þÿ The Future of Home Economics Teaching: Teach
Reflections on 21st-Century Competencies

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The Future of Home Economics Teaching: Teachers' Reflections on 21st Century Competencies

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Abstract

Home economics (HE) teachers are obligated to develop their education so that the subject is current and promotes the well-being of the individual, family and larger community. This qualitative study provides insight into the student competencies and skills that Finnish HE teachers perceive to be important in the future and also how HE teaching should evolve to meet these needs. Data about future competencies and teaching practices among Finnish HE teachers were collected during an in-service training session that was organised after recent curriculum changes and updates. An interactive online discussion was used consisting of written reflections of 14 upper-secondary Finnish HE teachers that taught 21st century HE competencies (e.g., housing, textile care, food preparation and consumer skills). They said that this combination of skills promoted pupils' reflective thinking, which they will need at home, work and in the wider society. Teachers also said that personal development skills help build students' self-confidence and facilitate the joy of learning, which promotes wellbeing. Teachers valued HE literacy skills including housing and textile care, consumer knowledge and recipe literacy. Teachers also highlighted digital technology skills as important HE skills. Concerning the future of HE teaching, the teachers aimed to reduce teacher-directed lecturing and reduce contents and cooking in their lessons. Instead, they aimed to increase student-centred learning through the use of suggested pedagogical tools.

KEYWORDS: **FUTURE SKILLS; HOME ECONOMICS EDUCATION; 21ST CENTURY COMPETENCIES; PEDAGOGY; IN-SERVICE EDUCATION; TEACHER EDUCATION**

Introduction

Today's homes are involved in shaping the future since the lifestyle choices people make in everyday life have a far-reaching impact on both a local and global level. Societies are also changing rapidly and coming generations will face multiple societal and environmental challenges such as climate change, globalization, poverty and economic inequalities. Today's educational institutions need to prepare the future generation for the challenges of a constantly changing society and somehow capitalize on the novel pedagogical potential of digitalization. Recently, many countries have pursued school reforms that emphasise 21st century skills or competencies (Dede, 2010) that emphasise creative knowledge work in a digital society.

The future of Home Economics (HE) is a recurrent topic in the HE profession and the future development of the discipline has been addressed by various researchers (e.g., Harden et al., 2018; IFHE, 2008; McGregor, 2008a, 2011; Pendergast, 2012; Smith, 2019). Despite active research on the future of the discipline and profession, the view of the future direction of HE as a school subject has

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gained modest scholarly attention. Dixon (2017) studied six Home Economics teachers' perspectives of the possible future direction for HE education in New Zealand. Her study showed that teachers believe in the future of the subject that it creates meaningful future outcomes for the students despite the fact the public does not see it that way. The skills that the interviewed teachers mentioned were cooperation and collaboration, critical thinking and problem solving.. This study continues the discussion on the future direction of HE education from teachers' perspectives.

In the field of HE science, there seems to be a need for the research on teachers' views and perspectives of how their subject should evolve. Thus, the purpose of this study is to investigate and explain what Finnish HE teachers perceive as necessary future skills for students.

The present study asserts that HE is critical when it comes to teaching future skills for life beyond formal schooling. HE has tackled such issues and it has the potential to provide the tools for sustainable practices in everyday life (e.g., Haapala et al., 2014; Øvrebø, 2015). HE as a school subject has always been multidisciplinary in nature and the subject's goal has been to improve the quality of everyday life for individuals, families and households (Arai & Ohta, 2005; Elorinne et al., 2017). The multidisciplinary nature of home economics means that there is a wide variety of research issues and disciplines (e.g., food, family, consumer and education sciences) applied and theorised. As McGregor (2011) has argued, HE is fragmented and there are many specializations, which are too far from its original common core. However, HE is intricately linked to promoting a quality life in the context of school and adult education and its multidisciplinary approach can be a resource for HE teachers (IFHE, 2008). For example, the multidisciplinary nature of HE is beneficial when HE teachers educate young people to address the problems that are present in an age of climate change (McGregor, 2012). According to Finnish curriculum guidelines, HE teachers decide on what everyday skills they will teach to their pupils.

As we previously mentioned, research tradition of HE is fragmented and closer examination shows it is focused on particular content areas, such as education about food (Höijer et al., 2011; Murphy, 2011), nutrition (Hokkanen & Kosonen, 2013) and consumer strategies (McGregor, 2008b). Other recurrent themes are food preparation and the use of recipes (Brunosson et al., 2014; Granberg et al., 2017); food literacy (Brante & Brunosson, 2014; Ronto et al., 2017); citizenship and gender equality (Arai & Ohta, 2005) and sustainable development (Dewhurst & Pendergast, 2011; Gisslevik et al., 2017; Haapala et al., 2014). In addition, there is also research from a broader perspective such as professional practice (e.g., McGregor, et al., 2008), professional development (Kuusisaari, 2013, 2014; Smith & de Zwart, 2016) and philosophy (e.g., Nickols & Collier, 2015; Vaines, 1990) and how these impact the practice of HE (e.g., Benn, 2009; Smith, 2009).

From a HE subject point of view another interesting strand of HE education research is HE pedagogy and curriculum studies, which have focused on pedagogical perspectives for HE education (Smith, 2017), pedagogical approaches to support students in the development of critical thinking, employability and lifelong learning skills (Poirier et al., 2017) and a comparison of contemporary curricula from Finland, Norway and Sweden (Tuomisto et al., 2017). This study contributes to research on the future direction of HE pedagogy and HE curriculum from teachers' perspectives.

It is notable that earlier studies focused on students' critical thinking and certain individual skills yet little scholarly attention has been devoted to an analysis of the broad spectrum of HE skills. Paas and Palojoki (2019) did a comprehensive study of Estonian Handicraft and HE teachers' aims and challenges. Our research continues the discussion of the variety of HE skills by studying Finnish HE teachers' views on the skills they considered useful and necessary in young people's future lives. This study analyses the teachers' perceptions of what they address as important future skills and competencies in HE classes and what they think they need to change in their teaching. The aim of the study was to analyse teachers' perspectives on how the contents of HE and their teaching should evolve as a school subject. The research questions were the following:

1. What skills and competencies do HE teachers expect to be important to students in the future?
2. What do teachers consider as developmental goals to improve in their own teaching practices?

21st Century Competencies and Skills and Their Interpretation

There are several definitions for the concept of 21st century competencies (Ananiadou & Claro, 2009; Binkley et al., 2012; Dede, 2010) that have been recommended by diverse organizations such as Organisation for Economic Co-operation and Development (OECD) (2005) and the Directorate-General for Education, Youth, Sport and Culture (2008). These have been widely adapted and included in national curricula in many western countries. In this study we consider the term 21st century competencies as an umbrella concept of desired skills and competencies for a person to survive in a future society (Binkley et al., 2012). The emphasis is on higher level thinking skills (creative thinking, problem solving and critical thinking), communication and collaboration skills as well as tools of digital technology and digital literacy skills. Moreover, the framework of an ever-changing world with both global and local citizenship demands certain life skills and intrapersonal responsibilities are seen as prerequisites for the future. For example, the cultivation of students' creative and innovative skills is vital and present-day students are expected to engage in creating and sharing by capitalising on versatile digital technologies (Hakkarainen, 2009).

Although the term 21st century competencies and skills might seem rather recently introduced (Salas-Pilco, 2013), actually skills, such as critical and analytical thinking and problem solving are noted by philosophers and educators from ancient Socrates to 20th century John Dewey (Silva, 2009). The inclusion of 21st century competencies and skills in national curricula can be seen as a two-sided matter; on the one hand, 21st century competencies can be considered as a political way to manage and control human capital via education and on the other hand, these competencies can be seen as individuals' necessary skills for the future.

The terms *competencies* and *skills* have been used interchangeably in the literature. According to Wang (2019), *competency* is an integration of knowledge, skills, attitudes and values that are required for citizens to participate fully in society in the 21st century (Ananiadou & Claro, 2009; Directorate-General for Education, Youth, Sport and Culture, 2008; National Research Council, 2012; Voogt & Roblin, 2012). According to the European Commission's CEDEFOP glossary (CEDEFOP, 2014), *a competence* includes cognitive elements such as the use of theory, concepts and tacit knowledge and it also involves technical skills and interpersonal attributes such as social or organizational skills and ethical values. Home Economists McGregor and MacCleave (2007) have emphasised that *competent* professionals are able to solve practical problems in a creative and holistic manner instead of mastering a set of discrete skills. Thus, competencies encompass ways of thinking and knowing (e.g., analysis, synthesis, interpretation, critical reflection) and transforming thinking in response to diversity and change. The CEDEFOP (2014) glossary defines *skills* simply as the ability to perform tasks and solve problems. Generally, in the HE literature, skills have a broader meaning than a mere ability to perform tasks and solve problems as it also includes critical thinking and capabilities to participate in society as an active citizen (Smith & de Zwart, 2010). In the context of HE, Aulanko (2008) states that skills are difficult to explain in words because skills contain theoretical knowledge and technological abilities. For example, cleaning skills combine theoretical knowledge of what and how to perform a task, tacit knowledge as well as the ability to use and apply equipment and materials. A skill also comprises cooperation between the machine and body and these skills are learned through training (Aulanko, 2008). To conclude, a competence in this study refers to a broader concept than skills that comprises skills in the above-defined broad sense together with knowledge, attitudes and ethics (CEDEFOP, 2014; Ananiadou & Claro, 2009). Thus, HE competencies involve acquiring and mastering of such living skills that are vital in the society. HE competencies can be seen not only as skills necessary for living in the home and society but also as competencies for improving the quality of everyday life for individuals, families and households. Smith and de Zwart (2010) have noted that HE also provides individuals with practical life and independent living skills.

Home Economics in the Finnish Curriculum and 21st Century Competencies

The latest Finnish National Core Curriculum for Basic Education [FNCBE] (Finnish National Board of Education [FNBE], 2014) sees 21st century skills as transversal competence that is embedded in each school grade and subject including HE. The FNCBE (FNBE, 2014) emphasises the acquisition of 21st century skills and preparation of students for the challenging and changing working life, without mentioning 21st century skills explicitly. The curriculum shifts the focus from content knowledge (what teachers should teach) towards teaching the students higher-level learning skills such as collaborative learning, multiliteracy and digitalization together with subject knowledge.

There are seven transversal competences in grade 7-9:

- thinking and learning to learn (T1)
- cultural competence, interaction and self-expression (T2)
- taking care of oneself and managing daily life (T3)
- multiliteracy (T4)
- ICT competences (T5)
- working life competence and entrepreneurship (T6), and
- participation, involvement and construction of a sustainable future (T7).

These transversal competencies and environments that are supportive for learning are introduced in the subject-specific curriculum. However, the curriculum does not provide detailed guidelines about the actual teaching of HE, the detailed content that should be covered or what materials and techniques should be used. For example, the teaching of HE guides young students to think critically and become aware of various social, environmental, cultural and economic issues related to everyday life.

Home Economics is compulsory in the 7th grade and an optional subject in 8th and 9th grades. The objectives of instruction in HE are: Practical work, Cooperation and Interaction and Information management (FNBE, 2014; NCBE, 2016). These objectives are pursued in teaching through key content areas of HE, which are in the FNBE (2014) for grades 7-9 (students aged between 13-16 years):

- Food knowledge and food culture (food preparation and baking, choices and habits related to food, nutrition, food safety and economical and ethical food choices);
- Housing and living together (family, textile care and house management, home technology, use of services and home design) and;
- Consumer and financial skills at home (consumer rights and responsibilities, ability to make informed and responsible decisions, use media and technology, budget and use money in households) (FNBE, 2014; NCBE, 2016).

The development of future teaching

The development of an HE subject is not only a matter of developing the content but also the methods and practices of teaching it. For this reason, we also examine what teachers think about how their teaching should evolve. Reflection and the use of theoretical knowledge are the basis for the development of teaching (Kessels & Korthagen, 1996; Kuusisaari, 2010; Lunenberg & Korthagen, 2009). According to the studies focusing on the development of teaching and the teacher's self-reflection (e.g., Kessels & Korthagen, 1996; Loughran, 2002), the teacher's pedagogic thinking (Kansanen et al., 2000) and the teacher's practical wisdom (Lunenberg & Korthagen, 2009), the development of teaching involves combining research-based theoretical knowledge and teachers' own self-reflection. Regarding the development of HE teaching, Kuusisaari (2016) found that the HE teachers who were able to develop new teaching practices collaboratively were the ones who reflectively questioned their existing practices, then consciously aimed to create new practices and then based the development of new ideas of teaching on theoretical knowledge, namely learning theories. The in-service education, which is the context of the present study, was based on the concept of *developmental collaboration* (Kuusisaari, 2016).

Developmental collaboration can be described as a theory-based further development of ideas through questioning them, forming new ones and making them more concrete in peer-to-peer collaboration (Kuusisaari, 2016).

Method

The context of the study and data collection

The context of this study is an in-service education course that was arranged for volunteer HE teachers in metropolitan area to develop new teaching practices and adjust their expertise to FNBE (2014) changes. The first author designed this training with an experienced HE teacher, worked as an educator on the course and collected data. This in-service education course was organised in the theoretical framework of educational Design-Based Research (DBR). Educational DBR represents a

research strategy of the learning sciences that pursues educational innovations through iterative cycles (Bereiter & Scardamalia, 2014; Bielaczyc, 2013; Brown, 1992; Cobb et al., 2009; Collins et al., 2004; Sandoval & Bell, 2004). The data in this study was collected during the orientation phase of the in-service training, when teachers analysed existing teaching practices and the contents of home economics as a subject (during the first and second phase of DBR). The start of the course was organised to support structured reflection to facilitate critical thinking that disrupts hegemonic ways of thinking and teaching of HE. The first phase of research encompassed defining the learning problem, that is, a development goal; the teachers analysed existing teaching practices and the contents of home economics as a subject. The second phase involved designing a thematic teaching unit/programme collaboratively. These (3-5 lessons long) thematic teaching units were derived from teenagers' world of experience and integrated the use of technology into teaching.

The third phase (testing) included the introduction of innovations into school lessons; teachers taught the lessons they developed at school (first iteration) and then shared their results and experiences, which prompted the further development of their lessons. The fourth phase brought results, the final design of innovations into lessons (second iteration). Three teacher teams wrote three articles about developing their teaching units further for other teachers to use. The first author of this article then edited these articles and they were published as a format of free e-publication (PDF); this concluded the design research cycle.

The data consists of 14 teachers' online reflections about their work as teachers of HE. The teachers were experienced home economics educators and their work experience varied from 9-35 years. They were asked to reflect on this question: *What knowledge and skills will young people need in their near future and after 20 years?* Data collection was conducted by using a Moodle online platform, where teachers posted their writings that related to the overall assignment. In total 37 A4 size pages, in Times New Roman 12 pt. font were collected and analysed by the first author.

Analysis of teachers' reflections on future skills and goals

The first author arranged the data collection and its analysis. Qualitative content analysis was conducted on the teachers' written texts posted in Moodle. The teachers wrote their reflections freely and most of the teachers did not answer the presented questions directly. Thus, after careful examination of the written texts, the analysis was focused on those portions of teachers' written texts that related to the research questions. Thus, the data consists of portions of extracted text, that were concerned with the future aspect of the HE subject. In total, 14 teachers had posted 81 posts consisting of several statements or paragraphs. Twenty-five of 81 posts focused directly on the research questions of the present study: 1) students' future skills and 2) goals for developing teaching, while 56 posts were not related to future skills and omitted from the data analysis (see Figure 1).

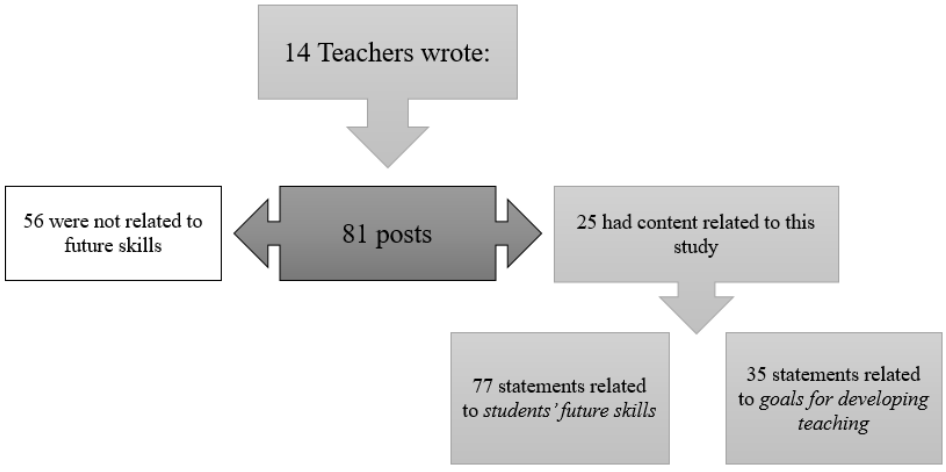

Figure 1 Inductive Data Selection Flow

A deeper qualitative content analysis of the extracted texts (25 posts) was conducted (Elo & Kyngäs, 2007; Graneheim & Lundman, 2003; Saldaña, 2009) by the first author. This analysis was data-driven

and based on inductive analysis (Elo & Kyngäs, 2007). The unit of analysis was a written statement, idea or mentions of students' desired future skills and teachers' development goals for HE instruction (i.e., segmented the text as meaningful ideas or statements); for example, a statement is one meaningful idea or content that could consist of a few sentences or one paragraph.

The coding of data was a cyclical process (Saldaña, 2009) where the first author conducted several cycles of coding to further manage and focus on the salient features of the data. The first author classified these statements and identified emerging codes based on the statement's content (Chi, 1997; Saldaña, 2009, pp. 7-8) in the extracted text. Next, the contents of the statements were carefully classified to one or several of the emerged codes. The classification was reviewed and negotiated with other researchers as a summative reliability check. These codes were grouped according to their main meaning into sub-categories and further categorized to main categories (Elo & Kyngäs, 2007). Figure 2 illustrates the categorization of students' future competencies and skills.

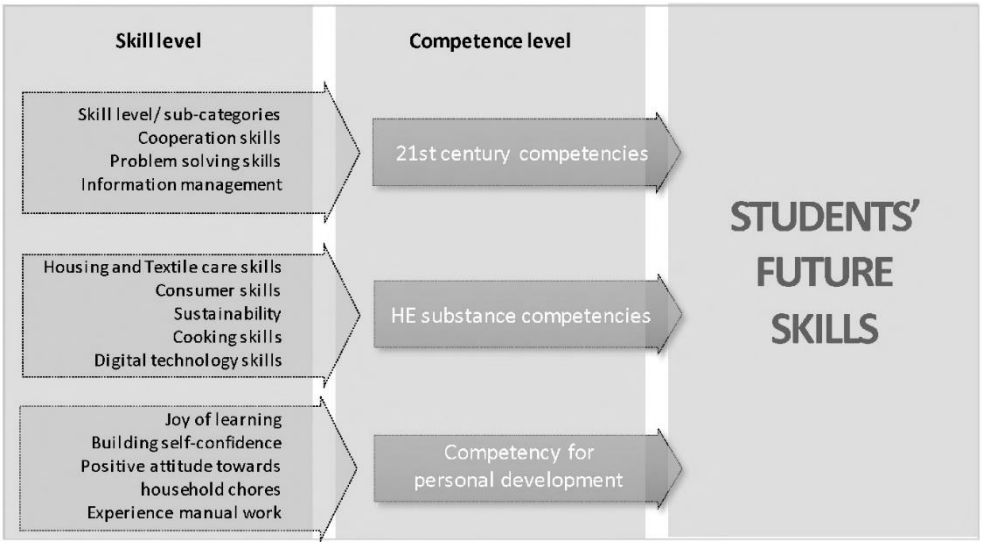

Figure 2 The Categorization of Students' Future Skills

The three main categories that were inductively constructed from the 77 statements related to *students' future skills* were:

1. 21st century competencies
2. HE substance competencies, and
3. competencies for personal development.

The total number of statements related to the students' desired future skills in teachers' writings was 77. A bit over half the statements (f = 41; 53, 2%) were classified as HE substance competencies, approximately one-third of statements (f = 28; 36, 4%) were classified according to the category of 21st century competencies and only ten percent of the statements (f = X; 10, 4%) were classified in the personal wellbeing category.

Further, the 35 statements related to *goals for developing teaching* were inductively classified into three categories of nine sub-categories (see Table 5):

1. teachers' desired changes in their lessons (less)
2. desired pedagogy and implementation (more), and
3. suggested tools for changing teaching (pedagogical tools).

Results

In this chapter, we will first present the results concerning what competencies and skills students should learn for their future (Q1) and secondly, the results of what teachers consider as developmental goals to improve HE teaching (Q2).

The 21st century competencies and connections between 21st century skills and HE skills

According to the results, the teachers saw students' desired future competencies as three-fold including 21st century competencies, Home Economics competencies and Personal development competencies. Thus, teachers' thinking was visible on three levels:

- *21st century thinking* reflects school-level thinking that is influenced by society, politics and global discussion.
- Thinking that takes place on *a Home Economics* level reflects subject level thinking that is influenced by society, HE discipline and the curriculum.
- The thinking about competencies for personal development reflects the individual and personal level of students.

In the following, the contents of the main categories and sub-categories are presented. In the text, the connections between 21st century skills and HE substance skills in teachers' writings are presented after the descriptions of the each 21st century skill sub-category.

The results revealed that despite the fact that HE teachers were subject experts, the teachers considered the 21st century competencies to be important future skills for students and emphasised the teaching of these higher-level thinking and cooperation skills together with teaching HE substance related skills. The category of 21st century competencies included subcategories of skills: *Cooperation*, *Problem solving* and *Information management*. Table 2 presents the results of the analysis of desired students' future 21st century skills: the main categories and subcategories, the numbers of statements and representative quotes.

Cooperation skills were comprised of teachers' statements on negotiation skills, skills needed for learning together with peers and a sense of responsibility. Teachers described these themes by stating how important it is to learn to work and think together as a group. Teachers value the learning of negotiation skills. By this, they especially meant the division of household duties at home and the division of work among group members in education and work settings: *living together*. The sense of responsibility was related to taking responsibility for household duties at home and conducting work and more broadly in society in responsible manner. Cooperation skills were connected to *Housing and textile care* and *Consumer skills* and *Food preparation skills*. Table 1 shows the connections between 21st century skills and HE skills.

Table 1 21st Century Skills Connections With HE Skills

21st Century Skills	Cooperation Skills	Problem-Solving Skills	Information Management Skills
	↑	↑	↑
Home economics skills that contribute to 21st-century skills	• Housing and textile care • Consumer skills • Food preparation skills HE literacy	• Consumer skills • Food preparation skills • HE literacy • Housing and textile care skills	• Consumer skills • Digital technology • HE literacy • Housing and textile care skills

The subgroup of **problem-solving skills** also included skills at planning and organisation. Teachers emphasised the ability to plan one's own work order and practical application of knowledge in real life situations. *Problem-solving skills* were connected to *Housing and textile care*, *Consumer skills*, *HE literacy skills* and *Food preparation skills* (see Table 1).

Information management skills consisted of discussions connected to skills at capturing new knowledge, comparing data and information and being able to make discerned and informed choices. Information management skills were connected to *Housing and textile care*, *Consumer skills*, *Technology*, *HE literacy skills* and basic scientific principles of *Housing and textile care* (see Table 1).

Regarding 21st century skills, the teachers highlighted teaching information management, cooperation and problem-solving skills. Interestingly, the problem-solving subcategory included skills at organising, general planning, and planning one's own work, which are typical representations of skills needed not only in running a household but also in working life and more widely in society.

Negotiation skills and having a sense of responsibility were among important Cooperation skills at home and in working life.

To conclude, the connections that teachers have drawn between future HE skills and 21st century skills make visible such higher-level thinking that students can achieve through learning of HE skills for functioning at home, work and in wider society. What the teachers find to be essential competencies of the 21st century can be trained and taught via everyday routines. Competencies for the 21st century were described in this article are higher level thinking that pupils can achieve through everyday actions. Earlier we described the connections that teachers have drawn between future HE skills and 21st century skills and these have provided pragmatic examples on how to achieve higher-level thinking and social awareness (competencies) through accomplishing tasks in everyday life.

Table 2 Students' Future 21st Century Competencies and Skills

Category & subcategories [C: Codes of statements] (S: Quantity of statements)	**Representative quotation of 21st-century competencies (Statements: 28)**
21st-century competencies (S: 28)	
Cooperation skills [C: 9] (S:)	
• Cooperation [C: 1]	I have never favoured individual [practical] tasks; I see it important that students work together and think together how they should accomplish a task. Together students either succeed or fail, experiences of success increase; thus, no one will be left behind. That is the principle. (T14)
• Negotiation [C: 1]	I have purposefully tried now, at the beginning of a new semester, to get my students to negotiate and decide their work duties by themselves in a group [in practical lessons]. I have observed their activities and then asked who is going to do what. This has been quite nice and 7th grade students have really negotiated in a very detailed way the tasks that each of them will have. (T6)
• Cooperative Learning [C: 1]	I think that the important matters to learn in Home economics are cooperation skills and consideration and respect for other people. (T6)
• Responsibility [C: 1]	How can I make it possible [for the students] to really learn to organise, take responsibility, plan and negotiate? How can I teach skills for living together? (T11)
Problem solving skills [C: 4] (S: 7)	
• Ability to plan one's own work [C: 1]	Young people need to learn basic skills: How to apply the knowledge they learn in practice, knowledge about [scientific] phenomena. They also need ways to experience different phenomena. (T8) (This quote also represents cooperation skills.)
• Organisation skills [C: 1]	
• General planning skills [C: 1]	In optional HE [8-9th grade] teaching, I aim to give food for thought [for the learning of capabilities] so that students can learn to face future everyday challenges creatively and show initiative. That is why the course is planned and implemented together with the students. (T6)
• Problem solving skills [C: 1]	
Information management [C: 4] (S: 12)	
• Practical application of knowledge [C: 1]	Maybe the most important aspect is to support a student's confidence that he or she will survive [in life]; students need to feel that they are capable of making the right choices and finding the information they need to survive. (T8)
• Skill at capturing new knowledge and skills [C: 1]	It's difficult to say what skills young people will need in their future life. I'm sure that many of the skills needed in everyday life now will be transformed. The use of electronic services and the amount of information available will grow. (T4)
• Comparing and contrasting skills [C: 1]	Thinking about the mastery of everyday life, the most important challenge in the changing world is the abillity to acquire knowledge and capture new concepts. (T10)
• Discerning informed choices [C: 1]	

Home Economics subject competencies

The main category of HE substance competencies included the following skills subcategories: Housing and textile care, Consumer choices, Food preparation, Sustainability and Technology and HE literacy in general. The subgroup of Housing and textile care was the most emphasised future skill among HE competencies (see Table 2). On the other hand, the least discussed theme in the writings was Sustainability, which was unexpected considering the timeliness of this topic. Table 3 presents the results of the analysis of students' future HE skills: the main categories and subcategories, the numbers of statements and representative quotes.

The discussion related to **Housing and textile care** contained many statements about home management skills that a person needs to organise and manage a home and possessions including cleaning, doing laundry (choosing and using textiles, aftercare of textiles, textile labelling and chemical use) and home and interior design. Among Housing and textile care skills the teachers valued basic scientific principles related to cleaning and textile care and multi-literacy skills related to cleaning and textile care. Housing and textile care were connected to Consumer skills and Cooperation skills in general and especially to developing a Sense of responsibility. Information management skills were also necessary when comparing and contrasting skills. In addition, Food preparation and Multi-literacy skills were linked to cleaning.

As important future skills in the main category of **Consumer skills**, teachers consider budgeting, and multi-literacy related to consumer knowledge and the ability to discern quality and value. Consumer skills were also connected to HE literacy. A further consumer skill would be an ability to evaluate products in terms of ethical production, usability, care and maintenance qualities. In the area of Consumer skills, the teachers considered not only the learning of consumer knowledge but also the practising and training of consumer skills. For example, they wanted the students to think about the choices they have made, prepare budgets and visit markets, all of which inform and enhance practical Consumer skills. Autio et al. (2009) have stressed the importance of consumer education in schools because young people lacked sufficient budgeting skills. For example, online micro loans have been a problem for young people in Finland.

In teachers' writings related to the **Food preparation** skills subcategory, the teachers wrote about the importance of attaining proficiency in basic food preparation skills, the phenomena and basic scientific principles of food preparation. However, teachers also highlighted recipe literacy. According to Brunosson et al. (2014), recipe literacy is a concept that means the ability to comprehend and adhere to recipes. It captures the complex field of knowledge that embraces both theoretical and practical skills needed when using recipes. Food preparation skills were also connected to planning, budgeting, textile care, cleaning and cooperation.

It was a bit surprising that teachers did not stress **Sustainability**. They discussed environmental issues only on a general level and did not mention climate change or global warming. A generational difference in the use of these terms may explain why climate change is not visible in the data. Another explanation may be the case that teachers already teach it and take it for granted (see a quote in Table 3).

Teachers relate **digital technology** to such skills as the use of electronic transactions and services, programming and robotics, specifically robot appliances in the home, blogging and photography. It is notable that the teachers discussed more about technology than sustainability in their writings.Digital technology was also connected to student-centred learning methods and information management skills.

An interesting result was that in addition to multi-literacy skills related to cleaning and textile care areas, multi-literacy related to consumer knowledge and recipe literacy, teachers highlighted general **HE literacy** by which they meant more than just knowing or doing. As Smith (1993, 2009, p. 55) has pointed out long ago, "General literacy has been broadened to include negotiating, critical thinking and decision-making skills". The term *literacy* has been applied to various kinds of literacy such as financial or health literacy (Hira, 2013; Pendergast, 2013). The teachers seem to mean that HE literacy "involves the ability to make decisions and apply knowledge to everyday living" (Smith, 2013, p. 268) and deal with "multiple literacies in a way of interconnecting elements such as skills, culture, systems, and behaviors" (Hira, 2013, p. 115).

Table 3 Students' Future Competencies and HE Skills

Category & Subcategories [C: Codes of statements] (S: Quantity of statements)	**Representative quotation**
HE substance competencies (S: 41)	
Housing and Textile care skills [C: 5] (S: 15)	
Housing and home management skills [C: 4] Cleaning [C: 3] Multi-literacy skills related to cleaning [C: 1]	Thinking of the near future, I think there should be some teaching connected with daily living. What basic [domestic] equipment shall I [a student] need when I move away from home? What expenses does one have to pay for an apartment? [Guiding students to] consider their future needs. At the same time, of course, to think about the whole budget of living. What does everything a person needs cost? (T1)
Basic scientific principles used in cleaning [C: 1] Basic scientific principles used in textile care [C: 1]	Youngsters need especially to learn basic skills. They need to know how to apply in practice what they have learned. They need to be able to observe [scientific] phenomena and try to experience different phenomena. They should realise how important it is to wash a woollen sweater according to product information and what happens when the woollen sweater is washed in the wrong way. (T8)
Food preparation skills [C: 2] (S: 8)	
Recipe literacy skills [C: 4]	Maybe lecturing should really be reduced and focus on recipe literacy!!! (T1)
Mastery of the basic skills of food preparation [C: 1]	Pupils should be encouraged to start cooking without a teacher going through the instructions first. Important and critical points for a recipe to succeed can be considered at the end of the lesson. Perhaps those [critical] issues would even emerge from the pupils' own experiences and perceptions. Pupils would also learn to read the instructions more carefully after failing a few times. This new way would certainly burden the teacher at first, when ten pupils were simultaneously asking for help but the pupils are doing so already as they don't bother to listen to the teacher's guidance. (T12)
Phenomena and basic scientific principles of food preparation [C: 1]	In 20 years of teaching, I have concluded that mastery of everyday life is important for students' future life. Students could learn systematic planning of a week's menu, making the next day's food from the leftovers from the previous day. Develop an attitude building towards eating vegetarian foods and replacing meat with vegetable-based protein [sometimes]. (T1)
Consumer skills [C: 4] (S: 7)	
Budgeting [C: 1]	The young people need more and more consumer information, consideration and practice, in my opinion. The selections have exploded really since my own youth in the 1980s when I chose between the soft drinks Jaffa and Pepsi. Therefore, we have taken a visit to shop/market in our plan last year. We use the whole (3x45min.) lesson time for this. We study the selections, ecolabels, domesticity, organic food, fair trade, the amount of salt, sugar and the fiber, prices per kilo and so on. (T11)
Paying bills [C: 1] Multi-literacy skills related to consumer knowledge [C: 1]	Consumer issues have become increasingly important in my teaching in recent years. It is easy to find material to teach consumer knowledge (e.g., from the webpage of The Consumers' Union of Finland) and students' themselves are quite up to date about consuming (e.g., quickie loans pikavipit). (T13)
Digital technology skills [C: 3] (S: 7)	
Use of electronic transactions and services [C: 1]	At least in our own school, there is a lot of talk about programming and robotics. Both are certainly important activities and an essential part of the future when will become more technical; in 20 years' time, it may be enough to know how to program your kitchen in order to prepare a festive meal. (T4)
Programming [C: 1] Robotics [C: 1] Blogging [C: 1]	I want to expand [the use of] blogging, storing images, surveys for pupils etc. [in teaching]. Textbooks are slowly moving into the background, which is good. For a long time, students have been taking pictures of recipes they have wanted to have for themselves. In the future, I hope that students will keep a home economics blog (or some other digital file) where they gather material for their own and others' enjoyment. (T13)
Sustainability [C: 1] (S: 2)	Environmental issues are involved in every lesson I teach and must continue to be so. It would be important to get pupils and homes to reflect on environmental issues on a practical level. (T11)
HE literacy [C: 2] (S: 2)	In my opinion, planning a student's own work (for example, scheduling, the rational order of performing tasks/work) and recipe literacy skills are areas that should be enhanced. (T7)

When examining the HE subcategories from the teachers' perspective in general, the basic skills of HE together with other multi-literacy skills related to cleaning and textile care, recipe literacy and knowledge related to consumer knowledge were often mentioned in the writings. To summarise, the learning of information management, cooperation, HE literacy, the basic principles of HE, learning to apply the knowledge in practice and experiencing [scientific] phenomena were seen to be more important to learn for the future rather than specific content knowledge.

Competencies for personal development

The category of wellbeing entailed such aspects as building self-confidence and learning the joy of learning, which are the two most emphasised aspects in the teachers' writings. The other categories the teachers mentioned as future skills were more HE related future aims like embracing household chores and experiencing manual work. Table 4 presents the results of the analysis of students' future competencies for personal development skills: the main categories and subcategories, the numbers of statements and representative quotes.

Table 4 The Results of The Analysis of Students' Competencies for Personal Development

Category & Subcategory [C: Codes of statements] (S: Quantity of statements)	Representative quotation
Competencies for personal development (S: 8)	
Personal development skills (S: 8)	
Joy of learning [C: 2]	Experiences. It is great to knead the dough, feel the onion sting in the eyes and notice how calming it is to fold 50 t-shirts and place them neatly on the shelves. Cooperation and shared experiences are also part of experiencing the feeling of home.(T4)
Building self-confidence [C: 4]	I hope that the joy of learning will be remembered instead of just performing tasks. (T3)
Positive attitude towards household chores [C: 1]	One's own personal human capital and good self-knowledge with self-confidence help to survive in a changing society. (T4)
Experience manual work [C: 1]	Hopefully, the young people who set off from our school are self-confident and eager to learn. If they are willing discover new concepts and ideas, they are going to succeed in the future. (T12)

To invoke the joy of learning in a pupil is to encourage a constant life-long motivation to adapt easily to current information, knowledge and environments where new concepts are intriguing rather than tedious. In student-centred learning, students are attached to the topic at hand on a personal level since they must develop their own solutions to given problems alone or in teams. This might be one way to empower students' self-confidence and trust in their own abilities.

Future Prospects of Home Economics Pedagogy—Student-Centred Learning

An important part of education pedagogy involves reflecting on how to implement such teaching that learners can achieve different learning aims and goals: how to teach best. Our second research aim was to study what teachers consider as developmental goals to improve in their own teaching practices (Q2). According to the analysis, the teachers commented on their work critically. Teachers wrote about what they should change in their teaching even though that was not questioned in their in-service education assignment. As professional teachers, they could not think about students' future skills without also thinking about what they should change in their teaching. Table 5 summarises what the teachers wanted to reduce from their lessons, what kind of pedagogy they wanted to implement more in the future and what they suggested as the tools for changing their teaching.

Table 5 Results of the Analysis of the Teachers' Development Goals of HE Teaching

Category & Sub-categories (S: Quantity of statements)	Representative quote
In their instruction, teachers want less (less)	
Lecturing (S: 9)	T4: "In the class I often notice that I am talking too much and give many answers directly without first giving the pupils a chance to find a solution by themselves". T7: "I maybe go through recipes far too thoroughly even though they often do not stick in students' minds. I recognise myself as a curling teacher: I prepare and ensure too much for the students and on behalf of students".
Teacher-directed learning (S: 6)	T10: "A discussion of students' questions produces learning and a lengthy teacher-directed phase lessens the learning in other ways".
Content during lessons(S: 7)	T13: "All cannot be taught after all so we must find a common thread of HE and develop [HE instruction] along with the times. I will aim towards [the teaching of] larger themes".
Cooking during lessons(S: 5)	T1: "I and my colleague have long thought about how to eliminate the pressure. We have tried to reduce content but without succeeding. Yes, the truth is that we use far too much time on food preparation." T12: "This autumn I have purposely aimed to cut down food preparation tasks in the lessons but I am only at the beginning of reducing them. Plenty of food preparation could be cut down to reduce the feeling of a hurry in the lessons".
In their instruction, teachers want to implement more (more)	
Student-centred learning (S: 3)	T6: "If I had the time to teach everything using inquiry-based learning, I would do it. But sometimes one needs to use shortcuts to achieve the goals. I would most like to learn how to use imagination to try collaborative teaching methods of different kinds. The ideal would be, of course, that students could learn from each other and discover ideas by themselves".
Pedagogical tools for implementing and increasing student-centred teaching (tools)	
Let students learn from failures instead of ensuring success in practical tasks like food preparation (S: 6)	T5: "I, too, recognise myself as a curling teacher: I ensure that students' success and lay the groundwork for working too much by explaining all the critical phases beforehand. This takes too much time in a lesson and I feel that students may not have heard anything. That s a waste of work. Why don't I let them figure things out by themselves? And let them tell their findings to the whole class at the end of a lesson."
Present more tasks that require critical thinking and planning (S: 4)	T1: "The pupils should be given more tasks and assignments that require consideration, thinking and planning".
Engage students to participate in the process of planning lessons (S: 3)	T4: "Students need to be more involved in the planning of lessons. This is a goal I have for the future". T5: "I too have experienced defining the learning goals of every lesson with students worthwhile. It gives a framework for working. At the end of a lesson, we have another look at the goals and discuss how the goals have been accomplished".
Differentiation of learning tasks (S: 2)	T12: "There are more and more students among classes who have not practised or been trained in household skills at home. On the other hand, the portion of the students who are skilled and perfomr lots of household chores has grown. This has got me thinking whether I should differentiate the teaching according to students' skill levels".

The analysis showed that teachers aim towards *student-centred learning* and *planning of teaching*. They mentioned *inquiry learning* and *collaborative learning* as more specific pedagogical approaches towards more student-centred learning. The teachers had a clear view about the aim to reduce further *teacher-directed learning* and especially *teacher talk* or lecturing. To achieve this, the teachers suggested that they need to *engage students to participate in the process of planning lessons* more and they need to *assign more learning tasks that require critical thinking and planning*. The teachers seemed to express a shift from teacher-led to student-centred teaching also through negation: by reducing their own role they planned to allow more room for students to think and experiment themselves (see Table 5).

The teachers analysed themselves for having *too much content in their lessons*, especially having *too much food preparation* planned for the HE lessons including food related topics. They considered that heavy load of learning aims and practical tasks created feelings of pressure and prevented

students' actual learning. In this connection, the teachers highlighted that to achieve inquiry learning and collaboration among students they need to *allow students to learn from failures too instead of ensuring success in practical tasks especially in food preparation*. To permit students to learn from failures is not typical in the teaching of HE in Finland. One teacher's writing expresses the idea behind giving up ensuring:

> I must let the pupils read and understand by themselves, measure independently and achieve their own results or products. Learners learn so much from burnt, clotted or too salty creations. These create striking and remarkable learning opportunities for the whole group. Of course, one also must make sure that the pupil acquires the feeling that she/he learns and will do well (in life). (T11)

Teachers also wrote about the need to differentiate learning tasks more in the future than before. This need arises from students' previous heterogenic background expertise on HE related subjects. The teachers meant by differentiation the division of practical tasks according to student's knowledge and skills in order to meet everyone's learning goals and to encourage students to think about what they already know and are able to do and what they need to learn more. A citation in Table 5 clarifies this need in teachers' thinking.

Discussion

Teachers are, of course, influenced by teacher education, national curriculum and local and global societal and political changes. Our results show how teachers integrate all this information into the HE subject when thinking about their students' future instead of the subject tradition and when thinking of the whole variety of HE competences and skills together instead of a particular subject of HE education, such as food and consumer education (e.g., Höijer et al., 2011; McGregor, 2008b). By studying HE competence and skills as a wide-ranging phenomenon rather than focusing on an individual skill, the study created understanding of the core priorities of the HE subject and showed how the subject should evolve at school. We analysed what Finnish HE teachers' value as important 21st century competences and home economics skills. According to our study, teachers emphasised the following HE skills: housing and textile care, digital technology, recipe literacy and consumer capabilities as the core HE substance competencies when they consider what students will need in their future life. However, teachers see the future competencies of students as three-fold: readiness for the 21st century, Home Economics and personal development. Furthermore, they emphasised that these skills are all integrated.

Teachers valued HE literacy skills including consumer knowledge, textile care and cleaning. In the food preparation skills, teachers recognised flaws concerning recipe literacy skills (see also Brunosson et al., 2014) in addition to actual food preparation practice. Regarding consumer skills, the teachers believe it to be important that students learn consumer knowledge and practise and train in consumer skills. They wanted the students to think about their choices in devising budgets and undertaking market visits. Digital technology, in the form of digital services and information sharing, was also mentioned as one of the important HE competencies the students will need in their future lives. Considering the fact that everyone faces environmental challenges, such as climate change, it is notable that teachers did not stress sustainability issues as a core area of HE subject or poverty, economic inequalities and obesity that also matter. Although teachers did not stress sustainability, they thought environmental and nature matters concerning chemical use related to, for example, textile care and cleaning (see also Haapala et al., 2014; Øvrebø, 2015) were important. To address this matter of teaching sustainability more closely would require investigating the actual practices of teaching sustainability on the secondary school level of HE education. Furthermore, how HE teachers in other countries address sustainability is also worthy of future research.

This study has its limitations due to the number and homogeneity of participants. The research represents the view of 14 teachers who are actively developing their teaching. Although teachers work in the same societal and cultural context, they have similar (but not the same) academic education, the teachers' individual attributes like age, gender and years of experience varied. We analysed only the data that directly focused on the research questions; however, the total of collected data is quite rich and will provide opportunities for later analysis related to HE education when considering how the teachers developed their teaching towards their developmental goals.

The findings of this study are in a Finnish context; however, these findings may also be helpful to international teachers and teacher educators who work in the field of HE. The 21st century skills and competencies and the development of teaching are universal research themes and other scholars

may find the methods used in this study useful to repeat and expand upon the study in their own contexts. Further research on a global level might reveal how the categories of skills identified in this research correspond with HE teachers' views in other countries.

As McGregor (2011) has noted, HE is fragmented and consists of many specific areas that then cause challenges to defining the core competence of the subject. Teachers are facing this challenge in their everyday work and they solve the problem in practice when teaching their subject matter. Thinking on a higher level, cooperation and information management skills are the new standard of learning outcome and achieving that outcome requires the development of both content and teaching methods practices (e.g., Binkley et al., 2012). Finnish HE teachers stress 21st century competencies, such as cooperation, problem solving and information management skills. They saw that the ability to think critically carries on to their lives outside school and so the pupils will be able to make better choices based on their own critical thinking rather than acting without reflection. Similar skills were also mentioned as future skills by HE teachers in New Zealand (Dixon, 2017).). The 21st century competencies and skills teachers emphasised in their writings are in line with the 21st century competencies and skills proposed in the literature: higher level thinking (creative thinking, problem solving and critical thinking), communication and collaboration and tools of digital technology and literacy (e.g., Binkley et al., 2012; Hakkarainen, 2009; Sundqvist. et al., 2021).

Regarding the changes in teaching HE, in the lessons teachers want to stop ensuring success in practical tasks and let the students learn from their failures in addition to successfully performing tasks. Teachers want to change their teaching to a more student-centred approach by reducing the content of the lessons such as lecturing and food preparation and instead involving students in the planning of lessons and implementing more tasks that require critical thinking. The teachers criticised themselves for having too much content in their lessons, which creates stress and prevents actual learning. These pedagogical changes, which the teachers proposed are in line with the desired students' future competencies: the teaching needs to allow students to cooperate, work collaboratively with knowledge and information, use critical thinking and solve problems to achieve 21st century competencies in HE lessons.

For the professional development of HE teaching, there must be a shift from current pedagogy to more strategic and future-oriented teaching. According to this study, collaborative reflection via a shared online writing process provoked the teachers' thinking about students' future skills and the development of the subject beyond the traditional curriculum. Based on this study, in-service educators' facilitation supports teachers' reflection and critical thinking. Together with facilitation, theoretical knowledge (learning theories, professional articles) helps to provoke teachers' critical thinking toward the development of teaching. Theory-based development of ideas where teachers question, reify ideas and develop them further in collaboration is pivotal to the development of teaching (Kuusisaari, 2016). Design-based Research is a potential method for organising the development of HE teaching. In-service education is necessary to develop HE teaching as it provides social context: structures, time and place.

In general, the results of this study imply that in the teaching, prevailing content and practices need to be inspected more closely and their adequacy should be evaluated regarding their future usefulness. Teachers should ask if they exist because they have always been there or if they are being used as appropriate tools for greater goals.

Conclusion

This study demonstrates that teachers see that the development of 21st competencies is critical in future HE teaching. This should have implications for developing initial teacher education, in-service education of HE teachers and curricula of HE in schools. Curriculum materials including textbooks may also need to be revised. Home Economics as a school subject includes content potential that is relevant in the future and teachers' thinking reflects this. Based on the results of this study, we conclude that HE teaching and its content have an important role to play in developing students' 21st century competencies.

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