

Faculty of Educational Sciences, University of Helsinki

# **BEYOND BASICS**

- AN INTEGRATIVE APPROACH TO LEARNING IN  
FINNISH COMPREHENSIVE SCHOOL

**Janni Haapaniemi**

DOCTORAL DISSERTATION

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# ABSTRACT

The main purpose of this doctoral thesis is to explore the characteristics of the integrative approach to learning. The study builds on the sociocultural approach to learning, emphasising pupils' interactions, collaboration and agency in school. Tools are viewed as important mediators for learning. The empirical part of the thesis is based on two data collections. The first set of data were collected in three Finnish comprehensive schools in Spring 2017 through observations of eight different home economics lesson structures for grades 7–9 (pupils aged 13–16) in which an integrative approach to learning was used as a standpoint for planning the learning activities. Additionally, data were collected with five teacher interviews. The second data collection included observations from two home economics lessons with the same planned lesson structure, together with using the diamond ranking method with 8th grade pupils (aged 14–15) from one Finnish upper comprehensive school in Autumn 2019. Here, teacher interviews were conducted to strengthen interpretation of the observations and increase the credibility of the data.

The thesis represents a compilation of three original publications. The study presented in Article I characterises the tools and pedagogical arrangements used in teaching with an integrative approach to learning. The study highlighted in Article II explores the teacher perspective on the integrative approach to learning from a curriculum development and teacher autonomy point of view. Finally, Article III describes a study that gives voice to pupils on the integrative approach to learning by examining which practices pupils considered important for working on collaborative and integrative learning tasks. The study utilises triangulation and combines multiple methods of data collection to access a nuanced view of the classroom reality in home economics related to the integrative approach to learning.

The results emphasise the role of the teacher. Participating teachers did not feel taking an integrative approach to learning diminished their teacher autonomy but, instead, provided opportunities to develop their professionalism. Teachers assume the role of enabler in the integrative approach to learning for pupils, but only when the teacher communicates the integrative objectives to the pupils and carefully chooses the tools that enhance the integrative approach and the pupils are acquainted with those tools. Also, pupils considered the teacher's role in making supportive pedagogical choices important when working with a learning task utilising an integrative approach to learning.

As a main conclusion, I argue that collaboration is of utmost importance for effectively implementing an integrative approach to learning: through collaboration between teachers, the integrative approach can be used as a tool to develop the school's collaborative culture. Moreover, collaboration between

pupils in integrative learning tasks is important, as pupils considered collaborative ways of working being enhanced by interthinking. Additionally, when the teacher's instruction through the integrative approach to learning reaches the pupil level and pupils comprehend its meaning can they learn to become integrative thinkers. The results suggested that this work is only beginning in Finnish home economics classrooms.

This thesis does not cover all characteristics of the integrative approach to learning and leaves several perspectives for further study. The case study approach offers possibilities for using this study as a steppingstone for developing a school's collaborative culture, teacher autonomy and lesson implementation towards an integrative approach to learning in home economics but also in other school subjects.

*Keywords:* integrative approach to learning, sociocultural approach, tools, collaboration, diamond ranking method

# TIIVISTELMÄ

Viime vuosina perusopetuksessa on painotettu tulevaisuuden osaamisen taitoja. Tällaiseksi taidoksi nähdään esimerkiksi suurien kokonaisuuksien hahmottaminen ja niihin liittyvien asioiden vuorovaikutussuhteiden ymmärtäminen. Peruskoulussa tähän pyritään oppimisen eheyttämällä eli kehittämällä opetusta, jossa eri oppiaineiden tietojen ja taitojen yhdistämistä harjoitellaan. Vuoden 2014 opetussuunnitelman perusteissa veloitetaan koulut tarjoamaan oppilaille vähintään yksi eheyttävä monialainen oppimiskokonaisuus vuosittain.

Tässä tutkimuksessa tarkastellaan perusopetuksessa tapahtuvan eheyttävän oppimisen piirteitä kotitalous-oppiaineessa. Tutkimus kytkeytyy sosiokulttuuriseen oppimiskäsitykseen ja painottaa oppilaiden vuorovaikutusta, yhteistyötä ja osallisuutta koulussa. Erilaiset oppimista tukevat välineet nähdään tärkeinä oppimisen välittäjinä.

Tutkimuksen empiirisessä osassa toteutettiin kaksi aineistonkeruuta. Ensimmäinen aineisto kerättiin keväällä 2017 kolmesta suomalaisesta peruskoulusta. Oppimisen eheyttämiseen tähtäviä kotitaloustunteja havainnoitiin yhteensä kahdeksan vuosiluokilla 7–9. Lisäksi viittä oppituntien suunnitteluun tai toteutukseen osallistunutta opettajaa haastateltiin. Toinen aineisto koostui kahden samansisältöisen kahdeksannen luokan (oppilaiden ikä 14–15) kotitalousoppitunnin seuraamisesta syksyllä 2019. Näillä eheyttämiseen tähtäävillä oppitunneilla oppilaat arvioivat ja arvottivat kirjallisuuteen perustuvia ja itse kehittämiään tehtävän tekemiseen edistävasti vaikuttaneita tekijöitä (*diamond ranking method*). Myös toisessa aineistonkeruussa opettajaa haastateltiin, mutta tätä aineistoa käytettiin pääasiassa datan luotettavuuden varmentamiseksi.

Tämä tutkimus koostuu kolmesta osatutkimuksesta. Osatutkimuksessa I havainnoitiin eheyttävän oppimisen välineitä ja pedagogisia tapoja, joita eheyttävän oppimisen edistämiseksi käytettiin. Osatutkimuksessa II tutkittiin opettajien näkemyksiä eheyttävään oppimiseen opetussuunnitelmatutkimuksen ja opettajan autonomian näkökulmista. Osatutkimuksessa III huomio kohdistettiin oppilaiden näkökulmaan, tutkimalla millaisia opetukseen liittyviä toimintatapoja he pitivät tärkeinä yhteistyötä ja eheyttämistä vaativan tehtävän suorittamisessa. Tutkimuksessa hyödynnettiin erilaisia aineistonkeruumenetelmiä, jotta eheyttävän oppimisen näkökulmia voitiin tarkastella monipuolisesti.

Tutkimuksen tuloksissa opettajan rooli korostui. Tutkimukseen osallistuneet opettajat eivät kokeneet eheyttävän oppimisen olevan uhka heidän opettajan autonomialleen, vaan kokivat hyötyvänsä sen tarjoamista mahdollisuuksista kehittää omaa opettajuuttaan. Opettajalla on keskeinen tehtävä eheyttävän oppimisen mahdollistajana ja ensisijaisen tärkeää on, että eheyttävän oppimisen tavoitteet sanoitetaan oppilaille ja valitaan oppimiseen

välineitä, jotka edistävät oppimisen eheyttämistä. Välineiden tulee olla oppilaille riittävän tuttuja, jotta niitä voidaan hyödyntää oppimisen edistämiseksi. Myös oppilaat korostivat opettajan tekemien valintojen vaikutusta onnistuneen eheyttävän oppimisen tukemisessa.

Tulokset osoittivat, että yhteistyö on keskeinen edellytys eheyttävän oppimisen onnistumiselle. Opettajien välinen yhteistyö luo mahdollisuuden koko koulun toimintakulttuurin kehittämiseksi. Oppilaiden mielestä eheyttävän tehtävän tekemistä kotitaloustunnilla edistivät erityisesti yhdessä ajattelun taidot (*interthinking*). Keskeistä eheyttävässä oppimisessä on, että oppilas opettajan ohjauksen myötä ymmärtää eheyttävän oppimisen tavoitteen ja merkityksen. Tulokset osoittavat, että tämä työ on kotitalousopetuksessa vasta alussa.

Tämä tutkimus ei kata kaikkia eheyttävän oppimisen tarkastelumahdollisuuksia ja aineisto tarjoaakin useita jatkotutkimusaiheita. Tapaustutkimuksena toteutettu tutkimus tarjoaa kuitenkin useasta perspektiivistä tarkasteltuja näkökulmia suomalaista perusopetusta koskettavaan eheyttävän oppimisen teemaan, joita voi hyödyntää niin kotitaloudessa kuin muissakin oppiaineissa. Tuloksia voi hyödyntää useilla eri tasoilla: koulun toimintakulttuurin kehittämiseksi, opettajan autonomia -käsitteen tarkastelussa ja oppituntien kehittämisessä kohti eheyttävää oppimista.

*Avainsanat: eheyttävä oppiminen, sosiokulttuurinen oppimiskäsitys, välineet, yhteistyö, diamond ranking method*

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# ABBREVIATIONS

FH	Food and Health (title of home economics school subject in Norway)
FNCC	Finnish National Core Curriculum for Basic Education
HCS	Home and Consumer Studies (title of home economics school subject in Sweden)
HE	Home Economics
ZPD	Zone of Proximal Development

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# LIST OF ORIGINAL PUBLICATIONS

This thesis is based on the following publications:

- I Haapaniemi, J., Venäläinen, S., Malin, A., & Palojoki, P. (2019). Home economics education: Exploring integrative learning. *Educational Research*, 61(1), 87–104.  
DOI: 10.1080/00131881.2018.1564626
- II Haapaniemi, J., Venäläinen, S., Malin, A., & Palojoki, P. (2020). Teacher autonomy and collaboration as part of integrative teaching – Reflections on the curriculum approach in Finland. *Journal of Curriculum Studies*, 53(4), 546–562.  
DOI: 10.1080/00220272.2020.1759145
- III Haapaniemi, J., Venäläinen, S., Malin, A., & Palojoki, P. (2021). Amplifying the voice of pupils: Using the diamond ranking method to explore integrative and collaborative learning in home economics education in Finland. *Education Inquiry*, Advanced online publication.  
DOI: 10.1080/20004508.2021.1966888

The publications are referred to in the text by their roman numerals.

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# PREFACE

This dissertation explores multiple perspectives on the integrative approach to learning. The context for this study is the comprehensive level in Finnish schools, more precisely, grades 7–9 (pupils aged 13–16,  $n = 192$ ), here referred to as upper comprehensive education.<sup>1</sup> At this level of education, the future-oriented discourse has led to discussion on 21st century competencies and learning that has resulted in different implementations in different countries (Ananiadou & Claro, 2009; McPhail & Rata, 2016; Voogt & Roblin, 2012), such as an emphasised orientation to interdisciplinarity (Hipkins et al., 2014; Lenoir et al., 2015). The integrative approach to learning in this study acts as an overarching concept that includes multiple ways of integrating and synthesising knowledge and skills from different school subjects at the comprehensive school level (Haapaniemi et al., 2019). To understand the multifaceted nature of this concept, both teachers' and pupils' perspectives are investigated, as are the various pedagogical choices affecting the learning situation. The main aim for this doctoral study was to explore the characteristics of the integrative approach to learning in upper comprehensive education.

The sociocultural approach to learning provides a theoretical frame for this study; the social nature of and pupils' active role in learning are considered central (Vygotsky, 1962, 1978). This study was conducted within the Finnish education system in the home economics subject area. In Finland, the latest curriculum reform (Finnish National Core Curriculum for Basic Education [FNCC], 2014) supports two somewhat complementary approaches to learning: the sociocultural approach and the socio-constructivist approach. The first approach emphasises social participation: the relationship between, for example, novice and expert and the historical perspective and context of the activity. The latter emphasises qualitative differences and progression in knowledge construction as a result of learners' actions and interactions (Packer & Goicoechea, 2000). The latest curriculum also emphasises an integrative approach to learning, an approach that home economics education as a field and as a school subject is believed to enhance (FNCC, 2014; McGregor, 2011b). Some Finnish research on the integrative approach to learning has centred on teachers' and principals' perspectives (Braskén et al., 2019; Mård & Hilli, 2020) and pupils' perspectives (Eronen et al., 2019; Niemi & Kiilakoski, 2019; Tarnanen et al., 2019). However, despite the prominent interest in this field of study, it has not been widely explored. The dearth of research focusing on the integrative approach to learning extends to the international context, even though such an approach is emphasised in the

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<sup>1</sup> In Finnish comprehensive school, grades 1–6 are usually taught by class teachers, while upper grades 7–9 are taught by teachers who are specialised in their disciplines.

curricula in several countries as part of the focus on 21st century skills (Ananiadou & Claro, 2009). Moreover, knowledge on what the integrative approach to learning has to offer specifically to home economics education is also lacking.

From a curriculum study perspective, this research is based on the premise of two historical approaches to curriculum development – the curriculum tradition and Bildung tradition (Autio, 2014) – based on which policies, tools and methods have been distributed transnationally over time. A logical presumption is that these traditions have intertwined to compose each country's contemporary curriculum (Hopmann, 2015; Sivesind et al., 2016). The practical implementations for teaching often bring these traditions together, creating interesting study settings that produce results inspiring the development of classroom practices (Erss, 2017; Hopmann, 2015). An example of one such setting is a home economics educational environment characterised by an integrative approach to learning (Haapaniemi et al., 2020).

The chapters in this thesis outline the theoretical approach of the dissertation (Chapter 1), describe the research design and methodological approach (Chapter 2), present the main results from the empirical part of the research (Chapter 3) and discuss the pedagogical implications and broader conclusions together with the study limitations (Chapter 4). The original publications are referred to in the text according to their Roman numerals (Articles I, II and III).



# **1 THE CONCEPTUAL FRAME OF THE THESIS**

The subchapters in this chapter outline the theoretical perspectives on learning adopted for this research, starting with an introduction to the sociocultural approach to learning and its interpretations and implementations in Finnish comprehensive education. Then, roots of the integrative approach to learning, the main concept examined in this thesis, are presented together with the teacher's and pupil's role as viewed within this approach. Also, the ability to integrate and synthesise knowledge and skills and possible barriers to this integration and synthesis at the comprehensive school level are briefly discussed. Finally, curriculum traditions and their effect on the development of the Finnish curriculum are discussed, and the reasoning for selecting home economics and its role in this study are presented.

## **1.1 THE SOCIOCULTURAL APPROACH TO LEARNING IN COMPREHENSIVE EDUCATION**

The current sociocultural approach to learning has its origins in Vygotsky's (1962, 1978) work. Within this approach, the main argument is the socially and culturally framed nature of a human; thus, learning is seen as a social process mediated by culturally framed tools (Moll, 2014; Vygotsky, 1978). These mediators of meaning take the form of material tools, psychological tools and other humans as tools. Together, they comprise the physical, linguistic and intellectual means by which we try to understand the culture around us and how to act within it (Vygotsky, 1978).

According to Vygotsky (1978), learning starts externally at an interpersonal level as, for example, an expert mediates learning by teaching someone how to use a tool, such as a teacher teaching pupils the meaning of a new concept. Next, the learning process appears on the intrapersonal level as the learner begins to use the tool: using the previous example, when the pupil applies the learned concept during internal talk and then in conversation. During this internalisation, the interpersonal process becomes intrapersonal, meaning that the learner's thinking processes are transformed as they begin to use the new tool to express their thinking (Hall, 2007; Moll, 2014; Vygotsky, 1978). In learning, the importance of language is highlighted, as it both mediates and shares meaning but also constructs knowledge at both the inter and intra levels (Vygotsky, 1978). This means that learning a language is not limited to learning a vocabulary but, also, represents growing the capacity to structure intellectual practices reflected in purposeful behaviour in different situations (Säljö, 2009).

According to the sociocultural approach, developing a society is a two-way process (Moll, 2014; Vygotsky, 1978). In the beginning, internalisation moves from environment or society to learner, as the individual is constructed to be part of the society and its culture through social interaction and the learning process. This obligates the individual to adopt that culture's ways of thinking and acting. After this, the individual can participate in the actions of the society, which then enables the individual to remake the culture and its tools and, consequently, develop the self (Moll, 2014; Vygotsky, 1978).

In the context of education, the sociocultural approach provides several perspectives on learning that draw from its social nature (Moll, 2014; Vygotsky, 1978). First, interaction with teachers and peers is essential for learning. Second, development occurs in the zone of proximal development (ZPD): the continuum between what a person can do independently (actual level of development) and what the person can do with assistance from others (proximal level of development). School is a place where the boundaries of the ZPD are pushed, with the help of a capable instructor (Vygotsky, 1978). Third, pupils' contribution to learning is crucial. For Vygotsky, the aim of schooling was to provide pupils with access to abstract knowledge and theoretical concepts in a variety of fields. However, scientific concepts are not simply acquired by rote; gaining such knowledge involves 'the aid of strenuous mental activity on the part of the child himself' (Vygotsky, 1962, p. 86).

School teaching always includes mediation, which involves using tools to enhance learning (Hall, 2007; Vygotsky, 1978). Material tools, which are the equipment and materials used to support learning tasks in school, only indirectly influence psychological processes. Psychological tools include, for example, theoretical concepts, written learning assignments, pictures, symbols and assessment and often utilise language. Other humans are used as tools, such as when a teacher, other instructor or peer is acting as a master or mediator of meaning in a learning situation. To teach according to these guidelines for school education, the teacher must provide motivating learning tasks, for which tools are carefully chosen and interaction between pupils is enabled, to engage pupils in learning (Moll, 2014). This first requires knowing pupils' actual level of development in order to be able to help push the boundaries of their ZPD with the teaching and learning tasks (Hall, 2007).

Interaction between learners in school education is probably most present in collaborative work. To describe the ability to think productively and creatively together when collaborating, Littleton and Mercer (2013) introduced the term 'interthinking', arguing it as a contribution to the sociocultural learning approach. Interthinking has also been studied in the context of home economics education, a context in which its contribution to sociocultural learning was also supported (Taar, 2017). In studies of interthinking and successful collaborative work, the key elements of effectiveness have included, for example, inviting all group members to the discussion and elaborating on each other's knowledge (Littleton & Mercer,

2013; Soller, 2001) and having experience with how to work together in a classroom (Edwards, 2005; Taar, 2017).

However, working successfully in collaboration and utilising interthinking with peers is not self-evident; it requires training and guidance from the teacher (Dawes, 2004; Taar, 2017). The teacher plays an important role as the pedagogical professional responsible for designing instructional approaches that allow all pupils, with varying levels of knowledge, to use interthinking to achieve a higher level of understanding within their ZPDs (Rogoff, 1990; Edwards, 2005). Several pedagogical task-related decisions in education are left to the teacher, such as ensuring that pupils have adequate background knowledge and properly adapting task content and rigor to pupils' level (Fernández et al., 2001; Littleton & Mercer, 2013), along with utilising multiple tools and choosing suitable equipment, a responsibility deemed especially important in home economics lessons (Taar, 2017; Venäläinen, 2010).

## **1.2 THE INTEGRATIVE APPROACH TO LEARNING**

At the comprehensive school level, the future-oriented discourse in education has resulted in several supranational organisations, followed by several countries, to produce frameworks outlining educational goals for 21st century education, which have been referred to, for example, as 21st century competencies, skills or learning (Hipkins et al., 2014; McPhail & Rata, 2016; Voogt & Roblin, 2012). Despite the lack of overall consensus on the competencies included in these often only slightly different frameworks, scholars and practitioners generally agree that one must be able to integrate knowledge, skills, attitudes and values from multiple areas of interest to participate fully in societal discussions and development in the future (Ananiadou & Claro, 2009; National Research Council, 2012; Voogt & Roblin, 2012).

This orientation towards integration has led to a global emphasis on collaboration between school subjects that are already part of comprehensive education, both at the regulative curriculum level (Baillat, 2010; Clausen, 2010; Lenoir, 2010; Rodríguez, 2010; You, 2017) and implementation level (Al Husni & Naim, 2016; Baillat, 2010; Clausen, 2010; Jho, 2016; Park, 2016; Segovia, 2010) and in home economics education (Brante & Brunosson, 2014). Interestingly, this competence-centred discourse has also raised a discussion on the importance of maintaining the position of subject matter (Gericke et al., 2018; Young, 2013; see also Jones, 2009a, 2009b). This opposition, however, is not included in the discussion in this thesis, as the ability to integrate and the importance of subject matter are not mutually exclusive concepts.

In educational research, three forms of collaboration between school subjects intended to integrate the subject matter are often mentioned: multidisciplinary, interdisciplinary and transdisciplinary. The

multidisciplinary form has an additive and juxtaposing nature, as it involves only introducing multiple perspectives without supporting the integration within the learning or throughout the curriculum, while the nature of the interdisciplinary form can be found in the forethought and intentional goal of integration already supported by the curriculum (Klein, 2010; Spelt et al., 2009). Transdisciplinary, on the other hand, reflects the widest perspective, detaching itself from the borders of school subjects and aiming to develop an overarching synthesis by focusing interest on what lies between, across and beyond the school subjects, or more broadly, disciplines (Lattuca, 2003; Nicolescu, 2014).

Aiming at factually enhancing integration at the comprehensive education level, this thesis incorporates an interdisciplinary perspective. In education, interdisciplinarity is not a new phenomenon (Beane, 1997) but, instead, a multifaceted concept involving both theoretical and implementing viewpoints (Lenoir et al., 2015; Winebug & Grossman, 2000). Several models have been provided for conceptual categorisations based on, for instance, the rationales of the interdisciplinary perspective (Nikitina, 2006) or the degree of disciplinary integration in interdisciplinary practices (Huutoniemi et al., 2010; Mansilla, 2006). However, the element of the interdisciplinary perspective often considered essential is the involvement of the synthesis of knowledge through the integration of disciplines (Spelt et al., 2009). Regarding this, Mansilla (2010) described the practice of integration as follows: ‘interdisciplinary learners integrate information, data, techniques, tools, perspectives, concepts, and/or theories from two or more disciplines to craft products, explain phenomena or solve problems in a way that would have been unlikely through single-disciplinary means’ (p. 289). To follow this notion, in this thesis, the interdisciplinary approach in comprehensive education is viewed as aiming towards synthesis of knowledge through the integration of school subjects in pursuit of cognitive advancement or the ability to gain something unable to be gained without the perspectives of several school subjects (Klein, 2002; Lenoir et al., 2015; Mansilla, 2005; Spelt et al., 2009). This equips pupils with the ability to connect seemingly scattered information and make decisions based on broad perspectives, which qualifies them as integrative thinkers (Blackshields, 2015).

In this thesis, the phrase *integrative approach to learning* is used as an overarching concept at the comprehensive education level to describe the goal of integrating multiple school subjects, thus facilitating the development of integrative thinkers who can combine multiple perspectives to form an even broader view. A summary of the essential concepts relating to interdisciplinarity described in this subchapter are presented in Table 1.

**Table 1.** *Essential Concepts Composing the Theoretical Frame of This Study and Their Origins.*

<b>Concept</b>	<b>Definition</b>	<b>References</b>
Interdisciplinarity	Synthesis of knowledge through integration of disciplines to promote cognitive advancement or the ability to gain something unable to be gained without the perspectives of several disciplines.	Klein, 2002; Lenoir et al., 2015; Mansilla, 2005; Spelt et al., 2009
Integration	The practice of interdisciplinarity: integrating information, data, techniques, tools, perspectives, concepts and/or theories from multiple disciplines to explain phenomena or solve problems in a way unlikely possible by single-disciplinary means.	Mansilla, 2010
Integrative thinker	A person with the ability to connect seemingly scattered information and make decisions based on a wider perspective.	Blackshields, 2015; Huber & Hutching, 2004
Integrative approach to learning	An overarching concept describing interdisciplinarity in comprehensive education; integration of multiple school subjects aiming to provide pupils with a broad perspective and educate them to be integrative thinkers.	Haapaniemi et al., 2019

In supporting the integrative approach to school learning, Klein (2002, p. 9) explained that interdisciplinarity in education is ‘a process, not [a] fixed body of content’; thus, because of the ‘focus on [the] integration process, the question of pedagogy is inescapable’ (Lenoir et al., 2015, p. 67). This addresses the role of the teacher in guiding this process using pedagogical arrangements chosen for each pupil and group that enable them to reach their full potential (Hall, 2007), and even more importantly, that provide for the opportunity to adjust the teaching approach according to the pupils’ needs as the interdisciplinary project or lesson proceeds (Beane, 1997). As such, as Huber and Hutching (2004) argued, to enable integrative learning, teachers need to be integrative thinkers themselves.

Pupils are active actors in their own learning when constructing a broad perspective by drawing from the knowledge, skills, attitudes and values of multiple subjects and learning to be integrative thinkers. In addition to the sociocultural approach, this relates to participatory pedagogy supporting the

pupil's agency in school, relying on the idea that individuals can affect their own lives (Gresalfi et al., 2009). In a school context, this means giving pupils the right to be active learners (Brown & Renshaw, 2006; Greeno, 2006), carried out by increasing their understanding of their responsibility for participation during lessons (Edwards & D'arcy, 2004) and giving attention to active experiencing and meaning making (Emirbayer & Mische, 1998).

The list of pedagogical implementations in which the integrative approach to learning may be exploited is long. Implementations such as problem-based learning, project learning, inquiry-based learning and phenomenon-based learning are frequently used and developed in various educational contexts (Haapaniemi et al., 2019; Spelt et al., 2009). Social interactions and collaboration between pupils are usually encouraged within these implementations. Also, previous studies exploring the integrative approach to learning highlight the potential of learning collaborative work skills through this kind of learning (Eronen et al., 2019; Niemi & Kiilakoski, 2019; Tarnanen et al., 2019).

Despite the vast possibilities of implementations and their potential to support, for example, collaboration and interthinking, comprehensive school pupils' ability to integrate and synthesise knowledge and skills is not self-evident. Comprehensive schools often follow a subject-based education system, whereas the ability to draw on and apply knowledge from one subject to another reflects the complex nature of everyday life in which success is not achieved by being limited to the perspective of only one subject (Tuomi-Gröhn, 2008). In research, several potential barriers have been identified that prevent the successful implementation of the integrated approach to learning, such as the lack of linkage to everyday problems or experiences (Brante & Brunosson, 2014; Gilbert et al., 2011; Marton, 2006) or teachers' inability to support the creation of synthesis in the learning process (Illeris, 2018; Lattuca et al., 2004). The ability to draw on and apply knowledge from one situation to another has also been studied at the higher education level and referred to as transfer (Alexander & Murphy, 1999; Engeström & Tuomi-Gröhn, 2003; Gilbert et al., 2011). In the context of higher education research, the ability to transfer has been deemed a complex and even elusive phenomenon (Brent, 2011; Konkola, 2007; Marton, 2006). Therefore, planting the seeds for the ability to integrate and synthesise knowledge and skills through an integrative approach to learning at the comprehensive education level is of utmost importance.

## 1.3 CURRICULAR CONTEXT OF THE STUDY

### 1.3.1 CURRICULUM TRADITIONS

In the contemporary field of curriculum studies, a curriculum is considered to reflect society's prevalent culture while having its roots in the history of that society (Apple, 2004; Autio, 2014; Pinar, 2014). The policies, perspectives and methods of historical curriculum traditions have been distributed transnationally over time, and contemporarily, they serve as the foundation of each country's curriculum (Hopmann, 2015; Künzli, 2014; Sivesind et al., 2016). Therefore, as Tröhler (2016) observed, in order to understand the curriculum of today, the historical curriculum traditions must first be understood. Along those lines, the baselines of the curriculum traditions are here briefly described.

In curriculum theory, history notes two 'intellectual systems' (Pinar, 2014) with different theoretical premises. The Anglo-American curriculum tradition originated in the 20th century (Tyler, 1949) and anchors its perspective on learning on behavioural psychology and cognitive sciences (Autio, 2014; Hopmann, 2007; Pinar, 2014). Following these premises, the competence-based curriculum relies on carefully specified learning goals and is evaluated through standardisation and tests (Hopmann, 2015; Westbury, 2000). The aim is to ensure that school provides students with the competencies they will need in their subsequent higher education and working lives (Autio, 2014).

The other tradition, here referred to as 'Bildung', has its origins in German philosophy and bridges two sides of education: *Bildung* and *Didaktik* (Horlacher, 2015). The former refers to supporting the 'individual's development towards autonomy and [the] ability to [engage in] self-directed responsible or ethically reflected action' (Uljens & Ylimaki, 2017, p. 28). According to this philosophy, the goal of education is to guide pupils towards emancipation, self-determination and maturity, producing a self-developed need for further education (Autio, 2014). To separate Bildung from mere competence, Horlacher (2015; see, also, Pantic & Wubbels, 2012) argued: 'The presence of ethical guidelines is exclusive to Bildung, and thus provides an additional dimension that competence simply does not have' (p. 125).

The latter part of this tradition, Didaktik, refers to the practices of teaching, studying and learning and consists of theoretical and practical dimensions (Gundem, 2000; Hudson, 2007; Kansanen, 2002). Here, the basic structure of a curriculum comprises four elements: moral, cognitive, aesthetic and practical (Klafki, 1991, as cited in Autio, 2014). The curriculum is presented through *Lehrplan* ('curriculum framework'), a subject-centred education system that establishes the content for each subject, which requires a teacher's interpretation in order to be educative (Westbury, 2000). In this view, the content of education is perceived in its didactical sense, meaning that even when the curriculum provides a framework for the content, attention is

focused on the teacher's didactical analyses – that is, what is significant for the future of the pupils: whether the theory and practice are beneficial and the most suitable means to teach them for these pupils (Klafki, 1995). The perspectives of Bildung and Didaktik are bridged with the normative guidance of Bildung over the teacher's work and the moral element, or ethical guidelines (Horlacher, 2015), that make teaching to have educational potential (Deng, 2015).

To highlight, a dichotomic comparison of these historical traditions is not necessarily meaningful. Rather, understanding the outcomes of the interplay between them in contemporary curricula is the topic of interest (Hopmann, 2015). In the study described in Article II, this interplay, which is witnessed in the integrative approach to learning, is studied from the viewpoint of teacher autonomy (Haapaniemi et al., 2020), to which both traditions take a somewhat different approach, clearly affecting the way the schooling is planned and implemented, especially if one of the traditions is emphasised over the other (Biesta, 2012; Erss, 2017; Hopmann, 2015; Westbury, 2000).

### **1.3.2 FINNISH CURRICULUM**

As argued in the previous section, to understand the contemporary curriculum of a given country, its development and the cultural and societal context of that country must first be understood. The current study is conducted in Finland; therefore, basic knowledge on the essential questions of education, such as curriculum development, perspectives on school learning and the current emphasis in curricula, in the Finnish context are described next.

When education was established in Finland in the 19th century, it was anchored on the Bildung tradition; the aim of culturally framed school education was to develop self-consciousness and amplify national spirit (Snellman, 2000). Through the transnational exchange of policy, the curriculum has since shifted towards educational psychology, child-centred education and, lately, even more towards a competence-based approach (Saari et al., 2014; Sivesind et al., 2016). Despite this shift, the foundation of individual identity building is still preserved, and paramount importance is given to educational equity and to ensuring access to high-quality education for all students, regardless of their social, economic or ethnic background (Autio, 2017; Saari et al., 2014; Sahlberg, 2015). This is supported by the contemporary curriculum, for which the national goals of education are as follows: growth as a human being and membership in society; requisite knowledge and skills; and promotion of knowledge and ability, equality and lifelong learning (FNCC, 2014, p. 31).

In line with the Bildung tradition, in the 1950s, Finnish teachers had didactical autonomy; relying on that, they followed the national curriculum organised according to *Lehrplan*. This autonomy has largely remained intact (Erss et al., 2016; Sahlberg, 2015; Simola et al., 2017; Uljens & Rajakaltio, 2017), regardless of the fluctuations in political steering and the strong



centralisation of the curriculum design in 1970, which, again, decreased in the 1990s, when local municipality and school authorities were assigned greater responsibility for developing curricula (Pyhältö & Vitikka, 2013). This responsibility also meant engaging teachers more in the curriculum development process, while the manner in which the FNCC establishes normative regulations for comprehensive education and the local curriculum process were approved by the local education authority (Pyhältö & Vitikka, 2013; Sahlberg, 2015; Vitikka & Rissanen, 2019). One argument for giving teachers responsibility in the curriculum development process, on both the national and, especially, the local level, is the five-year, high-quality master level teacher education required for all comprehensive schoolteachers in Finland (Niemi et al., 2016). Finnish teachers are expected to fully master curriculum development in their schools. This professional engagement from teachers is essential pedagogical activity in the Didaktik sense (Uljens & Rajakaltio, 2017), and it is argued to increase the teacher's ownership of the curriculum and of the holistic interpretation and effectiveness of the reform (Goodson, 2014; Kennedy, 2010).

Currently in Finland, several trends of curriculum development transitions are ongoing. Sivesind et al. (2016) reported on the shift from a purposive policy programme towards a conditional perspective with a regulative and normative nature, as, for example, with the introduction of the assessment criteria for level eight in the 2004 curriculum (FNCC, 2004) and with the addition of the assessment criteria for levels five, seven and nine, which will be used from autumn 2021 onwards, as part of the latest 2014 curriculum. The prominence of neoliberal tendencies suggests stronger political steering (Erss et al., 2016; Saari et al., 2014; Simola et al., 2017) and has echoes in the adoption of a new public management model in schools, challenging them with increased bureaucratic work and tightening economic limitations (Rajakaltio & Mäkinen, 2019). Still, schools are often perceived as autonomous profit units (Risku & Pulkkinen, 2016). The habit of designing school-level curricula has shifted more and more towards the development of common municipality-level, or even broader, curricula (Saarinen et al., 2019), emphasising the efficiency of the management model, while at the same time possibly decreasing teachers' engagement in the process.

Following the *Lehrplan* model, the curriculum in Finland is still strongly subject-centred and shows no indications of abandoning this system (Uljens & Rajakaltio, 2017). In the curriculum, the tasks, objectives and content areas related to the objectives are specified for each subject. In addition to the subject-bound system, the curriculum identifies transversal competencies, the role of which has been especially emphasised in the latest curriculum. These competencies are not new to the Finnish curricula, but in previous designs, they were not fully employed because they seemed disconnected from subject teaching (Vitikka & Rissanen, 2019). The aim of the transversal competencies is to 'cross boundaries of and link different fields of knowledge and skills' (FNCC, 2014, p. 33), which follows the orientation towards 21st century

competences in Organisation for Economic Co-operation and Development (OECD) countries (Ananiadou & Claro, 2009). This idea of applying knowledge and skills in different situations repeats the concept of the integrative approach to learning. Similar to 21st century competencies, the transversal competency 'refers to an entity consisting of knowledge, skills, values, attitudes and will' (FNCC, 2014, p. 33).

The seven transversal competencies in the current Finnish National Core Curriculum (2014) are as follows: a) thinking and learning to learn; b) cultural competence, interaction and self-expression; c) taking care of oneself and managing daily life; d) multiliteracy; e) information and communication technology (ICT) competence; f) working life competence and entrepreneurship; and g) participation, involvement and building a sustainable future. The objective of all seven competencies is to 'support [the pupil's] growth as a human being and to impart competencies required for membership in a democratic society and [for a] sustainable way of living' (FNCC, 2014, p. 33). The co-existence in the curriculum of the two systems, *Lehrplan* and competence-oriented, is shown in the way that the transversal competencies are assessed as part of each subject's evaluation. For this, the curriculum provides guidance on which transversal competencies may be incorporated into which subject's education.

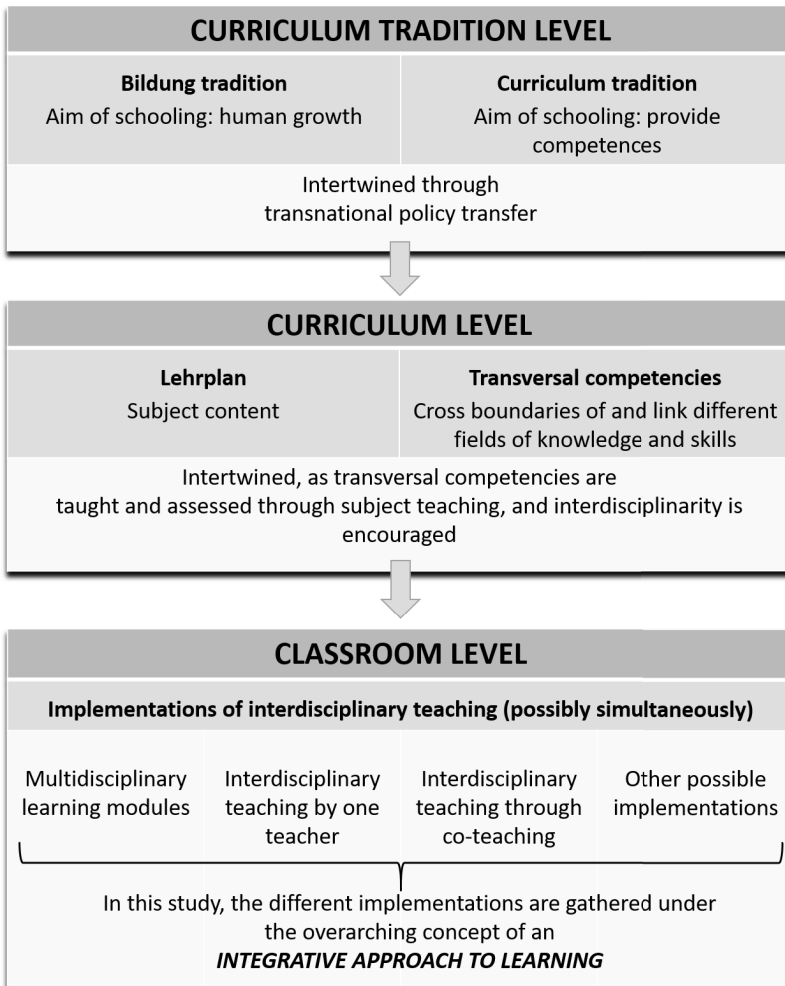
Following the introduction of the historical development of education, Pöntinen (2019) outlined the development of the conception of learning in the Finnish curriculum and in home economics education. Starting with the empiric-behavioural concept in the 1950s, Pöntinen (2019) led us to the current approach that shaped the latest 2014 curriculum, named socio-constructivism. This approach combines cues from the sociocultural and constructivist approaches with emphasis on pupils as active actors responsible for their learning processes and on interactions in learning (FNCC, 2014, p. 26); connections to participatory pedagogy are easily found in this design as well.

For the integrative approach to learning, the current curriculum seems to suggest several supporting practices. First, the curriculum emphasises integrative instruction intended to 'enable pupils to see the relationship and interdependencies between the phenomena to be studied' (FNCC, 2014, p. 52). To achieve this, schools are obligated to arrange at least one multidisciplinary learning module for learners each year that involves at least two subjects, and co-teaching is encouraged. Guidelines for these modules are provided in the national curriculum, but responsibility for implementation is placed at the local curriculum level and often with the schools themselves. In the curriculum, parallel study, sequencing and holistic integrated instructions are given as examples of possible working methods. Second, the integrative approach to learning aligns with transversal skills, also aimed at crossing boundaries of and linking multiple fields of knowledge and skills. Thus, in the curriculum, integration across the content of multiple school subjects is encouraged. Third, especially in the multidisciplinary learning modules,

assessment is focused on the learning process, which enables teachers to adapt the process while it is still ongoing, following the sociocultural approach framing the integrative approach to learning.

Regardless of these suggested practices, introducing this collaborative pedagogical working culture, which also calls for collective autonomy, has been challenging (Little, 1990). To ensure a shared understanding of the objectives set for the transversal competencies and multidisciplinary learning modules, the transition within the school culture has been recognised as a slow process that needs support from management and sufficient resources, such as time and opportunities for joint discussions and planning (Venäläinen et al., 2020). Venäläinen et al. (2020) suggested that achieving the objectives of the subject's own and transversal competencies in multidisciplinary learning modules has not been fully reached, despite this being a goal for these modules in the curriculum.

The relationship between different theoretical levels and the integrative approach to learning concept at the comprehensive school level in Finland, as the contextual frame of this study, is presented in Figure 1.



**Figure 1.** *Curricular Context of This Study.*

To conclude, several societal and historical matters and pedagogical trends have affected the path leading to the current point at which interdisciplinarity and integration between school subjects are emphasised in the Finnish national curriculum. Nevertheless, despite this current emphasis, setting the obligation in the curriculum to implement multidisciplinary learning modules in schools does not ensure that the integrative approach to learning will be adopted as part of the school culture or as part of classroom practices for home economics education.

### 1.3.3 HOME ECONOMICS EDUCATION

The data for this thesis were collected from the home economics school subject, from home economics teachers and from pupils in home economics lessons in Finnish upper comprehensive schools. The selection of this subject is supported by two viewpoints. First, in home economics, the study context itself – everyday life – naturally possesses a complex and integrative nature, and trying to simulate this complexity inevitably leads to taking an integrative approach to learning, at least to some extent (Darling & Turkki, 2009; McGregor, 2011b; Tuomi-Gröhn, 2008). Second, home economics learning tasks often involve collaboration between pupils, and interaction has an important role in such learning (Beinert et al., 2021; Taar, 2017). In this section, these viewpoints and their roots in home economics are discussed.

To go one step further, home economics consists of four fields of practice: a) an academic discipline (home economics and home economics science); b) an arena for everyday living (home or home economics); c) a curriculum area (home economics education); and d) a societal arena to influence policy (home economics; International Federation for Home Economics, 2008). Here, interest is placed on the curriculum area; to separate the curriculum from the academic discipline, the content knowledge provided by the discipline is transformed to fit the educational purpose of teaching, not as a reduction of a discipline but, rather, to reflect the culturally bound educational values (Barnes, 2015; Pountney & McPhail, 2017).

The philosophical guidelines in home economics are guided by the focus on the home for the good of humanity, which encompasses individual, family and global levels, both alone and through social institutions (McGregor, 2012). Human beings' relation to the environment, including nature, culture and society, is in focus when attempting to improve, optimise and enhance well-being and quality of life, often starting with the human ecology approach (McGregor, 2011b, 2015; McGregor et al., 2012; Turkki, 2015). Home economics as a field of research realises the complexity of everyday life and draws from several subdisciplines, such as the natural sciences, physical sciences, arts, humanities and administrative sciences, to integrate the various components and theoretical approaches of daily routines (Darling & Turkki, 2009; Heinilä, 2014; McGregor, 2011b; Tuomi-Gröhn, 2008). As such, the interdisciplinary perspective in the field has progressed towards a more transdisciplinary approach (McGregor, 2009, 2011a, 2016).

The goal of home economics as a school subject taught around the world is to give students an active role as learners and provide them with knowledge and skills to enhance their personal empowerment to manage their daily lives in a creative and responsible manner (Janhonen-Abuquah & Palojoiki, 2015). To address the multiple literacies needed in home economics education on personal, societal and global levels, through both physical and emotional perspectives (Hira, 2013; Turkki, 2015), curricula may contain several content areas, for example, food, nutrition, health, textiles, technology, consumerism, family studies or household management, according to the development of the

home economics curriculum and the overall educational scope in the country in question. The emphasised perspective on the subject in a particular country is often reflected in the name assigned to the course of study; some such names include Home and Consumer Studies in Sweden (Granberg et al., 2017), Food and Health in Norway (Beinert, 2021), Home Economics in Japan (Kishi et al., 2017), Family and Consumer Sciences in the United States (Poirier et al., 2017) and Family Education in Saudi Arabia (Alharbi & Renwick, 2017).

In Finland, the subject is called Home Economics and includes three content areas: food knowledge, skills and culture; housing and living together; and consumer and financial skills at home (FNCC, 2014). Since its first appearance in the Finnish curriculum as a compulsory subject for boys and girls in the 1970s, the subject's integrative nature has been emphasised in every curriculum (1970, 1985, 1994, 2004, 2014), the latest also highlighting the content covering all transversal competencies. In addition, the opportunity for enhancing collaboration between pupils and taking pupils' experiences as a foundation for learning has been, and still is, considered important. This gives home economics a good starting point for taking part in multidisciplinary learning modules and embracing an integrative approach to learning.

In this study, exploring the integrative approach to learning in home economics provides knowledge for classroom pedagogy in home economics education. During the last ten years, several dissertations have strengthened the pedagogical base of home economics education (see Appendix 1). Due to their content and the Finnish context of this thesis, consideration of the recent studies is limited to those published in the last ten years, related to the classroom pedagogical approach and conducted in the Nordic-Baltic country context. The Nordic-Baltic countries share a similar approach to home economics education in comprehensive schools, although they include national characteristics as well (Beinert, 2021; Granberg et al., 2017; Rendahl, 2018; Venäläinen, 2010). According to Heinilä (2014), the Nordic countries especially employ the home economics research paradigm targeting the life-world perspective and persons in these situations, valuing the uniqueness of human beings.

The pedagogically oriented studies of home economics education involving home economics classrooms are distributed across several home economics content areas. Here, attention is directed to those providing links to this study. Two studies (Gelinder, 2020; Gisslevik, 2018) used the content of sustainable food consumption, highlighting its importance relative to the school subject while also revealing the need for further discussion on the pupils' perspective and the need for room to amplify the sustainable perspective in home economics teaching. The orientation to sustainable development, overall and in home economics education, is also present in Article III, in which a learning task related to sustainable development was designed and implemented for data gathering purposes.

At the comprehensive education level, the integrative or interdisciplinary nature of home economics education was of interest in Lindblom's (2016)

study, in which the ways of combining the content of food and health were used as a frame for examining students' goal achievement. In addition, Granberg (2018) addressed the integrative nature of home economics education in her study results, particularly concentrating on the role of mathematics in cooking. At the higher education level, Pöntinen (2019) studied cross-curricular collaboration in Finland and argued, as a challenge for interdisciplinarity, that more attention should be paid to the integrative nature at the home economics teacher education level, and home economics teachers should receive in-service training on how to implement integration in their work. Similarly, the challenges of finding time and opportunities for planning for interdisciplinary teaching between nutrition and health in comprehensive education were also uncovered in Lindblom's (2016) study, which interestingly also revealed that sometimes the lack of time was used as an excuse for not making changes to the study plan. These studies indicate that more research on the integrative perspective in home economics education is needed. The current thesis tries to fill this gap in the knowledge at the comprehensive level by exploring the aspects of the integrative approach to learning in home economics education from both teachers' and pupils' perspectives and discussing the pedagogical implementations in the classroom.

Concerning the theoretical frame for learning, almost half of the studies conducted in home economics education within the last ten years were guided by the sociocultural approach (Beinert, 2021; Gelinder, 2020; Granberg, 2018; Malin, 2011; Pöntinen, 2019; Rendahl, 2018; Venäläinen, 2010). This can be considered as support for the ideas (that also guide this study) that giving the pupils an active role as learners and using interactions between teachers and pupils to enhance learning are both desirable in home economics education. In addition, in this subject area, various psychological and physical tools are typically present in daily classroom activities; therefore, the sociocultural approach has been used to give theoretical power to explaining these activities. The role of tools in learning in a Vygotskian sense is emphasised in the studies conducted by Venäläinen (2010) and Taar (2017), both of whom argued that learning can be enhanced by using carefully chosen tools in a pedagogically appropriate way. At the same time, as Beinert (2021) mentioned, physical tools can also be used as a distraction during the lesson, especially if the teacher does not have enough background knowledge about how to scaffold the pupils during the learning task. Both Taar (2017) and Beinert (2021) addressed language as a psychological tool and other people as a tool for learning, arguing in their conclusions that the potential exists in home economics education for strengthening pupils' communicative skills, such as argumentation and even interthinking skills, when pupils are engaged in active learning group work tasks. However, for this to happen, the teacher must carefully plan a motivating learning task, clearly communicate the means and aims of the task to the pupils and scaffold the group's co-operative study process. Using tools

in teaching when implementing an integrative approach to learning is the main interest in the study for Article I of this thesis.

In most of the doctoral studies conducted within home economics education with pedagogical orientation during the last ten years, at least part of the data were collected through classroom observations. This brings forth the ways of working in the home economics classroom. The nature of using psychological and physical tools in learning tasks utilising practical and theoretical knowledge and skills, combined with the collaborative ways of working that naturally encourage interaction, separates home economics from many other school subjects. Although a cumulative pool of studies related to home economics education now exists, none of the studies discussed here focused on the integrative approach to learning in the theoretical context of Bildung and curriculum traditions.



## 2 RESEARCH AIMS AND METHODS

In this chapter, the aims of the empirical component of this thesis are described, and the epistemological and ontological approaches are outlined. The data collection and analysis methods are explained, and ethical considerations are discussed.

### 2.1 AIMS OF THE RESEARCH

The overall aim of this thesis is to characterise the integrative approach to learning in upper comprehensive education (grades 7–9) and to explore it from different perspectives to inform a multifaceted understanding of the phenomenon. The integrative approach to learning is explored within the frame of Finnish curriculum development in which aspects of both *Bildung* and curriculum traditions have been intertwined. The importance of outlining the curricular context in Finland is based on the theoretical approach anchored in a sociocultural view, emphasising the cultural environment affected by the historical development.

This thesis comprises a collection of three original publications (Articles I, II and III). The studies highlighted in each of these articles were guided by one of the following three research questions (RQ 1–3), collectively shedding light on various perspectives of the integrative approach to learning.

1. What kind of tools and pedagogical arrangements support the integrative approach to learning in home economics lessons that integrate other school subjects? (Study I)
2. How do teachers reflect teacher autonomy and collaboration as part of integrative teaching? (Study II)
3. What classroom practices are perceived as beneficial by pupils working on an integrative and collaborative learning task in a home economics classroom? (Study III)

The first research question, addressed in Study I, relates to the classroom level and aimed to explore the different ways the lessons were implemented and the different tools used in the lessons that integrated several school subjects to support the interdisciplinary perspective. The second study (Study II) took a more curriculum study perspective, and the research question (RQ2) targeted teachers and their understanding of integrative teaching from the perspective of teacher autonomy. The third research question (Study III)

provided yet another view of the integrative approach to learning in which pupils are in focus. To conclude, this thesis aims to provide a rich and detailed picture of the integrative approach to learning concept in upper comprehensive education, using Finnish curriculum development as a frame and providing cues for further development.

## **2.2 EPISTEMOLOGICAL AND ONTOLOGICAL CONSIDERATIONS**

This thesis is engaged with the educational sciences, which often as an outcome provide ideas on possible solutions to educational problems (Cohen et al., 2018; Holma & Hyytinen, 2015). To prevent unintended misunderstandings, the underlying epistemological and ontological presuppositions guiding this thesis must be discussed. Following the prevailing ideas of epistemology in education, signifying a rejection of the positivistic approach intended to reach the objective truth through empiricism, this thesis is guided by an approach in which knowledge is considered a process that scientific studies advance by supplementing it from multiple viewpoints, giving the process a dynamic element (Nuutinen, 2002). This strongly fallibilistic view on epistemology accepts the idea of a truth, but it is considered out of reach, more of an ideal; therefore, theories are held as justifiable beliefs about the nature of reality but not as definite truths (Peirce et al., 1994). This fallibilistic approach is related to the sociocultural approach to learning, as Vygotsky (1962, 1978) highlighted the dynamic nature of knowledge, development through learning and being bound to one's society and culture, not the idea of truth.

Fallibilism often relates to realism, but the emphasis on the social, historical and political context that affects the knowledge and theories separates this study from the realism classification (Risjord, 2014), suggesting a social constructivist approach (Berger & Luckmann, 1967). This is supported by several observations. First and foremost, the pervasive sociocultural approach in this thesis reinforces the idea of the social-historical nature of knowledge, leading to the following aspects. Second, the orientation to curriculum development as a theoretical frame in Study II sets the historical dimension as a starting point for the study, helping to interpret the current curriculum and teacher's role through the historical trajectory. This supports the approach according to which understanding the history is crucial for understanding the present. Third, the social nature of knowledge is highlighted in the third part (Article III), where the discussions between pupils are the main mediators to exploring the possibility of enhancing learning through interthinking.

Epistemological constructivism has been critiqued as to whether theories of knowledge are even needed if knowledge is only socially and politically constructed. However, in the context of this study, following the ideas of Siegel

(1998), the argument can be made that, without epistemological aims, meaning the idea of targeting knowledge and truth to at least some extent, justifying why some knowledge should be included in a curriculum, the kind of competencies or learning goals that should be targeted and in what ways teaching ought to be implemented would be difficult. This means that, considering the idea of unreachable truth in constructivism and the fallible nature of knowledge, striving towards them using the most appropriate methods known is a significant endeavour.

Social constructivism also guides the ontological assumptions in this thesis. Seeing reality as socially constructed is essential: through learning and interaction with others, individuals create their understanding of reality (Berger & Luckmann, 1967). These mental representations become social roles reinforced through interactions, which are finally institutionalised. For example, in home economics education, food-related cultural norms and the division of work in families can often be taken for granted. Social reality is composed by these institutions, which are passed on to the next generation without questioning their meaning. Comprehensive education possesses this institutionalised status: its meaning is hardly questioned, and an individual will find making changes to its structure or content difficult. Also, emphasis on interdisciplinary teaching is a socially or politically constructed aim for teaching. However, I argue that it has not been institutionalised as a teaching method, as its role is still questioned and whether it threatens learning the subject matter in school education has not been determined (Gericke et al., 2018; McPhail & Rata, 2016).

The aim of this thesis is to characterise and explore the integrative approach to learning from different perspectives in upper comprehensive education, acknowledging the subjective world of human construction and everyday life. The research paradigm may, thus, be seen as interpretive (Cohen et al., 2018): this thesis is not intended to develop generalisable theory, yet theory is considered a set of meanings grounded to the participants as their source. Interest is focused on how pupil groups together construct their answers to the learning task and on what teachers think about integrative teaching. As part of the methodological approach, the analysis aimed to start from individual meanings and produce more general categories, not to change the social reality or individual meanings (Berger & Luckmann, 1967; Cohen et al., 2018; Schütz, 1972). The inability to compose generalisable theory through case studies has been considered one of the study method's major downfalls; however, this viewpoint has changed to one in which the interpretive nature of case studies is valued, especially in the social sciences: the strengths and weaknesses of different approaches vary; therefore, they are seen as complementary, not opposite, to each other (Flyvbjerg, 2004).

The methodological choices for this research were guided by epistemic values (Risjord, 2014, pp. 14–33), which guided the researcher towards justified scientific practices and a reasonably implemented study. Still, this thesis is bound to the values established for education (Holma & Hyytinen,

2015): education and learning itself are valuable. In addition to being tied to the value set of the curriculum, one self-evident value guiding this thesis is that the integrative approach to learning is considered valuable and worth striving to attain. In summary, this thesis acknowledges a socially constructed epistemology and ontological assumptions also based on social constructivism, regarding both teachers' and pupils' lived experiences in school and at home.

## **2.3 PARTICIPANTS AND DATA COLLECTION**

### **2.3.1 OUTLINE OF THE DATA COLLECTION**

This thesis is based on data-based case studies in the home economics education context (see, for example, Gelinder, 2020; Granberg, 2018; Lindblom, 2016; Rendahl, 2018). The empirical part is based on two approaches to data collection. Data were collected first in Spring 2017 through classroom observations and interviews with teachers and principals. These data were used in Study I (all data) and Study II (only the interview data). As the second approach, data were collected in Fall 2019 through the diamond ranking method as well as classroom observations. These data were used in Study III. The data collected for this research are outlined in Table 2.

**Table 2.** Description of Data Collected for This Research.

Study	Data collection method	Description	Specification
<b>Data collection 1, Spring 2017</b>			
I	Classroom observations in three schools: audio and video recorded data, photographs, field notes	Five different home economics lesson structures with an interdisciplinary nature, some lessons observed several times with different pupil groups; participatory observation	Audio data 19:15:54; Video data 9:49:07; 347 photographs; Handwritten fieldnotes 204 pages (A5)
I/II	Teachers' interviews: semi-structured, audio recorded	School 1: HE teacher, 2 mathematics teachers Schools 2 and 3: 1 HE teacher (combined $n = 5$ )	Audio data 7:14:14; 104 pages of transcripts (Calibri font, size 11, single spaced)
I/II	Principals' interviews: semi-structured, audio recorded	Principal from each school ( $n = 3$ )	Audio data 2:09:38; 30 pages of transcripts (Calibri font size 11, single spaced)
<b>Data collection 2, Autumn 2019</b>			
III	Classroom observations in one school: audio and video recorded data, photographs, field notes	Two lessons for 8th grade pupils (Lesson 1: 12 pupils; Lesson 2: 13 pupils), each lesson 90 minutes; participatory observation	Audio data 7:51:59; Video data: 3:33:12; 7 photographs; Handwritten fieldnotes 24 pages (A5)
III	Presentations made by the pupils	PowerPoint presentations describing work groups' results for the given working task, one presentation per work group	7 presentations
III	Diamond rankings made by the pupils	Rankings of the practices' pupils perceived as helpful for proceeding in the given working task, one ranking per work group	7 diamond rankings

Note: HE = home economics

The first data collection was conducted in three schools in Finland in Spring 2017. Two of the schools volunteered to participate after seeing the participation petition on the home economics teacher social media network calling for home economics teachers who had upcoming lessons involving an integrative approach to learning. The third teacher was personally asked to participate via e-mail after being suggested by one of the participating teachers. During the data collection, five different home economics lesson structures integrating different school subjects were observed. Some lessons with the same structure were observed with several pupil groups; thus, altogether eight lessons were observed. In the first school, the multidisciplinary learning module included home economics, Swedish and mathematics. In addition to observing the home economics lessons, the researcher observed one Swedish lesson and one mathematics lesson to gain a broader understanding of the module. (Data from those observations were not included in the analysis.) The lessons observed are summarised in Table 3.

**Table 3.** *Lessons During Data Collection 1.*

<b>School</b>	<b>Integrated subjects</b>	<b>Pupils' grade (age)</b>	<b>Classes observed, participating pupils/class</b>	<b>Duration of one observed lesson</b>	<b>Teaching setting</b>
1 Eastern Finland	HE, Swedish, mathematics	7th grade (13–14)	2: 1–14 HE pupils 2–14 HE pupils	3 x 45 min	HE classroom
	HE, Russian	8th grade (14–15)	1: 18 pupils (12 HE, 6 Russian)	2 x 45 min	HE classroom
2 Southern Finland	HE, crafts	7th grade (13–14)	3: 1–36 pupils (18 HE, 18 crafts) 2–33 pupils (15 HE, 18 crafts) 3–24 pupils (13 HE, 11 crafts)	3 x 45 min	HE classroom, camp place
3 Eastern Finland	HE, chemistry, arts	9th grade (15–16)	1: 12 HE pupils	2 x 45 min	HE classroom
	HE, history	9th grade (15–16)	1: 16 HE pupils	2 x 45 min	HE classroom

*Note:* HE = home economics

As part of the first data collection, interviews were conducted with teachers and principals. In all three schools, one home economics teacher and the principals were interviewed. In addition, in School 1, two mathematics teachers who participated in the multidisciplinary learning module were interviewed. The data from the principals' interviews were analysed but ultimately used mainly to provide a broader understanding of each school's culture.

The second data collection was conducted in Autumn 2019. The participating teacher was again located through the social media network for home economics teachers. The school was located in southern Finland. The participating pupils were studying home economics as an optional course in two of the teacher's 8th grade classes. Eighth graders were selected because home economics is usually compulsory in the seventh grade for all pupils, and during the seventh grade course, the basic content areas of home economics are covered. Therefore, a reasonable presumption was made that the participating 8th graders had studied enough home economics to be able to understand its connections to other school subjects. During the second data collection, two home economics lessons with the same lesson structure were observed. In the first lesson observed, 12 home economics pupils participated in the study, and in the second lesson observed, 13 home economics pupils participated in the study. Immediately after both lessons, the teacher was briefly interviewed to strengthen the interpretations of the observations and to validate the data collected, but these brief interview data were not included into the analysed data.

### **2.3.2 OBSERVATIONS AND VIDEO AND AUDIO RECORDED DATA COLLECTION IN THE CLASSROOM**

Classroom observations were chosen as the primary data collection method for gathering data from naturally occurring social situations in the classroom (Cohen et al., 2018). Likely due to the advantages of this method, it seems to be a somewhat common data collection method in studies on home economics pedagogy (Beinert, 2021; Bohm, 2016; Höijer, 2013; Kivilehto, 2011; Lindblom, 2016; Malin, 2011; Venäläinen, 2010). During the observations, the researcher assumed a participatory role, but in the form of observer-as-participant, placing more emphasis on the observer rather than on the participant aspect (Cohen et al., 2018, p. 397; Mertens, 2010). This followed Silverman's (2014) argument that the social world cannot be studied without being part of it. In the beginning of each lesson, the researcher reminded the pupils about the purpose of the study and the researcher's role as an observer. In the second data collection, the researcher also introduced the lesson theme and the learning task, as the task was intertwined with the diamond ranking method. During all lessons observed, the learners were able to ask for help from the researcher, and sometimes the researcher also asked the learners some clarifying questions to better understand their actions and arguments.

During the second data collection, at the end of the lessons, the researcher asked each work group questions about their experiences with the content learned during the multidisciplinary learning module.

For both data collections, the data from the classroom observations were collected via audio and video recordings, which then complemented each other during the analysis (Heath et al., 2010). Video recording was chosen as a means for data collection because it enabled the recording of situations in the way they naturally occurred in the classroom while also capturing the social activities (Heath et al., 2010). The researcher carried an audio recorder during all lessons observed to record audio data. In addition, in most of the lessons observed during the first part of the data collection, one fixed camera recorded most of the classroom, and the researcher used one handheld camera to more closely capture interesting phenomena. This approach overcame the disadvantages of losing detailed data with the fixed camera and losing the overall picture with the handheld camera (Heath et al., 2010). An exception to this approach was made for the lessons presented at School 2, as parts of the three lessons observed there were held at a nearby camping site, where the fixed camera could not be used. Therefore, the only camera used to video record during those lessons was the handheld model, so the collected data mainly consisted of audio recordings and short video clips. To support the video and audio recordings, the researcher took photographs of the settings, documents and equipment and wrote fieldnotes both during and after the observations. These helped the researcher to recall the layout of the scenes and to synchronise the video and audio data for analysis (Heath et al., 2010).

During the second data collection, two fixed cameras were used that covered most of the classroom and the participating pupils. This was considered sufficient, as pupils worked within the same group in the same place for the entire lesson, and the cameras were placed so that the presentations pupils gave about their learning tasks at the end of the lessons were clearly recorded. Therefore, the handheld camera was not used. Additionally, during the group work sessions, each group had its own audio recorder to collect good quality audio data of the group's discussions.

### **2.3.3 INTERVIEWING TEACHERS AND PRINCIPALS**

The interview as a research tool can serve several purposes and can be used as the only data collection method or in conjunction with other techniques (Cohen et al., 2018). In this thesis, interviews were used for three main purposes. In Studies I and II, interviews with teachers and principals broadened the understanding of the school's culture, and the teachers' interviews helped to interpret the pedagogical choices underlying the implementation of interdisciplinarity during the lessons. In Study II, teachers' interviews served as the main mediator for understanding the teachers' interpretations of their autonomy. In Study III, teachers' interviews were used



to ensure that the data collected were reliable with respect to the pupils' behaviours during the lesson.

All interviews were semi-structured and in-depth (Cohen et al., 2018; see, for example, Lofthouse & Thomas, 2017; Pantic & Wubbels, 2012). All teachers were asked a list of structured questions, which were communicated freely, without any preset emphasis. The interviewees were made aware of the focus of the interviews in advance, and during the first data collection, the interview outline was also given to the home economics teachers in advance, as the teacher interviewed first had asked for it, so the same procedure was followed with the other teachers.

In the first data collection, the mathematic teachers' interviews were held between the observed lessons, but the home economics teachers' interviews were held later, within two weeks from the observed lessons, as with them the stimulated recall method was employed (Nind et al., 2015; Powell, 2005): during the interviews, short video clips chosen by the researcher were shown to the home economics teachers to remind them about the activities in the classroom or to focus the discussion into a particular theme. These video clips were useful for deepening the interview themes and for helping the teachers to recall the pupils' activities and the instructions they gave to the pupils. This also supported the semi-structured feature of the interviews, as the video clips differentiated between teachers and often caused the discussions to drift, prompting the need to ask additional and specifying questions.

#### **2.3.4 DIAMOND RANKING METHOD**

The third study (Study III), drawn from educational action research, was intended to critically examine the actions of the group and the individual group members to understand their social and educational practices and the situations in which these practices were executed (Carr & Kemmis, 1986; Hart & Bond, 1995; Kemmis, 2006). This investigation was implemented following a participatory methodology that emphasised collaboration to explore meaningful experiences among people in a pedagogical relationship (Niemi et al., 2015; Niemi et al., 2018) and to seek new ways of investigating classroom pedagogy (Niemi et al., 2015). From several available methods for exploring pupil perspectives (e.g. Brante & Brunosson, 2014; Lehtomäki et al., 2014; Niemi & Kiilakoski, 2019), the diamond ranking method was chosen for data collection because it aligns with a participatory pedagogy (Gresalfi et al., 2009) and allows the method to be integrated with the classroom learning task, thereby giving pupils agency. Diamond ranking method was also used as a novel way of collecting data from home economics classroom. This method is collaborative, which aligns well with the ways of working in home economics.

In the original use of the diamond ranking method, participants working in pairs or trios chose nine photographs, which then were organised into a diamond shape, with the most preferred picture placed at the top and the most disliked at the bottom, annotated by comments and explanations

(Clark, 2012; Clark et al., 2014; Woolner et al., 2010). In classroom settings, diamond ranking is usually used to explore pupils' value positions or feelings, using pre-written options rather than pictures (Clark, 2012; Hopkins, 2010), which was also the case in this study. The selected options were either written by the pupils themselves or chosen from a pre-written list prepared by the researchers, based on the socioculturally drawn literature regarding beneficial practices for collaborative work. Despite the use of pre-written options, the aim and strengths of the method remained the same: pupils ranked the options collaboratively with their work groups, requiring each group 'to make explicit the overarching relationships by which they organise knowledge, thus making their understandings available for scrutiny and comparison' (Clark, 2012, p. 223).

To ensure clarity and avoid ambiguity, the diamond ranking method and the list of pre-written options were pretested with three 8th grade classes in another school. After some clarifications to the instructions, the method was introduced to and tested with another theme with the participating pupils three weeks before the data collection.

For the data collection, two integrative and collaborative learning tasks for home economics education (Janhonen-Abuquah & Palojoki, 2015) were designed by the researchers. The tasks followed the principles of the sociocultural learning approach, as they assigned pupils the role of active learners, encouraged collaborative group activities, afforded opportunities for pupils to develop their ZPDs through interaction with their peers and provided an opportunity to integrate knowledge from several subjects. The participating teacher chose the task most suitable for the pupils.

During the lessons, the data were collected, and the interdisciplinary learning tasks were completed in small work groups in which pupils usually worked during home economics lessons. After completing the learning task, the groups were asked to choose the nine most important practices that helped them to work with the task from a prepared list of options (preferably with their own options added). These options were then ranked using the diamond-shaped template provided to the pupils both on paper and on a flash drive. After this, the groups presented their diamond rankings as part of the learning task. This created an arena in which the pupils were able to argue for their selected options and rankings. Pupils also received feedback from their peers. The whole lesson, including the teacher's instructions in the beginning, the learning task activities, the diamond ranking presentations and the feedback sessions were audio and video recorded to promote a better understanding of the processes pupils followed when working with the task, the arguments they used to choose and rank their options and the way they presented and augmented their diamonds for other pupils.

## 2.4 DATA ANALYSIS METHODS

### 2.4.1 THEORY-BOUND CONTENT ANALYSIS

In this thesis, an abductive approach was taken for the analysis, which was, thus, theory-bound: theory was used as a starting point for setting the areas of interest for the analysis and as a frame for reflecting on the results (Walton & Gore, 2013). Abductive reasoning can be traced back to Pierce (1965, p. 106, as cited in Walton & Gore, 2013, p. 9), who argued: 'Abduction is the process of forming an explanatory hypothesis'. This means that no preset hypothesis is tested; rather, the existing theory is complemented by the perspectives adopted.

In a qualitative analysis, data reduction is the key element of a manageable and comprehensive analysis, provided a fruitful overview of the data is retained (Cohen et al., 2018). The importance of choosing appropriate units of analysis to guide the analysis is especially relevant in cases when an abundance of video data exists (Ash, 2007). In this thesis, the analysis of the classroom observation and interview data followed the guidelines of the content analysis method, a qualitative analysing tool for reducing the data and categorising it according to preset areas of interest drawn from the theoretical frame (Cohen et al., 2018; Hsieh & Shannon, 2005).

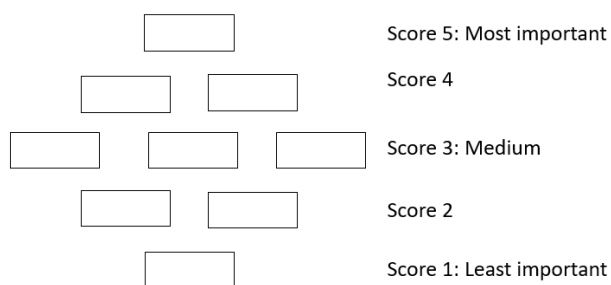
For this study, the content analysis guidelines described by Cohen et al. (2018, pp. 475–491) were primarily followed through a four-step process. First, the units of analysis were defined. This is a discussion, action or activity targeted to a certain situation. In this case, a unit of analysis was defined as an activity with a clear aim, for example, a work group preparing a pie dough until the dough was ready (Study I) or working together to complete the learning task (Study III). These units were associated with other parallel units of analysis, such as other groups working on their tasks. As the second step, areas of interest, the clearly described categories with more specific codes for analysis, were derived from the theoretical frame of each study. For example, in Study I, these were the tools used in the data, in Study II, the dimensions of teacher autonomy and in Study III, the working styles of the pupil groups and their ability to draw knowledge from other school subjects.

The third step involved the actual coding and classification of the data according to the categories established in step 2. At this stage of the analysis, if necessary, additional and more descriptive data-based subthemes were formed to create a more detailed analysis. In Studies I and II, the analysing programme Atlas.ti was used to carry out the analysis; in Study III a special analysing programme was not used, but the coding was created in Microsoft Excel. In all studies, the results of the content analyses were presented with a table introducing the categories (also called themes), subcategories (also called subthemes), descriptions or characteristics of the previous and example quotes from the data.

Finally, in the fourth step, the examples of codes and categories were examined: characteristics within a category were identified, categories were divided into more descriptive subcategories and re-categorisations were made, if necessary. Also, connections between the categories were considered. In Study I, as part of this step, a more data-driven analysis approach was used to create the descriptive subcategories for the vast category of pedagogical arrangements supporting the integrative approach to learning (Cohen et al., 2018). In this research, the case study approach was intended to elicit an in-depth understanding of the data, bearing in mind the socially constructed nature of knowledge and lived experiences. Therefore, while analysing the observation and interview data, the focus was on a descriptive and interpretive approach, and no quantitative frequencies or other measures between the categories were used.

## 2.4.2 SCORING IN DIAMOND RANKING METHOD

In Study III, a qualitative content analysis was used together with a numerical illustration of the practices pupils had ranked with the diamond rankings. The scoring system followed a model introduced by Hopkins (2010) in her study exploring the classroom conditions for effective learning from pupils' perspectives: a practice positioned in the top line of the diamond scored 5, a practice in line two scored 4, a practice in line three scored 3, a line four practice scored 2 and any on the bottom line scored 1 (see Figure 2).



**Figure 2.** *Scoring of the Practices Chosen for the Diamonds.*

The practices were scored, and the scores for each practice were then aggregated to gain a single score for each practice. Through these numeral illustrations, the quantification of the results was not targeted, but it reinforced the qualitative understanding of the data by providing a view of the relative importance between the chosen practices in the diamonds (Hopkins, 2010). This methodological triangulation of classroom observation and diamond ranking data was believed to provide a richer picture of the pupils' perspectives and enhance the validity of the study (Cohen et al., 2018, p. 141).

## 2.5 ETHICAL CONSIDERATIONS

This thesis complies with the ethical principles of the University of Helsinki (Finnish Advisory Board on Research Integrity, 2013). Informed consent was obtained from all participants: teachers, principals, the pupils' guardians and the 8th (Study III) and 9th (Study I) grade pupils themselves as some or all of them were over 15 years old. Also, consent for conducting the study was obtained from the official authority, which in most of the schools was the school principal. The informed consent form for the pupils' guardians was developed by the researchers and approved by the principal and the home economics teacher in each school. The form was sent to the guardians by the home economics teacher through the school's network system. The pupils whose guardians did not authorise participation were excluded from the recordings.

Prior to the data collection for Study I, the home economics teacher informed the pupils about the forthcoming study, its purpose and how the data would be collected. For Study III, this announcement was made by the researcher. The pupils were also informed that they had the right to opt out of the study at any time and that it would not affect their participation in the lesson or their assessment in the subject. These matters were repeated to the pupils by the researcher before every data collection with every pupil group. The anonymity of the participants was secured in all phases of the study by using code names combining letter and numerical identifications (Finnish Advisory Board on Research Integrity, 2019). The collected data were stored on an external hard disk, protected by a separate password, to which only the researcher had and has access.

### 3 OVERVIEW OF THE ORIGINAL STUDIES

In this chapter, an overview of the original studies published in three articles is provided. The aims, main results and core conclusions of those studies are presented. The focus of the discussion is on the various aspects of the integrative approach to learning that these studies brought forth. The central aims and core conclusions are briefly summarised in Table 4.

**Table 4.** *Central Aims, Theoretical Perspective and Core Conclusions of Each Study.*

<b>Article</b>	<b>Aims</b>	<b>Theoretical perspective</b>	<b>Core conclusions</b>
I	Explore the tools and pedagogical arrangements supporting an integrative approach to learning in interdisciplinary home economics lessons in upper comprehensive education	Tools in sociocultural theory  Theoretical roots of integrative approach to learning	Vast variations in implementation, tool use and supportive pedagogical arrangements in lessons  Differences in implementations complement each other, but only if the integrative nature is clear to the pupils
II	Understand teachers' reflections on teacher autonomy and collaboration as part of integrative teaching in upper comprehensive education  Identify the integrative approach to learning within the curriculum study frame	Curriculum theory  Teacher autonomy and collaboration in integrative approach to learning	Autonomy was maintained in integrative teaching activity; integrative teaching provides possibilities for professional development  Some challenges for collaboration were identified
III	Interpret upper comprehensive education pupils'	Pupils' collaborative learning in	Pupils considered collaborative ways of working that enhanced

	perspective on working style and classroom pedagogy practices in a lesson employing an integrative approach to learning	integrative approach to learning  Participatory pedagogy, pupils' agency	interthinking, and teacher's role in supportive pedagogical choices is important  Ability to draw knowledge from other school subjects was found challenging
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### 3.1 PLENTY OF OPPORTUNITIES TO IMPLEMENT INTEGRATIVE APPROACH TO LEARNING (ARTICLE I)

In education, the shift towards 21st century skills (Ananiadou & Claro, 2009; Voogt & Roblin, 2012) and the demand for the ability to learn and adapt learned knowledge and skills rather than possessing knowledge (Tynjälä et al., 2012; Tynjälä & Gijbels, 2012) has led to the objective of educating integrative thinkers (Blackshields, 2015; Huber & Hutchings, 2004). In comprehensive school, this requires integrative teaching in which the knowledge, skills, attitudes and values of several subjects are integrated (Spelt et al., 2009) to provide an understanding that can only be acquired from an interdisciplinary perspective (Klein, 2010; Lenoir et al., 2015; Mansilla, 2005). In these perspectives, the integrative approach to learning concept is theoretically rooted.

In Study I, to understand the various implementations of the integrative approach to learning, tool use from the sociocultural perspective and pedagogical arrangements that support interdisciplinarity were explored in Finnish home economics lessons (Haapaniemi et al., 2019). The results revealed the diverse use of both supportive tools and pedagogical arrangements. All three kinds of tools were used in the lessons observed. Material tools supported the integration of subjects when physically presented in the lessons; psychological tools were used in a supporting way, mostly through written, drawn and spoken instructions, but also through the use of terms, symbols and pictures and by designing integrative questions for the pupils. Other humans were used as tools most frequently; however, they rarely supported the integrative approach to learning. Pedagogical arrangements impacting the integration were classified into categories: who led the integration (teacher, pupil); what kind of integration took place (knowledge, experience, skills, methods, materials); whether the pupils from different subjects were mixed in a meaningful way; and whether the lesson's theme and objectives supported an integrative approach.

The diverse use of supportive tools and pedagogical arrangements moved the lessons towards a holistic approach to integrative learning, as they widened the perspective. This emphasises the idea of integrative learning being greater than its parts (Blackshields, 2015). Teachers were seen as having a critical role in making the pedagogical arrangements but, more importantly, in addressing the targeted integrative approach to learning and guiding pupils towards it. For teachers, consciously aiming at interdisciplinarity and making this goal understood by the pupils seemed to be a good starting point for taking an integrative approach to learning.

### **3.2 DEVELOPING TEACHERS' AUTONOMY WITH INTEGRATIVE APPROACH TO LEARNING (ARTICLE II)**

In Study II, teacher autonomy and collaboration were used as proxy concepts reflecting the interplay between the curriculum traditions in the contemporary Finnish curriculum (Haapaniemi et al., 2020). This interplay was witnessed in the emphasis on the integrative approach. In this study, teacher autonomy was understood through three dimensions: the capacity for self-directed and professional action; the capacity for self-directed and professional development; and the freedom from control by others regarding the two previous dimensions (Smith & Erdoğan, 2008; see, also, Pearson & Hall, 1993). The connection between teacher autonomy and collaboration was discussed in the sense of 'collective autonomy' (Little, 1990) and deep-level collaboration, whereby collaboration reaches all the way to discussing the didactics of teaching and underlying teacher-related beliefs (Vangrieken et al., 2015).

Regarding integrative teaching, none of the five participating teachers considered their autonomy as having diminished and argued that integrative teaching gave them opportunities for professional development and reflection. Regarding planning for integrative teaching, some elements of control were raised, but no feelings of excessive control were conveyed. These teachers were able to rely on their own professionalism in planning and implementing their integrative teaching; therefore, autonomy was also maintained in this dimension. Additionally, the local curriculum processes in these schools had been diverse and engaging, which had helped the teachers to interpret the aims of integration encouraged by the curriculum.

The teachers interviewed had utilised collaboration in several ways through different phases of integrative teaching. Still, both advantages and challenges were coupled with it in integrative teaching. As positives, the teachers desired greater collaboration with other teachers and emphasised its empowering nature. This confirms that no collision between teacher autonomy and collaboration was perceived. As challenges, structural issues, such as time and economic considerations, together with personal issues and negative attitudes



towards integrative teaching, were viewed as limiting the possibility for successful collaboration. The same elements were identified in Lindblom's (2016) and Pöntinen's (2019) study results. The results of Study II suggest that integrative teaching may be a good starting point for discussion and reflect progress towards including collaboration as part of teacher autonomy to achieve collective autonomy and a collective culture in schools.

### **3.3 ENHANCING PUPILS' LEARNING THROUGH AN INTEGRATIVE APPROACH TO LEARNING (ARTICLE III)**

The aim of the third study was to expand the existing knowledge on pupil's points of view on the integrative approach to learning (Haapaniemi et al., 2021). To reach this aim, the study highlighted a comprehensive school's 8th grade (aged 14–15) pupils' perspectives on working style and classroom pedagogy within an integrative approach to learning environment. Attention was also given to the ability to apply relevant knowledge and skills in another context (Brante & Brunosson, 2014; Brent, 2011; Gilbert et al., 2011; Marton, 2006).

Drawing on educational action research (Carr & Kemmis, 1986; Hart & Bond, 1995; Kemmis, 2006) and emphasising participatory pedagogy and pupils' agency in school (Gresalfi et al., 2009), diamond ranking was employed as a main data collection method (Clark, 2012; Clark et al., 2014; Woolner et al., 2010). The data were gathered from two home economics lessons with 8th grade pupils working on an integrative and collaborative learning task in small work groups.

For their diamonds to describe the important practices that helped the groups to succeed in the given learning task, the pupil groups chose practices from both analysis-driven content areas: practical arrangements (related to pedagogical decisions made by the teacher regarding the task or the lesson) and working style (concerning the practices of a group or of a pupil within a group). Each group had its own style of working, which was reflected in the practices chosen for ranking. Most groups viewed language as an important tool for establishing a collaborative and respectful working environment, and practices related to interthinking were identified as the most important for task completion. These results were in line with those of previous research on linking collaborative working and interthinking (Littleton & Mercer, 2013; Rogoff, 1990; Soller, 2001; Taar, 2017) and their potential in integrative learning settings (Eronen et al., 2019; Tarnanen et al., 2019). Several groups emphasised the ease of working with friends and linked this to the group's effectiveness, along with a good working atmosphere, which also reinforces the findings of previous studies that the experience of working together positively effects the collaboration (Edwards, 2005; Taar, 2017), as does a positive atmosphere (Rogoff, 1990).

Indications of the ability to apply knowledge from other school subject lessons were rare, revealing that pupils were not yet equipped with the requisite skills to achieve this: pupils had difficulties in remembering whether the topics related to the learning task had been discussed in other lessons and saw them as scattered and unconnected items. Only one group out of seven clearly introduced an example from another lesson while working on the learning task. This may emphasise the importance of the teacher's introduction and development of the ability to integrate and synthesise knowledge and skills as a natural part of teaching at the comprehensive education level.

## **4 CONCLUDING REMARKS**

This study explored the integrative approach to learning from the perspectives of lesson implementation and content, teachers' interpretation of autonomy, pupils' experiences with practices that support integrative group work and pupils' ability to apply knowledge from other school subject lessons. These perspectives were used to fulfil the overall aim of this study: characterising the integrative approach to learning in upper comprehensive education in Finland. The various perspectives revealed different aspects and possibilities associated with this complex phenomenon, which are discussed in the following sections under two themes characterising the integrative approach to learning: using tools and collaboration. Both themes are rooted in the sociocultural approach to learning and act as summarising themes for Studies I–III.

### **4.1 PUPILS AND TEACHERS WORKING TOGETHER TOWARDS AN INTEGRATIVE APPROACH TO LEARNING**

#### **4.1.1 MULTIPLE TOOLS THAT ENHANCE LEARNING**

According to the sociocultural learning approach, learning means that individuals first learn how to use culturally and socially framed tools to express their own thinking during interactions; then, they learn how to use tools to understand the environment around them and how to act within it; finally, they develop the tools they have learned to use, which at the same time possibly develops the society (Hall, 2007; Säljö, 2009; Vygotsky, 1978). All types of tools – physical, psychological and other humans – are needed to create the intellectual means required to understand the world and other humans.

A curriculum is a tool, both as a physical document and, more importantly, as a psychological tool. At the society level, a curriculum is a historically and culturally bound set of regulations, recommendations and suggestions, based on the country's contemporary ideologies of science, politics, economics and religion and on what is considered important for today and for the future (Apple, 2004; Künzli, 2014; Pinar, 2014; Sivesind et al., 2016). Its developmental trajectories are unique in each country (see, for example, Sivesind et al., 2016; Taar, 2017) but are not composed in a vacuum; instead, they are subjected to transnational policy transfer. At the school level, a curriculum is a tool that frames the given education and bounds it to the local level: for example, in Finland, the local curriculum offers possibilities for

teachers together with other stakeholders to define the local emphasis and realisation of the national curriculum (Saarinen et al., 2019). A curriculum is also a tool for a teacher: it provides nationwide and locally set frames for teaching, but after interpreting its conception of learning and aims, it leaves plenty of room for teacher's pedagogical and didactical creativity with its implementation, such as using an integrative approach to learning with pupils. Pupils are the ones who are, through education, expected to adopt the culturally bound values and ways of acting in the society and to grow as humans and become integrative thinkers able to face the complex future ahead of them (FNCC, 2014). To conclude, a curriculum is a tool used by many, such as teachers, principals, education providers and the state, through many means. It provides cultural-historical frames for education and for pupils for their learning. It is also a tool that develops society through its normative nature and unites interests from many stakeholders.

Teacher autonomy is also a tool. It has theoretical definitions (Pearson & Hall, 1993; Smith & Erdoğan, 2008), yet its realisation in teachers' work is bound to the history of the curriculum tradition, through which each country defines the teacher's role in education (Biesta, 2012; Erss, 2017; Hopmann, 2015; Westbury, 2000). As a tool, teacher autonomy can be used to reflect the teacher's capacity for professional action, professional development and freedom from control, but in light of this study, the two earlier dimensions can only be viewed through the level of self-directedness the teacher possesses, as the chosen model suggests. The increasing level of collaboration between teachers and the value they see in it as way to develop their professionalism opens a discussion on the role of collaboration in teacher autonomy. This does not mean that collaboration threatens or eliminates teachers' own didactical positioning: it means sharing to develop oneself as a professional and one's teaching craft (Frederiksen & Beck, 2013; Moolenaar et al., 2012; Vangrieken et al., 2015). To summarise, in this thesis expanding teacher autonomy is suggested, not only to see the level of self-directedness in teachers' actions and development, but also to enhance their ability to achieve these objectives through collaboration. The integrative approach to learning welcomes collaboration in all phases of teaching, and the ways to use collaboration in teaching when the integrative approach is adopted are many, from planning to implementation and assessment.

In lessons, multiple tools are used to enhance learning. This also applies to teaching using the integrative approach to learning, as seen in Study I. The diverse use of tools and the diverse use of supportive pedagogical arrangements for the integrative approach complement each other, making the whole to be greater than its parts. Also, pupils saw the teacher's role in making pedagogical choices in the integrative lesson as important, as analysed in Study III. These choices involve, for example, selecting the appropriate learning tasks, learning equipment and learning environment to enhance pupils' learning in their ZDP (Edwards, 2005; Littleton & Mercer, 2013; Rogoff, 1990; Taar, 2017). For this, the aims set for learning are important:

targeting the aim to achieve the integrative approach is crucial, and even more important is helping pupils understand this aim. In this way, the goal of learning becomes a together target: a goal for the pupils to reach through learning and a goal for the teacher to mediate through carefully chosen learning tasks and pedagogical arrangements appropriate for these pupils (Hall, 2007; Huber & Hutchings, 2004).

Finally, as observed in this research, the integrative approach to learning as a concept is a tool. From a sociocultural point of view, it is a societally and culturally constructed aim for school education, where the intertwining of curriculum traditions acts as a historical dimension. When implementing the integrative approach as a tool in education, one encounters all the tools mentioned as well. 1) The curriculum may regulate how or even whether integration is emphasised. In Finland, the curriculum dictates that at least two multidisciplinary learning modules must be offered for pupils each year, and integration between the content of multiple school subjects is encouraged. The content may be decided at the school level. 2) For teacher autonomy, employing an integrative approach to learning itself offers possibilities for professional growth, and while it does not necessarily require collaboration between teachers, as seen in the findings of this research, it offers several possibilities for it. This collaboration, then, is the key to teacher autonomy development towards collective autonomy. 3) The diverse use of material, psychological and human tools enriches the integrative approach to learning by providing learners with a more holistic view on the possibilities available through integration. This possesses the power to affect how pupils understand the world around them, and later how these same pupils, as adults, make use of this understanding by changing the world. Here, especially, the teacher is a human tool, a mediator of meaning, teaching pupils how to be integrative thinkers by choosing appropriate learning methods, working tasks, and equipment, and ensuring that pupils have adequate skills for working with them.

#### **4.1.2 ENCOURAGING A COLLABORATIVE CULTURE IN SCHOOLS**

When characterising the integrative approach to learning, collaboration was seen as essential. This means collaboration between principals and teachers, collaboration between teachers, collaboration between teacher and pupils and collaboration between pupils. In this section, these types of collaboration in the integrative approach to learning are discussed.

Principals have an important role in creating possibilities for collaboration among teachers. Pedagogical leadership that offers enough support and time for planning is crucial. Collaboration between teachers in this thesis concerning the integrative approach to learning relates to teacher autonomy, a school's collaborative working culture and various ways of incorporating collaboration into teaching and learning. While this research focuses on home

economics as a study context, the importance of collaboration in the integrative approach to learning also applies to other school subjects and teachers. A school's collaborative culture influences all teachers and, hopefully, also pupils. Participating teachers did not perceive their teacher autonomy as being diminished by the demand for collaboration with colleagues. Conversely, collaboration was welcomed, and its empowering nature embraced. Teachers showed that collaboration was possible in all phases of integrative teaching, even when only one teacher is involved in the implementation. The challenges hindering collaboration between teachers identified in this research, such as time and personal issues, as noted, are similar to those mentioned in other studies that examined integrative teaching in home economics (Lindblom, 2016; Pöntinen, 2019). To overcome the challenges, school leaders should encourage collaboration as natural and wanted to promote the development of a collaborative culture. Developing deep-level collaboration (Frederiksen & Beck, 2013; Vangrieken et al., 2015) and a culture of collective autonomy (Little, 1990) in schools are processes in which a collaborative culture may be anchored. This would also encourage integrative teaching: in order to provide pupils with the ability to envision broad perspectives over difficult matters, such as sustainable development, where the borders of subjects no longer limit argumentation and understanding, teachers must be able to see these connections as well and be able to be integrative thinkers themselves (Huber & Hutchings, 2004). This is a difficult task to achieve alone, but in collaboration with other teachers, it can be accomplished, which broadens everyone's perspectives.

Collaboration between teacher and pupil as part of the integrative approach to learning can be seen from several viewpoints emphasising both pupils' and teacher's responsibilities. Teachers are responsible for guiding learning in a forward direction. From a sociocultural perspective, when aiming at developing pupils in their ZPD, teachers must choose the best possible pedagogical arrangements and tools for learning tasks (Hall, 2007; Vygotsky, 1978). In integrative teaching, this means, for example, choosing tasks that enhance interdisciplinarity from several perspectives, beyond knowledge-based integration and scaffolding the integration during lesson, if necessary. Teachers must also ensure that pupils have the abilities required to complete the tasks (Taar, 2017); indeed, aiming at utilising an interdisciplinary approach in group work at the comprehensive education level requires familiarising the pupils with the ability first. Teachers are also often the ones who set the goals for the lessons. Making the pupils aware of these goals and, ideally, discussing them with the pupils, may enhance their ability to achieve those goals, especially with the teacher playing the role of encouraging and supporting pupils along the way.

Also, pupils have a role in collaborations between pupil and teacher. By being active participants in lessons and taking responsibility for their own learning, pupils can use their agency in school (Brown & Renshaw, 2006; Edwards & D'arcy, 2004; Greeno, 2006; Gresalfi et al., 2009). In this sense,

teacher and pupil can be seen on a together journey when targeting an integrative approach to learning: if one party fails to do his or her part, the other is incapable of reaching the goal.

The discussion regarding collaboration between pupils here is mainly limited to the concept of interthinking. In the best scenario, collaboration between pupils leads to interthinking and enhances learning in pupils' ZPDs (Littleton & Mercer, 2013; Rogoff, 1990; Taar, 2017). Study III illustrates that the pupils recognised the importance of the collaborative, active and respectful working style for succeeding in completing integrative tasks as part of a group. Considering the Studies (I–III) presented in this thesis, home economics as a subject seems to provide good opportunities for collaboration and interthinking through an integrative approach to learning: in all observed home economics lessons in which the integrative approach to learning was followed, the learning tasks were done in groups, requiring group discussion and enabling interthinking. However, for interthinking to occur, the learning task must be appropriate, and pupils must be familiar with how to elaborate and reflect on their knowledge, or in other words, with how to interthink (Fernández et al., 2001; Soller, 2001; Taar, 2017). Thinking together is a skill that can be developed (Dawes, 2004), and familiarity, for example, friendship, is often beneficial for pupil collaborations and group work, as it makes the participants feel more secure (Edwards, 2005). These aspects of pupils' collaboration reveal that the role of a teacher is again notable: while the agency is given to the pupils for working collaboratively with their group and applying their interthinking skills, the teacher makes it possible with supportive pedagogical arrangements. This, again, supports the idea that pupils and the teacher share a together journey within the integrative approach, and both are needed for the goals to be achieved.

To conclude, when discussing collaboration, the integrative approach to learning demands consideration of the school's culture, other teachers and the pupils. One teacher can initiate the process of creating a culture that supports integrative teaching and collaboration through self-encouragement and self-reflection and by renewing the tools available, teacher autonomy and pedagogical arrangements, as shown through the examples in this study. However, broadening the school's culture towards interdisciplinarity in collaboration with colleagues may have a greater impact on facilitating the development of a collaborative school culture. However, when it is accomplished, the pupils will be the winners by engaging in motivating learning tasks that inspire an integrative approach to learning.

## **4.2 LIMITATIONS AND FUTURE STUDIES**

In this section, the credibility of this thesis is considered through methodological reflections. The epistemological and ontological

presuppositions are also discussed in light of the methods and results. Possibilities for further study are addressed as well.

#### **4.2.1 METHODOLOGICAL REFLECTIONS**

The quality of this thesis is discussed based on its trustworthiness according to the four criteria for naturalistic inquiry: truth value (in conventional paradigms referred to as internal validity), applicability (external validity), consistency (reliability) and neutrality (objectivity; Lincoln & Guba, 1985). This thesis presents an examination of case studies, a qualitative approach that has often been methodologically underrated as a study inquiry; however, as Flyvbjerg (2004) argued, the value of every study inquiry lies in the way it is conducted and, thus, depends on its trustworthiness.

First, to determine a study's truth value, confidence in the credibility of the findings must be justified and that the study was carried out in such a way as to enhance its credibility must be confirmed (Lincoln & Guba, 1985). Following the epistemological and ontological approach adopted in this study, this does not equate to evaluating the 'truth' of the findings, as in a naturalistic inquiry, the idea of truth differs from its meaning in the natural sciences: reality and 'truth' are seen as a multiple set of constructions made by humans with these concepts in mind (Berger & Luckmann, 1967; Lincoln & Guba, 1985). Flyvbjerg (2004) supported this view, asserting that the aim for objectivity in a qualitative study does not draw from the natural sciences' trust in causality or the search for 'truth', thereby constituting rule-based knowledge; instead, it produces context-dependent knowledge often through case studies. In case studies, as in this study, the closeness to real life situations and the multiple details captured are important obtain a nuanced view of reality, in which rule-based knowledge lacks the ability to meaningfully understand human behaviour. Also, the predictive, general theories do not apply to human affairs and social sciences. This makes the context-based knowledge the most valuable data about the reality that can be gathered (Flyvbjerg, 2004). In the integrative approach to learning, searching for a 'one truth' does not seem feasible, as teachers implement instructional methods in their own way through didactical analysis. Still, here is where the value of this study lies. The nuanced view of reality is strengthened with the rich examples provided in the study. Also, these are not the only ways to implement or pursue an integrative approach to learning.

In this thesis, credibility was enhanced in two ways. First, triangulation was utilised in the data collections (Lincoln & Guba, 1985). For the first data collection, the data were gathered through classroom observations and interviews, and for the second, classroom observations and the diamond ranking method served as the source of the data. In this way the imperfections of one method may be overcome with another method: for example, in the recordings of pupils discussing their selections and rankings of the practices for their diamonds and the audio recordings of pupils introducing their



diamonds to the rest of the group, pupils provided cues for interpreting the diamonds. Second, member checks that ensured that the researcher's interpretation was in line with the participant's interpretation were conducted during the data collection (Lincoln & Guba, 1985). The stimulated recall method was used with the home economics teachers in their interviews during the first data collection (Nind et al., 2015; Powell, 2005). This allowed teachers to reflect on the classroom situations from the lessons they presented that were relayed to them, which helped me as a researcher to understand the constructions of these situations. Also, serving in the role of a participating observer allowed me to ask questions of the pupils during the observations. In my opinion, this also demystified my role as a researcher, as the pupils understood what kinds of information and activities were of interest to the research.

Additionally, the possibility that the recording devices and the researcher acting as observer-as-participant and, thus, being present during the observed lessons may have affected the behaviour of the pupils, thereby decreasing the credibility of the findings, was acknowledged. Some pupils seemed to be distracted by the cameras and audio recorders in the beginning of the lesson and made funny faces for the cameras, but while the lesson was ongoing, these behaviours subsided. To understand the possible effect on the credibility, the teachers were asked whether the pupils' behaviours during the lessons observed differed significantly from their behaviours during other home economics lessons that were not recorded. For both observations, the teachers reported observing no major change in behaviour that would reduce the credibility of the study.

To further enhance the credibility, member checks may have been extended to also include the results and conclusions of the studies by asking the participating teachers to comment on them as well during the analysing phases (Lincoln & Guba, 1985). Furthermore, the data were analysed and categorised by only one researcher, me as the author of this theses, so the credibility may have been augmented by having at least two researchers participate in the analysis (Cohen et al., 2018; Silverman, 2019). However, consensus about the analysis and the categorisations was achieved between all researchers participating in the studies via thorough discussion, during which the justifications for the decisions were considered.

Second, applicability has proven to be troublesome in naturalistic inquiries when compared with the ability to generalise. To overcome this, Lincoln and Guba (1985) suggested approaching this matter through transferability: giving empirical evidence and sufficient, thick descriptive data about the context enables the applicators to judge the similarities and, as such, the transferability and applicability of the findings. This approach was supported by Flyvbjerg, who argued, with respect to qualitative case studies, that the 'choice of methods should clearly depend on the problem under study and its circumstances' (2004, p. 394). This means that a descriptive case study can be of value to the collective process of knowledge cumulation as a study inquiry

with formal generalisations, but the choice is to be made based on the study problem. In this thesis, no formal generalisation was targeted, but the detailed description of the study is considered to provide for the possibility of evaluating the transferability. The findings act as examples produced by their contexts, but the potential exists for applicability, as in many Finnish schools the integrative approach to learning is of interest due to the suggestions towards it in the curriculum.

Applicability also relates to the question of sampling: even when the sampling was not random and representative, the schools were typical Finnish schools, which increases the applicability of the findings (Flyvbjerg, 2004). Most of the participating home economics teachers volunteered to participate, which may cause bias in the results, as teachers with negative attitudes towards integrative teaching most likely would not have chosen to participate. Consequently, the positive attitude towards integrative teaching may be somewhat overemphasised in the results. Still, some of the teachers were specifically asked to participate in the interviews, and they also reported positive attitudes towards integrative teaching. More importantly, despite their positive attitudes, all teachers addressed possible problems involved with integrative teaching. This indicates that the issues raised by the participants were not limited to positive features of integrative teaching, which increases the credibility of the data (Lincoln & Guba, 1985).

Third, consistency differs from the conventional definition of reliability based on the idea of reality being a construction; hence, the same study conditions can never be duplicated. Therefore, the consistency of the study's dependability may be a better factor for assessment (Lincoln & Guba, 1985). Fourth and finally, neutrality directs attention to the data and its confirmability and does not emphasise the researcher's role in objectivity, still considering the inquirer bias (Lincoln & Guba, 1985). In this way, the characteristics of the data become relevant, not the characteristics of the researcher. Both dependability and confirmability can be ensured with an audit trail, which provides the opportunity to examine the process and its outcomes (for instance, the data, findings and interpretations) from the point of view of their accuracy. This means considering, for example, whether the findings are grounded in the data, if the analytic techniques and categories used were appropriate, the degree and incident of inquirer bias and whether alternative possibilities were considered (Lincoln & Guba, 1985).

To overcome the third and the fourth point, this thesis and the articles offer thick descriptions of the studies involved, striving for a comprehensible and useful audit trail, in which methodological approaches are linked with the study: for example, usage of the sampling, data collection and analysis methods have been addressed together with descriptions of the categories used in the analysis with excerpts from the data. Still, confirmability may have been enhanced with more precise description and regular use of a research diary throughout the study process (Lincoln & Guba, 1985). For this study, a research diary was used only during the data collection periods. A long-term

research diary would have helped me to reflect my own learning process as a researcher during the whole study process.

Despite mainly achieving consistent dependability and confirmability, closer consideration of inquirer bias and the possibility of other interpretations are worth considering (Lincoln & Guba, 1985). In this study, inquirer bias was associated with two factors: verification and my role as a researcher. Verification relates to the tendency to confirm the researcher's preconceived notions. According to Flyvbjerg (2004), case studies contain no greater bias towards verification than other methods of inquiry; on the contrary, researchers are even more aware of their preconceived notions when employing this method. Also, in this study, the preconceived notions, such as the positive attitude towards the integrative approach to learning and being bound to the norms and values of the curriculum, were acknowledged and considered. My role as a researcher has surely been affected by my background as a home economics teacher. It certainly contributed to choosing home economics education as the subject of this thesis, which has both advantages and disadvantages. Familiarity with the field may have affected the analysis by directing attention according to previous experiences, but at the same time, it allows for deeper interpretation of the data through familiarity with the content. Acknowledging these notions helped to consider them as my construction of the reality and, hence, an unescapable part of this study.

The possibility of other interpretations is always present in qualitative studies (Lincoln & Guba, 1985). It starts with the research area and questions, as they limit the study scope. Here, the starting point was the sociocultural approach to learning when considering the characteristics of the integrative approach to learning. This led to a focus on tools, pedagogical arrangements, teacher autonomy and the practices pupils considered beneficial for their integrative work. However, as especially Study II suggested, other dimensions, such as the school culture, management culture and the principal's role, also affect the implementation of integrative teaching in schools. A point worth mentioning is that video recording as a data collection method provides endless possibilities for analysis, and a clear frame for the theory-based content analysis was needed for extracting the data accordingly (Heath et al., 2010). Different theoretical frames and analysis methods may have directed the analysis to other matters now left hidden. This leaves plenty of room for further study.

#### **4.2.2 FUTURE STUDIES**

In this thesis the integrative approach to learning concept is used as an umbrella term, under which are different implementations of integrative learning and teaching. Certain theoretically framed aspects of the concept have been explored in the Finnish upper comprehensive education context. However, this investigation only provided a narrow glimpse of the integrative

approach to learning phenomenon in upper comprehensive education, and as Study II indicated, many aspects were left hidden, such as the management culture and the principal's role together with the effect of pedagogical leadership on the development of a school's collaborative culture. Thus, further study is suggested to examine the elements that were not addressed in this study but were alluded to in the data. Also, focusing on the perspectives of other stakeholders, such as principals, municipal authorities and parents and guardians, would provide a broader picture of this phenomenon. In Finland, the future will automatically open multiple possibilities for appropriate study settings when schools implement their annual obligatory multidisciplinary learning modules.

In this thesis, the importance of understanding the curriculum context is emphasised. The roots in different curriculum traditions and different paths with transnational policy transfer have led to a specific current curriculum for each country. This sets limitations for further study. Due to the different contexts, implementing similar research in other countries would not be meaningful, as the data produced would not be comparable. With that said, meaningful international study settings are possible, such as taking a different curriculum context as a central perspective for the study and, for example, exploring the various interpretations and implementations of the integrative approach to learning. This comparable setting would increase understanding of the different backgrounds of educational systems and simultaneously provide policymakers with important information to explain why adoption of some policies through transnational policy transfer may be more troublesome than the adoption of others. For example, in Finland, related to the strong tradition of teacher autonomy, obligated learning modules are not commonly found at the curriculum level. Still, the participating teachers welcomed them with ease but at the same time identified several problems related to them.

This study was conducted in the context of home economics lessons. The results revealed the possibilities for multiple implementations of the integrative approach to learning with the school subjects participating in the interdisciplinary teaching with home economics. The multifacetedness of everyday life as a starting point for learning home economics was reported to provide naturally occurring connections with other school subjects, thereby making home economics a wanted partner for integration. Clearly pinpointing these connections through a systematic study can facilitate the start of integrative collaboration. Additionally, even when collaboration between pupils was commonly practised in home economics lessons and viewed as important by the pupils, concentrating more closely on the collaboration between pupils and the teacher may be fruitful for interpreting the potential for enhancing learning through an integrative approach for both pupils and teachers. The role of the teacher as an enabler for integrative learning was highlighted in the discussion, but the integrative approach to learning also provides teachers with opportunities to develop their teaching through trying new and alternative teaching methods alone or together with colleagues.

Assessing these methods together with pupils preserves pupils' agency and provides new ways for collaboration also worth studying. This would provide pedagogical outcomes applicable also to school subjects other than home economics.

### **4.3 CONCLUSION**

From a sociocultural perspective, the integrative approach to learning may be seen as a tool to develop education: it possesses and mediates culturally bound meaning and has both historical roots and a futuristic orientation. In comprehensive education, based on its theoretical roots, the integrative approach to learning mediates the aim at the curriculum level towards 21st century skills, along with the teacher and pupil level goal of educating integrative thinkers with the ability to successfully apply knowledge and skills from different contexts together. The overall target is to prepare pupils for their future and for addressing challenges by not obeying the borders of school subjects.

This thesis consists of three parts, or studies (I, II, III), and the conclusion from all the studies is that, while the integrative approach to learning has multiple characteristics, major attention ought to be given to teachers, pupils and their relationship in learning. The role of the teacher as the developer of one's professionalism and enabler for the integrative approach to learning through various implementations for teaching is essential, but as essential are the pupils, who first need to understand the importance of being an integrative thinker and then be willing to embark on the journey to learn and develop their skills in integrative thinking with support from the teacher.

This study's results reveal that striving to implement the integrative approach to learning is still reaching beyond the basics in many ways: a school's culture may not structurally encourage collaboration, teachers lack the time needed for planning and pupils have difficulties integrating and synthesising knowledge between school subjects (Table 5).

**Table 5.** *Going Beyond the Basics with an Integrative Approach to Learning (Roman numerals Refer to the Study from which the Outcomes were Derived).*

	<b>Possible advantages</b>	<b>Possible challenges</b>
<b>School culture level</b>	<ul style="list-style-type: none"> <li>- Increasing collaboration → leading towards collective school culture (I, II, III)</li> </ul>	<ul style="list-style-type: none"> <li>- Structural issues: time, economic considerations (II)</li> <li>- Need for pedagogical leadership (II)</li> </ul>
<b>Teacher level</b>	<p><b><i>Teacher autonomy</i></b></p> <ul style="list-style-type: none"> <li>- Professional development and reflection (II)</li> <li>- Expanding autonomy to include collaboration → leading towards deep-level collaboration and collective autonomy (II)</li> </ul> <p><b><i>Lesson implementation</i></b></p> <ul style="list-style-type: none"> <li>- Addressing the target of integration to pupils and supporting them in striving towards it in their ZPD (I)</li> <li>- Using diverse tools and pedagogical arrangements to support a holistic integrative approach (I)</li> <li>- Supporting integrative task completion pedagogically (III)</li> <li>- Making the integration and synthesis of knowledge a natural part of teaching (III)</li> </ul>	<ul style="list-style-type: none"> <li>- Personal issues (II)</li> <li>- Negative attitude towards integrative teaching (II)</li> <li>- Teachers only learning to become integrative thinkers and human mediators of integrative approach to learning themselves (I, II, III)</li> </ul>
<b>Pupil level</b>	<ul style="list-style-type: none"> <li>- Developing to becoming integrative thinker (I, II, III)</li> </ul> <p><b><i>Lesson implementation</i></b></p> <ul style="list-style-type: none"> <li>- Using language as a tool: developing shared communicative space in a work group (III)</li> <li>- Developing interthinking skills through engagement in collaborative, integrative learning tasks (III)</li> </ul>	<ul style="list-style-type: none"> <li>- Difficulties in the ability to apply knowledge from other school subject content (III)</li> </ul>

More importantly, the results also reveal that the integrative approach to learning facilitates the development of a school's collaborative culture, creates the possibility of contributing to teachers' professional development and autonomy to incorporate collaboration in the classroom and promotes the development of pupils' ability to integrate and synthesise knowledge and skills from different school subjects. This study provides examples of how these goals can be achieved, which can be used as a steppingstone to develop the practices needed to incorporate an integrative approach to learning and to focus on developing pupils as integrative thinkers. For many, this requires the courage of going beyond the basics at the school culture, teacher and pupil level. To summarise, I argue that the collaboration and willingness to collaborate of everyone involved in the teaching and learning, directly or indirectly, is of utmost importance.

## REFERENCES

- Al Husni, N. M., & Naim, E. R. (2016). Interdisciplinary curriculum empowers cognitive advancement to solve real life problems. *Journal of Education and Learning*, 5(4), 34–43. <https://doi.org/10.5539/jel.v5n4p34>
- Alexander, P. A., & Murphy, P. K. (1999). Nurturing the seeds of transfer: A domain-specific perspective. *International Journal of Educational Research*, 31(7), 561–576. [https://doi.org/10.1016/S0883-0355\(99\)00024-5](https://doi.org/10.1016/S0883-0355(99)00024-5)
- Alharbi, M., & Renwick, K. (2017). Saudi Arabian home economics curriculum: Searching for deep learning. *International Journal of Home Economics*, 10(2), 109–120.
- Ananiadou, K., & Claro, M. (2009). *21st century skills and competences for new millennium learners in OECD countries* (OECD Education Working Paper No. 41). OECD Publishing. <http://dx.doi.org/10.1787/218525261154>
- Apple, M. W. (2004). *Ideology and curriculum* (3rd ed.). Taylor & Francis.
- Ash, D. (2007). Using video data to capture discontinuous science meaning making in non-school settings. In R. Goldman, R. Pea, B. Barron, & S. J. Derry (Eds.), *Video research in the learning sciences* (pp. 207–226). Routledge.
- Autio, T. (2014). The internationalization of curriculum research. In W. Pinar (Ed.), *International handbook of curriculum research* (2nd ed., pp. 17–31). Routledge.
- Autio, T. (2017). Curriculum theory in contestation? American curriculum, European Didaktik, and Chinese wisdom traditions as hybrid platforms for educational leadership. In M. Uljens & R. Ylimaki (Eds.), *Bridging educational leadership, curriculum theory and Didaktik educational governance research* (Vol. 5, pp. 257–280). Springer.



- Baillat, G. (2010). In search of interdisciplinarity in schools in France: From curriculum to practice. *Issues in Integrative Studies*, 28, 170–207.  
<http://hdl.handle.net/10323/4458>
- Barnes, J. (2015). *Cross-curricular learning 3–14* (3rd ed.). Sage.
- Beane, J. A. (1997). *Curriculum integration: Designing the core of democratic education*. Teachers College Press.
- Beinert, C. (2021). “An unexploited potential” *LifeLab food and health: Assessment and development of teaching and learning practices in the Norwegian school subject Food and Health* [Doctoral dissertation]. University of Agder.
- Beinert, C., Palojoki, P., Åbacka, G. K., Øverby, N. C., & Nordgård Vik, F. (2021). “Is there any sugar in bread?” A qualitative video analysis of student activating learning tasks in home economics. *Acta Didactica Norden (ADNO)*, 15(1).  
<https://doi.org/10.5617/adno.8078>
- Berger, P. L., & Luckmann, T. (1967). *The social construction of reality: A treatise in the sociology of knowledge*. Doubleday.
- Biesta, G. J. (2012). Giving teaching back to education: Responding to the disappearance of the teacher. *Phenomenology & Practice*, 6(2), 35–49.  
<https://doi.org/10.29173/pandpr19860>
- Blackshields, D. (2015). *Integrative learning: International research and practice*. Routledge.
- Bohm, I. (2016). “We’re made of meat, so why should we eat vegetables?”: *Food discourses in the school subject Home and Consumer Studies* [Doctoral dissertation]. Umeå University.

- Brante, G., & Brunosson, A. (2014). To double a recipe – Interdisciplinary teaching and learning of mathematical content knowledge in a home economics setting. *Education Inquiry*, 5(2), 301–318. <https://doi.org/10.3402/edui.v5.23925>
- Braskén, M., Hemmi, K., & Kurtén, B. (2019). Implementing a multidisciplinary curriculum in a Finnish lower secondary school – The perspective of science and mathematics. *Scandinavian Journal of Educational Research*, 64(3), 1–17.
- Brent, D. (2011). Transfer, transformation, and rhetorical knowledge: Insights from transfer theory. *Journal of Business and Technical Communication*, 25(4), 396–420. <https://doi.org/10.1177/1050651911410951>
- Brown, R., & Renshaw, P. (2006). Positioning students as actors and authors: A chronotopic analysis of collaborative learning activities. *Mind, Culture, and Activity*, 13(3), 247–259. [https://doi.org/10.1207/s15327884mca1303\\_6](https://doi.org/10.1207/s15327884mca1303_6)
- Carr, W., & Kemmis, S. (1986). *Becoming critical: Education knowledge and action research*. Falmer Press.
- Clark, J. (2012). Using diamond ranking as visual cues to engage young people in the research process. *Qualitative Research Journal*, 12(2), 222–237. <https://doi.org/10.1108/14439881211248365>
- Clark, J., Laing, K., Tiplady, L., & Woolner, P. (2014). *Making connections: Theory and practice of using visual methods to aid participation in research*. Research Centre for Learning and Teaching, Newcastle University.
- Clausen, K. W. (2010). Interdisciplinary practices in Ontario: Past, present, and future. *Issues in Integrative Studies*, (28), 69–108. <https://files.eric.ed.gov/fulltext/EJ1101101.pdf>
- Cohen, L., Manion, L., & Morrison, K. (2018). *Research methods in education* (8th ed.). Routledge.

- Darling, C., & Turkki, K. (2009). Global family concerns and the role of family life education: An ecosystemic analysis. *Family Relations*, 58(1), 14–27.
- Dawes, L. (2004). Talk and learning in classroom science. *International Journal of Science Education*, 26(6), 677–695.  
<https://doi.org/10.1080/0950069032000097424>
- Deng, Z. (2015). Content, Joseph Schwab and German “Didaktik”. *Journal of Curriculum Studies*, 47(6), 773–786.  
<https://doi.org/10.1080/00220272.2015.1090628>
- Edwards, A., & D’arcy, C. (2004). Relational agency and disposition in sociocultural accounts of learning to teach. *Educational Review*, 56(2), 147–155.  
<https://doi.org/10.1080/0031910410001693236>
- Edwards, J. A. (2005, February 17–21). *Exploratory talk in peer groups: Exploring the zone of proximal development* [Paper presentation]. Proceedings of the 4th Congress of the European Society for Research in Mathematics Education, (CERME 4), Sant Feliu de Guíxols, Spain.
- Emirbayer, M., & Mische, A. (1998). What is agency? *American Journal of Sociology*, 103(4), 962–1023.
- Engeström, Y., & Tuomi-Gröhn, T. (2003). *Between school and work: New perspectives on transfer and boundary-crossing*. Pergamon.
- Eronen, L., Kokko, S., & Sormunen, K. (2019). Escaping the subject-based class: A Finnish case study of developing transversal competencies in a transdisciplinary course. *The Curriculum Journal*, 30(3), 264–278.  
<https://doi.org/10.1080/09585176.2019.1568271>
- Erss, M. (2017). Curriculum as a political and cultural framework defining teachers’ roles and autonomy. In T. Autio, L. Hakala, & T. Kujala (Eds.),

- Opetussuunnitelmatutkimus – keskustelunavauksia suomalaiseen kouluun ja opettajankoulutukseen* (pp. 193–222). Suomen Yliopistopaino Oy.
- Erss, M., Kalmus, V., & Autio, T. (2016). “Walking a fine line”: Teachers’ perception of curricular autonomy in Estonia, Finland and Germany. *Journal of Curriculum Studies*, 48(5), 589–609.  
<https://doi.org/10.1080/00220272.2016.1167960>
- Fernández, M., Wegerif, R., Mercer, N., & Rojas-Drummond, S. (2001). Re-conceptualizing “scaffolding” and the zone of proximal development in the context of symmetrical collaborative learning. *Journal of Classroom Interaction*, 36(2), 40–54.
- Finnish Advisory Board on Research Integrity. (2019). *The ethical principles of research with human participants and ethical review in the human sciences in Finland. Finnish National Board on Research Integrity TENK guidelines 2019*. (2nd rev. ed.). [https://tenk.fi/sites/default/files/2021-01/Ethical\\_review\\_in\\_human\\_sciences\\_2020.pdf](https://tenk.fi/sites/default/files/2021-01/Ethical_review_in_human_sciences_2020.pdf)
- Finnish National Core Curriculum for Basic Education. (2004). *National core curriculum for basic education 2004*. Finnish National Board of Education.
- Finnish National Core Curriculum for Basic Education. (2014). *National core curriculum for basic education 2014*. (Publications No. 2016:5). Finnish National Board of Education.
- Flyvbjerg, B. (2004). Five misunderstandings about case-study research. In C. Seale, G. Gobo, J. F. Gubrium, & D. Silverman (Eds.), *Qualitative research practice* (pp. 390–404). SAGE Publications Ltd.
- Frederiksen, L. F., & Beck, S. (2013). Didactical positions and teacher collaboration: Teamwork between possibilities and frustrations. *Alberta Journal of*

- Educational Research*, 59(3), 442–461.
- <https://jhistsex.org/index.php/ajer/article/view/55749>
- Gelinder, L. (2020). *Smak för hållbar mat?: Undervisning för hållbar matkonsumtion i hem-och konsumentkunskap* [The taste of sustainable food? Teaching sustainable food consumption in Home Economics]. [Doctoral dissertation]. Uppsala University.
- Gericke, N., Hudson, B., Olin-Scheller, C., & Stolare, M. (2018). Powerful knowledge, transformations and the need for empirical studies across school subjects. *London Review of Education*, 16(3), 428–444.
- Gilbert, J. K., Bulte, A. M. W., & Pilot, A. (2011). Concept development and transfer in context-based science education. *International Journal of Science Education*, 33(6), 817–837. <https://doi.org/10.1080/09500693.2010.493185>
- Gisslevik, E. (2018). *Education for sustainable food consumption in home and consumer studies* [Doctoral dissertation]. University of Gothenburg.
- Goodson, I. F. (2014). *Curriculum, personal narrative and the social future*. Routledge.
- Granberg, A. (2018). *Koka sjuda steka: Ett sociokulturellt perspektiv på matlagning i hem- och konsumentkunskap på grundsärskolan* [Boiling and frying: A sociocultural perspective on Home Economics cooking in schools for students with mild intellectual disabilities]. [Doctoral dissertation]. Uppsala University.
- Granberg, A., Brante, G., Olsson, V., & Mattsson Sydner, Y. (2017). Knowing how to use and understand recipes: What arithmetical understanding is needed when students with mild intellectual disabilities use recipes in practical cooking lessons in home economics? *International Journal of Consumer Studies*, 41(5), 494–500. <https://doi.org/10.1111/ijcs.12357>

- Granberg, A., Olsson, V., & Mattsson Sydner, Y. (2017). Teaching and learning cooking skills in home economics. *British Food Journal*, *119*(5), 1067–1078.  
<https://doi.org/10.1108/BFJ-09-2016-0435>
- Greeno, J. G. (2006). Authoritative, accountable positioning and connected, general knowing: Progressive themes in understanding transfer. *The Journal of the Learning Sciences*, *15*(4), 537–547.  
[https://doi.org/10.1207/s15327809jls1504\\_4](https://doi.org/10.1207/s15327809jls1504_4)
- Gresalfi, M., Martin, T., Hand, V., & Greeno, J. (2009). Constructing competence: An analysis of student participation in the activity systems of mathematics classrooms. *Educational Studies in Mathematics*, *70*(1), 49–70.  
<https://doi.org/10.1007/s10649-008-9141-5>
- Gundem, B. B. (2000). Understanding European didactics. In B. Moon, M. Ben-Peretz, & S. Brown (Eds.), *Routledge international companion to education* (pp. 235–262). Routledge.
- Haapaniemi, J., Venäläinen, S., Malin, A., & Palojoki, P. (2019). Home economics education: Exploring integrative learning. *Educational Research*, *61*(1), 87–104. <https://doi.org/10.1080/00131881.2018.1564626>
- Haapaniemi, J., Venäläinen, S., Malin, A., & Palojoki, P. (2020). Teacher autonomy and collaboration as part of integrative teaching – Reflections on the curriculum approach in Finland. *Journal of Curriculum Studies*, *53*(4), 546–562.  
<https://doi.org/10.1080/00220272.2020.1759145>
- Haapaniemi, J., Venäläinen, S., Malin, A., & Palojoki, P. (2021). Amplifying the voice of pupils: Using the diamond ranking method to explore integrative and collaborative learning in home economics education in Finland. *Education Inquiry*. <https://doi.org/10.1080/20004508.2021.1966888>

- Hall, A. (2007). Vygotsky goes online: Learning design from a socio-cultural perspective. *Learning and Socio-Cultural Theory: Exploring Modern Vygotskian Perspectives*, 1(1), 94–107.
- Hart, F., & Bond, M. (1995). *Action research for health and social care: A guide to practice*. Open University Press.
- Heath, C., Hindmarsh, J., & Luff, P. (2010). *Video in qualitative research: Analysing social interaction in everyday life*. SAGE.
- Heinilä, H. (2014). Enriching home economics philosophy with phenomenological insights: Aesthetic experiences, bodily being, and enfolded everyday life. *Kappa Omicron Nu*, 19(1).
- Hipkins, R., Bolstad, R., Boyd, S., & McDowall, S. (2014). *Key competencies for the future*. NZCER Press.
- Hira, T. K. (2013). Home economics literacy: Investing in our future. *Journal of ARAHE*, 20(3), 113–118.
- Höjjer, K. (2013). *Contested food: The construction of home and consumer studies as a cultural space* [Doctoral dissertation]. Uppsala University.
- Holma, K., & Hyytinen, H. (2015). Filosofian ja empirian dialogi: Normatiiviset ja deskriptiiviset ulottuvuudet kasvatustutkimuksessa [Dialog between philosophy and empiricism: Normative and descriptive aspects in educational research]. *Kasvatus: Suomen Kasvatustieteellinen Aikakauskirja*, 46(3), 220–232.
- Hopkins, E. (2010). Classroom conditions for effective learning: Hearing the voice of key stage 3 pupils. *Improving Schools*, 13(1), 39–53.
- <https://doi.org/10.1177/1365480209357297>

- Hopmann, S. (2007). Restrained teaching: The common core of Didaktik. *European Educational Research Journal*, 6(2), 109–124.  
<https://doi.org/10.2304/eej.2007.6.2.109>
- Hopmann, S. (2015). ‘Didaktik meets curriculum’ revisited: Historical encounters, systematic experience, empirical limits. *Nordic Journal of Studies in Educational Policy*, 2015(1), 27007. <https://doi.org/10.3402/nstep.v1.27007>
- Horlacher, R. (2015). *The educated subject and the German concept of Bildung: A comparative cultural history*. Routledge.
- Hsieh, H., & Shannon, S. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15(9), 1277–1288.  
<https://doi.org/10.1177/1049732305276687>
- Huber, M. T., & Hutchings, P. (2004). *Integrative learning: Mapping the terrain*. The Association of American Colleges and Universities.
- Hudson, B. (2007). Comparing different traditions of teaching and learning: What can we learn about teaching and learning? *European Educational Research Journal*, 6(2), 135–146.
- Huutoniemi, K., Klein, J. T., Bruun, H., & Hukkinen, J. (2010). Analyzing interdisciplinarity: Typology and indicators. *Research Policy*, 39(1), 79–88.  
<https://doi.org/10.1016/j.respol.2009.09.011>
- Illeris, K. (2018). A comprehensive understanding of human learning. In K. Illeris (Ed.), *Contemporary theories of learning* (pp. 1–14). Routledge.
- International Federation for Home Economics. (2008). *IFHE position statement – Home economics in the 21st century*. IFHE.



- Janhonen-Abreuquah, H., & Palojoki, P. (2015). *Luova ja vastuullinen kotitalousopetus = Creative and responsible Home Economics education*. Helsingin yliopisto, Opettajankoulutuslaitos.
- Jho, H. (2016). An analysis of STEM/STEAM teacher education in Korea with a case study of two schools from a community of practice perspective. *EURASIA Journal of Mathematics, Science & Technology Education*, 12(7), 1843–1862.
- Jones, A. (2009a). Redisciplining generic attributes: The disciplinary context in focus. *Studies in Higher Education*, 34(1), 85–100.  
<https://doi.org/10.1080/03075070802602018>.
- Jones, A. (2009b). Generic attributes as espoused theory: The importance of context. *Higher Education: The International Journal of Higher Education and Educational Planning*, 58(2), 175–191.
- Kansanen, P. (2002). Didactics and its relation to educational psychology: Problems in translating a key concept across research communities. *International Review of Education/ Internationale Zeitschrift Fr Erziehungswissenschaft/ Revue Inter*, 48(6), 427–441. <https://doi.org/10.1023/A:1021388816547>
- Kemmis, S. (2006). Participatory action research and the public sphere. *Educational Action Research*, 14(4), 459–476. <https://doi.org/10.1080/09650790600975593>
- Kennedy, K. J. (2010). School-based curriculum development for new times: A comparative analysis. In E. H. Law & N. Nieveen (Eds.), *Schools as curriculum agencies: Asian and European perspectives on school-based curriculum development* (pp. 3–20). Sense.
- Kishi, N., Arai, N., Imoto, R., Kamei, Y., Hane, Y., Isshiki, R., Suzuki, M., & Kanzawa, S. (2017). A study of Japanese lesson study in home economics. *International Journal of Home Economics*, 10(2), 86.

- Kivilehto, S. (2011). "Kyl mä varmaan kohta ymmärrän.": *Asunnon suunnittelu - opetusohjelma oppilaiden ajattelun ja oppimisen haastajana peruskoulun kotitalousopetuksessa* ["I will soon understand." The house planning program as an enhancer of pupils' thinking skills and learning in home economics at comprehensive school]. [Doctoral dissertation]. Helsinki University.
- Klafki, W. (1995). Didactic analysis as the core of preparation of instruction. *Journal of Curriculum Studies*, 27(1), 13–30.
- Klein, J. T. (2002). Introduction. interdisciplinarity today: Why? What? And how? In J. T. Klein (Ed.), *Interdisciplinarity education in K-12 and college: A foundation for K-16 dialogue* (pp. 1–17). The College Board.
- Klein, J. T. (2010). A taxonomy of interdisciplinarity. In R. Frodeman, J. T. Klein, & C. Mitcham (Eds.), *The Oxford handbook of interdisciplinarity* (pp. 15–30). Oxford University Press.
- Konkola, R. (2007). Promoting learning and transfer between school and workplace. *Journal of Education and Work*, 20(3), 211–228.  
<https://doi.org/10.1080/13639080701464483>
- Künzli, R. (2014). The German curriculum movement – A failure of transatlantic exchange. *Euro-JCS*, 1(1), 53–60.  
<http://pages.ie.uminho.pt/ejcs/index.php/ejcs/article/view/16>
- Lattuca, L. R. (2003). Creating interdisciplinarity: Grounded definitions from college and university faculty. *History of Intellectual Culture*, 3(1), 1–20.
- Lattuca, L. R., Voigt, L. J., & Fath, K. Q. (2004). Does interdisciplinarity promote learning? Theoretical support and researchable questions. *The Review of Higher Education*, 28(1), 23–48. <https://doi.org/10.1353/rhe.2004.0028>

- Lehtomäki, E., Janhonen-Abuquah, H., Tuomi, M., Okkolin, M., Posti-Ahokas, H., & Palojoki, P. (2014). Research to engage voices on the ground in educational development. *International Journal of Educational Development*, 35(C), 37–43.  
<https://doi.org/10.1016/j.ijedudev.2013.01.003>
- Lenoir, Y. (2010). Interdisciplinarity in Quebec schools: 40 years of problematic implementation. *Issues in Integrative Studies*, (28), 238–294.
- Lenoir, Y., Hasni, A., & Froelich, A. (2015). Curricular and didactic conceptions of interdisciplinarity in the field of education: A socio-historical perspective. *Issues in Interdisciplinary Studies*, 33, 39–93.  
<https://files.eric.ed.gov/fulltext/EJ1117897.pdf>
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage.
- Lindblom, C. (2016). *Skolämnet hem- och konsumentkunskap på 2000-talet - förutättningar för elevers möjlighet till målpuppfyllelse* [The school subject Home and Consumer Studies in the 2000s: Conditions for pupils' opportunity to reach the goals in the subject]. [Doctoral dissertation]. Umeå University.
- Little, J. W. (1990). The persistence of privacy: Autonomy and initiative in teachers' professional relations. *Teachers College Record*, 91(4), 509–536.  
[https://www.researchgate.net/profile/Judith\\_Warren\\_Little/publication/](https://www.researchgate.net/profile/Judith_Warren_Little/publication/)
- Littleton, K., & Mercer, N. (2013). *Interthinking: Putting talk to work*. Routledge.
- Lofthouse, R., & Thomas, U. (2017). Concerning collaboration: Teachers' perspectives on working in partnerships to develop teaching practices. *Professional Development in Education*, 43(1), 36–56.  
<https://doi.org/10.1080/19415257.2015.1053570>
- Malin, A. (2011). *Kotitalouden opetustilat osana kehittyvää oppimisympäristöä : Asumistoiminnot ja opetussuunnitelma muutoksen määrittäjinä* [Home

- Economics classrooms as part of developing the environment: Housing activities and curriculums defining change]. [Unpublished doctoral dissertation]. Helsinki University.
- Mansilla, V. B. (2005). Assessing student work at disciplinary crossroads. *Change*, 37(1), 14–21. <https://doi.org/10.3200/CHNG.37.1.14-21>
- Mansilla, V. B. (2006). Interdisciplinary work at the frontier: An empirical examination of expert interdisciplinary epistemologies. *Issues in Integrative Studies*, 24(1), 1–31.
- Mansilla, V. B. (2010). Learning to synthesize: The development of interdisciplinary understanding. In R. Frodeman (Ed.), *The Oxford handbook of interdisciplinarity* (pp. 288–306). Oxford University Press.
- Mård, N., & Hilli, C. (2020). Towards a didactic model for multidisciplinary teaching – A didactic analysis of multidisciplinary cases in Finnish primary schools. *Journal of Curriculum Studies*, 1–16. <https://doi.org/10.1080/00220272.2020.1827044>
- Marton, F. (2006). Sameness and difference in transfer. *Journal of the Learning Sciences*, 15(4), 499–535. [https://doi.org/10.1207/s15327809jls1504\\_3](https://doi.org/10.1207/s15327809jls1504_3)
- McGregor, S. L. T. (2009). Knowledge generation in Home Economics using transdisciplinary methodology. *Kappa Omicron Nu FORUM*, 16(2).
- McGregor, S. L. T. (2011a). Transdisciplinary methodology in Home Economics. *International Journal of Home Economics*, 4(2), 104–122.
- McGregor, S. L. T. (2011b). Home Economics as an integrated, holistic system: Revisiting Bubolz and Sontag’s 1988 human ecology approach. *International Journal of Consumer Studies*, 35(1), 26–34. <https://doi.org/10.1111/j.1470-6431.2010.00920.x>

- McGregor, S. L. T. (2012). The role of philosophy in Home Economics. *Kappa Omicron Nu FORUM*, 19(1).
- McGregor, S. L. T. (2015). Vanguard next practice for Home Economics: Complexity thinking, integral thinking, and the human condition. *International Journal of Home Economics*, 8(1), 64.
- McGregor, S. L. T. (2016). Transdisciplinary professionalism for Home Economics. *International Journal of Home Economics*, 9(1), 54–71.
- McGregor, S. L. T., Pendergast, D., & Turkki, K. (2012). *Creating Home Economics futures: The next 100 years*. Australian Academic Press.
- McPhail, G., & Rata, E. (2016). Comparing curriculum types: ‘Powerful knowledge’ and ‘21st century learning’. *New Zealand Journal of Educational Studies*, 51(1), 53–68. <https://doi.org/10.1007/s40841-015-0025-9>
- Mertens, D. M. (2010). *Research and evaluation in education and psychology: Integrating diversity with quantitative, qualitative, and mixed methods* (3rd ed.). Sage.
- Moll, L. C. (2014). *L. S. Vygotsky and education*. Routledge.
- Moolenaar, N. M., Slegers, P. J. C., & Daly, A. J. (2012). Teaming up: Linking collaboration networks, collective efficacy, and student achievement. *Teaching and Teacher Education: An International Journal of Research and Studies*, 28(2), 251–262. <https://doi.org/10.1016/j.tate.2011.10.001>
- National Research Council. (2012). *Education for life and work: Developing transferable knowledge and skills in the 21st century*. National Academies Press. <https://doi.org/10.17226/13398>
- Nicolescu, B. (2014). Methodology of transdisciplinarity. *World Futures*, 70(3–4), 186–199. <https://doi.org/10.1080/02604027.2014.934631>

- Niemi, R., & Kiilakoski, T. (2019). "I learned to cooperate with my friends and there were no quarrels": Pupils' experiences of participation in a multidisciplinary learning module. *Scandinavian Journal of Educational Research*, 64(2), 1–15.  
<https://doi.org/10.1080/00313831.2019.1639817>
- Niemi, R., Kumpulainen, K., & Lipponen, L. (2015). Pupils as active participants: Diamond ranking as a tool to investigate pupils' experiences of classroom practices. *European Educational Research Journal*, 14(2), 138–150.  
<https://doi.org/10.1177/1474904115571797>
- Niemi, R., Kumpulainen, K., & Lipponen, L. (2018). The use of a diamond ranking and peer interviews to capture pupils' perspectives. *Improving Schools*, 21(3), 240–254. <https://doi.org/10.1177/1365480218774604>
- Niemi, R., Kumpulainen, K., Lipponen, L., & Hilppö, J. (2015). Pupils' perspectives on the lived pedagogy of the classroom. *Education 3-13*, 43(6), 683–699.  
<https://doi.org/10.1080/03004279.2013.859716>
- Niemi, H., Toom, A., & Kallioniemi, A. (2016). *Miracle of education: The principles and practices of teaching and learning in Finnish schools* (2nd rev. ed.). Sense Publishers.
- Nikitina, S. (2006). Three strategies for interdisciplinary teaching: Contextualizing, conceptualizing, and problem-centring. *Journal of Curriculum Studies*, 38(3), 251–271. <https://doi.org/10.1080/00220270500422632>
- Nind, M., Kilburn, D., & Wiles, R. (2015). Using video and dialogue to generate pedagogic knowledge: Teachers, learners and researchers reflecting together on the pedagogy of social research methods. *International Journal of Social Research Methodology*, 18(5), 561–576.  
<https://doi.org/10.1080/13645579.2015.1062628>

- Nuutinen, P. (2002). Kasvatustieteestä opettajankoulutuksen perustieteenä [Educational sciences as the basics of teacher education]. In P. Nuutinen & E. Suomalainen (Eds.), *50*, 93–101.
- Packer, M. J., & Goicoechea, J. (2000). Sociocultural and constructivist theories of learning: Ontology, not just epistemology. *Educational Psychologist*, *35*(4), 227–241.
- Pantic, N., & Wubbels, T. (2012). Competence-based teacher education: A change from “Didaktik” to curriculum culture? *Journal of Curriculum Studies*, *44*(1), 61–87. <https://doi.org/10.1080/00220272.2011.620633>
- Park, H. (2016). Teachers’ perceptions and practices of STEAM education in South Korea. *EURASIA Journal of Mathematics, Science & Technology Education*, *12*(7), 1739–1753.
- Pearson, L. C., & Hall, B. W. (1993). Initial construct validation of the teaching autonomy scale. *The Journal of Educational Research*, *86*(3), 172–178. <https://doi.org/10.1080/00220671.1993.9941155>
- Peirce, C. S., Burks, A. W., Hartshorne, C., & Weiss, P. (1994). *The collected papers of Charles Sanders Peirce*. IntelLex Corporation.
- Pinar, W. F. (2014). *International handbook of curriculum research* (2nd ed.). Routledge.
- Poirier, S., Remsen, M. A., & Sager, M. (2017). Teaching and learning in Family and Consumer Sciences education: Thriving in challenging times. *International Journal of Home Economics*, *10*(2), 17.
- Pöntinen, S. M. (2019). *Oppiaineyhteistyö opetusharjoittelussa: Tapaustutkimus aineenopettajakoulutuksesta* [Cross-curricular collaboration in subject teachers’

- teaching practices: Case study in subject teacher education]. [Unpublished doctoral dissertation]. Helsinki University.
- Pountney, R., & McPhail, G. (2017). Researching the interdisciplinary curriculum: The need for ‘translation devices’. *British Educational Research Journal*, 43(6), 1068–1082. <https://doi.org/10.1002/berj.3299>
- Powell, E. (2005). Conceptualising and facilitating active learning: Teachers’ video-stimulated reflective dialogues. *Reflective Practice*, 6(3), 407–418. <https://doi.org/10.1080/14623940500220202>
- Pyhäntö, K., & Vitikka, E. (2013). *Oppiminen ja pedagogiset käytännöt varhaiskasvatuksesta perusopetukseen* [Learning and pedagogical practices from early education to comprehensive education]. Opetushallitus.
- Rajakaltio, H., & Mäkinen, M. (2019). The Finnish school in cross-pressures of change. *Euro-JCS*, 1(2), 133–140. <http://pages.ie.uminho.pt/ejcs/index.php/ejcs/article/view/56>
- Rendahl, J. (2018). *Vem och vad kan man lita på? Ungdomars förhållningssätt till budskap om mat och ätande utifrån ett forskarinitierat rollspel* [Who and what can you trust? Studying adolescents’ perceptions of food and eating through roleplay]. [Doctoral dissertation]. University of Gothenburg.
- Risjord, M. W. (2014). *Philosophy of social science: A contemporary introduction*. Routledge.
- Risku, M., & Pulkkinen, S. (2016). Finland: Finnish principal. In H. Ärlestig, C. Day, & O. Johansson (Eds.), *A decade of research on school principals* (pp. 61–75). Springer.



- Rodríguez, J. G. (2010). Interdisciplinarity and research on local issues in schools: Policies and experiences from Colombia. *Issues in Integrative Studies*, (28), 109–137.
- Rogoff, B. (1990). *Apprenticeship in thinking: Cognitive development in social*. Oxford University Press.
- Saari, A., Salmela, S., & Vilkkilä, J. (2014). Governing autonomy. In W. Pinar (Ed.), *International handbook of curriculum research* (2nd ed., pp. 183–200). Routledge.
- Saarinen, J., Venäläinen, S., Johnson, P., Cantell, H., Jakobsson, G., Koivisto, P., Routti, M., Väänänen, J., Huhtanen, M., Kivistö, A., & Viitala, M. (2019). *OPS-työn askeleita: Esi- ja perusopetuksen opetussuunnitelmien perusteiden 2014 toimeenpanon arviointi* [Steps of curriculum work: Evaluating the implementation of the pre- and comprehensive school curriculum 2014]. Kansallinen koulutuksen arviointikeskus.
- Sahlberg, P. (2015). *Finnish lessons 2.0: What can the world learn from educational change in Finland?* (2nd ed.). Teachers College Press.
- Säljö, R. (2009). Learning, theories of learning, and units of analysis in research. *Educational Psychologist*, 44(3), 202–208.
- Schütz, A. (1972). *The phenomenology of the social world* (1st paperback ed.). Northwestern University Press.
- Segovia, I. (2010). The conception and role of interdisciplinarity in the Spanish education system. *Issues in Integrative Studies*, (28), 138–169.
- Siegel, H. (1998). Knowledge, truth and education. In D. Carr (Ed.), *Education, knowledge and truth: Beyond the postmodern impasse* (pp. 33–50). Routledge.
- Silverman, D. (2014). *Interpreting qualitative data* (5th ed.). Sage.

- Silverman, D. (2019). *Interpreting qualitative data* (6th ed.). SAGE Publications.
- Simola, H., Kalalahti, M., Kauko, J., Sahlström, F., & Varjo, J. (2017). *Dynamics in education politics: Understanding and explaining the Finnish case*. Routledge.
- Sivesind, K., Afsar, A., & Bachmann, K. E. (2016). Transnational policy transfer over three curriculum reforms in Finland: The constructions of conditional and purposive programs (1994–2016). *European Educational Research Journal*, 15(3), 345–365. <https://doi.org/10.1177/1474904116648175>
- Smith, R., & Erdoğan, S. (2008). Teacher-learner autonomy. Programme goals and student–teacher constructs. In T. Lamb & H. Reinders (Eds.), *Learner and teacher autonomy. concepts, realities and responses* (pp. 83–102). John Benjamins.
- Snellman, J. V. (2000). *Kootut teokset 1-24* [Collected papers 1–24]. EDITA.
- Soller, A. (2001). Supporting social interaction in an intelligent collaborative learning system. *International Journal of Artificial Intelligence in Education*, 12, 40–62.
- Spelt, E. J. H., Biemans, H. J. A., Tobi, H., Luning, P. A., & Mulder, M. (2009). Teaching and learning in interdisciplinary higher education: A systematic review. *Educational Psychology Review*, 21(4), 365–378. <https://doi.org/10.1007/s10648-009-9113-z>
- Taar, J. (2017). *Interthinking in Estonian Home Economics education* [Doctoral dissertation]. Helsinki University.
- Tarnanen, M., Kaukonen, V., Kostiainen, E., & Toikka, T. (2019). Mitä opin? monilukutaitoa ja tutkivaa oppimista monialaisessa oppimiskokonaisuudessa [What did I learn? Multiliteracy skills and inquiry-based learning in an

- interdisciplinary learning module]. *Ainedidaktikka*, 3(2), 24–46. <https://doi.org/10.23988/ad.81941>
- Tröhler, D. (2016). Curriculum history or the educational construction of Europe in the long nineteenth century. *European Educational Research Journal*, 15(3), 279–297. <https://doi.org/10.1177/1474904116645111>
- Tuomi-Gröhn, T. (2008). Everyday life as a challenge sphere of research: An introduction. In T. Tuomi-Gröhn (Ed.), *Reinventing art of everyday making* (pp. 7–24). Peter Lang.
- Turkki, K. (2015). Envisioning literacy to promote sustainable wellbeing. In V. W. Thoresen, R. J. Didham, J. Klein, & D. Doyle (Eds.), *Responsible living* (pp. 151–178). Springer.
- Tyler, R. W. (1949). *Basic principles of curriculum and instruction*. Syllabus for Education.
- Tynjälä, P., & Gijbels, D. (2012). Changing world: Changing pedagogy. In P. Tynjälä, M. Stenström, & M. Saarnivaara (Eds.), *Transitions and transformations in learning and education* (pp. 205–222). Springer.
- Tynjälä, P., Stenström, M., & Saarnivaara, M. (2012). Introduction and overview. In P. Tynjälä, M. Stenström, & M. Saarnivaara (Eds.), *Transitions and transformations in learning and education* (pp. 3–8). Springer.
- Uljens, M., & Rajakaltio, H. (2017). National curriculum development as educational leadership: A discursive and non-affirmative approach. In M. Uljens & R. M. Ylimäki (Eds.), *Bridging educational leadership, curriculum theory and Didaktik: Non-affirmative theory of education* (pp. 411–437). Springer Open.

- Uljens, M., & Ylimäki, R. M. (Eds.) (2017). *Bridging educational leadership, curriculum theory and Didaktik: Non-affirmative theory of education*. Springer Open.
- Vangrieken, K., Dochy, F., Raes, E., & Kyndt, E. (2015). Teacher collaboration: A systematic review. *Educational Research Review*, *15*, 17–40.  
<https://doi.org/10.1016/j.edurev.2015.04.002>
- Venäläinen, S. (2010). *Interaction in the multicultural classroom: Towards culturally sensitive Home Economics education* [Doctoral dissertation]. Helsinki University.
- Venäläinen, S., Saarinen, J., Johnson, P., Cantell, H., Jakobsson, G., Koivisto, P., Routti, M., Väänänen, J., Huhtanen, M., Kauppinen, L., & Viitala, M. (2020). *Näkymiä OPS-matkan varrelta: Esi- ja perusopetuksen opetussuunnitelmien perusteiden 2014 toimeenpanon arviointi* [Perspectives from curriculum work: Evaluation of the implementation of the national core curricula for pre-primary and basic education 2014]. (Report No. 5:2020). Finnish Education Evaluation Centre (FINEEC).
- Vitikka, E., & Rissanen, M. (2019). Opetussuunnitelma kansallisena ja paikallisena ohjausvälineenä [Curriculum for national and local guidance]. In T. Autio, L. Hakala, & T. Kujala (Eds.), *Siirtymiä ja ajan merkkejä koulutuksessa* [Transitions and contemporary characters in education] (pp. 221–245). Tampere University Press.
- Voogt, J., & Roblin, N. P. (2012). A comparative analysis of international frameworks for 21st century competences: Implications for national curriculum policies. *Journal of Curriculum Studies*, *44*(3), 299–321.  
<https://doi.org/10.1080/00220272.2012.668938>

- Vygotsky, L. S. (1962). *Thought and language*. MIT Press.
- Vygotsky, L. S. (1978). *Mind in society*. Harvard University Press.
- Walton, D., & Gore, G. (2013). *Abductive reasoning*. The University of Alabama Press.
- Westbury, I. (2000). Teaching as a reflective practice: What might Didaktik teach curriculum? In I. Westbury, F. Hopmann, & K. Riquarts (Eds.), *Teaching as a reflective practice – The German Didaktik tradition* (pp. 15–40). Lawrence Erlbaum Associates.
- Winebug, S., & Grossman, P. (2000). *Interdisciplinary curriculum: Challenges to implementation*. Teachers College Press.
- Woolner, P., Clark, J., Hall, E., Tiplady, L., Thomas, U., & Wall, K. (2010). Pictures are necessary but not sufficient: Using a range of visual methods to engage users about school design. *Learning Environments Research*, 13(1), 1–22. <https://doi.org/10.1007/s10984-009-9067-6>
- You, H. S. (2017). Why teach science with an interdisciplinary approach: History, trends, and conceptual frameworks. *Journal of Education and Learning*, 6(4), 66. <https://doi.org/10.5539/jel.v6n4p66>
- Young, M. (2013). Overcoming the crisis in curriculum theory: A knowledge-based approach. *Journal of Curriculum Studies*, 45(2), 101–118.

# APPENDICES

## APPENDIX 1. DOCTORAL STUDIES RELATED TO CLASSROOM PEDAGOGY OF HOME ECONOMICS (HE) EDUCATION AT THE COMPREHENSIVE AND HIGHER EDUCATION LEVEL IN NORDIC-BALTIC COUNTRIES IN THE LAST TEN YEARS.

Author	Year of Pub.	National context	Content area of study	Data collection methods
Salla Venäläinen	2010	Finland	Multicultural HE education, tools guiding learning (sociocult. approach)	Classroom observations
Sari Kivilehto	2011	Finland	Using computer-based study programme to enhance pupils' thinking skills, collaboration and multidisciplinary basis of home economics education	Classroom observations, survey (participating pupils and teacher)
Anne Malin	2011	Finland	HE classrooms as pedagogical learning environments (sociocult. approach)	Classroom observations
Karin Höijer	2013	Sweden	The construction of food at home and in consumer studies <sup>1</sup> : teachers', pupils', classroom and cultural perspectives (social constructionism)	Classroom observations, focus group interviews (pupils and HCS <sup>1</sup> teachers)
Ingela Bohm	2016	Sweden	The discourses of normality and responsibility in context of food choice in HCS and teacher's possibilities to counteract their opposition.	Classroom observations

Cecilia Lindblom	2016	Sweden	The impact of frame factors (teacher's qualification, classroom, lesson time, interdisciplinarity and group work) on pupils' goal achievement in HCS <sup>1</sup>	Surveys (individuals working with HCS, <sup>1</sup> dedicated to other subjects and head teachers), classroom observations
Maria Lange	2017	Sweden	Teachers' and students' perspectives on food safety as part of HCS <sup>1</sup>	Surveys (nationwide and 9th grade pupils), interviews (HCS <sup>1</sup> teachers)
Jaana Taar	2017	Estonia	Pupils' interaction and interthinking in collaborative group work tasks in HE education in Estonia (sociocult. approach)	Pupils' group work discussions, pupils' feedback, teachers' reflections
Emmalee Gisslevik	2018	Sweden	Exploring the ways to incorporate sustainable food consumption in HCS <sup>1</sup>	Document analysis (curricula), classroom observations, interviews (HCS <sup>1</sup> teachers)
Albina Granberg	2018	Sweden	Teaching content of cooking in HE education for students with mild intellectual disabilities (sociocult. approach)	Classroom observations, semi-structured interviews (HE teachers)
Jenny Rendahl	2018	Sweden	Roleplay as a tool to examine adolescents' reflexivity regarding food and eating (sociocult. approach)	Roleplay in everyday contexts (shop and classroom), focus group interviews (pupils)
Silpa Maria Pöntinen	2019	Finland	Cross-curricular collaboration in HE teacher students' teacher training (sociocult. approach)	Student assessment discussions, group discussions and interviews (students, teachers and principals)

Lolita Gelinder	2020	Sweden	Sustainable food consumption in HCS <sup>1</sup> from textbook, student meaning making, taste and didactic implication perspectives	Document analysis (textbooks), classroom observations
Emma Oljans	2020	Sweden	The importance of health as educational content in home economics education	Document analysis (curricula), focus group interviews (HCS <sup>1</sup> teachers)
Cecilie Beinert	2021	Norway	Teaching practices and students' active learning tasks in FH <sup>2</sup> studies in school (sociocult. approach)	Questionnaire (all Norwegian FH <sup>2</sup> teachers), focus group discussions (FH teachers and students), classroom observations

1: The name Home and Consumer Studies is used for the home economics subject in Sweden's comprehensive curriculum, in the table abbreviated as HCS

2: The name Food and Health is used for the home economics subject in Norway's comprehensive curriculum, in the table abbreviated as FH