs. An activity theoretical lens therefore relates to what Yrjö Engeström (1987) calls *expansive learning*, starting with "individual subjects questioning the accepted practice" and gradually expanding "into collective movement or institution" (Engeström, 2014, p. xx).

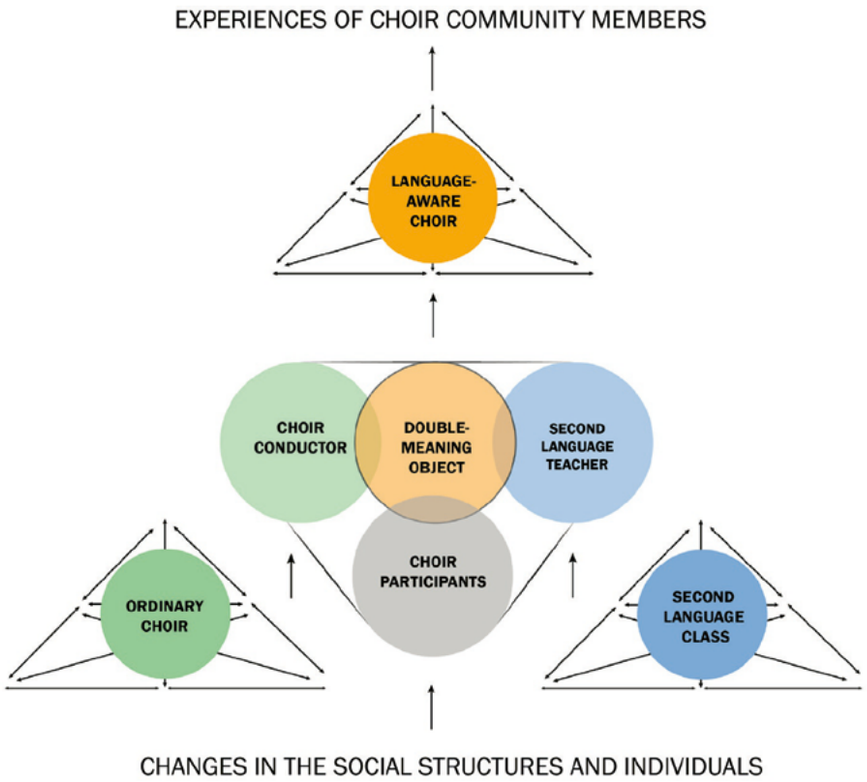
Figure 1 depicts one key principle of activity theory, that is, the historicity (Engeström, 1999, p. 25) of language-aware choirs stemming from two separate disciplines (music and language education) and reflecting changes in the social structures and individuals due to the diversifying reality in Finland. According to Engeström (2005), social structures are dialectically linked to "the actions of the individual" (p. 17). In this study, attention is given to the experiences of choir community members (Figure 1), while also being reflected upon in light of the past and present forms of the boundary-crossing choir activity.

Research material

The research material encompasses 13 individual semi-structured interviews (Kvale & Brinkmann, 2009) with four choir participants (three interviews per person, approximately 60–90 min each) and the Finnish-as-a-second-language teacher (one interview, 150 min). The interviews were first conducted with 11 volunteer choir participants, of which the information-rich data of four were selected according to theoretical sampling that highlights "purposeful selection of samples to inform the emerging theory in the study" (Coyne, 1997, p. 626; see also Becker, 1993; Glaser, 1978, 1992; Glaser & Strauss, 1967). The selection acknowledged diverse perspectives, rich descriptions, and their relevance to the needs of the emerging theory. The interviewee's language competence was not a criterion, but it may have influenced on the richness of the interview data. The study employed an adaptable sampling strategy to be "responsive to real-world conditions" and to "meet the information needs of the study" (Coyne, 1997, p. 630). The three interviews with the participants took place between September 2019 and May 2020. The first and second interviews were conducted before and after choir rehearsals, within the same building for convenience. Due to the COVID-19 lockdown, the choir rehearsals and the third interviews took place online. In line with the theoretical sampling, the interview with the second-language teacher was conducted

afterwards, in January 2024, "according to the needs of the study" (Morse, 1991, p. 129).

Figure 1. Language-Aware Choir Integrating Activity Systems (Adapted From Lehtinen-Schnabel & Levänen, 2024, p. 3).



The interviews with the choir participants were conducted in English, as all interviewees were able to speak it at an adequate level, which is typical for the majority of choir participants. If needed, the interviews also employed holistic communication in line with translanguaging (García & Wei, 2014; Wei, 2018), such as bodily and vocal expression (e.g., gestures, singing), to support and complement the verbal expression. Although English proficiency was not a criterion for participation in interviews, it may have influenced volunteering as interviewees. The interview with the second-language teacher was conducted in Finnish and the cited parts were translated into English by the researcher.

The interviews encompassed a variety of themes related to earlier experiences of learning music and Finnish-as-a-second-language, reasons for joining the language-aware choir, personal learning aims, as well as choir experiences. All interviews were first audio-recorded and then transcribed verbatim, three by the researcher and all others by a company specialising in audio-recorded research transcription.

Ethics

All participants voluntarily joined the study and provided their written informed consent. The study was reviewed by the Ethics Committee of the University of the Arts Helsinki and received research permissions from the related organisations according to their research integrity guidelines.

The narrative approach

I approached the research material through narrative inquiry, understood as "the study of experience as story" (Connelly & Clandinin, 2006, p. 479) and "a form of social action" (Lal et al., 2012, p. 6; see also Clandinin, 2006; Riessman, 2008) in which narration is "not only presenting but also constituting reality" (Bruner, 1991, p. 5). The study is located between the distinction of narrative methodologies where stories are either "told" or "living" (Connelly & Clandinin, 2006, p. 482). As the choir conductor, I have an "inside" perspective upon the "living out of stories" (Clandinin, 2006, p. 47) alongside the participants. In turn, the interviews drew upon these lived experiences, stressing "life as lived in the past" (Connelly & Clandinin, 2006, p. 482). Although I constructed the stories retrospectively (Freeman, 2015), they strive towards meaning-making in the future as forward-looking agencies of change (Westerlund, 2020, p. 7), highlighting the capacity of imagination and allowing us to view things "as if they could be otherwise" (Greene, 1995, p. 15; see also Dewey, 1938). The construction of stories aimed to move beyond the simple "telling of stories" (Barrett & Stauffer, 2009, p. 11) by working "towards deeper understanding of the varying and complex meanings and interpretations" (p. 11) for the purpose of this study–in this case, to develop a new understanding of transdisciplinary choir practice.

The analysis was a composite of the paradigmatic and narrative modes of reasoning (Polkinghorne, 1995) focusing on the interview material from five choir participants, selected in accordance with purposeful theoretical sampling (Coyne, 1997). The first phase, highlighting the paradigmatic mode of thought (Bruner, 1985), started with mapping and coding (e.g., Leavy, 2017, p. 151) the interview material from the five interviewees horizontally, through the lens of the research question. In other words, I approached the transcribed interview texts (pre-, middle-, and postinterviews of four choir singers and one interview with the language teacher) and coded the parts where various meanings of participation in the language-aware choir emerged. The coded parts encompassed choir experiences related to music and second-language learning,

participation in the social context of the choir community, and linking the choir experiences to life events and surrounding society, addressing "alternative perspectives of the ways" in which language-aware choirs were "understood, enacted, and lived out" (Barrett & Stauffer, 2009, p. 11). When looking at these parts through the concept of wide-awakeness (Greene, 1978, 1995) and activity theoretical lens (Engeström, 1999, 2001), a common theme among them became apparent: a kind of "transformative force" they provided for the lives of the interviewees. The first phase of analysis thereby engaged in thematic analysis (e.g., Braun & Clarke, 2006) using an abductive approach (see Alvesson & Sköldberg, 2009, pp. 3–4).

In the second phase of the analysis, aligning with the narrative mode of thinking (Bruner, 1985), the parts including the "transformative force" in each individual interview were vertically organised into a story form. I focused on the interview material of each single interviewee and constructed a story of the parts depicting aspects of personal transformation that participation in the choir had triggered. This process required continuous consideration of what to include or exclude (cf. narrative smoothing, Spence, 1986) as well as synthesising and relating "events and actions to one another by configuring them as contributors to the advancement of a plot" (p. 16). All in all, the two-phase analysis acknowledged that "each story told and lived is situated and understood within larger cultural, social, and institutional narratives" (Clandinin & Caine, 2008, p. 542), thereby reinforcing or balancing "the big picture" (Stroh, 2015, p. 43)—the broader systems framework with which they were engaged.

Towards wide-awakening individual transformations

As an outcome of the two-phase analysis, the five stories presented below depict the meanings that joining and co-constructing a language-aware choir practice provided for the participants. These meanings show various transformations in (a) self-image as a second-language user (Sasha's story); (b) musical identity (Sofia's story); (c) the integration process (Rami's story); (d) a sense of social and cultural participation (Roosa's story); and (e) understanding second-language learning (language teacher's story). The meanings will also be discussed in dialogue with Greene's and Engeström's theoretical insights.

Choir activity transforming second-language use and learning into a positive and holistic experience: Sasha's story

Sasha moved to Finland with her family more than 10 years ago. She can no longer return to her homeland, where she used to work as a journalist and editor, and where she "really lived through the language." For her, singing and musical activity in the language-aware choir opened up not only a new relationship with Finnish-as-a-second-language, but was holistically connected with her process of identity change, shaping her self-image related to her acculturation process. Surprisingly, music and singing had enabled emotions and "a way of grasping through feeling" (Greene, 2001, p. 86) within her language use, rather than seeing language merely as a system of structures with which she was accustomed. In other words, through musical activity, for Sasha, language use had become a holistic experience and action, fuelled by the diverse choir community with which she could identify. Although Sasha's story was of a very personal process, it was also part of "manifestations of an evolving systemic contradiction in the activity they stem from" (Engeström, 2016, p. 5), illuminating disruptions in the activity system of a traditional second-language class in Sasha's past experience:

> I think it is really challenging, stressful, and even traumatic to change your culture and language, and everyday life context. I think that the people who have changed their life context might not do it on purpose. I belong to those ones. Even if you are at home, the home is leaving you, maybe gradually. I think that if you want to learn a language deeply–not just for reading some special documents—but really to speak with people in everyday life, it requires you to change your personality in general. You just feel, "I'm not me." I can say that I was in despair. That kind of feeling for several years. I'm the kind of person who always relies on logical things and ordering systems. I need to process it all the time. In the choir, suddenly, I needed to cancel all those brain functions and I started having fun and joy, and pleasure. It changes my relationship with language. I really get pleasure from learning. I can't say that it's something logical. It's just a feeling and emotion. The choir supports my speaking, not being so shy about looking stupid. I just feel more relaxed. It is also the group which is very diverse. I believe that this diversity is healing.

From language learner to singing enthusiast: Sofia's story

Joining a language-aware choir allowed Sofia to create a new relationship with music and singing as the musical world opened up to her through language awareness in the choir context. Surprisingly, entering the choir as a language learner started a process of becoming an enthusiastic singer, a new musical identity that she had not earlier been encouraged to pursue. This process was strengthened when she became aware of the

positive effects of singing on her well-being, both psychological and physiological (see also Heydon et al., 2020). Moreover, combining her native language within Finnish language learning through singing helped her in this process. Sofia's story uncovered the differences between "the central components of the activity system" (Engeström, 2005, p. 29)–namely, of an ordinary and a language-aware choir. These components were related, for instance, to rules (e.g., access requirements) and tools (e.g., pedagogical principles) that could easily exclude adults like Sofia, who would not have dared to join a normal choir:

> I first thought we will have grammar classes or something and then there is a song. But it was not like that. Suddenly I was in the middle of a real choir. I think we are all surprised. Actually, we can sing. And with all these different voices, the final result, everything together. I thought this was only possible in a professional setting where people do this for living. We do this even though we didn't know we could.

> I had a big experience when you asked me to make my native language version of that Finnish song. That was very special to me, and also the fact that I could do it. That I even could sing it alone in a large public concert at the Helsinki Music Centre as a soloist when others were humming in the background. That was a huge step in my self-confidence. I could also speak Finnish a little in front of the audience. I would never have thought I could. Even though it was a small thing for the others, for me it was a huge thing on a personal level. It is this self-confidence. And it is not only that. It is also this happiness when we are singing together. It is some kind of big positive energy that stays.

> I have never sung before in a choir. I have a twin sister and she sang a lot, but I was always the shy one. Now I am singing every day. I started because of the choir. Especially if I am down or miss something. It's a way to express whatever is inside. It is also part of the confidence that comes from knowing what is happening in the body.

Songs opening intercultural dialogues in daily life: Rami's story

Rami's story was about sharing and radiating around what he had learned in the choir. The story referred to the opening of social imagination (Greene, 1995), in the sense that through musical encounters in the choir–and singing the choir's songs with his daughter–he began to reflect on his own integration process in Finland and to better understand his daughter's life situation, "from the vantage point of the person whose world it is" (p. 4). As Greene (1995) argued, encounters with art can nurture becoming wide-awake to the world by arousing imagination to see alternative realities that prompt us to attend to and express regard for "empty spaces" (p. 3) between ourselves and others.

By finding a shared musical space through the choir songs they both enjoyed, it also became possible for Rami and his daughter to expand this space to include other songs and languages, as well as to start creating their own songs that combined and mixed these ingredients according to different situations. In line with Sofia's story, Rami's story shows that although language learning was the reason for joining the choir, it was the songs and music that finally became meaningful to him. In this way the language-awareness in musical activity (the double-meaning object of the choir activity) could expand "a horizon of possibilities" (Engeström, 2005, p. 10) for wider participation in music education:

> Usually when I have sung, for some reason my five-year-old daughter has not wanted to hear. She somehow used to feel sad. These were mostly slow songs in my native tongue. Now, when our music class is over, I often keep on singing in the evening. And my daughter allows me to sing. She even likes the songs. Every day she says: "Let's sing the songs from your music class," and then we sing them together. Indeed, she knows more or less all the tunes.[5] And now there are no objections to me singing anymore. We have also started to talk using the tunes from our class. But we use other words and make up new melodies. We are talking about, let's say, going to eat or doing something. We sometimes use Finnish, sometimes my native language, and sometimes English.

> I signed up for this class because of language, but I think I now care even more about music. I think the songs of the choir provide me with some kind of common thing outside. Sometimes I mention these songs at work to my friends. Some of them know them. For me personally it is like integration. And probably it is just the same thing in a different way with my daughter. I feel that knowing these Finnish songs aligns with her childhood now. I guess she is learning her Finnish self, and I won't become completely foreign to it, ignoring the fact.

A language-aware choir community cultivating and forging a sense of social participation: Roosa's story

Roosa's story raised the meaning of a choir as a social ecosystem where experiences not only in singing with others, but also in language use and production, could be shared, including becoming familiar with the cultural and social contexts embedded in songs. This social ecosystem had awakened Roosa's social imagination (Greene, 1995) towards a sense of participation and belonging in her new home country, while also creating opportunities for positive identification with Finnish culture. As Greene (1995) emphasised, "the more we imagine, the more possibilities will open for us—possibilities of meaning, of vision, of alternative realities" (p. 75). Roosa also showed the need for more possibilities where a second language could be used and produced in

an authentic (real-world, out-of-language-class; see also Lilja et al., 2020) environment, which she had found in the choir. Her story demonstrated how the educational needs in a diversifying society have themselves become much more varied, reflecting how "the funda-mental societal relations and contradictions of the given socio-economic formation–and thus potentials for qualitative change–are present in each and every local activity of that society" (Engeström, 2005, p. 36). Consequently, the new needs created "internal tensions and contra-dictions" (Engeström & Miettinen, 1999, p. 9) in the activity systems of a second-language class and an ordinary choir, thus encompassing "a driving force of change" (Engeström, 2001, p. 135) and the potential for "radical transformations of entire activity systems" (Engeström, 2014, p. xviii):

> I really enjoy singing with other people. I was hoping to find a choir where I feel welcome. In my neighbourhood there is a choir, but I might not feel welcome. I think that everybody in our choir–it doesn't matter why you came to Finland or whatever reasons you have to stay in Finland–want to learn the language. There is this common experience that Finnish is a very hard language. I think that one of the problems is that Finnish-as-a-second-language is taught as a foreign language and not as a communication language. For me, the choir is like filling this void. In the choir, we work on aspects that you don't work on in a Finnish class or elsewhere. Like pronunciation is not practiced in the other contexts, and the sounds in order to improve the phonetics. And then we are actively using the language. The way we are working also helps us to comprehend, because we are not separating things. One important thing is the spoken language, that is good because you start to get sentences. In a song you sing and hear the same word several times, even if you don't understand it. It stays, and there's some kind of link. There is the melody, there is the rhythm, and there is also the fact that you are hearing and repeating. I think this sort of combining the language with something else is really good. I can see a change in society, there are many foreigners. So that would be very good in other activities, too.
>
> For me, one of the main things in the choir is, however, the social link, this emotional connection of knowing songs that people know. I don't have this strong sense of nationalism, but I do have a sense of unity. And I think that music has this strong cultural component that is not the national anthem. I will be in tears when we do the performance. All these crazy people from all over the world singing in Finnish. It's just like this understanding that we are all the same.

Expanding the understanding of second-language learning: The second-language teacher's story

For the second language teacher, joining the choirs in Autumn 2015 and co-constructing the choirs' practice awakened "such a big and holistic thing that it is difficult to specify":

> Participating in the choirs regularly already for years, and being part of developing the practice, must have transformed my original teaching. I have forgotten what the reasons were and why I ended up there. But I can say that the choir has had a huge impact. In particular, I continually consider how this joy could be transferred into a second-language classroom and applied to my own teaching. Something that has such a positive and encouraging atmosphere. As we know, Finnish-as-a-second-language learners describe Finnish learning in terms of "it's impossible," "I don't want to," and so on. But the choir provides simultaneous aesthetic experiences. It encompasses collaboration, doing together, and active learning. Another big difference is that in the choir there are no language levels. I think you cannot bring this kind of holistic embodiment into the second-language classroom without integrating it with such planned vocal instruction. It's difficult to create something so holistic in a language class. For some groups, it can be embarrassing or difficult. But I try to introduce this into my classrooms. I have also taken songs, to the extent I have been able to. I adopt the playful and creative approaches of the choir, for example, when we focus on a text. I have also liked other activities where arts have been integrated into second-language teaching, but in my opinion there is something about singing that captures the language best. I think it is great how singing in the choir teaches about society and culture, too. And the spoken language. So you get language skills, knowledge, and then something that is perhaps even more important. At the professional level, I recognise that it has been a big thing, that I have been in the choir. It is about learning, to understand more about it.

The second language teacher underscored joy, playfulness, embodiment, and aesthetic experiences that encounters with music and musical activity "brought into being" (Greene, 2001, p. 5) in relation to language learning in the choir, aligning with earlier research that stresses the connection between enjoyment and language learning (e.g., Fonseca-Mora & Machancoses, 2016; Lehtinen-Schnabel & Levänen, 2024). Overall, the second-language teacher highlighted the embodied (holistic) approach to language learning (e.g., Jusslin et al., 2022), which differed significantly from orientations typical in second-language classrooms but was central to the choir practice.

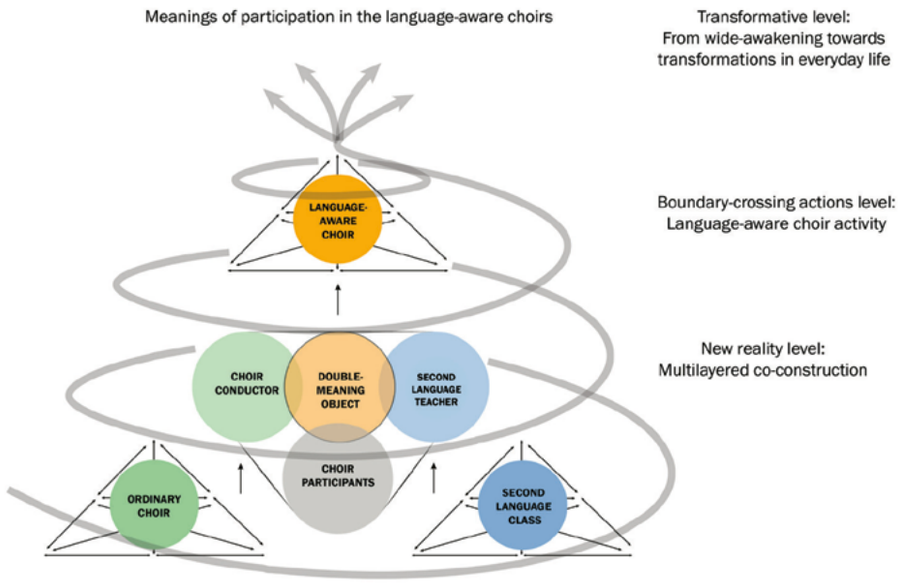
At the activity systems level, the second-language teacher highlighted the significant differences between a second-language class and a language-aware choir, such as the object of the activity related to music and language learning (single-meaning vs. double-meaning), the rules (e.g., language proficiency requirements vs. open access

and heterogeneity), and the available tools (e.g., pedagogical approaches). For her, a language-aware choir created an additional context, expanding second-language learning with new professional horizons and focal points that allowed her to choose in her daily work "whether to stay in the familiar comfort zone or to break away into something new and risky" that reaches towards "the zone of proximal development" (Engeström, 2016, p. 6; see also Vygotsky & Rieber, 1998, p. 202). As Engeström (2001) emphasised, contradictions that convey "historically accumulating structural tensions within and between activity systems" can "generate disturbances and conflicts, but also innovative attempts to change the activity" (p. 137).

Discussion

To develop an emerging theorisation of a transdisciplinary choir practice that merges music and language education in nonhierarchical ways (Lehtinen-Schnabel, 2023), this narrative practitioner inquiry explored the meanings that choir participants gave to a new, integrated activity system. These meanings were refracted through Greene's (1978, 1995, 2001) concepts of wide-awakeness and social imagination, thus focusing on the individual transformations that extended beyond mere teaching and learning of skills and competencies, and towards meaning-making. The composed stories illustrated how a choir activity, relying on continuous, multilayered intercultural, transprofessional, and transdisciplinary co-construction (Lehtinen-Schnabel & Levänen, 2024), could create a new reality that was not predetermined but reflected the emerging real-life needs of its adult immigrant participants. This new choir reality enabled boundary-crossing choir actions (see Figure 2) by disrupting well-established norms and accus-tomed habits of action associated with disciplinary traditions in music education, as well as those related to language education.

Figure 2. An Emerging Theorisation of a Transdisciplinary Choir Practice: From the Co-Construction of a New Reality Towards Various Individual Transformations.



The concept of wide-awakeness (Greene, 1978) and its enlarged form of social imagination (Greene, 1995, 2001) enabled me as the choir conductor and developer of the practice to reflect upon my own process of breaking loose from the unquestioned habits of music teaching and learning I had adopted during my studies and career. To put it simply, and as the Beginning(s) section showed, I started reflecting on music education and my work from the widest possible vantage points of others. The conceptual framework also helped me in identifying the meanings of other choir community members as "a kind of metaphor for the awakenings, the unexpected disclosures" (Greene, 2001, p. 177) towards a heightened understanding of their personal, professional, and social lives. The multiplicity of meanings described by the stories demonstrated the language-aware choir practice as a critical music education "praxis" (e.g., Kemmis & Smith, 2008; Mahon et al., 2020), referring not just to any musical action or community practice that follows musical principles, but to a transformed and transformative practice that responds to the needs of the people involved (Westerlund & Partti, 2018). This kind of praxis is "morally-politically informed and oriented, reflective, agentic, context-specific, and transformative . . . working towards positive change" (Mahon et al., 2020, p. 17).

At the level of integrated activity systems (Engeström, 2001, 2005), the meanings made by the participants manifested how the activities of an ordinary choir or a second-language class differ from the activity of a language-aware choir, which cannot

be reduced to the sum of the two activity systems (Lehtinen-Schnabel, 2023). In the integrated activity system music and language education are not merely interacting, but are merged in novel ways, thereby creating a new activity system. This structural level of examination also allows one to address the tensions between the individual actions of choir community members and the stable social structures in music and second language education "as sources of change" (Engeström, 2001, p. 136); hence, it uncovers the disruptions in disciplinary-focused activities to reflect on the varied social needs of newly arrived residents. The new needs, in this case, led to engendering a new double-meaning professional activity aimed at holistically integrating language learning into meaningful musical experiences within a social context of a choir, supported by two professionals representing distinct disciplines of music and language education. In terms of activity theory, this emerging choir activity can be seen as "a collective journey through the zone of proximal development of the activity" (Engeström, 2001, p. 137). In this study, the activity theoretical lens was used for its potential to connect systemic thinking at a manageable level (activity level) with the exploration of a language-aware choir practice and individual actions within it. The theory has been criticised, however, for "oversocialising" the individual and omit-ting the subjective perspective (e.g., Billett, 2006; Larkin, 2009, 2019; Murphy, 2022; Valsiner & Van der Veer, 2000), but, by contrast, subjective aspects were addressed here through Greene's (1978, 1995, 2001) concepts of wide-awakeness and social imagination.

All in all, the present study suggests a new transdisciplinarity and transprofessionalism for approaching not just music education theory, but also practice: a logic that could rely on "more than one rationality, be able to cope with tensions and insecurities, and reconcile conflicting professional expectations" (Laes et al., 2024, p. 4; see also Vogd, 2017). Through transdisciplinarity, music education could better tackle "complex problems that affect society and individuals" (Rezaei, 2022, p. 6). Moreover, the study contributes to the growing scholarship on expanding professionalism in music education (e.g., Barrett & Westerlund, 2024; Westerlund & Gaunt, 2021) in which the transdisciplinary approach integrates "knowledge and experience from various scientific and social partners to solve real-life situations" (Rezaei, 2022, p. xii). Overall, the study's emerging theorisation provides an example of the transition towards a complex transdisciplinary transformation in music education as a response to the emerging needs in contemporary societies.

Conclusion

This study promotes novel transdisciplinary approaches to music education in the midst of the interconnected challenges of contemporary societies. Through the emerging theorization of a language-aware choir practice, the study communicates the transformative power of transprofessional practices and encourages further use of complex transdisciplinarity in music education research. The theorisation also sets thinking with activity systems (Engeström, 1987, 1999, 2001) in dialogue with the concepts of wide-awakeness and social imagination (Greene, 1978, 1995, 2001). This emphasises the continual creation of a new reality that is not predetermined by established disciplinary traditions or habits of action, but allows an open horizon for boundary-crossing activities and fosters a creative mindset and boldness in experimentation when merging different disciplines nonhierarchically. In the language-aware choirs the creation of a new reality is an ongoing process of co-construction that draws on the real-life needs of its participants with immigrant backgrounds. This coevolving process holds transformative potential not only for the choir practice and the personal and professional lives of the choir community members, but also for expanding socially engaged and responsible music education.

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Author contributions

Johanna Lehtinen-Schnabel: Conceptualisation, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Software, Validation, Visualisation, Writing–original draft.

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Ethical approval and informed consent statements

The ethics committee of the University of the Arts Helsinki approved this study. The construction and handling of unpublished data for this research adhered to the Ethical Instructions of the University of the Arts (UNIARTS 2015), the code of ethics of the

European Commission (EC 2010), and the Responsible Conduct of Research (RCR) guidelines of the Finnish Advisory Board on Research Integrity (TENK 2012). The study has received research permissions from the related organisations according to their research integrity guidelines. In addition, DPIA (Data Processing Impact Assessment) has been processed and approved by the Data Protection Officer at the University of the Arts Helsinki. All the participants of this study have provided their written informed consent to participate in this study.

Data availability statement

Owing to its sensitive nature the research material of this study cannot be shared.

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Notes

1. Integration training aims to give better possibilities for some immigrants (unemployed, at least 17 years old, having lived in Finland for fewer than 3 years) to integrate into Finnish society. The requirement to participate concerns both labour market and independence training, funded by unemployment benefits.
2. I use the notion of language-aware choir, which I have created, to foster a sensitised and responsive approach to engagements with language in a choir context, which can include language learning. Language awareness in a choir also acknowledges the concept of translanguaging (García & Wei, 2014; Wei, 2018), in which all possible linguistic resources (e.g., participants' first languages) and other resources (e.g., embodied, material, and spatial) are harnessed to support communication and to overcome the monolingual bias in teaching and learning (Hua et al., 2020).
3. The understanding of meaning here stems from pragmatist thinking and John Dewey's holistic ideas—which also provide frames of reference to activity theoretical thinking (Miettinen, 2006) and Greene's (1978, 1995, 2001) concepts underpinning this study. As Dewey emphasised, "an event can have an infinite number of meanings and selection involves beliefs, values, and ideology" (Westerlund, 2002, p. 42). Importantly, experience is about "doing, trying out deliberately meanings in life and undergoing" (p. 47). As Westerlund denotes, in the Deweyan sense, "it is this undergoing and doing that gives us meaning" (p. 47). Musical meanings "actualise themselves in a musical event [. . .] where meaning is experienced as a meaning of the whole situation" (pp. 44–45). Meanings "are not in the things, but rather produced by social interaction" (p. 41). Meanings are thus both individual and social, situational and contextual, and deeply relational.
4. The language teacher, for instance, suggested new songs, helped choir participants with the creation and re-creation of song lyrics, clarified specific second-language issues related to song lyrics when needed, helped with translating lyrics and other things that came up during the rehearsals, and created "funny language songs" in collaboration with the music teacher.
5. Rami also shared beautiful videos of his daughter singing the choir's songs.

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ARTICLE 4

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Language-Aware Choir Practice for Adult Immigrants: Paving the Way to Transdisciplinary Transitions

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Abstract

Transitions towards sustainable societies increasingly require multi-perspective and transdisciplinary approaches not only theoretically but also at the practical and policy levels. This theory-oriented chapter explores the potential of transdisciplinary professional repositioning through the case of a language-aware choir that aims to respond to the real-life needs of its adult immigrant participants by merging learning Finnish as a second language into a choir practice. By interrogating the idea of artistic autonomy as a principle that has in effect prevented music professionals from identifying meaningful opportunities for new practices, the chapter lays the ground for conceptualizing language-aware choir practice as an invitational practice and an emerging double-focus activity system. The chapter argues for a transdisciplinary transition from the stable and narrow understanding of professional expertise in music education towards accepting the potential of music education to play a central role in transdisciplinary approaches in seeking ways out of unsustainability. The theoretical argument is supported by data from two language-aware choirs that illustrate how the constantly co-developed transdisciplinary fusion of two activity systems, namely choir and second-language class, can strengthen choir participants' active being-in-society and expand music educators' professional horizons beyond the established unidisciplinary boundaries.

Keywords: Activity system · Choir · Invitational practice · Language learning · Music education · Transdisciplinary transition

1 Introduction

In the United Nations' global framework for the 2030 Agenda (United Nations, 2015), the concept of sustainable development is seen as a far-reaching endeavour encompassing "the active involvement of governments, the private sector, civil society, and all of humanity" (Gamage & de Silva, 2022, p. 1). The Agenda's long-term Sustainable Development Goals aim to secure "a sustainable, peaceful, prosperous and equitable life on earth for everyone now and in the future" (UNESCO 2017), the pursuit of which should also challenge the arts and music education fields to reconsider their societal position in future scenarios. Yet, while it is widely agreed that transitions towards more sustainable societies require *holistic engagement* with the *complexity* of wicked problems (e.g. climate change and increasing inequality and poverty) (e.g. TWI2050 – The World in 2050, 2018), it is still rare in music education to develop practices that aim to integrate mutually divergent goals with musical ones. At the same time, the sciences have displayed a growing interest in the role that the arts and humanities could play in encouraging change towards more sustainable societies (e.g. Kueffer & Wiedmer, 2022; Schlüter et al., 2021; Waddock, 2021).

The lack of professional interest among music educators in contributing to "a way out of 'unsustainability'" (Kagan, 2014, p. 23) in a wider societal and global sense can be explained at least partially by the deeply-rooted binary distinction between intrinsic *musical* values and extrinsic *non-musical* values. This distinction has shaped musicians' and music educators' professional mental models and values especially in the decades since the Second World War, emphasizing the establishment of a discipline-specific, neutral artistic realm of idealized knowledge freed from the pursuit of societal instrumentalization, which in Western schooling had previously instilled "Christian values, a sense of national identity, and a common patriotic framework" (Barrett & Westerlund, 2017, p. 76). A similar shift away from 'social trustee' professionals towards 'expert' professionals also took place in other professions in the era of modernist professional specialisation (Dyrdal Solbrekke & Sugrue, 2011). In the field of music, it created an ideal of professional *adiaphora* (Bauman & Donskis, 2013) – "the placing of action outside of the universe of moral obligations and evaluations that take place elsewhere in society" (Westerlund & Odendaal, 2025, p. 29).

In this theory-oriented chapter, we argue that for music education to fully utilize its ethico-political potential in complex contemporary societies, there is a need "to rethink the trends of the past" (Bauman & Donskis, 2013, p. 211) and strengthen the "transition from the art-for-art's-sake assumptions" (Gablik, 1991, p. 7) towards a better understanding of how the complex array of issues around (un)sustainability may also permeate music education. There is a need to reevaluate the scripts that arts institutions have "used to interpret art's politics" (Charnley, 2021, p. 17) so that music education institutions will be able to reposition themselves without getting lost in new policy rhetorics. We further argue that music education could play a central role in *transdisciplinary approaches* when seeking ways out of 'unsustainability', since transitions towards sustainability increasingly call for issue and problem-generated transdisciplinarity (e.g. Kagan, 2014; Kueffer & Wiedmer, 2022; Schlüter et al., 2021). Such transdisciplinarity involves collaborative and participatory approaches (Leavy, 2011), and points "to the limitations of disciplinary modes of knowledge" (p. 34) not just in research but also in professional practice, as this chapter demonstrates. It requires expanding professionalism (Westerlund & Gaunt, 2021) and a

conscious stepping out of professional comfort zones towards collaborative co-creations, "the we-condition of being" (Escobar, 2022, n.p.).

The chapter explores the potential of transdisciplinary professional repositioning through the case of a relatively newly emerged language-aware choir practice for adult immigrants in Finland. The practice was initiated by the second author of this chapter, the choir conductor, in a situation when all publicly funded services of the country in question were expected to take into account the increasing rate of immigration and the consequent rethinking of the service system (Lehtinen-Schnabel, 2023; Lehtinen-Schnabel & Levänen, 2024). The aim of the language-aware choir practice is to serve a double-function related to *both* Finnish *language learning and music making*, providing a meaningful, participant-driven intercultural and socio-musical context for newly arrived individuals in Finnish society. Theoretically, the practice illustrates "new fusions of praxis" and professional responsibility (Sugrue & Solbrekke, 2011, p. 194) in music education towards building "'bridges' to the future" (p. 194) through evolving transdisciplinary "knowledge-building practices" (Leavy, 2011, p. 14). On the policy level, the practice resonates with the goals of the Finnish national strategy for sustainable development, which recognises the UN's 2030 Agenda Goals by aiming to ensure fairness, equality, participation, and inclusion as well as engagement with multi-stakeholder and transprofessional cooperation and a whole-of-society approach (Finland's Strategy for Sustainable Development, 2022).

In the chapter, we will first interrogate the idea of artistic autonomy in music education to highlight how the *adiaphoral conceptual framing* of music education can have the effect of preventing music professionals from identifying meaningful opportunities for new practices. We will then conceptualise language-aware choirs as an *invitational practice* (Purkey & Novak, 1993; Purkey & Stanley, 1991; Purkey & Aspy, 2003) and *a double-focus activity system* (see activity theory in Engeström, 1987, 1999, 2001). Third, by using interview data from seven participants of two language-aware choirs and combining activity theory with affordance theory, we will expose the narrowness and limitations of approaches to music education that constrain themselves within unidisciplinary meanings by focusing only on musical experience. We will demonstrate how the meanings that the participants give to the choirs are not only about the *musical* experience and knowledge, but also about their active and meaningful participation in the multilevel reciprocal life of their societal ecosystems.

The theorization is meant to help in understanding musical activities through "the mutual and functional interrelationship between the organism and its environment" (p. 731), where the participants appear "as societal beings, with societal and individual histories of becoming" (Pedersen & Bang, 2016, p. 731). The theoretical argument is supported by data drawn from the second author's research journal and fieldnotes as well as the interviews that she conducted with the choir participants and the teacher of Finnish as a second language who worked with her in the language-aware choirs.

2 Expanding Responsibilities of Music Educators

2.1 Aesthetic Insulation and Separatism

The period preceding and immediately after the Second World War in many countries reminded us painfully of how music and music education can be corrupted by prevailing political forces to control the population and impose homogeneity (see e.g. Abel (2019) on socialist realism in all arts in the Soviet Union). In the Western music education theorisations of the 1970s and 1980s, the *L'art pour l'art* discourse on artistic autonomy was therefore an understandable counter-attempt meant to steer teachers away from religious and political collectivism towards developing individually experienced sensitivity to the aesthetic qualities of music (e.g. Reimer, 1989). Music educators were encouraged to focus on music's intrinsic values as autonomous ends in themselves, whereas other values (e.g. social, ethical, moral) were considered to fall under the category of the merely useful, helpful, and good as means - as heterogeneous causal conditions of the processes leading towards the intended end (see e.g. Westerlund, 2002, 2003, 2008). The binary distinction between musical and non-musical values effectively eliminated the complexity of social life and engagement from professional discourse and carved out a special professional role for music education in society. Moreover, the discourse on the autonomy of the arts fitted well with the emerging notion of (neutral) specialised expertise that was increasingly rooted in modern society's professions in general.

Paradoxically, the purely musical emphasis that was considered politically neutral simultaneously served the prevalent educational policy discourse according to which the masses of modern society needed to be educated to understand the value of great art. Casey Haskins (2013) takes an example from Harold Bloom's (1987) famous defence of The Western Canon in the US context, in which aesthetic autonomy "appears as an attribute of artworks which gives them a certain inferential insulation from 'the overdeterminations of race, class, and gender'" (p. 120). In music education, Bennett Reimer (2009) defended such insulation by comparing it to the rise of the civil rights movement in the United States, asking, "Can music education really resolve such deeply problematic issues, something no one seems to know how to do?" (p. 6). Reimer went even further in his support of the binary stance, arguing that by dealing with and advocating for "marginal values", such as group participation and cooperation, music educators commit "a moral crime"; therefore, "it is of the utmost importance that any self-justification for music education be rid of the appurtenances which obscure and weaken its real import" (p. 11).

While the ranking of values and goals does not mean that societal ills would not touch

musical practices (see also Reimer, 2009), the narrowing of the conceptual framing of teachers' mental models sets other-than-musical values aside from professional horizons and creates "aesthetic separatism" (Wickström, 2023, p. 88), according to which non-musical values are less important. Moreover, the autonomy discourse asks music educators to take the musical world as it is in our normative social contexts, whilst situating music professionals "as unresponsive to the actual social and communal values" (Westerlund, 2003, p. 23). While one can agree with the resistance to political restrictions in artists' work, and that the arts cannot be expected to 'solve' large-scale societal problems on their own, the normative binary categorising of the *L'art pour l'art* ideology ignores the interconnected nature of societal problems and the complex nature of meanings in human life. It disregards the rapidly changing immediate needs of people in various contexts and how these needs might affect their understanding of what is meaningful in artistic engagements. As Wickström (2023) writes, the discourse of *L'art pour l'art* has "worked with a concept of freedom that … could only be produced and consumed by a certain class of society, and not by everyone" (p. 89).

2.2 Music Education Praxis in Rapidly Changing Ecosystems

Over the past decades the *L'art pour l'art* discourse has been challenged, especially by the 1990s and 2000s praxial theorisation of music education (see Elliott, 1995; Bowman 2009; Regelski & Gates, 2009). The insulation and separatism of music and music education practices from processes of critical structural societal change has also been criticized by, amongst others, feminist researchers, who have shown how a presumably neutral stance and autonomy from social concerns has been "used to judge other genres of music as less valuable" (Bull & Scharff, 2021, p. 676). The essential tenet of praxial music education is its taking of real-life musical practices as the starting point for music education, and defining music "as a family of distinctive practices, with each family member existing to serve different 'goods,' and each instance of which is unique" (Regelski, 2009a, p. 191; see also Elliott, 1995; Bowman, 2009). As Wayne Bowman (2009) writes, instead of simply asking "questions like 'What works?' and 'How well?'", a music education praxis "is concerned with determining right courses of action where 'rightness' must be qualified by answers to questions like – 'For whom? Under what circumstances? Whether, and to what extent?'" (p. 5). While praxial theorisation does not place the critique of how music education can reproduce unwanted societal structures at the forefront, as has been the case with feminist and systems theorists (Väkevä et al., 2017; Barrett & Westerlund, 2024), praxial theorisation recognises that music education may not always serve ultimately good purposes, and that musical practices, as social practices, are like any practices in society in that they may produce good or less good effects (Bowman, 2009). Therefore, music education as praxis requires ethical wisdom, and should not be equated "with craft-like, prescriptive, or recipe-like formulae that presume to treat everyone with one-size-fits-all methods" (Regelski, 2009b, p. viii).

When aiming at creating established understandings of authenticity, however, a praxial music educator may effectively demonstrate musical plurality of the past and present, but still fail to support professional musicians' and music educators' thoughtful navigation of rapidly changing pluralist societies (Kallio et al., 2014). Taking existing distinctive musical practices and their functions as a starting point is seductive "for anyone who prefers to just get on with their specialized work", but may fail "to capture the evolving, interactive complexity of our conversions and artistic and other cultural subjects" (Haskins, 2013, p. 114). Such a limited horizon for professional imagination fails to encourage "music professionals to actively inquire, renew, and extend their understanding as well as to adapt the practices themselves" in their changing environment (Gaunt & Westerlund, 2021, p. viii). It does not urge music educators to construct their professional field "as a field of experimentation, engaged in everyday life and culture" (Kagan, 2014, p. 400). Music education as a responsible professional praxis thus not only "adds a moral and social justice dimension to the enactment of educational praxis" (Mahon et al., 2020, p. 23), but also requires *imaginative* reflexive work and the use of craft skills to reconfigure collective actions to address how the musical world *could be* in the current era and given situation.

Yet, as praxial music education is "concerned with the broadly human uses to which musical experiences may be put, [and] the ways they enhance (or interfere with) human life and living" (Bowman, 2009, p. 6), its focus can in principle reach beyond known musical genres, outcomes, and performance practices to become a field of transdisciplinary experimentation that aims to transform the modernist culture of unsustainability. By moving beyond the binary opposition between "meaningful uselessness vs. meaningless usefulness", as Sacha Kagan (2013, p. 123) puts it, a praxial music education can be expected to acknowledge the goals of sustainable development (UNESCO, 2021) and experiment with moving beyond the known musical world, building bridges to the future within rapidly changing ecosystems by crossing disciplinary boundaries – such as in the language-aware choir practice that is the subject of this chapter.

3 The Transdisciplinary Merging of Two Activity Systems in Language-Aware Choirs

Although still recognisable as a musical choir and a group of people singing together, the transdisciplinary and transprofessional language-aware choir practice, which involves close collaboration with the choir conductor and the second-language teacher, does not resemble mainstream choirs. The practice involves people from multiple linguistic and cultural backgrounds who all wish to learn Finnish. The collaboratively developed principles therefore include not only practising Finnish songs from different genres dealing with diverse themes in the Finnish language, but also collaborative choir improvisations and the creation of new songs and song lyrics. More importantly, the participants are also invited to bring to the rehearsals songs from their countries of origin, which then receive new, translated and co-created Finnish lyrics, highlighting the dialogue between cultures and languages, while pursuing a shared goal. Despite the straightforward aim to enhance language learning and active language use, the language-aware choirs perform publicly like any other choir.

As an intercultural, invitational practice, the choirs place respect, trust, optimism, and an intentionality towards democratic hope and collaboration at the heart of their practice (e.g. Purkey & Novak, 1993). Hence, the language-aware choir practice requires a radical reframing of professional practice from the choir leader: a processual out-of-the-box mindset and ongoing alertness towards the emergent, instead of adhering to established ways of doing that tend to heavily lean on choral repertoires. This requires not just the ability to make decisions regarding the music, but also a willingness to work collaboratively with a language teacher, and to learn and experiment with the pedagogy of language learning as integrated into the musical rehearsals. The practice is processual, as it is under constant transformation based on the here-and-now individual needs, desires, and experiences of the participants. As an invitational approach to music making, the practice is open to "a generous and genuine turning toward others in empathy and respect, with the ultimate goal of collaborating with them on projects of mutual benefit" (Purkey & Siegel, 2013, p. x1v). As the choir leader reflected in her diary during the research process,

> Acknowledging language in and through choir practice challenges my deeply ingrained mental models as a music professional. I constantly need to break free of familiar, taken-for-granted habits in my musical thinking and actions, as we seek new, creative ways to address the real-life needs of the choir participants. (Researcher diary)

The language-aware choir practice thus aims to develop new and creative approaches to the diverse entanglements of both music and language (see more in Lehtinen-Schnabel, 2023). On the one hand, the practice has generated a new understanding of choir practice and the choir leader's competence, leading the musical expert into what Schön (1983/2016) called the "swampy lowlands" of professional realities, where one has to question the taken-for-granted professional mental models (such as sticking with the existing repertoire and the habitual ways of practising). On the other hand, integrating the function of second-language learning into the choir activity by providing multiple sensory channels for language learning aligns with the novel ideas of holistic language learning (e.g. the embodied language learning of Jusslin, 2022) that are still rarely adapted in language courses.

Theoretically speaking, the transdisciplinary practice in focus here is based on the constantly co-created and bottom-up merging of two *activity systems* and their specific objects, to use Engeström's terms (1987, 1999, 2001): the object of a choir to make meaningfully experienced music, and the object of a second-language class to improve communication skills – together forming a double-meaning object and focus. This double-focus brings new elements to both the musical system and language learning, while the choir participants are allowed to "produce their own conditions of life" (Pedersen & Bang, 2016, p. 738) by changing, adding, and removing materials to align with the double-focus of the emerging activity system. The resulting merging is a co-created activity system that is irreducible to the sum of the two activity systems (see Figure 1, see also Lehtinen-Schnabel & Levänen, 2024). It is a radically new socio-cultural artistic ecosystem that aims to fully serve the needs of adult immigrants who wish to make music together with people who understand their specific life situation, while simultaneously actively learning and practising spoken Finnish in a supportive, mistake-tolerant, and safe setting. For the choir conductor and the second-language teacher, the language-aware choir practice is a working context that requires a transdisciplinary 'acting-with' instead of an 'acting-upon' mentality. It does not hold them to predefined models of what a good choir praxis is, but constantly pushes them to ask the self-defining question: "What meaning am I making of my life and work, and how can I help others to make meaning of their lives and work?" (Purkey & Siegel, 2013, p. xviii). It thus paves the way for "new fusions of praxis" that point towards engagements of professional responsibility for a positive future while being in the flow of the unknown.

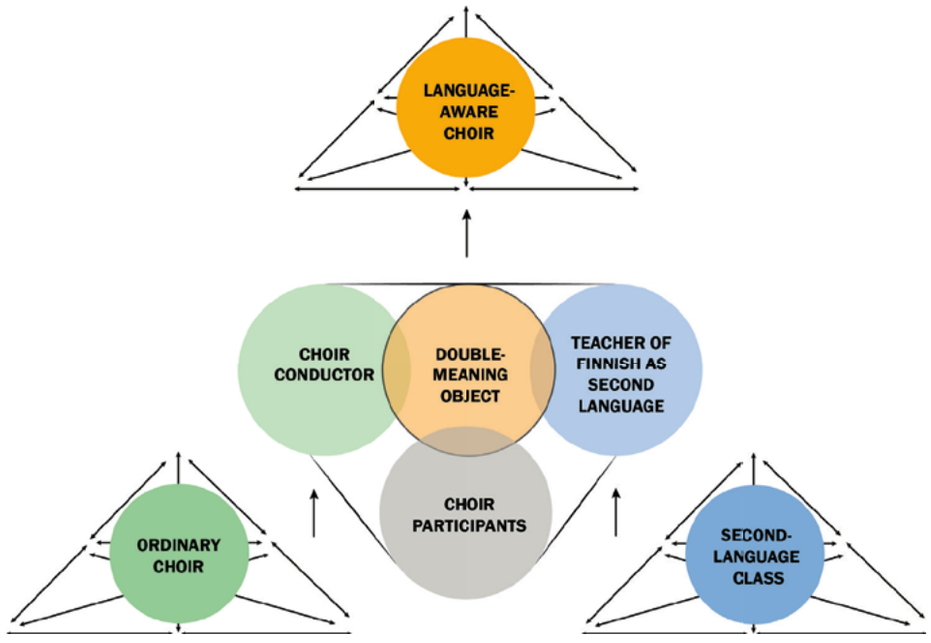


Fig. 1 Co-constructed, language-aware choir activity system stemming from the integration of two activity systems (an ordinary choir and a second-language class) (adapted from Lehtinen-Schnabel & Levänen, 2024)

4 How Language-Aware Choirs Support Active Participation in Society

As already indicated, the language-aware choir aims to fully respond to the needs of the people involved in the changing ecosystem. In the cultural-historical framework (Engeström, 1987), such practice affords meanings that are neither merely psychological nor individual, nor simply "only properties of the environment acting as stimuli for the subject" (Pedersen & Bang, 2016, p. 745). Rather, the meanings "are interwoven with ongoing societal standards and transformations into which individual subjects collectively engage themselves and to which they contribute continuously" (p. 745). Consequently, the affordances that are gained in and through the choir as an activity system "may change and/or be contradictory", since what is perceived as affordances in an activity system "will be inextricably connected to – and dependent on – the specific and particular societal environment, which constitutes the environmental ground for the activities of that person" (pp. 745–746). Moreover, as Purkey and Stanley (1991) explain, when seeking meaningfulness in this environment, "[p]eople not only perceive the world of the present, they also reflect on past experiences and *imagine future ones* to guide their behavior" (p. 32, italics added).

The reflections of the choir participants interviewed indeed show that for them there is no one anticipated ultimate end or purpose to the merged activity system. Rather, the system is experienced as valuable in and for the processes in which they are taking part at that given moment and within their specific everyday life contexts. As some of the participants reflected:

> I take those songs to my daughter and then we sing them together and she actually knows many of the songs now. (Choir participant 2)

> I started to sing a lot more. I make up songs, constantly. With the children and, yeah, and with… with the dog. (Choir participant 1)

Joining the language-aware choir has encouraged some of the participants to enter new social contexts:

> Like, being exposed to Finnish in the choir encourages me more to do other Finnish things and, in that sense it just gets you to do more and more you do things in Finnish, and you think that you are welcome and you feel less shy. (Choir participant 3)

The individual expressions of the choir participants are not simply descriptions of individual benefits, but are at the same time *critical systems stories* (Stroh, 2015) of how the participants have experienced the formal systems of both music education and the learning of Finnish as a second language. Many of the interviewees had prior experience of studying the Finnish language in conventional language classes, which according to them can be detached from everyday language use because of the strong differences between literary/written and spoken Finnish. As two of the interviewees noted:

> In the [language-aware] choir, I think, most useful for me was to learn spoken language, which I don't learn in language class. Well, they try to teach you at the end, but it's very little. (Choir participant 4)

> In the choir it's more working on… how to speak Finnish, yeah. I mean, when you are in an L2 [Finnish as a second language] classroom, it's kind of… scripted. I don't know, you're sitting there. It's looking at a book, but it's not active. We are not encouraged to use spoken language. (Choir participant 1)

When reflecting on her past experiences of teaching Finnish, the second-language teacher also highlighted the significant differences when approaching language through artistic activities that enable holistic experiences. According to her, the choir allows for the deepening of language skills in out-of-language-class contexts.

While the participants expressed their increased willingness and readiness to use Finnish outside the choir rehearsals, they also reflected the uniqueness of the choir context by comparing it with their everyday environment, which often prevents them from trying to use the Finnish language:

> When I'm out, like in a shop or a restaurant, I'm trying to use Finnish. Yes. Yeah, like either they hear my accent there … [and] they switch to English, yeah. But sometimes the worst one has been, when they just take a look at me and they just speak English. (Choir participant 1)

The choir participants also described the value of opportunities to share their own culture and songs with others, and to have a safe dialogue between people from different cultures and linguistic backgrounds. In this way, the interviewees connected the practice with the wider society and its limited spaces for intercultural dialogue:

> I had a big experience when you asked me to make the native [language] version. It was very special to me. Yeah. So I love traditional songs of my country and I love the Finnish ones. I think there's a lot in common. (Choir participant 5)

The interviewees further pondered their rights as immigrants to use the Finnish language and to sing Finnish songs, while at the same time expressing the wish to belong to Finnish culture and to be proud of knowing and experiencing it, including in their immediate social circumstances:

> The fact that we are singing together in Finnish makes me feel a little bit more integrated… like part of the Finnish culture. Because we are all in the same circumstances. I'm not the only one different. There's a lot of people like me. This supports each other I think. (Choir participant 5)

> The extra thing is that [the choir is] a good way to learn a culture. Finnish culture is actually opened up in songs. Pop songs are easy because it's from this day. Yeah, and a nice thing is that in Finland everybody knows those songs. And they, my colleagues, also ask me all the time which songs I am singing in the choir. (Choir participant 6)

The evolving invitational choir practice therefore "points in a hopeful direction that offers a common language in communication [but is] incomplete with questions unanswered and avenues unexplored" (Purkey & Siegel, 2013, p. xiv). In other words, the practice allows the participants to "choose their behavior" and to do "the best and safest things they can from their perspective at the moment of acting" (Purkey & Aspy, 2003, p. 148). At the same time the bottom-up activities are a bold attempt to support the UN's 2030 Agenda Goals of participation, inclusion, and multi-stakeholder and transprofessional cooperation, as also addressed by the Finnish government.

5 Conclusion

In this chapter, we have argued for a transdisciplinary transition from the narrow and stable understanding of professional expertise in music education towards "new fusions of praxis" and professional responsibility (Sugrue & Solbrekke, 2011, p. 194), as is increasingly required from professionals when engaging with the multiple issues related to sustainability and wicked problems in contemporary societies. The chapter has addressed the general need for a new transdisciplinarity, in which arts practices could be "guided not so much by the precepts of individual disciplines as by the goal of using the best possible combination of disciplinary tools to solve the problems at hand" (Kueffer & Wiedmer, 2022, p. 59). Through the case of an invitational language-aware choir practice and the empirical material from participants of this practice, we have aimed to illustrate how a transdisciplinary practice, with its constantly co-developed fusion of two activity systems, can strengthen the participants' being-in-society beyond "mere situated actions and operations of the subject" (Pedersen & Bang, 2016, p. 744). We have aimed to demonstrate how such engagements with processes that are meant to breathe "new life into professional responsibility" (Sugrue & Solbrekke, 2011, p. 194) require navigating through the modernist myth of musical autonomy towards understanding how meaningful experiences in musical activities can intertwine in multiple ways with the life experiences of individuals and simultaneously align with the national and global policies that urge an active contribution from all sectors of society to "a way out of 'unsustainability'" (Kagan, 2014, p. 23). As the chapter has demonstrated, such transdisciplinarity requires expanding music educators' professional horizons beyond the established boundaries of repertoires, genres, and practices towards experimental approaches and potentially encompassing a fusion of activities.

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APPENDICES

Appendix A: Six Fields of Action

Singing in this context is approached in a holistic way, emphasizing diverse ways of using the voice, for example, "sound expression" and involving both the voice and the body.

1 Warm-ups

- Phonemes, sounds, letters, syllabus, words (phonetic orientation) are used to open up the voice, body, mind, ears, and other senses
- To familiarize oneself with different phonemes, vowels, consonants, and the challenging sounds of Finnish with the help of vocalisation, breathing exercises, singing ostinatos, simples tunes, and circle songs
- To inspire language learning with the help of comprehensive "sound-expression", gestures, multi-sensory methods, games, playfulness, and the utilization of space

References to language learning: phonetic expression, familiarizing with diverse sounds, courage to use the language, listening and hearing, hearing specification

2 Collaborative improvisations

Based on playful and creative orientation with sounds of music and language (letters, words, phrases), vocalization, circle songs, or other simple tunes with/without instrumental accompaniment

- To encourage the holistic use of language – even with a small amount of language proficiency
- To listen to each other
- To utilize all modes and ways of communication
- To react
- To strengthen the skills of interaction
- To activate creative and imaginative thinking
- To learn to tolerate mistakes and not to be scared of them

References to language learning: to find new and creative ways to express oneself in order to communicate, courage to use the language, speech production, listening and hearing

3 Singing songs in different genres and themes, and beyond

Arranged to fit varying circumstances, special needs, and the wishes of the choir members

- To practise pronunciation in collaboration with other learners
- To put the language into the mouth, to chew and taste it from different angles and directions with the help of musical expression and gestures
- To become familiar with new vocabulary and the social and cultural contents of the songs
- To perceive the Finnish language diversely, e.g., through spoken language and proverbs in pop songs, "plain language" in children's songs, dialects in folk songs
- To facilitate understanding the meaning of words with the help of musical expression
- To express feelings and share experiences while learning language

References to language learning: pronunciation, new vocabulary, cultural knowledge, spoken language and dialects, comprehension

4 Creating new lyrics

To facilitate understanding the rhythm, intonation, and structure of the language with the help of musical phrasing

- To activate language production
- To change old-fashioned utterances in songs to spoken and more useful forms
- To encourage the expression of one's own thoughts, ideas, and emotions
- To utilize learned language in creative ways

References to language learning: to activate spoken and written language production, courage to use the language, pronunciation, to recall learned words and utterances

5 Immersing in the stumbling blocks of Finnish with 'Funny Finnish language songs' (lyrics by the S2 teacher and music composed by the choir conductor)

- To facilitate memorizing and distinguishing the general challenges and "stumbling blocks" of Finnish with the help of gripping melodies and catchy rhythms
- To emphasize a relaxed, joyful, and humorous atmosphere for engaging with language learning
- To internalize basic grammar rules with the help of singing, musical expression, and supporting gestures
- To create memory points for the challenging aspects (pronunciation, grammar, vocabulary) of Finnish

References to language learning: all the aspects of language, e.g. grammatical structure, vocabulary, pronunciation, stumbling blocks, the most difficult sounds and phonemes in pronunciation

6 Familiarizing with songs brought by the choir participants and also translated into Finnish

- To share diverse languages among the choir participants in relation to the Finnish language
- To approach and perceive language through different contexts and situations
- To encourage/facilitate the wishes of the learners and intercultural dialogue

References to language learning: courage to use the language, understanding, vocabulary, dialogue between diverse languages

Appendix B: Interview themes

I Participant's experiences in Finnish, in learning Finnish, in being part of the Finnish society

1. Interview
1. How do you describe Finnish to someone who doesn't know it yet?
2. What is difficult/challenging in learning Finnish for you?
3. In what kind of moments do you face those difficulties? Can you tell me about those moments? How do you manage those difficult moments?
4. Have you studied Finnish in some courses/s / Do you study Finnish at the moment? Do you know your "official language proficiency" according to the common European framework? What have you learned?
5. In what situations do you need to use Finnish at the moment? E.g. At work? At studies? At home? When do you go to the doctor?

2. / 3. Interviews (reflecting on earlier questions through experiences in the LFBS-choir*)*
1. Any changes in your language proficiency since Autumn when you joined LFBS choir?
2. Any changes in the use of Finnish language in your daily life? How much do you use Finnish per day at the moment? E.g. 5%, 20% or not at all, a little, some, a lot.
3. Have you been participating in a Finnish language course? At the same time or earlier? What is the difference between learning Finnish via singing in a choir or in a normal Finnish course for you in relation to learning Finnish?

II Participant's musical experiences

1. Interview
1. In what kind of situations do you use/make music in your daily life? Musical experiences so far? Where? E.g. at home? Why? Just relaxing, a specific situation?
2. Do you have any experiences in making music by yourself as a hobby? Can you tell me about those situations? Context? Where?
3. Do you have experiences in singing?
4. What kind of songs/music do you like/dislike when you sing? What kind of music do you like in general?
5. In what kind of situations do you like singing?

2./3. Interviews (reflecting on earlier questions through experiences in the LFBS choir*)*
1. Has your relation to music changed since you started singing in the LFBS choir ?Any changes in the use of music in your daily life? If so, has the choir had something to do with it?
2. How would you describe your musical experiences in the LFBS choir?

III Choir and social aspects in a choir

1. Interview
1. Have you had experiences singing together with others (in a choir)?
2. How is it for you to sing together with others?
3. If you compare singing alone or with others – is there a difference?
4. In what ways do other singers/music around you affect your singing?

2./3. Interviews (reflecting on earlier questions through experiences in the LFBS choir)
1. Tell me about your experiences in singing with others in LFBS-choirs?
2. If you had earlier experiences, any similarities or differences?

IV Participants' needs and experiences in learning Finnish in the LFBS choir

1. Interview
1. Why did you join the LFBS choir?
2. What are your expectations? / What do you wish for?
3. What would you like to do in the LFBS choir?
4. What would you like to learn in the LFBS choir?
5. Does music and singing have specific properties that you think may help you in your language learning?
6. Besides language and music is there something else you would like to experience in the choir?
7. What kind of songs/music would you like to sing in the LFBS choir?

2. / 3. Interviews (reflecting on earlier questions through experiences in the LFBS choir)
1. Some months behind. Tell me about your experiences of joining the choir.
2. How does reality meet your expectations? Any surprises?
3. What do you get/have got for yourself being part of the LFBS choir?
4. LFBS choir in relation to language learning.
Have you learned something? What?
What have been good approaches for you?
What has been difficult? Not so good?
5. About music. What kind of music and songs do you have found nice?
Good for you in relation to your language learning? Not so good?
6. What do you think; what is it in music that helps/supports you in relation to your language learning?
7. Besides language and music is there something else you have experienced in the choir?
8. Tell me about your experiences with online learning?

Appendix C: Example of interviews

Q: After your experiences, how would you describe a Learn Finnish by Singing choir for a person who does not know at all what it is about? In your own words?

It's a place where we sing Finnish songs or songs in Finnish. Ah…Where we learn how to pronounce words while we sing and learn the meanings. And at the same we have fun singing together, so I think it has all these and other qualities. It has this pronunciation. I would say it's the big, big thing here. It was also the fastest learning for me. At the same time there's the musicality and fun of singing.

Q: And what do you do there?

We, we… we sing together…Finnish songs. One part. And then there's this part… but there is also this meaning of the words also that we look at and make the lyrics and…we make sense of what does that mean and, and uh… we play… and have some grammar songs that's an easy way also memorize some language things… Yes. It stays. And then we perform, of course. We perform. Have concerts, too.

Q: How did the reality and your expectations meet?

Well, in the beginning I just wanted to learn Finnish, but since we could have this together, joining the choir was not only to learn some Finnish but also to learn something about music and singing. So that was a surprise, because I thought it would be like grammar. But the focus is in the singing and then through the singing we do it.

Q: How would you describe this surprise?

So this was a good and nice surprise in that sense, because actually I was in the middle of a choir suddenly…That was really nice. I didn't understand that how that could work but actually does. I have to say that we created a wonderful atmosphere. It's like this nice moment of the week for me… Yeah. E-, e-, even if it's snowing, raining, storm…that's the thing I don't want to miss.

Q: What was important for you in learning Finnish in a choir?

It's really to like that with a pronunciation and phonetics, but there's a memory connected with the music that… I don't know how to explain this for real, but……something that we sing sticks better than something I say 10 times. It just stays there in the memory in the different way. Because it's very hard to start singing a song in the middle. Sometimes you need to (humming) and…You need to do this, but the memory is there and it stays. So it comes with, supports in that way.

Q: What is difficult for you in Finnish language?

How to pronounce the words and, and also the listening, yeah… hearing, because it's something…that's the hardest thing for me.

What has been good for you in relation to pronunciation and speaking in the choir?

For instance, exaggerating.

What do you mean with exaggerating?

We exaggerate, this thing we do before we start singing those words or you ask what's the most challenging word for us. And then we repeat that word in different ways. In a way that we can really feel them. These things help a lot. A lot.

Q: How about in relation to hearing? You told that it has been the most difficult for you.

It is… I think it's connected with the same thing. Because when we are singing, we are learning those words in this exaggerated pronunciation and then we also learned a normal. But then that thing sticks there. It's easier than to identify somewhere else that word when it comes. Sometimes I identify words in a conversation, I cannot connect this to something like logical…but I identify a few things and it's from the songs. It's really this singing. Well, in this case it's singing, but many times I understand in other courses we are just there sitting, taking notes and we speak very little. In the choir we are all the time doing the language. Maybe that's even the…like a memory it's created, yes, in fact.

Q: How about your relation to music? Has it changed somehow when being part of the choir?

R: Oh, yeah. Definitely. Well…Ha-, I became much more…confident. Much more. That's the thing. I've been always loving music, but in a closed way. So this was like a huge step for me. And I became confident to even do that small t that when I was singing alone in a concert, I would never think I could do something like that in my life. So this was huge step. I-, and it make me feel confident. Okay, well I can do this. This was… and it's, I enjoyed it. So it was both. It was a little bit scary, but then I enjoyed it a lot.

Q: How do you see it in your daily life?

R: I sing every day.

Q: Do you really sing every day?

R: Yes. I do every day. And then I sing… I sing many songs…Finnish and songs in my mother tongue. Yeah, it started because of the choir. It started when I came here. Okay. I get this feeling that I don't know how to explain. Well, the singing exercises. I understand I-, I-, I see the benefits. But then, but the singing is like… It's like my drug. It's like when I'm down or if there is some missing of something, it's a way to express things here. Or even when I'm happy too, but…usually it's more, I need it even more when I am not so good, music helps a lot.

R: Yes. I express whatever is inside here. Yes, yes.
But it's also part and the confidence that comes……also from knowing a little bit what's happening in the body. And I-, I notice I also start to listen different things because of here the choir and I love so much these…So, it's also opening this new. Well. I also notice now the different voices. But that's because we do all those different voices… Yeah. I-, well that's really amazing for me. And I love that. That's been changing.

Q: Do you mean that this has changed after you started to sing in the LFBS choir?
R: Yes. I think that's one of the big strengths in the choir is that everybody can sing, there's not such thing as bad singers. And that's the big thing because actually then it turns into truth…we can all sing because there's not this 'oh, I cannot do this, I cannot'. You leave that thing open and people have a go and they try and actually we are all surprised. With all these voices, the final result, everything together. I'm like oh my god I thought this was only possible in this very… well, professional level with people who do this for living. And we do that even though we didn't know we could. Yeah. Because you know… … they tell us like you are not born to be artist or you are born with. It's with painting… It's with singing.

Q: Yes. I really agree with you. What do you think, how is it for you to sing together with others?
R: Uh… from the learning, is really… I-, I can follow… I don't hear myself so well. I hear myself inside something. So it's not the… it's more even than singing alone. I see how my voice is fitting in some kind of a harmony. It's really the belonging feeling. That being part of something together with others and that feels so good.

Q: In the LFBS choir, do you have this feeling of belonging?
R: Uh, yes, yes. It's also, yeah… because it's really this integration as well. That's a big, big thing, because when I come here as an outsider, I don't speak the language. And everything is so different. So there's this feeling of isolation or not being part……or something. And that in choir there and the fact that we are singing in Finnish together makes me feel a little bit like more integrate…like part of the Finnish culture.

Appendix D: Phonology test form

FONOLOGIATESTI

Kunnari, Savinainen-Makkonen & Saaristo-Helin

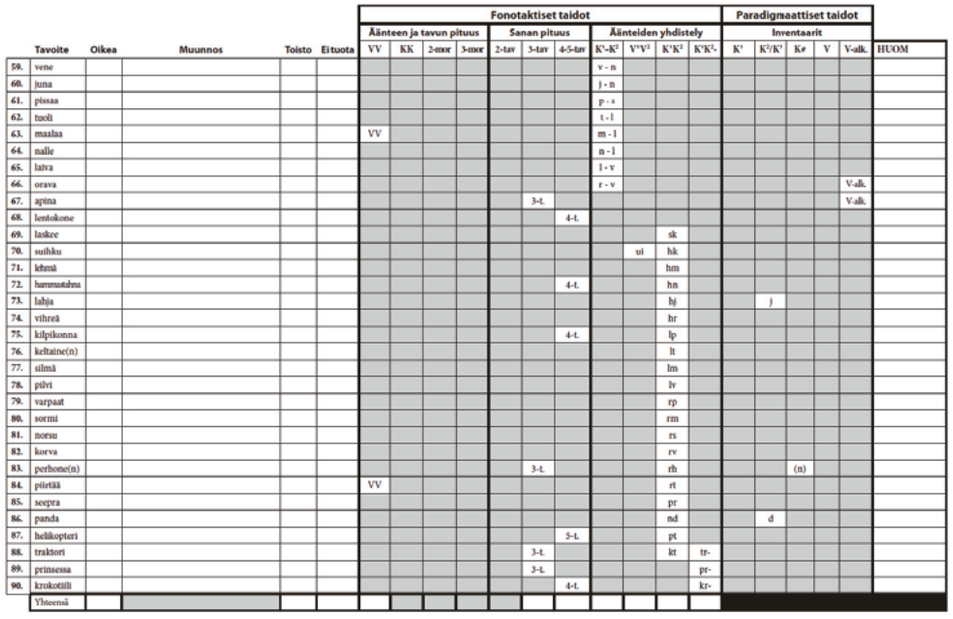
3-6-vuotiaiden testilomake

Testattaven nimi:

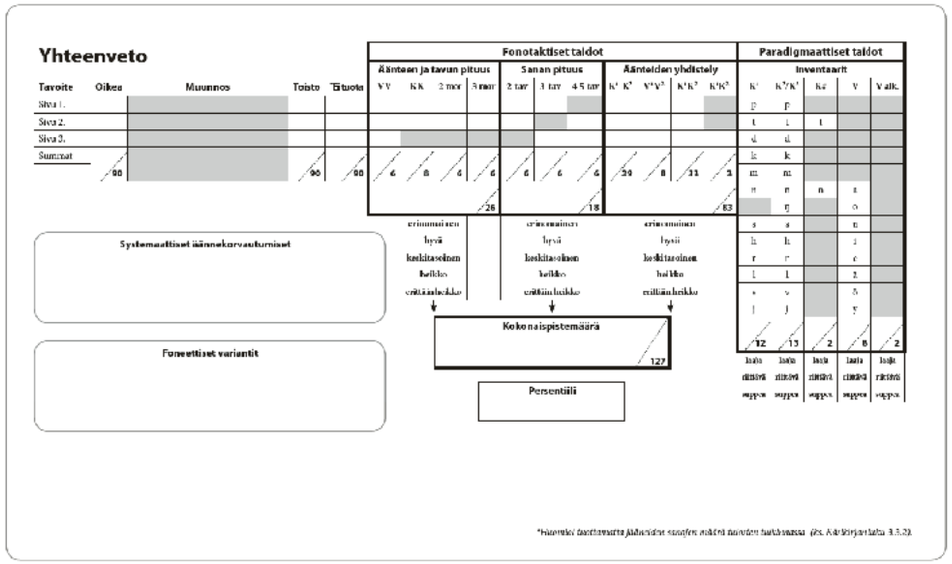
Ikä: Testauspäivämäärä:

	Tavoite	Oikea	Muunnos	Toisto	Ei tuota	Fonotaktiset taidot: Äänteen ja tavun pituus: VV	KK	2-mor	3-mor	Sanan pituus: 2-tav	3-tav	4-5-tav	Äänteiden yhdistely: K¹-K²	V¹V²	K¹K²	K²K¹-	Paradigmaattiset taidot: Inventaarit: K¹	K¹/K²	K#	V	V-alk.	HUOM
H1.	auto																					
H2.	koira/huuva																					
1.	pesu					VV											p			u		
2.	tutti						KK			2-t.							t	t		u		
3.	kukka						KK			2 k							k	k				
4.	(un)muu																m					
5.	lun																l					
6.	suu																s					
7.	(h)alhaa																h					
8.	vauva													aa			v	v				
9.	nenä									2 n							n	n		e		
10.	juo													uo/oa			j					
11.	vauppa						KK		3-m.				s - p	aa			v	p				
12.	poma												p - l				p			o		
13.	hattu												h t				h	t		a		
14.	polka												p k	ol						o		
15.	mikkoo												n - k				n	k				
16.	saikka												s k				s					
17.	lauasu												l - s	ua				s	s			
18.	kissa						KK			2-t.			k - s					s		t		
19.	pöllö						KK						p - l					l		ö		
20.	kala									2 l			k l					l		a		
21.	lihi					VV							l - h					h		i		
22.	sammakko						KK				3-t.		s - m					m				
23.	kauppa								3 m.						mp			m, p				
24.	linna							2-m.							nt		l	n				
25.	koukk							3-m.							ŋk		k	ŋ		a, ä		
26.	mansikka										3-t.				nt		m					
	Yhteensä																					

VV=pitkä vokaali, KK=pitkä konsonantti, 2 mor=2. morfonologista, 3 mor=3 morfonologista, 2 tav=2 tavuinen sana, 3 tav=3 tavuinen sana, 4-5 tav=4-5 tavuinen sana
K¹-K²=toisistaan eroavat viereiset konsonantit, V¹V²=diftongi, K¹K²=konsonanttiryhmä, K²K¹=ennallaanmuuttuva konsonanttiryhmä, K²K¹=ennallaanmuuttuva konsonanttiryhmä
K=K=ennallaanmuuttuva konsonantti, K#=sanan alkuinen konsonantti, V=vokaali, V-alk.=ennallaanmuuttuvat vokaalit



	Tavoite	Oikea	Muunnos	Toisto	Eituota	Fonotaktiset taidot: Äänteen ja tavun pituus: VV	KK	2-mor	3-mor	Sanan pituus: 2-tav	3-tav	4-5-tav	Äänteiden yhdistely: K'-K²	V'V²	K'K²	K'K²-	Paradigmaattiset taidot: Inventaarit: K'	K²/K'	K#	V	V-alk.	HUOM
59.	vene												v - n									
60.	juna												j - n									
61.	pissaa												p - s									
62.	tuoli												t - l									
63.	maalaa					VV							m - l									
64.	nalle												n - l									
65.	laiva												l - v									
66.	orava												r - v								V-alk.	
67.	apina										3-t.										V-alk.	
68.	lentokone											4-t.										
69.	laskee														sk							
70.	suihku													ui	hk							
71.	lehmä														hm							
72.	hammastahna											4-t.			hn							
73.	lahja														hj			j				
74.	vihreä														hr							
75.	kilpikonna											4-t.			lp							
76.	keltaine(n)														lt							
77.	silmä														lm							
78.	pilvi														lv							
79.	varpaat														rp							
80.	sormi														rm							
81.	norsu														rs							
82.	korva														rv							
83.	perhone(n)										3-t.				rh				(n)			
84.	piirtää					VV									rt							
85.	seepra														pr							
86.	panda														nd			d				
87.	helikopteri											5-t.			pt							
88.	traktori										3-t.				kt	tr-						
89.	prinsessa										3-t.					pr-						
90.	krokotiili											4-t.				kr-						
	Yhteensä																					



Yhteenveto

Fonotaktiset taidot: Äänteen ja tavun pituus | Sanan pituus | Äänteiden yhdistely

Paradigmaattiset taidot: Inventaarit

Tavoite | Oikea | Muunnos | Toisto | Eituota

Sivu 1. | Sivu 2. | Sivu 3. | Summat

Systemaattiset äännekorvaukset

Foneettiset variantit

erinomainen / hyvä / keskitasoinen / heikko / erittäin heikko

Kokonaispistemäärä: 127

Persentiili

Appendix E: Example from researchers' journal

After the choir rehearsal on November 20, 2019

This time, we were really on a roll. With the performance at the Music Centre coming up, however, I find myself feeling that it's somewhere in the back, and I have to really keep reminding myself not to let it influence the content of the rehearsals, or hinder us from going with and being open to whatever new emerges. The choir members' enthusiasm about the performance – for some, it will be their very first concert in their lives – was also present. Together with the second language teacher we continuously try to highlight that having fun and enjoying ourselves during the performance is what matters most. There's no need to be afraid of making mistakes – neither in music nor language.

We decided to use a song, a "circle song", that we often start our rehearsals with, as the opening song for the concert. It allows for different kinds of improvisational approaches in and through the piece. This time we had a walking-improvisation in the rehearsal space. We walked around and said different words in our own first languages. Little by little, the words turned into Finnish words and eventually into singing and the song itself. A nice coincidence occurred. While we were quietly "speaking" to ourselves in our own languages, one person started singing – or so I thought. Afterwards, when we reflected on the experiences and someone admired the choir participant's beautiful singing, she responded with a smile, "But I did not sing, I was only speaking – in my own language". Being attuned to sounds and languages, it could be heard how this tonal language, spoken by the participant, really sounded like a melody. This coincidence also triggered an interesting discussion of differences between the rhythm and melody of different languages.

When we were singing a popsong called Todella kaunis, a question came up about the double consonants and vowels in the lyrics. This song has a lot of them – so typical of Finnish – and they're particularly challenging for most of the choir participants. We played around them with the help of intervals, emphasizing the double sound through it. We also came up togetehr with a new way: we stopped in the song whenever we came to a double consonant or a long vowel and held the sound "in the mouth" (for the consonants), or continued singing the long vowel sound, until I gave the sign for the melody to continue. (Added this later: One choir member sent me a WhatsApp message afterwards, saying that this was "the thing" for her when it came to hearing and pronouncing the double sounds).

Towards the end of the rehearsal, there was a discussion about what to wear for the performance. The suggestion that got the most support was that we could wear clothes in bright colours during the darkest season to bring some joy and light. It reminded me of something that happened a few weeks ago, which I also wrote down right after the rehearsal. When we were translating and reflecting on the lyrics of a rather melancholic Finnish pop song, one choir member spontaneously stood up and said: "This is why you Finns need us foreigners – we can bring a little more joy and positivity to things that can be looked at in so many different ways." Words don't really seem enough to describe the feeling I was left with once again after the choir session. It's really a great honour to be part of this diverse community.

Appendix F: Example of field notes

Some examples of new Finnish lyrics that were created during the choir rehearsals.

Minun Suomeni / My Finland popsong (re-created from lyrics A. Tuisku/orig. by L. Tähkä)

1. Minun Suomeni on uusi kotimaani mun.	My Finland is my new homeland.
Ei oo me ja ne muut, vaan taivaalla kuu,	There is no "us" or "them", but the moon in the sky,
joka loistaa kaikille.	shining for everyone.
Minun Suomeni on järvet, metsä loputon.	My Finland is lakes and endless forests.
Jokeen voi sukeltaa, uida meressäkin saa,	You can dive into a river, swim in the sea,
rauha ja vapaus on.	and there is peace and freedom
2. Minun Suomeni on kieli aivan mahdoton.	My Finland is a language impossible.
Ei kaikki ymmärrä, miten partitiivi saa	Not everyone can grasp how the partitive
lauseen monimutkaiseks'.	can make a sentence so complicated.
Minun Suomeni on salmiakki kamala.	My Finland is that dreadful salmiakki.
Täällä kahvia juodaan aamusta iltaan kuin	Here, coffee is drunk from morning until night,
ilmaa hengittäis.	as if it were the air we breathe.
Sitä kun aattelen, minä ymmärrän sen.	When I think about it, I understand:
Kaikki muuttuu, ja me mukana sen.	everything changes, and we change along with it.
Minun Suomeni on luonnon maisemassa.	My Finland is found in nature's landscape.
Minun Suomeni on oman perheen kaa.	My Finland is my family by my side.
Ja sen löysin kun mä ystävien kanssa	And I found it when I sang with friends
lauloin illoin. Minun Suomeni on uusi kotimaa.	in the evenings. My Finland is my new homeland.

A rap created (lyrics and audio track) by a choir participant, being collaboratively developed and recoreded during a hybrid choir rehearsal, with half of the participants joining online.

Maailmassa hallitsee nyt korona:	*Corona now rules the world:*
täytyy pysyä enemmän kotona.	*we have to stay home more.*
Pestä kädet minimi kakskyt sekuntia,	*Wash your hands for at least twenty seconds,*
vessapaperit ostaa täytyy ehtiä.	*and make sure you get your toilet paper.*
Painaa napit, avaimen avulla -	*Press the buttons with a key –*
hississä on viel yks päänsärky mulla.	*in the lift, there's one more headache for me.*
Laittaa maski, minne vain menossa,	*Put on a mask wherever you go,*
julkisessa liikenteessä, viruksen pelossa.	*on public transport, afraid of the virus.*
Ihmisistä kaksi metriä etäisyyttä.	*Keep two metres' distance from other people.*
kaupassa käsineet kädessä on uutta.	*wearing gloves while shopping is something new.*
Keino olla varovainen	*A way to be careful,*
koska virus on paholainen. (2-5 krt.)	*because the virus is the devil. (2-5 times)*

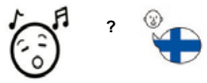
Appendix G: Information letter

Information for Research Participants in "Learn Finnish in a choir! The Potential of Music Education for Second Language Learning"





Warmly welcome to participate in a research study!
Participation is voluntary. You can discontinue your participation in the study at any time. Should you discontinue your participation, you will not be subject to any consequences. Information gathered from you up until the point of cessation of your participation may be used in the study.



1. The subject of the research study
This research study "Learn Finnish in a choir! The Potential of Music Education for Second Language Learning" investigates second language learning in a choir and identifies specific choir practices and related repertoires that support language learning.



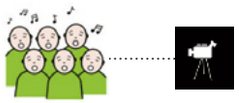
2. The concrete method by with personal data is collected
This research is conducted as a Learn-Finnish-by-Singing choir-intervention during in 2019-2020. Participants are asked to participate actively in the choir during this intervention. Collected data will not be used to assess participants in any way, rather to examine the affordances of singing in a choir in relation to language learning. Data collection concerning the participants of this study will consist of:



TO WHOM?

A) a 10-minute questionnaire

- for all volunteers



B) a couple of video recordings of the lessons and concerts

- for all the volunteers .



C) a 20-minute language expression test in the beginning (Autumn) and at the end (Spring)

- for participants with A1-level (Beginner) in Finnish



D) keeping a voluntary journal (Glock face -task)of Finnish language use outside the choir

- for all the volunteers



E) interviews (1 hour / interview / 3 times)

- for 6 to 10 participants



3. How and on what basis your personal data is processed in the study?

The purpose of this research study is to explore the potential of music education, and choir singing in particular, for second language learning (L2) in adults with linguistically diverse backgrounds.



<u>The method by with personal data is analyzed</u>

Data will be used for scientific purposes only. Participant's identifying information will be processed only by the responsible researcher.



All data will be pseudonymized and stored securely on a password-protected computer (encrypted). The hard copies of personal data (questionnaires and Consent Forms) will be kept in a binder locked in a cupboard in the Sibelius Academy at Uniarts Helsinki.



<u>Effects to participants</u>

- Information that is collected about participants for the purposes of this research will be carried out confidentially
- Video recordings and pictures of choir participants are taken only for research purposes during the choir intervention. Otherwise the identification of participants is minimized.
- To avoid language problems interpreters are used when needed in interviews
- Data will be collected, handled, analyzed, and interpreted carefully, and the study reported in a good scientific manner





The processing of your personal data is required for the performance of a task carried out in the public interest, namely scientific research and academic expression. Lawful basis for processing of special categories of personal data is scientific research.

4. Sharing of Personal Data



Sharing of personal data with a third party shall only be carried out in accordance with privacy legislation. Carried data will always be anonymized whenever this is possible without jeopardizing the research study.
In this study third parties will be used in language testing, in translation (interviews), in transcription and in video recording. The rights and privacy of the individuals will be safeguarded by agreements with third parties.



5. Transfer of your data to non-EU/ETA countries
Personal data will not be transferred to countries outside of the European Union and the European Economic.



6. Measures taken to protect your data

The following measures are taken in this research study to protect your rights:

- The research study has a research plan
- The person responsible for the research study is: Johanna Lehtinen-Schnabel
- Personal data is only processed and transferred for the purposes of mentioned at section 3, and information is handled in a manner so as not to reveal information about a specific person to external parties
- A data protection impact assessment has been conducted regarding this research study





7. Storage period of your data and anonymization

The criteria for defining the storage period of your data and anonymization is based on good scientific practice. In scientific research the aim is to store the research data so that the research results can be verified and previously collected data can be used for further scientific research on the same subject or for scientific research in other fields.
After the results have been sent to the participants, all identifying information will be deleted from the data and all the recordings will be destroyed in a safe manner at the latest in 2024. Anonymized data is no longer personal data.

9. The rights of the study participant in a scientific study

Because data is being processed for the purposes of scientific research, the purpose of processing is not to use the data in decision-making related to the participant.
It may be necessary to deviate from the rights of the data subject, as defined in GDPR and national legislation, if the study is being carried out in performance of a task carried out the public interest and the exercising of the participant's rights would likely prevent reaching the aim of the research study, the following rights can be deviated from:





- The right to access data
- The right to rectify information
- The right to restrict processing
- The right to be forgotten

If, however, it is possible to achieve the aims of the study and the achievement of the purpose is not greatly hindered, University of the Arts Helsinki will actualize your rights as defined in the GDPR. The extent of your rights is related to the legal basis of processing of your personal data, national legislation and exercising your rights requires proof of identity.



9. More information on the study and the exercising of your rights

The controller in this study are Johanna Lehtinen-Schnabel and University of the Arts Helsinki.
The contact person in matters related to the study is: Johanna Lehtinen-Schnabel
Contact information of the researcher: johanna.lehtinen-schnabel@uniarts.fi
The research participant must contact University of the Arts Helsinki's data protection officer if they have questions or demands related to the processing of personal data. Data Protection Officer Antti Orava, Phone number: +358 294 47 3568, Email: privacy@uniarts.fi
If the research participant sees that their data has been processed in violation of the general data protection regulation, the participant has the right to lodge a complaint with the supervisory authority, the data protection ombudsman (see more: http://www.tietosuoja.fi/en).

Appendix H: Consent form

SIBELIUS ACADEMY
UNIARTS HELSINKI

PARTICIPATION IN THE RESEARCH STUDY

Learn Finnish in a choir! The Potential of Music Education for Second Language Learning

I understand that my participation in this research study is completely voluntary and that I have the right to discontinue my participation at any stage without any reason and consequences, but all the information that is gathered up until that point can be used as described in the Privacy Notice.

**I have received sufficient information about the study,
I have had the possibility to have my questions answered,
I have understood the information and I wish to participate in the research study.**

Signature and name of research participant (choosing to participate can be also expressed per email)

**Contact details:
Johanna Lehtinen-Schnabel, Tel. 050 4618425, Email: johanna.lehtinen-schnabel@uniarts.fi
Sibelius Academy, University of the Arts Helsinki, Finland**

SIBELIUS ACADEMY
UNIARTS HELSINKI

TUTKIMUKSEEN
Learn Finnish in a choir! The Potential of Music Education for Second Language Learning
OSALLISTUMINEN

Olen ymmärtänyt, että tutkimukseen osallistuminen on vapaaehtoista ja voin milloin tahansa ilmoittaa, etten enää halua osallistua tutkimukseen, mutta siihen asti kerättyjä tutkimusaineistoja voidaan hyödyntää tutkimuksessa.

Olen saanut riittävät tiedot henkilötietojen käsittelystä "Tietoa tutkimukseen osallistuvalle" -tiedotteesta, minulla on ollut mahdollisuus saada vastauksia kysymyksiini, olen ymmärtänyt saamani tiedot ja haluan osallistua tutkimukseen.

Tutkimukseen osallistuvan allekirjoitus, nimenselvennys (tai sähköinen osallistuvan ilmoitus)

**Yhteystiedot:
Johanna Lehtinen-Schnabel, Tel. 050 4618425, Email: johanna.lehtinen-schnabel@uniarts.fi
Sibelius-Akatemia, Taideyliopisto, Finland**



This article-based dissertation explores inclusive, multilingual choirs where music and second-language learning are non-hierarchically and reciprocally merged, to respond to the needs of participants who have migrated to Finland as adults for various reasons. Through multi-/mixed-methods approaches and using a variety of research materials, the research asks: How can second-language learning be supported within a multilingual choir practice? and What new insights can a language-aware choir generate for music educational thinking and actions? The research draws from activity theory, activity systems thinking, and the theorisation of systems praxis.

The findings show that a language-aware approach in a choir reconfigures both choir practice and engagement with language learning, with varied potentials to support language development, while also requiring the choir conductor to expand professional boundaries. The study argues that transdisciplinary transitions and systems awareness are needed for professional practices in music and music education to be able to respond to new societal needs and advance socially sustainable collective futures.



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