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**INTERNATIONAL FEDERATION  
FOR HOME ECONOMICS**



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# International Journal of Home Economics

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## EDITORIAL

### Editor's comment

This issue of the International Journal of Home Economics has a special focus on teaching and learning in Home Economics education. Guest editors Hille Janhonen-Abuquah, Hanna Posti-Ahokas and Päivi Palojoki have harnessed experts from around the world to contribute to this themed issue which addresses three areas:

- the changing pedagogical landscape
- pedagogies for general education
- Home Economics pedagogy for higher education

The Journal is rounded off with two additional refereed papers.

I express my sincere thanks to the guest editors and encourage others to consider undertaking this role in the future.

Professor Donna Pendergast  
*Editor, IJHE*



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## Call for Editorial Board Members

Given the growth in the IJHE and the need for high quality reviewers, I invite you to submit an Expression of Interest for Membership of the IJHE Editorial Board. Please provide a brief Resume providing the following information:

- qualifications
- professional employment experience
- publications record; editorial board experience
- IFHE region membership
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- Must be a productive and respected researcher with expertise in one or more research methodologies and one or more Home Economics specialisations.
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INTERNATIONAL FEDERATION  
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## ***Part A Special Issue***

***Teaching and learning in Home Economics education***



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GUEST EDITORIAL

## Special Issue: Teaching and learning in Home Economics education

The idea of editing a special issue focusing on Home Economics education evolved through various international networks with which members of the editing team have been involved through IFHE and various projects. Through this collection of pedagogically focused articles, we aim to provide insights into Home Economics education in various parts of the world and at various levels of education. This issue widely represents Home Economics education at the tertiary level, making the issue a unique collection of articles for colleagues working to develop higher education programmes.

The articles were written by authors representing four continents and twelve countries. They illustrate how Home Economics education is being constantly developed in daily, practical, classroom activities and through research-based innovations. Articles feature quantitative and qualitative, disciplinary and trans-disciplinary, and empirical and theoretical work in addition to relevant descriptions of the work of reflective practitioners in developing Home Economics education at various educational levels.

The articles published here focus both on teachers' and students' views to identify practices that support meaningful learning. Curricula are analysed to provide understanding of Home Economics education in societal contexts. Curricula are powerful tools for highlighting the relationship between sustainable development, cultural responsiveness, and education within the teaching and learning of Home Economics. It is our common responsibility as Home Economics educators to address the following questions and show their connection to curricula:

- How do the surrounding, changing society and world affect teaching?
- How do knowledge and skills from the past help in understanding the present day and prepare Home Economics students for the future?
- How are globally influenced changes and diversifying contexts translated in local pedagogical practices?
- How does one extend the learning environment outside the classroom and design meaningful learning activities that support the development of high-quality Home Economics learning?

Changing global and local contexts challenge Home Economics education to renew itself in response. Global migration and increasing international collaboration change and enrich educational contexts, which, combined with accelerated technological achievements, make it possible to connect and discuss the pedagogical challenges we meet as Home Economics professionals across countries and time zones.

We were positively surprised by the number of manuscripts submitted for this special issue. In the first phase, 31 abstracts were submitted. Of these, 17 full articles were accepted for publication after a double-blind review process. We highly value the work done by the 37 reviewers, who took their task seriously and whose constructive comments helped to improve the articles. We want to sincerely thank all reviewers. You have shown us how strong our global Home Economics education-research community is!

The authors responded to the call with appropriate content, worked efficiently, met deadlines, and exemplified the entire range of contemporary Home Economics education research. They have opened the door to the lecture rooms, enabling us to fathom how Home Economics education is

practiced in various contexts. We must specifically mention the role of practitioner research, including lesson study, action research, and teacher self-study. It is of the utmost value for reflective practitioners to put pedagogical changes into action, argue them scientifically, and finally report the key conclusions to a wide audience.

Cooperation across disciplines and borders should be encouraged at all levels. We do hope that the articles in this special issue will be read by scholars in various academic fields beyond Home Economics. The articles' focus on contextual relevance and applicability while maintaining scientific rigor in ethics and methodology opens them to a wider audience.

Regarding school communities, all teachers should see the power of interdisciplinary cooperation, and Home Economics as a school subject provides an excellent platform for this. As school leaders, principals are in a position key to this process, which means that they must share information, negotiate, and be truly present in helping, designing, and enabling the implementation of good interdisciplinary practices.

Equality and equity are increasingly important themes in Home Economics education that aims for socially just societies. We strongly encourage further research on these themes in the future issues of the International Journal of Home Economics. You can follow our ongoing research project, Home Economics Education for Diversities (HEED) through the HEED blog at <http://blogs.helsinki.fi/heedproject/>.

The International Federation for Home Economics (IFHE) offers valuable networks and contacts that could be used even more to build cross-border study units, modules, and programmes to enhance learning and development in the field. The members of the editorial team have attended the IFHE world conferences since Hannover 1992, served as national country liaisons from 2003–2011, have served as programme committee chairs and members, and have attended several annual and council meetings. The IFHE has provided us a worldwide academic and professional network within which to share ideas and plan new activities. The editorial task has given the team a new opportunity to work with IFHE.

Finally, we invite you to enjoy the inspiration that this special issue gives to Home Economics professionals and others worldwide. We hope readers will find both practical ideas and resources for their own research, and that they will use the articles as learning materials in their teaching so that the novel ideas presented here can be further developed. We strongly believe in educational development: courageous pedagogical thinking leads to new educational innovations, which in turn equips Home Economics education to respond to the challenges of changing societies.

Hille Janhonen-Abuquah, Hanna Posti-Ahokas and Päivi Palojoki  
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INTERNATIONAL FEDERATION  
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## ***Special Issue***

Teaching and learning in Home Economics education

**Section I: The changing pedagogical landscape**



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REFEREED PAPER

## Pedagogy for Home Economics education: Braiding together three perspectives

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### Abstract

*This paper explores three perspectives on pedagogy, that are central to considering pedagogical approaches for Home Economics education: pedagogy as political/moral project that emphasises the function of education; pedagogy as relationship that speaks to the process of accompanying learners and caring for them; and pedagogy as classroom teaching practices referring to the core acts of curriculum implementation and assessment. The implications of each are elaborated and a case is made for a transformative pedagogical approach for Home Economics education that interweaves the three perspectives.*

**KEYWORDS:** CRITICAL PEDAGOGY, CONSTRUCTIVIST PEDAGOGY, TRANSFORMATIVE PEDAGOGY, HOME ECONOMICS, PEDAGOGY

### Introduction

The call for papers for this special issue stated that the focus was on *pedagogical approaches* related to Home Economics (HE). The term *pedagogy* has become ubiquitous in education but is seldom explained or elaborated (Alexander, 2004). A typical dictionary explanation is that pedagogy is the art, science, or profession of teaching. In ancient Rome, a pedagogue was the slave who escorted children to school carrying books and bags, ensuring their wards were safe and then helping children learn and providing moral guidance (Online Etymological Dictionary, n.d.). Today a pedagogue is typically considered to be a teacher. Simple descriptions such as this do not provide sufficient guidance to “inspire teachers’ pedagogical thinking” as requested in the call for papers.

Lusted (1986/1992) claimed pedagogy was “desperately undertheorized” (p. 3). Similarly others argue that a confused understanding of pedagogy impedes educational change (Alexander, 2004; Burdick & Sandlin, 2013; MacNeill, Cavanagh, & Silcox, 2005; Murphy, 1996; Thiessen et al., 2013). Some writers use pedagogy as a synonym for methods of instruction or the science of teaching. Thus it is associated with teaching strategies, or as Alexander (2004) claims, what teachers do, not why they do it. Other scholars consider why teachers do what they do, contending that pedagogy is a “deliberate attempt to influence how and what knowledge and identities are produced within and among particular sets of social relations” (Giroux, 1989, p. 239) thus focusing on the political function of education. Van Manen (1991, 1999) argues that the term *pedagogy* highlights the human, personalistic or social cultural elements of education, the relationship between teacher and student and the knowledge they create together. For him, pedagogy is a particular normative stance one

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takes toward children with implicit relational significance akin to the terms of friendship, love or family.

This brief overview draws attention to three perspectives on pedagogy that are central to considering pedagogical approaches for HE education: pedagogy as political/moral project; pedagogy as relationship; and pedagogy as classroom teaching practices. I begin by outlining pedagogy as political/moral project for HE education and then explain what that means for pedagogy as relationship and pedagogy as classroom teaching practices. I suggest that when the three are braided together they can enact the transformational power of HE.

### **The perspective of pedagogy as political/moral project**

By pedagogy as political/moral project I am referring to socio-ideological purposes behind educational practices. This perspective of pedagogy acknowledges that education is not neutral or apolitical. Rather, it is designed to steer students in a particular direction and therefore it is linked to ideologies and shaped by power, politics, history and culture (Hamilton, 2009). This use of pedagogy became more prominent with the rise of critical pedagogy (CP), the most common form of pedagogy mentioned in the educational literature (Loughran, 2013; Thiessen et al., 2013). Often contrasted with traditional transmissive or “banking” education, CP generally challenges the intent of education as the unquestioned acceptance of the status quo.

CP had its genesis in the liberatory pedagogy of conscientisation associated with the work of Brazilian expatriate, Paulo Freire. The aim is developing among the “oppressed”, language and concepts, wordings and readings to understand the ideological sources of disempowerment and voicelessness. A critical assessment of students’ situation is undertaken with a view of changing it. Students learn “to perceive social, political, and economic contradictions, and to take action against the oppressive elements of reality” (Freire, 1970/2000, p. 17). The primary preoccupation of CP is with social injustice and how to transform inequitable, undemocratic, or oppressive institutions and social relations (Burbules & Berk, 1999).

The common threads of CP “include, but are not limited to, the relationship between knowledge and power, language and experience, ethics and authority, student agency and transformative politics, and teacher location and student formations” (Giroux, 1994, p. 283). The focus is on the condition and means through which knowledge and power are produced and work within particular historical, social and cultural contexts (Lusted, 1986/1992). Dialogue is encouraged by asking “in whose interest” in order to undermine the ideological, experiences of colonisation and the structural violence of gender, race, and class discrimination (Giroux, 2004; Giroux & Simon, 1989). CP in the broadest terms is a moral and political practice because a foundational belief is that education should contribute to ensuring human rights and justice for all (Burbules & Berk, 1999; Giroux, 2004; Giroux & Simon, 1989; Shor, 1999; Shor & Freire, 1987).

CP has given rise to a range of pedagogies that seek to address specific injustices in society, such as critical feminist pedagogy (Luke & Gore, 1992), anti-racist pedagogy (Blakeney, 2005; Lynch, Swartz, & Isaacs, 2017), decolonising pedagogies (Tejeda, Espinoza, & Gutierrez, 2003), post-colonial pedagogies (de Zwart, 2005), queer pedagogies (Britzman, 1995; Bryson & De Castell, 1993) and eco-pedagogy (Antunes & Gadotti, 2005). Together they are often described as transformative pedagogies because they all seek changes that will make a difference in the world (Christensen & Aldridge, 2013).

### **The political/moral project of Home Economics education**

In HE the intent or central purpose is often referred to as a mission because HE is a profession which seeks to perform some mission of service to society. It is a normative statement of what *ought* to be. A mission-oriented field is one in which “knowledge or knowing is for the sake of doing something with the knowledge which is different from a discipline-oriented field which views knowledge as an end” (Vaines, 1980, p. 112). Therefore a mission-oriented field usually involves a continuing set of projects or efforts. Brown (1980) explained the project of HE education:

Because Home Economics education is part of Home Economics, its service is directed toward solving problems of the family as a family. Problems of the family as a family are concerned with suffering brought about by the family’s inability to engage adequately in areas of action which define its role as primary social institution. These areas of action

include: 1) action in rational-purposive production or procurement of the physical entities required by the family for the good life, 2) communicative action within the family and with social groups outside the family for understanding and for consensus in defining the good life, i.e., in the formation and determination of values and goals, and 3) emancipative action in freeing individual, the family, and society from dogmatic beliefs and from social forces which are dominative or exploitative (p. 101, underlining in the original).

Although this orientation of HE education was articulated more than three decades ago, it is still relevant today, perhaps even more so when you consider the problems that continue to face families, particularly ones arising from powerful forces such as corporate capitalism, war and conflict, and climate change. It is also implied in the Position Statement of the International Federation for Home Economics (IFHE, 2008) in phrases such as:

- concerned with the empowerment and wellbeing of individuals, families and communities;
- based on the values of caring, sharing, justice, responsibility, communicating, reflection and visionary foresight;
- achieve optimal and sustainable living for individuals, families and communities; and
- Home Economics has the potential to be influential in all sectors of society by intervening and *transforming political, social, cultural, ecological, economic and technological systems, at glocal levels.* (p. 1, emphasis added)

Clearly the agenda of HE outlined by IFHE is personal, social and political transformation.

Brown's (1980, 1993) arguments were based in CP. She maintained that HE education is a political/moral project. Moral, because the desirable ends, developing in students the ability to achieve optimal and sustainable living for individuals, families and communities, involve deliberation of values such as what is right and good. It is political, in its questioning of how societies ought to be, and in the sense that "intervening and transforming political, social, cultural, economic and technological systems" (IFHE, 2008, p. 1) requires people to become politically active citizens. The political/moral project requires transformative pedagogy as it is "activist" and "empowers students" (Ukpokodu, 2009, p. 43).

Pedagogy as a political/moral project sees the teacher as a transformative intellectual (Aronowitz & Giroux, 1985; Giroux, 1988) whose pedagogical practice is guided by emancipatory authority and the ethic of justice. Teachers are inspired to link their teaching to:

... educating students to take risks and to struggle within ongoing relations of power in order to be able to envision and promote those unrealized possibilities in the wider society that point to a more humane and democratic future. (Giroux, 1988, p. 138).

Teachers are guided by a conception of citizenship that includes the ability to question and engage in critical thought and moral reasoning, to probe beneath the surface of the taken-for-granted to reveal contradictions, to explore alternatives, in order to get to the root of problems and take action that contributes to a more just world (Westheimer & Kahne, 2004a, 2004b).

### **Adding a perspective of pedagogy as relationship to the braid**

Pedagogy as relationship attends to the social aspects of education that are required to achieve the political/moral project, highlighting the importance of the relationship between teachers and students in classrooms and the knowledge and understanding that they co-create (Bishop & Berryman, 2006). According to Burbules and Berk (1999) the endeavour to engage in CP is less a matter of fostering individual skills and dispositions, and more a consequence of the pedagogical relations, between teachers and students and among students, that promote it. There are two aspects of this perspective of pedagogy: the actual teacher/student relationship and how it guides practice; and creating the socio-cultural conditions that create knowledge.

Pedagogy as relationship sees the teacher/student relationship akin to being a parent where the teacher is charged with the special responsibility of caring for young people (van Manen, 1991). It is an embodied thoughtfulness, a moral orientation, a way of being that models such qualities as sensitivity toward the child's subjectivity, interpretive intelligences, a passion for knowing and

learning the mysteries of the world active hope in the face of prevailing crises, and humour and vitality (van Manen, 1991).

Pedagogy as relationship fosters the socio-cultural conditions that create knowledge. This is often referred to as establishing classroom climate, classroom atmosphere, a community of inquiry or a democratic classroom. The integral worth and experience of each individual is cherished and students feel safe to engage in dialogue and put forth their beliefs and ideas. Democratic principles provide a framework for classroom interactions (Altricher, 1993). Students and teachers are both learners and they work together in the classroom sharing power (Kreisberg, 1992) and decision-making (Schneider, 2010). Classrooms become communities of learning where students experience and have opportunities to develop the virtues of care, concern, connection and nurturance (Cranton, 2006; Martin, 1995;). Informed by an ethic of caring (Noddings, 1984, 1992, 2013, 2015) activities are included that build relationships of care with others and their environment. Teachers use such practices as the four components of a caring relationship outlined by Noddings (2015): *modelling, dialogue, practice, and confirmation*. *Modelling* involves showing students how to care. Teachers engage students in *dialogue* in an open-ended, genuine, common search for understanding, empathy, and appreciation rather than talking at them. Teachers provide opportunities for students to *practice* caregiving and they *confirm* by affirming and encouraging caring behaviour.

Pedagogy of relationship encompasses culturally appropriate ways of being in the classroom (Allison & Rehm, 2006; Janhonen-Abuquah, Posti-Ahokas, Palojoiki, & Lehtomäki, 2014; Landson-Billings, 1995). It allows students to bring their own identities and experiences into the classroom (Bishop & Berryman, 2006) and acknowledges students as culturally located beings (Baskerville, 2009). It is an inclusive pedagogy that responds to student diversity in ways that avoid marginalisation.

The pedagogy of relationship is the lived pedagogy or the curriculum-as-lived and experienced by students (Aoki, 2000, 2005). It includes an attunement to embodied, inspired knowing, thoughtful action, deliberation and purpose, authentic communication and personal development (Aoki, 2000, 2005). There is a connection to spirituality and soulfulness (Deagon & Pendergast, 2012; McGregor & Chesworth, 2005). Pedagogy of relationship provides experiences that touch the soul and evoke emotions to put students in touch with the basic realities of life, including suffering and death as much as love and joy and our deepest feelings and longings (Miller, 2000).

Laster (2008), in writing specifically about HE education, suggests that pedagogy of relationship is an important aspect of implementing critical literacy (the moral/political pedagogical project). She advocates the establishment of

a democratic culture of moral equals and interactions patterns that encourage optimum development; sensitivity and responsiveness to each other's needs; reciprocity (mutual sharing); and encouraging supportive relationship focused on helping each other learn.  
(p. 4)

According to van Manen (1991), a pedagogue tries to act in a right, good, or appropriate manner for the sake of what is best for the being and becoming of the learner, embodying what is taught in a personal way. It is within this dwelling a right with others within the community of the classroom that students learn to live the values of the political/moral project. Pedagogy of relationship opens the classroom to the possibility for transformative learning.

Although transformative learning is stimulated by any event or experience that calls into question our habitual expectations about ourselves and the world around us, in the context of the classroom, it likely depends on the nature of dialogue and relationships between teacher and student and among students. Students receiving information from an authority figure whom they do not know as a person can easily accept or disregard that information. But when a person is engaged in a serious dialogue with someone he or she knows, likes, and trusts, the potential for the examination of previously uncritically absorbed values and assumptions is, I suggest, much greater. (Cranton, 2006, p. 12)

## Weaving in the perspective of pedagogy as classroom teaching practices

Probably the most common understanding of pedagogy is as instructional methods. Attention is given to technical instrumental aspects of teaching, how knowledge is transmitted and how activities can be designed to bring about learning. The teacher is viewed as a methodologist or strategist involved with curriculum design, classroom strategies and teaching techniques, and evaluation purposes and methods (Bennett & Rolheiser, 2001; Chamberlain, 2003; Joyce, Weil, & Calhoun, 2008). Sometimes this is referred to as the pedagogical repertoire of teachers; a collection of tactics or strategies from which the teacher may draw to facilitate learning in the classroom. Tactics can include simple ice-breakers, cooperative structures and graphic organisers, such as think-pair-share, Venn diagrams, and T-charts. Instructional strategies are more complicated cooperative structures such as the jigsaw and graphic organisers such as concept and mind-mapping, and teaching approaches such as concept attainment, simulations and structured controversy (Bennett & Rolheiser, 2001; Clarke, 2005).

Classroom teaching practices can range from teacher-centred knowledge transmission processes to student-centred, constructivist active learning, to critical pedagogical processes. Teacher-centred practices include direct instruction such as lectures and demonstrations and are useful when there is information to be transmitted to students as part of a lesson and time is limited. But for transformative pedagogy teachers draw primarily from constructivism and CP for their professional practice (Ukpokodu, 2009).

Constructivism is a theory of learning that is linked to the progressive schooling of Dewey, Piaget's cognitive development theory, Vygotsky's socio-cultural theory of meaning making, and research on multiple intelligence, many ways of knowing, emotional learning and brain research (Fogarty, 1999). Constructivism is understood as the creation of new understandings by individuals on the basis of an interaction between what they already know and believe, and ideas and knowledge with which they come into contact. Therefore

constructivist pedagogy is thought of as the creation of classroom environments, activities, and methods...that focus on individual students developing deep understandings in the subject matter of interest and habits of mind that aid in future learning. (Richardson, 2003, p. 1627)

Transformative constructivism takes into account the cultural and social messages presented within the environments of learning (Shapiro, 2011) bringing CP and constructivist pedagogy together.

CP encourages critical awareness of problems, power, and inequalities. Lewison, Flint and Van Sluys (2002) outline four dimensions of CP for classroom teaching: disrupting the commonplace; interrogating multiple viewpoints; focusing on social political issues; taking action and promoting social justice. Lynch et al. (2017) add making systemic oppression visible, recognising personal complicity in oppression through unearned privilege and developing strategies to transform structural inequalities. There are similarities to the practical problem-solving/practical reasoning pedagogy frequently mentioned by American Family and Consumer Sciences / HE scholars (AHEA, 1989; Johnson & Fedje, 1999; Laster, 2008). As Laster (2008) notes, all forms of critical literacy involve similar processes of "problem posing, critical consciousness, questioning, critical reflection, and critical social action" (p. 10). Also important is acknowledging that problems are "wicked", messy and complex (McGregor, 2012). Therefore encouraging students to anticipate complexity and use systems thinking is important. In order to reach and engage all students, useful strategies include real-world case studies, problem-based learning, role playing and simulations, inquiry-based learning, group projects and collaborative activities, community service and place-based activities.

The most important aspect of pedagogy as classroom teaching practices is determining what teaching activity is appropriate for a particular group of students and the topic under study and what scaffolding techniques can be used to promote learning.

Good teachers ... are able to weave a complex web of connections among themselves, their subjects, and their students so that students can learn to weave a world for themselves. The methods used by those weavers vary widely; lectures, Socratic dialogues, laboratory experiments, collaborative problem-solving, creative chaos. (Palmer, 1998, p. 11)

## Weaving a braid of transformative pedagogy

In this paper I have suggested that pedagogy is often used in educational literature but seldom explained thoroughly. For the purposes of analysis I have teased out three perspectives of pedagogy: pedagogy as political/moral project referring to the transformative goals or purpose of the educational endeavour; pedagogy as relationship referring to the humanness of the educational experience and the necessity of being-in-relation with students and creating classrooms of learning that facilitate the transformative goal; and pedagogy as classroom practices where pedagogy is understood as teaching procedures or strategies for transformative pedagogy. These are summarised in Figure 1.

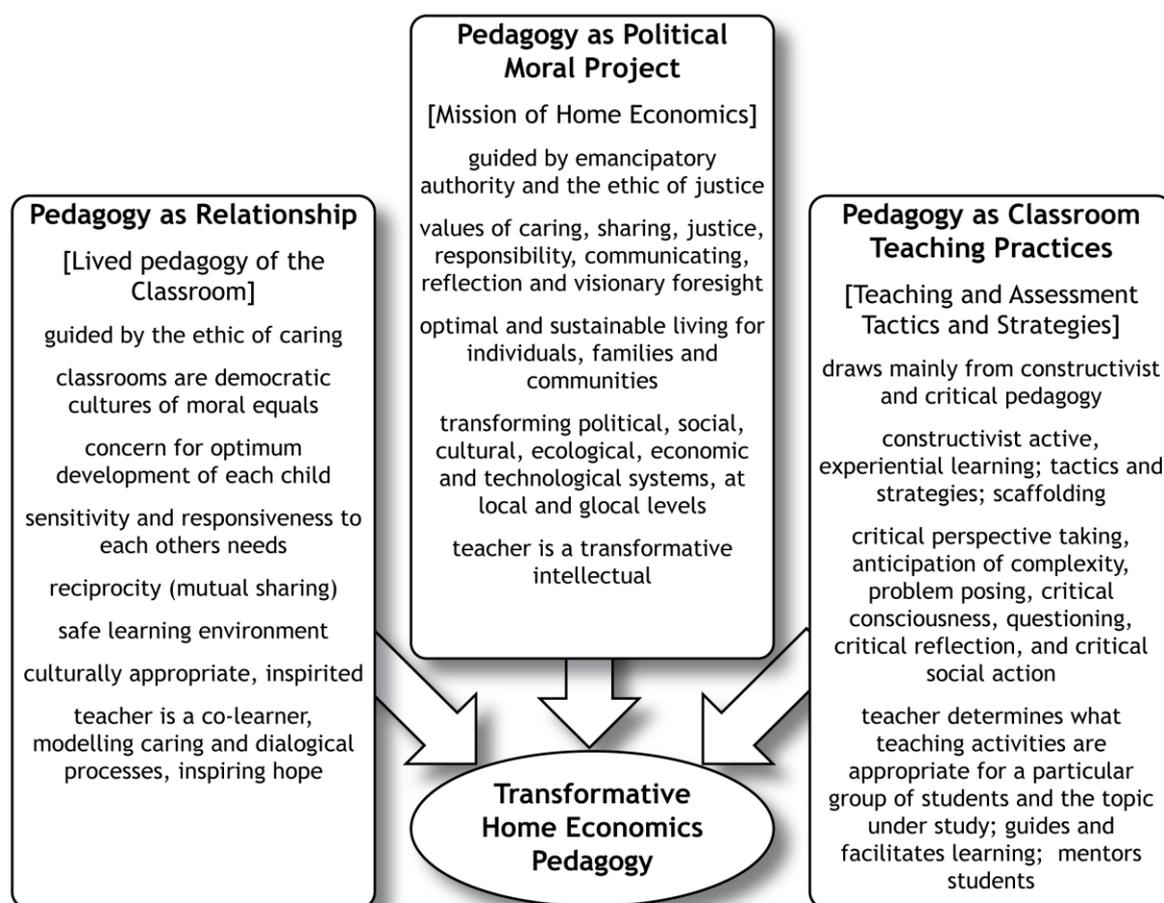


Figure 1 Three Pedagogical Perspectives inform Transformative Home Economics Pedagogy

The metaphor of a braid has been used to demonstrate that the three perspectives are not mutually exclusive. As van Manen (1991) cautions, “It is possible to learn all of the techniques of instruction but remain pedagogically unfit as a teacher” (p. 9). When pedagogy is approached exclusively as classroom practice, it may reduce teaching to matters of technique and method. Focusing on pedagogy as a political/moral project overlooks the role that a teacher’s humanness, caring and dialogue has in facilitating risk-taking in the learning environment. Pedagogy as relationship tempers pedagogy as political/moral project by paying attention to what is appropriate for the personal development of students and what inspires hope and possibilities. Pedagogy as classroom teaching practices enables teachers to select carefully from an instructional repertoire to meet the goals of the political/moral project and individual self-development. Pedagogy as relationship prevents the reduction of both pedagogy as political/moral project and pedagogy as classroom practices to technical cognitive skill development that diminishes the transformative potential of education (Berkovich, 2016). The three pedagogies inform each other. At least three strands are essential to create a braid; each enriching and constraining the other. The metaphor implies the importance of interlacing all three to create a transformative pedagogy for HE. Anyone who braids hair knows that often additional strands are added as the braid progresses therefore there is an openness to integrate

new pedagogical perspectives as they arise. Thus HE teachers become lifelong learners; students of pedagogy rather than pedagogues.

It is useful to have questions for self-assessment of pedagogical practice (Education Queensland, 2002; Gore, Griffiths, & Ladwig, 2004). Therefore, I provide questions for assessing implementation of transformative pedagogy for HE outlined in this paper in Table 1.

**Table 1 Key Questions to Creating Transformative HE Pedagogical Practice**

<b>Pedagogical Political Moral Project</b>	<p><b>Does this lesson</b></p> <ul style="list-style-type: none"> <li>• contribute to the empowerment and well being of individuals, families and communities?</li> <li>• contribute to optimal and sustainable living for individuals, families and communities?</li> <li>• prepare students to intervene and transform political, social, cultural, ecological, economic and technological systems, at local and global levels?</li> <li>• include identifying and solving intellectual and/or real-world problems?</li> </ul>
<b>Pedagogical Relationship</b>	<p><b>Have I</b></p> <ul style="list-style-type: none"> <li>• attempted to connect with students' background knowledge?</li> <li>• created a supportive, inclusive classroom environment based on mutual respect, empathy and caring?</li> <li>• created a sense of community in the classroom?</li> <li>• engaged in conversational dialogue with students and encouraged dialogue between students?</li> <li>• included students in planning the teaching and learning activities?</li> <li>• selected culturally relevant materials and activities that touch the soul?</li> </ul>
<b>Pedagogical Teaching Practices</b>	<p><b>Am I</b></p> <ul style="list-style-type: none"> <li>• moving beyond the simple transmission of knowledge and skills?</li> <li>• including constructivist active learning principles and practices?</li> <li>• emphasising critical literacy? higher-order thinking? questioning what is taken-for-granted? asking <i>in whose interest</i>?</li> <li>• fostering social justice citizenship?</li> <li>• coaching, facilitating, mentoring?</li> </ul>
<b>Continue to Create a Transformative Pedagogical Practice</b>	<p><b>Am I</b></p> <ul style="list-style-type: none"> <li>• adding new information and theoretical perspectives when appropriate?</li> <li>• becoming a student of pedagogy rather than a pedagogue?</li> </ul>

For example, imagine a teacher planning a lesson on the food-based dietary guidelines (commonly referred to as food guides) for their country. Instead of *how to* use the guide, the teacher could engage the students in a dialogue asking: *in whose interest* was the guide created? (e.g., what stakeholders were involved? what were their intentions?); whether the food guide reflects the cultural values of the students (e.g., do you see the foods you eat on the guide?); what is taken-for-granted? (e.g., are the foods accessible to you, to everyone in the country?); how does this guide compare to other food guides? (in what ways are they similar? different? what is the effect?); are the images and text appropriate? (what does it mean to you? can you understand it?); or what should a food guide include? (just food? sustainability considerations? other lifestyle recommendations?). Students then could determine what food guidelines would be most useful for particular groups of people and choose a method to share their learning.

There are also examples in the HE literature that can act as inspirations:

- the global/development resources created by the Canadian Home Economics Association in the 1990s (Smith & Peterat, 1992);
- the ongoing promotion of practical reasoning and a critical science perspective in Family and Consumer Science Education in the United States (Laster, 2008; Montgomery, 2008);
- examples of implementing productive pedagogy (Education Queensland, 2002) in HE in Australia (Reynolds, 2002a, 2002b, 2003);
- the e-books on global sustainable development education produced by the Consumer Issues and Family Resource Management Section of IFHE (O'Donoghue & Wahlen, 2008, 2010 );

- Smith's (2010) outline of instructional strategies for contextual teaching and learning (problem-based, project-based, inquiry-based, and cooperative learning);
- the training manual (Melo & Covelo, 2011) and active learning methodology toolkits (O'Donoghue & Cusack, 2008; O'Donoghue et al., 2014) produced by the Partnership for Education for Responsible Living with the involvement of HE professionals.

## Summing up

Pedagogy is often used as a synonym for teaching but not precisely defined. It is a complicated, rich, complex and sophisticated concept (Loughran, 2013). I suggest that a discussion of pedagogy is more clear if it is considered to be a combination of three perspectives braided together to create a transformative HE pedagogy.

Transformative learning is “a process that leads to a deep shift in perspective” (Cranton, 2006, p. xxii). If we truly want to empower people then we need to be inspired by more powerful conceptions of pedagogy. Otherwise we risk supporting the status quo (Håkansson, 2015), one right way of doing tasks related to the family, or the “fusspot” image (Hjälmeskog, 2013), disparaging the life experience of people (Matthews, 1987), perpetuating stereotypes and prejudices (Smith, 1994) and generally acting in ways that are contrary to the values and beliefs of HE (Brown, 1985).

## Biography

Dr Smith is a sessional lecturer in Home Economics Education at the University of British Columbia. She teaches exclusively in the Home Economics Education Diploma Program and in the completely online Master of Education in Home Economics: Human Ecology and Everyday Life. Her research interests are global, sustainability education; food literacy; action research; curriculum and pedagogy in Home Economics education; and the professional development of Home Economics educators.

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INTERNATIONAL FEDERATION  
FOR HOME ECONOMICS

REFEREED PAPER

## Teaching and learning in Family and Consumer Sciences education: Thriving in challenging times

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### Abstract

*Today, no issue is as important to a global community's continued prosperity as education. Research has illustrated that those societies who invest in a 21st century education benefit immediately by transforming an outdated system to a more sustainable approach. Family and Consumer Sciences educators worldwide must develop challenging, relevant, and ever-changing learning environments to prepare the future workforce of tomorrow. These strategies must incorporate workforce and economic development policies in K-12 education to be sustainable. The intent of this paper is to highlight pedagogical approaches to support students in the development of critical thinking, employability skills, and career paths to support lifelong learning. The following pedagogical approaches will be emphasised: project-based learning, standards-based grading, apprenticeships, technology-based teaching, and differentiated instruction. Through these approaches Family and Consumer Sciences teachers can prepare students to enter the workforce or a post-secondary institution fully prepared with skills and the confidence necessary to achieve in the real world.*

**KEYWORDS:** EDUCATION, CHALLENGING TIMES IN EDUCATION, FAMILY AND CONSUMER SCIENCE, TEACHING AND LEARNING, SECONDARY CLASSROOM STRATEGIES

### History of Family and Consumer Sciences in the United States

The study of Home Economics began in the United States after the American Revolution. Prior to that time, young women received instruction in homemaking and childcare skills at home. As society began to change in the 19th century with a focus on the equal rights of women and faith in education, the discipline of Home Economics became part of the curriculum and a professional field of study in secondary and post-secondary schools. This original curriculum focused on food, shelter, and clothing.

The growth of Home Economics education was propelled by the Morrill Act of 1862 when the land-grant colleges and universities sought "to promote the liberal and practical education of the industrial classes" (American Association of Family and Consumer Sciences, 2017). Technical courses that were

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related to the lives of the entire farm family were emphasised. It was during this time, that many courses were created to serve the needs of female students.

According to the American Association of Family and Consumer Sciences (2017), by 1890, domestic science courses emphasising home management skills were offered widely in American secondary and post-secondary schools. These courses included instruction in sewing, cooking, needle-crafts, home decoration, food preservation, and home nursing. The teaching of domestic science in the secondary schools soon created a demand for the training of Home Economics teachers in post-secondary education. The home management curriculum remained until the early part of the 20th century.

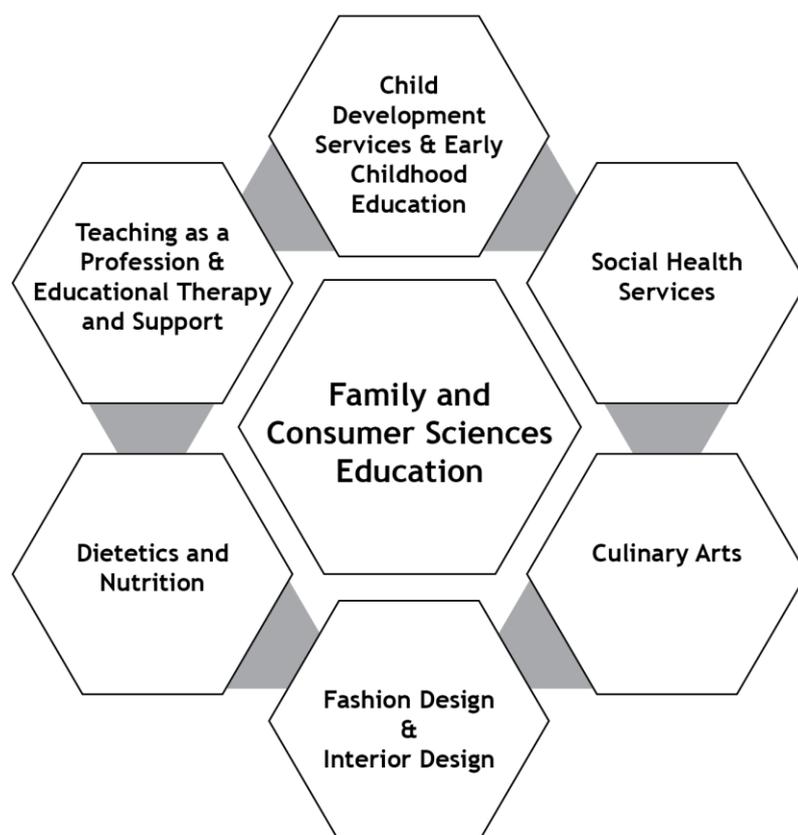
In 1899, Ellen H. Richards, the first female admitted to the Massachusetts Institute of Technology (MIT), was accredited with establishing a conference of participants interested in the application of science to household management problems. As an instructor in sanitary chemistry at MIT, her work emphasised the influence of environment on health and wellbeing. Partnering with Melville Dewey and other educators and activists, Ellen Richards, organised a series of annual gatherings that became known as the Lake Placid Conferences. Out of these conferences in New York, a movement took shape where goals and directions were established and the term *Home Economics* was agreed upon as the name that would cover a broad range of concerns. From this conference, the American Association of Home Economics was also established in 1909 (American Association of Family and Consumer Sciences, 2017).

Throughout the early years, the American Association of Home Economics was dedicated to improving living conditions in the home and community. Many of their members taught home management curriculum in secondary schools and helped to promote the discipline throughout the country. In 1917, with the passage of the Vocational Education Act, federal monies provided the salaries for teaching vocational Home Economics, agriculture, and trade and industry courses in the secondary schools.

By 1920, over 6,000 secondary schools in the United States were offering Home Economics education programs. It was during this time that social science research became more widespread and some of the findings in human relationships were incorporated into the Home Economics curriculum. By 1935, Home Economics educators were being urged to incorporate any knowledge or activity that might serve to improve families and family life.

As the scope of Home Economics training expanded, the variety of professions in the field increased. At the post-secondary level, the curriculum became more specialised. At the secondary level, the focus of Home Economics education changed to include a broader focus on careers and life skills. Thus, a curriculum with a multidisciplinary approach began to be implemented in many secondary programs (Texas Technological University Curriculum Center for Family and Consumer Sciences, 2017).

Overall, the discipline has been influenced by changing American society throughout the years. In 1994, at the annual AAFCS Conference in Phoenix, Arizona, the name of the discipline was changed from Home Economics to Family and Consumer Sciences to reflect the complexity of the profession. The secondary curriculum has also changed in the last decade to emphasise 21st century skills. Career pathways located in high school academies are now the norm in many secondary programs throughout the United States. Academies emphasise academics, technical and employability skills in all of the courses found in a career pathway. Upon completion of the three to four courses, students complete an industry standard certification exam. This certification enables students to obtain an entry-level position after graduating from high school. This new system also assists students in helping them make decisions about their career choice and further post-secondary training. The new secondary career pathways for Family and Consumer Sciences education are found in Figure 1. As the job market changes because of technology and globalisation, new career pathways are being developed to meet the demand (Texas Technological University Curriculum Center for Family and Consumer Sciences, 2017).



**Figure 1** Programs of Study for Family and Consumer Sciences Education

*Note.* Figure developed from Tennessee Department of Education Programs of Study in Human Services (n.d.) <https://www.tn.gov/education/article/cte-cluster-human-services>

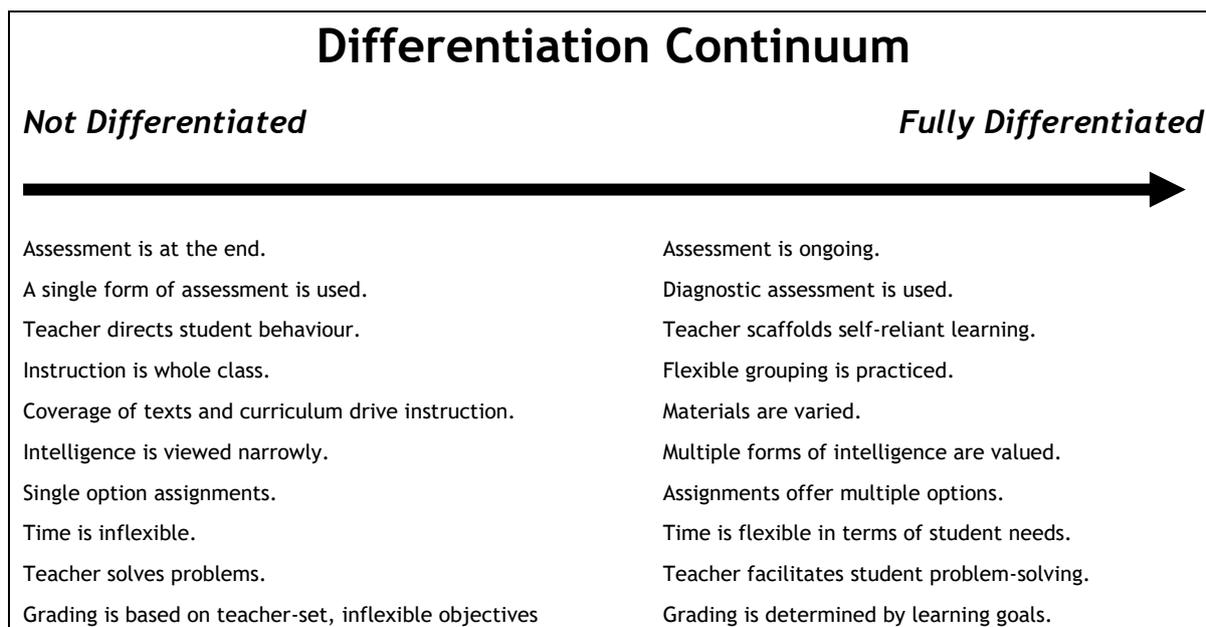
## Challenging times for Family and Consumer Sciences Education—call for innovative instructional strategies

### Differentiated instruction

The traditional way of teaching assesses a student's ability to listen and take tests. Albert Einstein said, "Everybody is a genius. But if you judge a fish by its ability to climb a tree, it will live its whole life believing that it is stupid" (Robb, 2008). By continuing to teach in the traditional way, students start to believe that they are less intelligent if they have difficulty paying attention or if they are poor test takers. By teaching in the traditional way, we are failing to acknowledge that all students are different and because of this, they learn differently.

A new way of teaching is emerging that challenges the idea of teaching all students the same way. This new instructional strategy is differentiated instruction (see Figure 2), which focuses on teaching the same topic in multiple ways using a variety of instructional strategies of varying degrees of difficulty. Key elements of differing instruction include continual assessment, recognizing the diverse needs of students, offering opportunities for groupwork and problem-solving, and allowing students to make choices regarding their learning (Robb, 2008).

By differing instruction, a teacher is able to reach all students with varying degrees of knowledge or learning difficulties. According to Carol Ann Tomlinson (Robb, 2017), a leader of differentiated instruction (and a professor of educational leadership, foundations, and policy at the University of Virginia), there are four ways to differentiate instruction. These are content, process, product, and environment (Wesely, 2014). Differentiating by content allows all students to learn based on previous knowledge. For example, students who are unfamiliar with the content may be asked to complete lower-level assignments such as defining words or reading an article and answering questions. Students who have some familiarity with the content are asked to complete activities that require higher-level thinking skills than those who are completely unfamiliar with the topic.



**Figure 2** Differentiated continuum

*Note.* The differentiated continuum illustrates the benefits for the teacher using differentiated instruction. The illustration was adopted from Tomlinson (1999, p. 16).

Through differentiation, teachers are confident that every student's style of learning is being met through a variety of instructional strategies. Students who learn visually prefer to see information being taught while those who learn solitarily work best individually. Social learners enjoy working in groups as compared to students who learn logically by understanding the reasoning behind concepts. Physical learners prefer to learn with a hands-on approach whereas auditory learners would rather hear information. This group of students are similar to verbal learners who learn best when hearing the information in music and sound (Lepi, 2012).

The differentiation process requires time to plan and implement. When teaching about the stages of development, a variety of different activities can be planned in order to meet the learning needs of every student. For example, visual learners could look at photo stories that identify and describe a child's developmental changes. Solitary learners could create a presentation on a particular developmental stage. Social learners might prefer to create a lesson to present to their classmates whereas logical learners could create a chart that details changes that occur in a child's brain while going through a milestone. In comparison, physical learners would interact with models of a foetus at different ages and aural and verbal learners could watch a video.

By allowing students to differentiate products, they are able to create end products that represent their learning styles and personality. A teacher could encourage differentiated products by providing students with a list of acceptable end products or allowing students free reign in deciding how to display their learning. By providing a list of acceptable projects, students can pick ones that best match their personality. For example, a teacher could allow students to create a project by picking between a variety of assignments including creating a PowerPoint, written report, speech, or model. By providing options, all students will create vastly different products that showcase their individual learning.

Differentiating the learning environment also takes planning and preparation of units and lesson plans. This is reflected through room arrangement to provide students opportunities to work independently, socially, or at stations.

Differentiated instruction works well for both high performing and low performing students. It increases student engagement, decreases discipline problems, and allows students to take control of their learning. Differentiated instruction does require more time and work on the teacher's part as learning to incorporate differentiated instructional strategies is an arduous task and critics of this approach argue that there is not enough research to support its positive effects (Weselby, 2014).

While there is limited research to support the positive effects of this approach, it is clear that using differentiated instructional strategies teach students using a variety of learning strategies. Differentiated instruction is a new teaching strategy that is being implemented in secondary schools worldwide. When practicing this new strategy, teachers should take time and initially focus on differentiating content, process, products, or learning environment and incorporate other elements of the process one at a time.

### Teaching with technology

In education, technology can be a life-changer, a game changer, for kids who are both in school and out of school. Technology can bring textbooks to life. The Internet can connect students to their peers in other parts of the world. It can bridge the quality gaps. (Queen Rania in Boudreau, 2010).

This quote was spoken by Queen Rania of Jordan whose focus is on reinventing the Jordanian school system (Al Abdullah, n.d.). It is amazing how classes are able to interact and learn from other students in different countries and cultures, something that until recently was not possible. Incorporating a new idea into a classroom is challenging as educators must consider the positive effect on learning that it offers to students.

Family and Consumer Sciences education provides students with necessary skills and concepts needed to thrive in the real world. This belief is also supported by Partnership for 21st Century Learning, a coalition that focuses on uniting educators, businesses, community and government leaders to ensure that all students are able to learn the necessary skills needed in life and work. Accordingly, technology is a 21st century skill that all students should excel in in order to reach their fullest potential. In order for technology to make the biggest impact on students, a teacher must be aware that technological instructional strategies are ever-changing and provide activities that promote teamwork, innovation, problem-solving, and decision-making (Kayalar, 2016). By incorporating technology into the classroom and teaching these skills, educators are preparing students for post-secondary success.

Many teachers are challenged by a limited supply of technology in the classroom. While it appears to be an impossible task, many school systems have solved this issue by implementing a *Bring Your Own Device* (BYOD) policy, which allows students to bring their own phones, computers, and tablets into the classroom. Although this policy makes it easier for teachers to incorporate technology into education, BYOD does pose some technical problems as not all devices have the same capabilities or applications. As a result, teachers must tailor their lesson plans to meet the abilities of the weakest device. To ensure that devices can be used effectively, schools have enforced capability requirements. If a student has a device that does not meet the requirements, then he or she will not be able to bring that device to school (Kayalar, 2016).

Overall, technology can improve student learning and help teach the four Cs: collaboration, creativity, communication, and critical thinking (Blair, 2012). Technology can help teachers save time as well. For example, there are many apps or websites that grade assignments automatically for teachers. Socrative.com is a great website to use when formatively assessing student learning. You simply create the quiz, the students take it using their devices, and the website grades the quiz automatically.

Former president of the United States, Barack Obama, said “Change will not come if we wait for some other person or some other time. We are the ones we’ve been waiting for. We are the change that we seek” (New York Times, 2008). Educators cannot simply wait for others to make the change. What good does that do for our students? We must make the changes that we wish to see in our classrooms.

Developing 21st century skills requires changes in methods of teaching and learning such as project-based learning which creates student-centred development of extended learning. Pedagogy requires a shift in practice focusing on learning that is project-based, collaborative, fosters knowledge construction, and is self-regulated, allowing for student voice and choice (see Figure 3). Critical thinking skills, central to this new focus, allow students to analyse complex problems and investigate questions for which there are no clear-cut answers. It also provides students with the opportunity to evaluate different points of view or sources of information, and draw appropriate conclusions based

on evidence and reasoning. Students work collaboratively to solve problems or answer questions to strengthen their ability to complete a task. Through a multiple communication system, students organise their thoughts and findings sharing these ideas through a variety of media. Creativity and innovation are central to learning from this approach as it supports students' abilities to generate and refine solutions to complex problems or tasks based on synthesis and analysis to combine and present what they have learned in new and original ways. Students are self-directed and take responsibility for their learning by identifying topics to pursue and develop processes for their own learning assessing their own work and responding to feedback. Through this process students make global connections to help them understand global needs and geo-political issues as well as to apply what they have learned to enhance local contexts and community issues. Using technology, students manage their learning and are able to produce products through information and communication systems (Ravitz, Hixon, & Mergendoller, 2013).

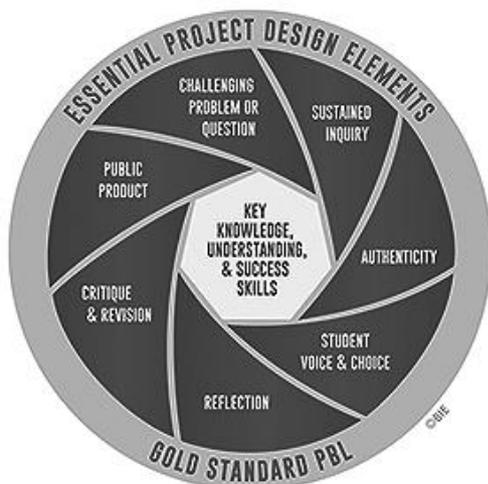
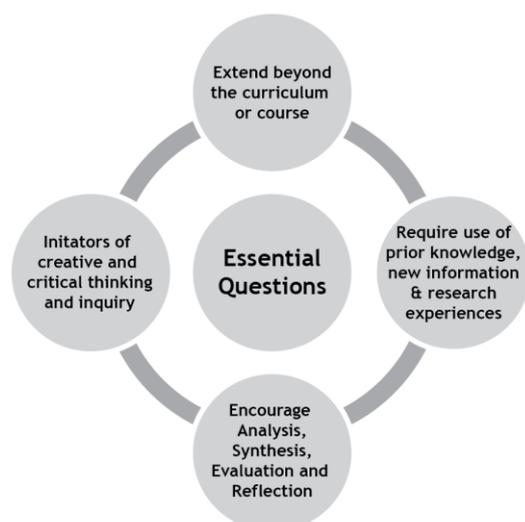


Figure 3 Project-based Learning Elements

Source: Mergendoller, 2015

According to Mergendoller (2015), critical thinking skills are foundational for 21st century success. Reasoning skills are required when student projects are created that involve deliberate and reflective thought. According to Mergendoller (2015, p. 1097), project-based learning is a “powerful pedagogy that helps students to learn how to be critical thinkers—to make thoughtful decisions and exercise reasoned judgements” as seen in Figure 4. Central to project-based learning is the creation of projects that enhance the development of cognitive tasks with student learning of academic content and skill development at the centre of well-designed projects to support critical thinking skills for 21st century success. At the centre of projects are well-developed essential questions and/or research questions to address the problem. Essential questions are designed in student-friendly language from the student’s point of view and relevant to their interests allowing for debate and are open-ended and complex to allow for multiple perspectives and more than one answer. Seen in Figure 4, questions are central to the content area and standard empowering students to take ownership of their own learning. Core elements of project-based design are key knowledge and understanding of the project, success skills such as critical thinking, problem-solving, collaboration, and making presentations, a challenging problem or question expressed in a problem statement, sustained in-depth inquiry that takes place over an extended period of time, public product or service used by individuals in the real world; and student voice and choice through a list of student-generated questions (Larmer, Mergendoller, & Boss, 2015).



**Figure 4** Essential Questions

Source. Larmer, Mergendoller, & Boss. (2015).

### Project-based learning and standards-based grading

At the centre of 21st century instruction and assessment of student learning is the use of project-based learning and standards-based grading. Together these two approaches support and complement how career pathways and academies merge key knowledge and success skills necessary for achieving college and career readiness. Content standards contain specific knowledge that students understand to master key concepts in courses aligned to pathways in career academies. With the project-based learning approach, students are able to master a number of content standards through the development of detailed project design. This process begins with an essential question that directs inquiry of a specific issue using advanced cognitive skills through informed knowledge derived from research, collaboration, and communication to solve problems or study relevant issues related to content. This practice allows students to make informed decisions through the construction of their own new knowledge of their world (Fortus, Krajcikb, Dersheimerb, Marx, & Mamlok-Naamand, 2005). This integrated instruction provides students with the opportunity to use problem-solving skills through an open-ended process of discovery to describe, define, and find solutions to real world problems (Larmer, Mergendoller, & Boss, 2015). Specific stages (see Table 1) in this type of inquiry include reflection, research, discovery, application and communication (Laboy-Rush, 2011).

**Table 1** Project-based Learning Stages

<b>Reflection</b>	Relating the problem to the student's context to support inquiry connecting what is known and what is needed to be learned
<b>Research</b>	Examination of selected readings and methods to gather information and sources through which students' progress from concrete to abstract understanding the problem
<b>Discovery</b>	Connecting research and information in which students take ownership of the learning process and determine what is still yet to be discovered about the problem. Students collaborate with each other and build on strengths
<b>Application</b>	Modelling of a solution to the problem; extending the learning to contexts; making connections to other disciplines with the creation of an artefact
<b>Communication</b>	Presentation of the model to peers and the community. Through these final stages, students demonstrate their communication and collaborative skills and take reviews and receive constructive feedback about the process

Source: Fortus, Krajcikb, Dersheimerb, Marx, & Mamlok-Naamand (2005).

PROJECT OVERVIEW									
Name of Project:						Duration:			
Subject/Course:			Teacher(s):			Grade Level:			
Other subject areas to be included, if any:									
Project Idea Summary of the issue, challenge, investigation, scenario, or problem:									
Driving Question									
Content and Skills Standards to be addressed:									
		T+A		E		T+A		E	
21 <sup>st</sup> Century Skills to be explicitly taught and assessed (T+A) or that will be encouraged (E) by project work, but not taught or assessed:	Collaboration			Other:					
	Presentation								
	Critical Thinking:								
						Presentation Audience:			
Culminating Products and Performances	Group:					Class:			
						School:			
	Individual:					Community:			
						Experts:			
						Web:			
						Other:			

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Figure 5 Project-based Learning Lesson Plan Development

Note. Project-based Learning Lesson Plan provides clear guidelines for incorporating 21st century instruction by incorporating standard concepts and student skill development adapted from the Buck Institute, 2011.

Table 2 includes practices for skills developed throughout the inquiry process. The following rubric contains a list of student demonstration and mastery of project-based learning practices. Each of these skills is assessed through ongoing formative and summative assessment.

Standards-based grading is a system that uses mastery of content to determine the grade assigned to the student by measuring students' proficiency on course objectives and standards. Instead of using grades for unit tests or individual assignments, students receive grades for each standard, or learning goal assessed. Students receive grades for assignments related to each course standard. This approach emphasises the repeated practice and revisions necessary for students to understand and master material. The key to using this method is the need for clear measurable standards with multiple assessments to demonstrate mastery of content and level of proficiency.

Standards-based grading system (Table 3) is used to evaluate mastery of content from learning standards. Student grades are aligned to student understanding and mastery of the course material and standards and have explicit meaning..

Advancement Via Individual Determination (AVID), employs the use of WICOR strategies to incorporate teaching and learning methodologies in the critical areas of *writing, inquiry, collaboration, organisation, and reading* guiding students to comprehend materials and concepts, and articulate ideas, at increasingly complex levels. Through positive peer group interactions, hard work and determination, students develop the belief of personal achievement (Barkley, Cross, & Major, 2005). Key to the success of writing is student engagement with the academic work. Writing is basic to thinking, learning and growth, requiring students to consider issues in new, complex ways, contributing to self-knowledge, and helping them to clarify and order experience and ideas (Barkley, Cross, & Major, 2005). Skills to produce critical thinking that enhance writing include structured writing, Cornell note-taking, quick writes, graphic organisers, timed writing exercises, and summaries or reflections of material.

Table 2 Project-Based Learning Assessment

Student Skill Demonstration	Mastery	Some Mastery	Limited Mastery
Compare information from different sources			
Draw conclusions from analysis of information			
Summarise what they have learned or read			
Analyse perspectives or solutions to a problem			
Generate an argument based on evidence			
Solve complex problems or answer questions to essential question			
Work in pairs or small groups to complete tasks or products			
Work with other students to set goals and create a plan for their team			
Create joint products using contributions from each team member			
Work as a team to incorporate feedback on group tasks or products			
Give feedback to peers or assess other students' work			
Structure data for use in written products or oral presentations (e.g., creating charts, tables or graphs)			
Convey their ideas using media other than written paper (e.g., posters, video, blogs, etc.)			
Prepare and deliver an oral presentation to the teacher or others			
Answer questions in front of an audience			
Decide how they will present their work or demonstrate their learning			
Use creation techniques such as brainstorming or concept mapping			
Generate their own ideas about how to confront a problem or question			
Invent a solution to a complex, open-ended question or problem			
Create an original product or performance to express their ideas			

Table 3 Standards-based grading equivalency rubric scale conversion

Mastery level	Grade	%	Rubric description
Advanced	4	100	The student has mastered content that is more complex than the stated learning goal.
	3.5	93	In addition to mastering the stated learning goal, the student has partial success with more complex content.
Proficient	3	86	The student has mastered the learning goal.
	2.5	79	There are no major errors or omissions regarding the less complex content and the student has partial success with the stated learning goal.
Basic	2	72	The student has mastered content that is less complex than the stated goal.
	1.5	65	The student has partial success with the less complex content, but has major errors or omissions regarding the stated goal.
Below Basic	1	58	With help, the student has partial success with both the less complex content and the stated learning goal.
	0.5	50	With help, the student has partial success with the less complex content, but not with the stated goal.
	0	0	Even with help, the student has no success with the content at any level.

Note. Adapted from the Buck Institute (2011).

WICOR strategies (Table 4) incorporate teaching and learning methods to guide comprehension of concepts found in standards and demonstrated in project-based learning. AVID brings research-based instructional strategies and curriculum to educational institutions across elementary, secondary and higher education institutions by teaching skills and behaviours for academic success with intensive support through tutorials and strong teacher/student relationships (Barkley, Cross, & Major, 2005).

**Table 4** WICOR Strategies

<b>Writing</b>	Structured writing samples Cornell note-taking Quick writes Graphic organisers Timed writing exercises Summaries Reflections
<b>Inquiry</b>	Reflecting on essential questions Acting on essential questions, concepts and academic tasks Defending point of view/decision Articulating multiple perspectives Extending/applying
<b>Collaboration</b>	Demonstrate sense of student mutual respect & support Develop products Solve problems together Engage in rigorous academic discourse Challenge one another to think deeply about the task at hand Focus on content and build on each other's thoughts Engage in collaborative learning activities (Socratic seminar, philosophical chairs, jigsaw activities, collaborative research products, collaborative processing and checks for understanding) Engage in collaborative learning structures (think/pair/share, fishbowl)
<b>Organisation</b>	Maintain up to date binders Uses of organisational tools such as calendars, planners and agendas up dated and aligned to project Uses focused note-taking system Plans short-term and long-term projects Uses SMART goals/data to achieve personal and academic goals Uses reading and writing strategies to organise their thoughts (graphic organisers, etc.)
<b>Reading</b>	Reads expository and persuasive texts Interaction with the text (number, circle, underlining, chart, etc.) Uses reciprocal teaching Summarising and reflecting Applies know, write, and learning charts

How students challenge themselves and others to think critically requires focused inquiry through reflection and acting upon essential questions, concepts and academic tasks as well as defending point of view, decision, articulation from multiple perspectives, extending and applying learning. Inquiry drives critical thinking skills through questioning and the application of intellectual functioning whereby students learn to ask progressively more complex questions scaffolding students to become progressively more metacognitive—aware of their own thinking processes (Barkley, Cross, & Major, 2005). When students work collaboratively, they are active and engaged learners as demonstrated through mutual respect and support, the development of products in problem-solving together, the engagement in rigorous academic discourse challenging each other to think deeply about the task, and focusing content building on each other's thoughts. Collaborative learning involves intentionally designed student groups engaged in *co-labouring* toward meaningful learning outcomes, using active engagement activities planned to maximise learning, and facilitating the sharing of the workload. Additional learning activities include Socratic seminar, philosophical chairs, jigsaw activities, collaborative research products, collaborative processing, and checks for understanding. Organisational skill demonstrates how students manage their academic lives. Evidence includes binders and organisational tools, calendars and planners and focused note-taking

systems. Through this skill, students plan short-term and long-term projects with smart goals and data to achieve personal and academic goals in writing and reading strategies to organise thoughts. Reading with a purpose is supported with complex activities to ensure that students are connecting reading material to prior knowledge, understanding the structure of texts, and using text-processing strategies during and after reading to improve comprehension (Barkley, Cross, & Major, 2005). Students comprehend and think critically through expository and persuasive texts, interaction with the text through numbering of paragraphs, circling, underlining and charting, reciprocal teaching, summarising and reflecting.

AVID's scaffold of social and academic structures instils these qualities, while at the same time improving outcomes in academic performance, building critical reading and thinking skills for rigorous fields of study, using writing as a powerful thinking and communication tool, and fostering collaboration among students, teachers, and other professionals within higher education and the "real" world of working and living (Barkley, Cross, & Major, 2005).

## Teaching and learning in Family and Consumer Sciences Education

To be a great Family and Consumer Sciences teacher requires knowledge, skills and a passion to make a difference in the lives of students and expertise in both Family and Consumer Sciences content and pedagogy. This combination in turn, is necessary for teachers to have a confident and expansive view of the full range of learning outcomes in the courses which are taught in their classrooms. Mastery learning can be conceived of as an instructional philosophy which is at the core with the belief that all students can learn, if given the time and opportunity. As teachers, we need to remember that not all students move up the ladder of Bloom's Taxonomy at the same pace (Armstrong, 2015). Mastery learning not only focuses on the content, but also on the process of mastering the specific learning objectives tied to the instructional strategies and assessment methods.

When examining Bloom's Taxonomy (Armstrong, 2015), it is apparent from this framework that learning is progression from simple to the higher levels of critical thinking. At the lower level of this framework, students master information through exposure to information and recall. At the highest level, students create new knowledge and the ability to reason about the information and apply it practically to situations.

The Family and Consumer Sciences Body of Knowledge in Figure 6 was created in 2000 to represent the basic foundation of the profession. The basic premise of this model is that family and community systems, resource acquisition and management, and human lifespan development is fundamental to the knowledge base. Central themes to the knowledge base include basic human needs, communication skills, public policy, critical thinking, diversity, global perspectives, professionalism, independence, community development, technology, and moral, ethical and spiritual development (American Association of Family and Consumer Sciences, 2017).

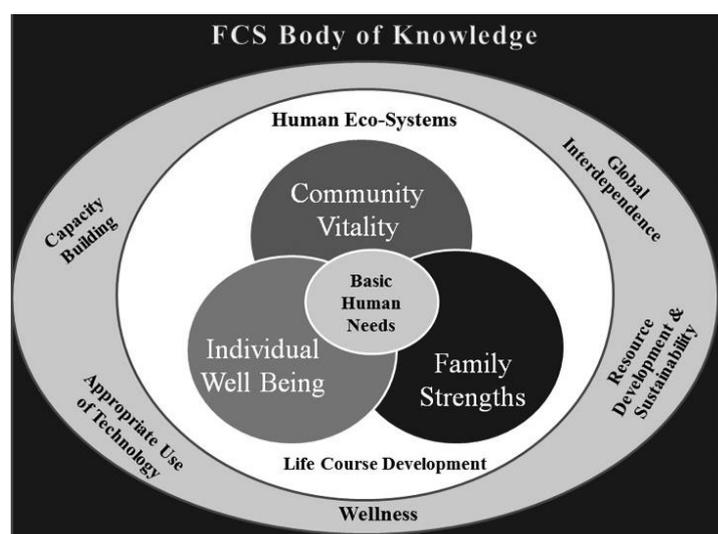


Figure 6 Family and Consumer Sciences Body of Knowledge

Source: American Association of Family and Consumer Sciences (2017).

The 2014 *Education for All Global Monitoring Report* on teaching and learning reported a global learning crisis and that the quality of education is at the centre of it (Lucas, 2014). This paper has illustrated a variety of challenging and innovative teaching and learning strategies to assist a Family and Consumer Sciences teacher and help them thrive in the 21st century classroom. All of the strategies outlined incorporate workforce and economic development policies in K-12 education. It is through these approaches that Family and Consumer Sciences teachers can prepare students to enter the workforce or a post-secondary institution fully prepared with the confidence and skills necessary to be successful throughout life (Smith & de Zwart, 2016).

Family and Consumer Sciences education has evolved into a discipline within Career and Technical Education and strives to incorporate innovative approaches to enable students to develop critical thinking, employability skills, and careers to support lifelong learning sustaining the core values of the profession found within the Family and Consumer Sciences Body of Knowledge as seen above in Figure 6. The implication for the Family and Consumer Sciences education profession is the importance of retaining the emphasis of human needs, family strengths and individual wellbeing while supporting a vital and thriving economy. This is accomplished through alignment of career clusters and standards found within AAFCS and integration within Career and Technical Education.

## Biographies

Dr Poirier has been employed at Middle Tennessee State University since 2005. She received her BS and MS degrees in Family and Consumer Sciences Education from Florida State University and University of Arizona. Her EdD was received in 1998 from Florida International University in Adult Education/Human Resources Development. Prior to coming to MTSU, Dr Poirier taught three years at Zayed University in Dubai, United Arab Emirates. Additionally, she has worked at the University of Florida Cooperative Extension Service, Florida International University, Florida Atlantic University, University of Arizona Cooperative Extension Service, and the Provincial Government of Alberta, Canada.

Dr Remsen has worked in the field of secondary education for over 24 years. She holds a doctorate from Tennessee Technological University in Exceptional Learning, a Master's degree in Child and Family Studies from the University of Tennessee, and Master of Arts in Teaching. She has worked at Middle Tennessee State University in the Department of Human Sciences and Elementary and Secondary Education and at Murray State University in the Department of Elementary and Special Education. Her research interests include the study of materialism and wellbeing across cultures and the development of early literacy in at risk populations. She is also published in the discipline of Special Education, Response to Intervention.

Ms Sager graduated from Middle Tennessee State University in May 2017 with a Bachelor of Science in Family and Consumer Studies, a minor in Secondary Education, and an endorsement in Early Childcare and Services. She is now employed by Warren County High School as a Family and Consumer Sciences educator.

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INTERNATIONAL FEDERATION  
FOR HOME ECONOMICS

REFEREED PAPER

## How can Home Economics education promote activism for social and ecological justice?

Jocelyn M Dupuis  
University of Saskatchewan, Canada

### Abstract

*Home Economics education in Saskatchewan, Canada is at a critical juncture: provincial Home Economics curriculum renewal and changes to the Home Economics teacher education program at the University of Saskatchewan offer opportunities for the evolution of the discipline. Internationally, the goals of Home Economics have shifted, a reflection of changes within academia and society. However, a gap exists between the international goals of the profession and Home Economics education in Saskatchewan.*

*Through a textual and reflective empiric analysis, a critical social and ecological justice theoretical framework of Home Economics will be developed that works to equip students with the tools necessary to participate in civil society. Civil participation is essential to challenge and change root causes of economic, social, and political inequality. Influenced by the work of Kevin Kumashiro's (2015) anti-oppressive education, Joel Westheimer's (2015) model of citizenship education, and Bob Davis' (2000) critique of lower-order thinking and learning pedagogies, personal vignettes provide examples of the transition from theoretical framework towards pedagogy, where a case is made for the applicability, suitability and relevancy of a critical social and ecological justice pedagogy of Home Economics education.*

**KEYWORDS:** HOME ECONOMICS EDUCATION, HOME ECONOMICS PEDAGOGY, SOCIAL JUSTICE, ECOLOGICAL JUSTICE, CURRICULUM

### Repositioning the field

A gap exists between the international goals of the profession of Home Economics and the way it is taught to student-teachers in post-secondary programs and grade school students in Saskatchewan, Canada. Traditionally approached as a skills-based, technical elective with developed curricula for Grades 10 to 12 students (age 15 to 18) in secondary/high school, a space must be made for a critical social and ecological justice pedagogy of Home Economics in order to increase relevancy and engagement by aligning with the objectives of the discipline on an international scale, other academic disciplines, and changes within society. The beginning stages of Home Economics provincial curriculum renewal and changes to the Home Economics teacher education program at the University of Saskatchewan provide an opportune moment in the evolution of the discipline to change its course towards a pedagogy that can develop students who are equipped to act as civil participants, addressing pressing issues of social and ecological justice.

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## Methodology

I will conduct a textual and reflective analysis through a feminist lens, in order to develop a theoretical framework towards a critical social and ecological justice pedagogy for the teaching of Home Economics. A critical social and ecological justice pedagogy is an approach to the Home Economics education that teaches students to identify and challenge dominant systems of power, while and encouraging civic participation as a means to improve the lives of people and the planet. Drawing from the work of Kevin Kumashiro (2015), Joel Westheimer (2015) and Bob Davis (2000) offers interdisciplinary possibilities within anti-oppressive and citizenship educational frameworks to inform a social and ecological justice pedagogy of Home Economics.

However, the absence of a female gaze is a major limitation of Kumashiro (2015), Westheimer (2015), and Davis' (2000) work. Reinhartz (1992) asserts that, values, knowledge and politics are bound. Thus, my interpretation of Kumashiro, Westheimer, and Davis' work is unique as it is filtered through the lens of my experience as a female Home Economics educator, and critical researcher seeking to uncover systems of power and oppression, adding much to a relatively non-existent body of Home Economics research in Saskatchewan. A feminist lens is crucial to this work because Home Economics is a feminised discipline, historically focused on the domestic sphere—a place traditionally of women's work devalued in a capitalist society despite valuable contributions to the wellbeing of the workers comprising the backbone of the labour pool. A feminist lens will help to challenge the mechanisms contributing to the marginalisation of the discipline through examination of normative institutional, social, and economic assumptions and challenging hierarchies of power and the status quo in Saskatchewan Home Economics education.

## A response to social concerns

Home Economics has been regarded by some as a relevant discipline in that it aims to help people live well; a shifting target reflective of the evolving needs and concerns faced by members of society (Apple, 2015). Through a brief periodisation, Smith and de Zwart (2010) identify how the focus of the discipline has evolved in Canada. The first period from 1900 to 1920 emphasised hands-on life skills, the second period from 1926 to 1961 focused on strengthening collaborative competencies to address dominant social issues of the time period or *social efficacy* (i.e., poverty among immigrants, sanitation issues, etc.), and the third period from 1961 to 1990s focused on consumer decision-making and practical reasoning (Smith & de Zwart, 2010).

To determine current issues of importance to society and the present goals of the profession, one only has to look to pop culture to see that citizens are becoming increasingly disenchanted with consumer-driven lifestyles and are looking for alternative ways to live well as a means to fulfilment. The growing popularity of food documentaries (i.e., *Food Inc.*, *Cooked*, etc.) focussing on global food systems and sustainability issues, farm-to-table initiatives (i.e., *The 100-Mile Diet*), the production of sustainable textiles such as Piñatex (faux leather made from pineapple leaves), and fair trade goods all illustrate the rising social consciousness of the general public.

In 2011, a course offered at the University of Saskatchewan on Indigenous food sovereignty. A current food history course is available through the history department where students study food safety, social justice, sustainability, immigration and “ethnic” cuisine, the rise of the industrial food system, and the gendered nature of cooking through the lens of race, class, gender, region/nation (College of Arts and Science, 2015; University of Saskatchewan, 2017). Foster (2013) adds that there are many academic institutions addressing similar ecological imperatives such as food waste and security as well as other sustainability issues.

These counter-discourses combined with the school and community garden movement, and non-government operations that focus on improving food policies and sustainable production, illustrate the growing interest in alternatives to dominant forms of production, consumption, and distribution that challenge governments and corporations who have power and control over the goods and services we require to live. The International Federation for Home Economics (IFHE) has taken its cue from evolving issues of social concern and have adjusted the goals of the profession accordingly.

## An evolving discipline: international and national contexts

Changing issues of importance to society towards supporting social and ecological sustainability practices are reflected in the United Nations (n.d.) release of 17 Sustainability Development Goals (SDGs) in 2015. The purpose of the SDGs is meant to unite industry, governments, and civilians in improving social and ecological issues by 2030, ensuring prosperity for people and the planet. Social justice-oriented SDGs include eradicating poverty, hunger, inequality (due to race, ethnicity, religion, gender, age, ability, income) and improving education, sanitation, and health outcomes, and economic opportunity for individuals and countries. Ecological justice-oriented goals include the protection, conservation, and restoration of life on earth and water that has been threatened through industrial processes. SDGs aimed at human development impacting the environment centre around climate action through responsible production and consumption practices, and the development of innovative and sustainable cities, communities, energy sources, and industries. It is important to note the overlap and interplay between SDGs, which are not mutually exclusive.

Recognising the congruence between the SDGs and the aims and goals of the discipline, the IFHE released several position papers in general support of specific SDGs including ending poverty, promoting good health and wellbeing, gender equality, clean water and sanitation, and responsible consumption and production. The IFHE (n.d.) describes how “[t]he ultimate goal of the IFHE is the improvement of the quality of their everyday life including the management of their resources” (par. 1). The environment has come to be recognised as an essential life-giving resource that must be managed through sustainable development practices to ensure the wellbeing of the people and animals which inhabit the earth.

Figure 1 illustrates complexities and interconnectedness of households as part of a larger global community to achieve wellbeing through sustainable development.

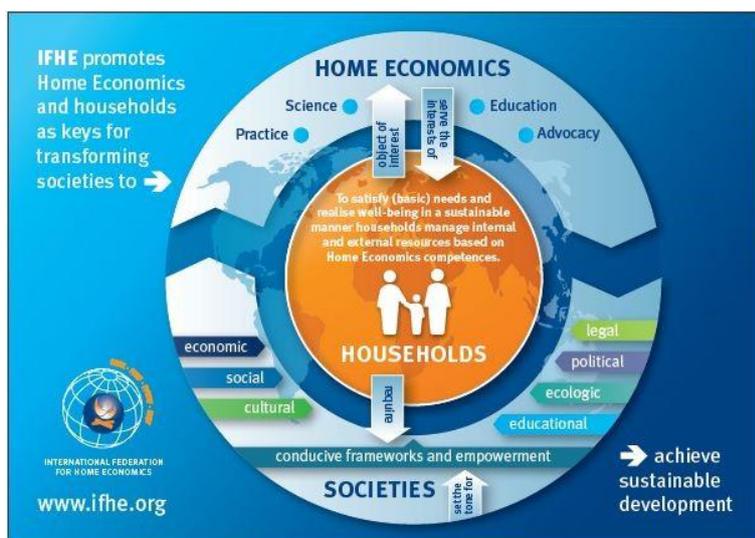


Figure 1 Home Economics relationship to Sustainable Development

Source: International Federation for Home Economics.

In a Canadian context, Smith and de Zwart (2010) understand that Home Economics:

... centers on questions such as “what should be done about...”: maintaining health, securing housing, acquiring appropriate clothing, caring for children, ensuring food security, making ethical consumer decisions, and so on. It is unique in teaching about foods and nutrition, parenting, human relationships and development, resource management, consumerism, clothing and textiles, housing and aesthetics, and integrating these topics and decisions about daily life with the wellbeing and fair treatment of people and the environment. (p. 21)

More important than what a select group of Home Economics researchers believe to be the current trajectory of the field is how grass-root practitioners, (a more heterogeneous group spanning a variety of disciplines across the physical and social sciences) see themselves. In 1998, an estimated 300 to 400 Home Economists collaborated on a shared definition of Home Economics through a series of dialogical circles and focus guides at an annual Canadian Home Economics Association Conference (Smith & Peterat, 2000). Smith and Peterat (2000) found that Home Economists self-identified a major purpose of the field as being to apply, "...knowledge and an ecological perspective to challenges of everyday life for individuals, families, and communities in practices of research, lifelong education, collaborative service, and advocacy, [and is] committed to working with others to improve human wellbeing" (p. 6). Therefore, issues of social and ecological justice are issues of Home Economics.

However, the degree to which Home Economics education in Saskatchewan aligns to the social and ecological justice goals of the broader profession is questionable. With the closure of the College of Home Economics at the University of Saskatchewan in 1990 (University of Saskatchewan, 2007), foods preparation, clothing, family finance and family life classes became part of the new Home Economics teacher education program in the College of Education while nutrition classes were restructured into the College of Pharmacy and Nutrition. Smith and de Zwart (2017) relay similar closures or restructuring have resulted in qualified Home Economics teacher shortages in British Columbia, where a survey revealed that 30% of respondents teaching in the subject area did not receive Home Economics specialisation during teacher training. It is likely that foundational objectives of the discipline are left by the wayside when taught by educators outside the field who lack exposure to a critical Home Economics background. Apple (2015) argues that the closure, downsizing, and restructuring of Home Economics programs have led to fragmentation within the field leading to a lack of cohesion to the broader goals of the discipline. Apple and Coleman (2003) describe Home Economics' transdisciplinary nature and the tendency for some practitioners to identify within narrow contexts of their specialisation, such as teachers and nutritionists versus Home Economists (as cited in Nickols & Collier, 2015, p. 23). As narrow specialisations within the field developed, so too did separate goals, interests, and pursuits. Such divisiveness was cited as a reason for the disbandment of the Canadian Home Economics Association in 2003 (Wilson, 2007). Given the development of the Home Economics teacher education program in the College of Education as fragmented from the larger profession, it is not surprising that the goals of Home Economics education in Saskatchewan are not congruent to the international goals of the discipline.

### **Pedagogy, curricula, and the Saskatchewan context**

As a Home Economics educator, I have observed variations in student engagement between skills and theory-based learning. I have found that students are keen to produce tangible products. In contrast, theory-based learning is often a struggle, evidenced by high truancy rates, low achievement scores on tests and assignments, and higher rates of classroom management issues. Personal analysis of my praxis has led to the realisation that in order to engage students in Home Economics theory-based learning, the discipline must focus not only on pedagogy (*how*, or the methods we employ to teach), but curriculum (*what* we teach) as well as being critical of why that knowledge is valued.

Higher-order thinking is related to Bloom's taxonomy: a hierarchal structure of learning based on depth of cognition. Recall, comprehension and applied learning are considered lower-order thinking whereas analysis, evaluation, and synthesis are examples of higher-order thinking (Bloom, Englehart, Furst, Hill, & Krathwohl, 1956). Currently in the process of renewal by the Saskatchewan Teachers Federation (2017), the 20-year-old Home Economics curricula are comprised of outcomes that promote lower-order thinking through an emphasis on applied learning, and recall and comprehension-based outcomes. For example, out of 30 modules in the *Foods Curriculum*, only three show potential to challenge students to think critically about concepts (Saskatchewan Education, 1999). Outcome 26.9 in the *Foods 10 30 Curriculum* requires that students become a critical consumer (Saskatchewan Learning 1999). In the suggested teaching methods beside the outcome, the document offers that students might achieve this outcome through an activity structured to help them develop an *opinion* or form a *viewpoint* (Saskatchewan Learning, 1999). Both require higher-order thinking although they are merely suggestions and do not offer practical examples of meaningful activities that might be useful to achieve the status of critical consumer.

Theory-based outcomes in Home Economics curriculum represent the interests of industry evidenced by representation from Saskatchewan Polytechnic; formerly the Saskatchewan Institute for Applied

Technology (a trade school), sitting on curricula development committees. A majority of outcomes in Home Economics curricula in Saskatchewan focus on the creation of products to demonstrate skills-based outcomes. Comprehension and recall indicators make up a majority of theory-based outcomes. Examples of lower-order thinking foods outcomes include memorising the parts of an egg, identifying properties of yeast and quick breads, and classifying types of flour. Much of this information can be easily discovered by students through the Internet. Furthermore, the degree to which similar recall-based activities meet the larger aims of the discipline to help families and communities improve their wellbeing is questionable. Students can learn to make healthy and economical dishes from eggs without memorising the parts of an egg. Students might be better served by learning about where their food comes from, how it is raised or grown, and alternative methods of production and consumption as opposed to memorising information that may or may not be required for careers in textiles, foods, and design.

Professional development opportunities for Home Economics educators such as school division meetings, as well as an annual provincial Home Economics conference centre around skills-based activities like cake decorating, pasta making, and sewing project swaps. The VISTA, a quarterly journal produced by the Saskatchewan Home Economics Teachers Association (SHETA) (n.d.), is also devoted to the distribution of resources contributed by members. The examination of resources circulated by my colleagues led to the realisation that both skills-based and theory-based pedagogical approaches to Home Economics theory often reflect lower-order curricular outcomes (i.e., notes, fill-in-the-blank activities, lectures, recall and comprehension-based textbook questions). Similar methodologies were employed as part of the Home Economics teacher education program at the University of Saskatchewan. Such lower-order thinking pedagogical methods are suitable and efficient in meeting lower-order thinking curricular outcomes but do little to help improve the wellbeing of individuals, families, and communities or challenge the root causes of social, economic, and political inequities.

A critical social and ecological justice pedagogy for Home Economics requires a supporting curriculum with higher-order thinking outcomes. Lower-order thinking outcomes and pedagogies contribute to the marginalisation of the discipline as the skills-based, hands-on projects seem more engaging, appearing to have more value than theory-based activities. This leads to the prioritising of what Apple (2015) refers to as the clichéd skills of cooking, sewing, and design—a common reduction of Home Economics education.

### **A Home Economics social and ecological justice pedagogy**

Foster (2013) and McGregor (2016) posit that addressing our current ecological crises means understanding the links between ecological health and broader social stratification issues based on race, class, gender, region, and other variables of inequity. According to Foster, the necessity of addressing ecological sustainability for the sake of survival is inextricably tied to human freedom. Developing a consciousness of the root causes of the issues, finding alternatives to consumer paradigms that hurt people, animals, and the planet, and empowering consumers as citizens to hold governments and corporations accountable for policies that protect our world is the way forward (Foster, 2013; McGregor, 2016). Questions such as *who has the power*, *who benefits*, and *whose voices are omitted* from our current industrialist/capitalist ways of being, thinking, and knowing, are essential to uncovering and challenging unequal distributions of power. Foster (2013) reminds us, “...that the struggles for human equality and for the earth are becoming one. There is only one future: that of sustainable human development” (p. 50). Kumashiro (2015), Westheimer (2015), and Davis (2000) provide a theoretical framework for a critical social and ecological justice pedagogy of Home Economics that works towards this goal of sustainability.

A critical social and ecological justice theoretical framework of Home Economics has three stages, loosely structured around Kumashiro’s (2015) model of anti-oppressive education. The *crisis stage* is a reference to the state of discomfort we experience when we realise that our knowledge is only a partial construction that looks different when viewed from alternate perspectives (Kumashiro, 2015). The crisis stage takes into account the student’s prior knowledge, questions, and desires, because what students learn will vary depending on their experience, knowledge, and positionality (Kumashiro, 2015). Self-examination should lead to the identification and reasoning behind why as learners we want to avoid the specific topics that make us uneasy, as well as inquire into our implicit and explicit actions and their underlying assumptions (Kumashiro, 2015). The *why* is unpacked as we confront our personal bias.

Kumashiro (2015) and Westheimer (2015) agree that teachers should confront students with troubling knowledge to unsettle their understandings with the goal of recognising paradoxes visible from alternate perspectives. For Home Economics, a major paradox centres on consumerism—we need to purchase items such as food, clothing, and shelter for survival although it contributes to many injustices to people, animals, and the environment. The crisis stage is not about reaching closure but rather about developing passionate, educated opinions (Kumashiro, 2015).

Davis (2000) insists that the classroom should not be a neutral place for teachers or students. Davis asserts that feminist research practices view all knowledge as political. Teachers should share their passion about their own beliefs and convictions (which offer a search for equity and justice) (Davis, 2000). Students also form a critical opinion that evolves as multiple perspectives are considered. Westheimer (2015) explains:

Students are being asked to learn to read but not to consider what's worth reading. They are being asked to become proficient in adding numbers, but not at thinking what the answers add up to—how they connect to the society in which they live. In short, students are acquiring bits of knowledge but are not being taught the social, economic, and political relevance of that knowledge. (p. 29)

Davis and Westheimer offer practical ways to stimulate the crisis stage through the examination of history and social studies.

Westheimer (2015) notes that a holistic approach must be taken to weave the past and present together in order to make history relevant to students. To Westheimer, history should not be taught as if it is static but rather as changing when connected with the present. All three authors advocate that educators must teach students to be critical of the media as it has the power to *shape collective consciousness* and influence political ideologies of the general public. (Westheimer, 2015; Davis, 2000; Orłowski, 2011). Overall, a holistic understanding of issues from multiple sources which challenges the status quo must be employed in order to give students the *real* tools needed to think critically. In Home Economics, the activism stage can be approached by examining social and ecological oppression stemming from consumer-driven production cycles.

In the *healing stage*, Kumashiro (2015) promotes personal reconciliation through the embracing of conflicting knowledge. Students in this stage should be directed towards understanding the hierarchies of power at work operating beneath the dualities of dominant discourses (Kumashiro, 2015). In this stage, depth of understanding is created as students explore the interplay between knowledge and context (Kumashiro, 2015). Students must come to terms with the fact that dominant discourses are impermanent and learning is an ongoing process (Kumashiro, 2015). For Davis (2000) and Westheimer (2015), the *crisis* and *healing stages* would be natural extensions of one another, leading students to a space where they are motivated to make a change. Orłowski (2011) emphasises teaching about the role that political ideology has on past and present events (similar to Westheimer's weaving together of the past and present). Ways to apply this stage in the classroom might involve working to understand the political nature of history and knowledge by developing discourse around who benefits and what is to be gained by the inclusion or omission of specific viewpoints and knowledge (Davis, 2000; Westheimer, 2015). Home Economics teachers can provide activities that help students draw out the socio-political history of power imbalances found in production cycles adding depth and context to current events related to foods, clothing and design.

Between the crisis and healing stages, Kumashiro (2015) outlines the *uncertainty stage* which encourages self-reflection by identifying the *hidden curriculum* and personal biases of both teacher and student before developing background in the healing stage. Kumashiro defines the hidden curriculum as the implicit values that are projected through institutional practices. I omit the uncertainty stage from my model as these important components of reflection seem to emerge in an ongoing dialogue throughout all stages.

Kumashiro's anti-oppressive model is limited as forms of oppression are generalised-problematic given that capitalism and neoliberalism are the root causes of disparity, inequality, and exploitation in all its forms (see Davis, 2000; and Orłowski, 2011). The lost opportunity to directly address issues of class is important given Anyon's (1980) work naming the hidden curriculum as existing educational differentials for students from varying class backgrounds. Anyon's work is essential to consider alongside Kumashiro because Home Economics educators teaching in (as well as belonging to) areas

of higher socio-economic status might be more inclined to embrace and utilise a critical social and ecological justice pedagogy than educators teaching in communities with lower socio-economic status.

Understanding this particular shortcoming of Kumashiro's work is essential to overcoming *hegemonic* obstacles (self-sustaining mechanisms of the dominant system that seek to discredit alternatives) to the provincial use of a critical social and ecological justice pedagogy for Home Economics in Saskatchewan. Saskatchewan is a rural, farming province with citizens from a working-class background which often emphasise technical, skills-based teaching and learning. Anyon (1980), Davis (2000), Orlowski (2011) and Westheimer (2015) view technical skills-based education as hegemonic as it continues the reproduction of working class relations in society. Directly addressing class oppression and recognising hegemony is essential if a critical social and ecological justice pedagogy of Home Economics is to be accepted and utilised by Home Economics practitioners and communities; supported by governments managing curriculum renewal; and taught to student-teachers through post-secondary programs.

The *activism stage* encourages the aims of social and ecological justice to be achieved through civic participation. For Kumashiro (2015) the activism stage revolves around exposing consequences and problems that are caused by normative practices and ways of thinking whereas I have found that this occurs in the crisis stage as part of unsettling student understandings. Examples repeated throughout Kumashiro (2015), Westheimer (2015) and Davis' (2000) work include working towards changing laws/policies, protests, lobbying legislators, and organising community and school groups for political action. Westheimer explains that without opportunities to identify and challenge dominant narratives as well as opportunities to actively engage as civic participants, educators are missing out on ways to:

teach students to think about root causes of problems or challenge existing social, economic, and political norms as a way to strengthen democracy. When we deny students the opportunity to consider paths for change that involve a critical examination of collective social policy questions (and not just individual character), we betray an important principle of democratic governance: the need for citizens to be able to engage in informed critique and make collective choices. (Westheimer, 2015, p. 45)

For Kumashiro, this stage must challenge institutional practices as well as our own responses because we must question how our own practices contribute to oppression (Kumashiro, 2015). Thus, the journey is ongoing as we consider, learn, and grow from multiple perspectives that add to our current understanding of the world. Service learning (i.e., volunteering at a soup kitchen, or sewing projects for community events, etc.) is an important part of Westheimer's (2015) participatory citizenship. Endeavours that help individuals to politically organise, raise awareness and champion policy changes, help students develop identities as civil participants and should be emphasised over service learning. Examples include lobbying, organising a rally, walking in a march, creating and circulating a petition, writing letters to officials and so on.

## Praxis: a learning journey in foods

### Crisis Stage

Despite the shortcomings of provincial Home Economics curricula and lack of exposure to critical pedagogies in the Home Economics teacher education program, I began to explore ways theory-based learning in Home Economics could be more relevant, interesting, and engaging to students. Having a personal interest in issues of food sovereignty, food insecurity, food waste, climate change related to the production, manufacturing, transportation, distribution, and consumption of food, and local and urban agriculture, I started to connect these trending issues to the curricular outcomes in my Grade 11 and 12 (ages 17 to 18) secondary foods class. Using the *Current Food Issues* (Saskatchewan Education, 1999) module in the *Saskatchewan Evergreen Curriculum* as a point of entry, I began exposing my students to information around where food comes from.

Using multiple resources such as documentaries, newspaper articles, websites, blogs, government publications, and even the science fiction movie *Interstellar*, I led students through a series of activities including debates, small group discussions, and an inquiry research project related to a topic from the unit of study. Activities and questions were structured to challenge students to

synthesise, evaluate, and analyse what they were learning about food additives, processed foods, and government regulations. As a facilitator, I worked to help frame the debates around the industrial food system. I saw my role as being to unsettle dominant narratives about our food system by presenting students with controversial information that would inspire dialogue. Congruent with Kumashiro (2015), Westheimer (2015), and Davis (2000), I readily shared my views with students when asked to model having an educated stance (a requirement of the healing stage to inspire activism).

While activities began with recall, comprehension-based expectations in order to scaffold knowledge, evaluation centred on higher-order thinking requiring students to form opinions supported by evidence. By requiring that students engage, interact, and respond to material rather than passively taking notes or answering text-book questions, interest in our topics began to grow. I noticed improvements in truancy-rates, exam achievement and increased participation. At student-parent conferences, families shared how students were extending their learning at home. As a beginning teacher, I thought that I had mastered my craft-until I taught Graham (a pseudonym).

### **Crisis Stage part 2: Confronting bias**

Graham was an ‘at-risk’ Grade 12 student at our school who struggled academically, regularly accessed the school nutrition program, and often missed school to babysit his younger siblings while his mom finished her schooling. In our *Foods 30* (Grade 11 and 12 class), Graham examined the ecological damage caused by animal feedlots as well as the ethical treatment of animals through meat production in North America. We studied the exploitation of unskilled workers through low wages and poor working conditions and how farmers are losing autonomy as agribusinesses take over through the patenting of agricultural chemicals, selective contracts to purchase products for those that prescribe to their methods, and suing those who oppose them. We learned about consumer health and safety concerns as preservatives and chemicals are added to our food with hidden names, and testing often funded by corporations with a vested interest in the outcomes rushes products to market. We also learned how the Industrial Food System contributes to issues of food waste and food insecurity for people locally and globally. Throughout the module, Graham was engaged and passionate. However, his focus in class began to wane accompanied by several absences from class.

One day, I noticed Graham pacing at the back of the classroom with his fists clenched. Before I could initiate a private conversation with him, an outburst ensued. Frustrated by the weight of the issues we had been studying, Graham vented. He was angry: angry about how we treat animals and people; angry about farmers losing their livelihoods to corporations; angry about the health and safety of his family because of the chemicals used in our food; angry that most solutions from the sources we explored suggested eating organic food and shopping at expensive farmers’ markets; but most of all angry because he had no control in his family over what they ate, where they shopped and what they could afford.

I carried the weight of Graham’s realisations with me, feeling that I had failed him. Kumashiro (2015) and Westheimer (2015) emphasise the importance of challenging ourselves and each other to recognise instances where biases skew our perspective, as well as exploring why some topics make us uncomfortable. My own positionality blinded me to the fact that the solutions we had explored were both inaccessible and exclusive—I was unaware of my bias until confronted with a perspective outside of my own experience and social positioning. However, it was from this place of frustration and sadness that I began to examine my knowledge of the discipline to reimagine a pedagogy of Home Economics that could bring students to this level of engagement and then work towards empowering them to challenge and change the root causes of inequalities.

### **Healing Stage**

Recognising and confronting my own bias helped me to facilitate deeper student learning moving forward. Our class began to uncover systems of power and oppression at work in topics related to course material as we connected the past to understand the present. We began to ask questions of dominant narratives such as *who has the power, who benefits, what are the hidden costs, and whose voices are missing?* New issues and questions arose as we questioned the lack of safe and affordable food and drinking water in remote First Nations communities. The more students learned about the socio-political contexts of the topics we were studying, the more informal classroom conversations turned to what we could do about it.

### Activism Stage

As an extension of our learning and as part of their commitment to changing dominant discourses, my students decided to write letters on specific topics of interest, presenting a call to action to companies and government organisations. Students wrote letters to their Member of the Legislative Assembly (MLA), Health Canada and the Saskatchewan Ministry of Agriculture to lobby on their behalf for more regulation of corporations, more testing on chemicals sprayed on crops and food additives put in our food, as well as for mandatory labelling for genetically modified foods. Other students contacted the head offices of grocery stores to challenge them on issues of food waste and to consider donating food normally wasted to our local food bank. The letter-writing campaign was not an original part of my unit plan, nor a curricular learning outcome. However, informal conversations with students (and parents) helped me to understand students connected with the project because it helped them to understand that their power and influence could come from their participation as engaged citizens.

Students shared the letters of reply they received as we revelled in our successes and used disappointments as a learning tool to discuss other effective forums we could use to bring attention to their call to action. We also identified the importance of education to raise awareness of important social and ecological issues and that many more voices and acts of resistance would be required to reflect our values. Students were genuinely surprised and engaged by the thought that their ideas mattered and their voices would be heard. While learning the skills to participate in civic activities would not change the immediate circumstance of Graham and others like him, it could enhance his understanding of the systems of power influencing his reality and provide him with a means to improving it.

### Conclusion

Kumashiro (2015), Westheimer (2015), and Davis (2000) contribute towards critical social and ecological justice theoretical framework that avoids any sort of grand narrative approach. It can be applied as a pedagogy through choice of instructional strategies and activities that makes sense to each individual while being sensitive to the interests of students, taking into account local issues. The critical social and ecological justice theoretical framework outlined is meant to inform a pedagogy of Home Economics that can be applied to help fulfil the goal of Home Economics in achieving, "...optimal and sustainable living for individuals, families, and communities" (IFHE, 2017). Renewed curricula with higher-order thinking outcomes and exposure to a critical social and ecological justice pedagogy in the teacher education program at the University of Saskatchewan are necessary to realign Home Economics education in Saskatchewan with the goals of the profession. A social and ecological justice pedagogy of Home Economics is essential if we are to challenge dominant, capitalist discourses and consider ways of living that will work towards a restoration of ecological balance where people assume the role of caretaker versus consumer.

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### Biography

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INTERNATIONAL FEDERATION  
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REFEREED PAPER

## Adapting to change: Building learning spaces in a culturally responsive manner

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### Abstract

*Like many other European countries, Finland received a fast-growing number of asylum seekers in 2015, and the subject of the resettlement of unaccompanied minors came under the limelight. This study analyses the experience of receiving a group of unaccompanied minors in a lower secondary school in the Helsinki metropolitan area. To help the asylum seekers adapt, the school established new teaching groups and other support mechanisms in cooperation with the asylum centre on short notice. The key actors in the process included the school leadership, the parents, pupils, preparatory class teachers and the Home Economics teacher, who were supported by a researcher from the university. The data collected throughout the process include emails, meeting minutes, participant observations, a blog and photographs. Qualitative content analysis of the material focuses on the planning and implementing of the Activity Evenings project that was organised collaboratively in the school's Home Economics class. The findings suggest that the evenings served as an important space for the newly arrived asylum-seeking students and other students, teachers and parents to build the ground for preparatory education for the immigrants as part of the school's regular programme and for further developing a culturally responsive, multicultural school community.*

**KEYWORDS:** MINOR ASYLUM SEEKERS, LEARNING SPACE, HOME ECONOMICS EDUCATION, CULTURAL RESPONSIVENESS, ACTION RESEARCH

### Introduction

This research was conducted in 2015, when Finland, like the rest of Europe, faced an influx of asylum seekers—32,500 refugees, mainly from Iraq, Afghanistan, Somalia, Syria and Albania—compared to 3,651 in the previous year (Ministry of the Interior, 2017). In 2016, Finland granted asylum to 1,570 unaccompanied minors (Finnish Immigration Service Statistics, 2017). The activities and research in this article were conducted during a period of heated public discourse on immigration. There was tension between those who were for helping asylum seekers and those who were opposed to immigration. At times, the social media discussions became heavily polarised, and many demonstrations took place against and in favour of immigration. In this research, we had the chance

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to follow up on how all this played out in daily life at a school where a group of unaccompanied minor asylum seekers had been placed on short notice. The purpose of this collaborative action research study was to establish practices for receiving new minor asylum seekers at school and to prepare the school community for the changing situation. We were interested in developing ways to strengthen the increasingly multicultural school community and to further develop culturally responsive pedagogies and home/school collaborations.

### **Role of school and community in the adaptation of minor asylum seekers**

Unaccompanied minor asylum seekers are the most vulnerable group of immigrant children (Oppedal & Idsøe, 2015). Constructing supportive networks and developing culture competence have been identified as keys to the adaptation process of minor asylum seekers (Oppedal & Idsøe, 2015). Keles Friborg, Idsøe, Sirin, and Oppedal (2016) similarly highlighted the importance of respectful intergroup relationships in schools and communities in the development of social and cultural competences and healthy adjustment trajectories in minor asylum seekers. In addition, both friends from the home culture and friends from the majority culture play a critical role in the adaptation process (Oppedal & Idsøe, 2015).

The school's role in the adaptation of minor asylum seekers is an area that needs further attention. The often interrupted and fragmented educational paths of asylum-seeking youth pose a challenge to their adjustment to structured education in the new host country (Spiteri, 2015). The immigrant youth studied by Spiteri (2015) in Malta perceived school as an element of stability in their otherwise unpredictable lives. Further, the extensive study conducted in Norway by Oppedal and Idsøe (2016) recommended the facilitation of participation in culturally diverse peer networks, which include youth from the host country, as an important domain of intervention to support minor asylum seekers. In the context of Finland, Björklund (2015) found that newly arrived young people had very limited contact with the local youth, as a result of which their social adaptation was highly dependent on professionals, including teachers, caretakers and social workers. Schools could potentially serve as spaces to create networks with the majority youth, but more needs be done to actively create opportunities for inter-group engagement.

Learning occurs in a space—both physical and virtual—that brings people together and encourages exploration, collaboration and discussion; alternatively, the space can also create an atmosphere of silence and disconnectedness (Oblinger, 2006). As learning is a social process, a community—a group of people with a common purpose, shared values, and similar goals—plays an important role in learning. A real community can be considered to exist only when its members interact in a meaningful way that deepens their understanding of each other and leads to learning. Learning spaces that foster connections rather than compartmentalisation are thus needed in Home Economics education (Malin, 2011). In this regard, Bickford and Wright (2006) have proposed several steps for engaging a community in co-creation: inviting stakeholders to participate, selecting a talented leader, understanding and appreciating differences in perspective, eliminating roadblocks to community learning, and finally, maintaining a balance between patience and performance.

### **Home/school linkages in multicultural schools**

At the time of this research, the renewal process of the national basic education core curriculum (FNBE, 2016) had been finalised. The reforms not only create new and interesting avenues for the culture of practice in schools, but also challenge teachers to extend the learning space beyond the school walls. Thus, the learning environments and work methods should be developed with the aim of encouraging secure and inspiring learning. The new national basic education curriculum emphasises on strengthening home/school linkages to support quality learning. These linkages have been found to be critical to implementing culturally responsive education in increasingly diverse schools (Gay, 2010; Gilhooly, 2015; Hue & Kennedy, 2012).

One year before the new national basic education core curriculum was launched, new legislation on pupil and student welfare (Finlex, 2013) came into effect. According to the new legislation, parents and guardians need to play an active role in the pupil's welfare services. The legislation now places more emphasis on preventive welfare and collaborative welfare practices. In practice, parent/school interaction has become increasingly challenging at upper levels of schooling. Too often, teachers find themselves contacting parents and guardians only when there is a problem.

Finnish lower secondary schools, where the learners are adolescents (age 13 to 17 years), are trying to find new ways to establish fruitful home/school interaction to enhance parents' participation. According to a recent survey conducted by the Finnish Parents' League (Vanhempien barometri, 2015), parents considered their participation quite limited, and they wished for alternative forms of participation beyond the usual fundraising-focused activities of schools' parental associations. In addition, the increasingly diverse home cultures of students also pose a challenge to schools with regard to developing new ways of parent/teacher interaction to support children's learning and creating a mutual understanding between the school and the home. In Warsame's study (2010) on the home/school relations of Somali families in Finland, the critical role of genuine intercultural dialogue became evident in overcoming prejudices, generalisations and marginalisation.

In the case of unaccompanied minor asylum seekers, *home* needs to be understood in a specific way. In Finland, some minor youth are placed in private homes, but a majority live in small institutions run by the central government during the asylum process and institutions run by the municipality after they are granted a residence permit. Therefore, the social workers and care takers, along with their peers, can be considered as their daily *family* or *home*. Björklund (2015) contended that while unaccompanied minor youth in Finland receive the support of various professionals, no one is assigned the role of a *parent*; that is, there is no one who would be able to provide holistic support. However, previous research on minor asylum seekers from Norway (Oppedal & Idsøe, 2015; Keles et al., 2016) and Malta (Spiteri, 2015) suggests that a great majority of unaccompanied youth do manage to maintain contact with their families at home and receive some amount of emotional and social support from them.

Gilhooly's (2015) study of immigrant youth from Myanmar in the USA emphasised that awareness among immigrant students about their own identities and sufficient knowledge about people's backgrounds are prerequisites for successful culturally responsive teaching. Similarly, in Spiteri's (2015) study on asylum-seeking youth in Malta, it was recommended that teachers be informed about their students' home cultures and spread the information to the home students. Gilhooly (2015) suggests that students' and their families' *funds of knowledge* could become a resource to support learning. His findings also point to the importance of the entire immigrant community in terms of supporting the learning of immigrant pupils, who face cultural and linguistic challenges in a new environment.

### **Culturally responsive education within the Home Economics context**

In this article, we use the notion of cultural responsiveness (Gay, 2013) to analyse the various dimensions of a learning space that are conducive for creating intercultural connections. Culturally responsive education addresses the learner in a comprehensive way through multi-dimensional engagement in learning activities. According to Wenger's (1999) social theory of learning, we consider learning as an experience, as doing, as belonging and as becoming. The focus of this theory is on the process of being an active participant in the practices of social communities and constructing identities in relation to these communities.

Creating meaningful connections between learners' home and school cultures is a central aim of culturally responsive teaching. For immigrant students, culturally responsive teaching can reduce the stress and anxiety associated with continually crossing cultural borders between home and school (Gay, 2013). According to Gay (2013), culturally responsive teaching should (a) connect in-school learning to out-of-school living, (b) promote educational equity and excellence, (c) create a community that includes individuals from different backgrounds, and (d) develop students' agency, efficacy and empowerment.

Home Economics as a school subject provides opportunities for culturally responsive teaching through its strong link to students' everyday lives and its orientation to activity and interaction (Janhonen-Abuquah & Palojoiki, 2005). According to Venäläinen (2010), the use of multiple tools, collaboration and peer work by teachers and their ability to connect their teaching with immigrant students' everyday lives are the key elements of successful multicultural Home Economics education. In addition, analyses of gender discourses by Home Economics university students in Finland and Ghana (Janhonen-Abuquah, Posti-Ahokas, Edjah, & Amu, 2017) pointed to the importance of a contextual understanding of gender that can be used as a basis of discussions for enhancing gender awareness and changing practices in Home Economics-related contexts.

The Home Economics classroom, as a physical space, is designed for hands-on activities and technical solutions for food preparation and household maintenance activities. However, architectural design can hinder collaborative learning (Malin, 2011), and Home Economics classrooms as gendered spaces force pupils to adopt various roles (Pettersson, 2007) before they are able to learn properly. However, despite these shortcomings, the Home Economics classroom has its advantages, especially with regard to building a collaborative learning community. In particular, its resemblance of a real-life home provides students with a sense of safety and familiarity. However, Home Economics classrooms probably mirror the majority culture and tradition more than any other classroom, and this could be a challenge for learners from diverse backgrounds.

### **Collaborative action research to strengthen home/school linkages and cultural responsiveness**

Action research draws from pragmatism and is based on the belief that knowledge comes from doing (Brydon-Miller & Maguire, 2003). It is a democratic, participatory process concerned with developing practical knowing (Camarota & Romero, 2009). It brings together action and reflection, and theory and practice, in participation with others, in the pursuit of practical solutions to issues of pressing concern to people. Working collaboratively leads not only to changes in communities and organisations, but also to personal changes in the action researcher. As action researchers reflect on their experiences, they acknowledge being profoundly changed by those experiences (Brydon-Miller & Maguire, 2003).

The importance of action research in developing Home Economics education so that it related better to the diverse, changing everyday lives of students was demonstrated in a two-year action research that was conducted with the aim of developing participatory methods for change in Danish schools (Benn, 2010). Additionally, a study by Janhonen-Abuquah et al. (2014) explored a process of developing and testing learning games to enhance intercultural dialogue in Home Economics classes. With the help of an action research-informed approach, they were able to develop tools for intercultural Home Economics education.

For this study, action research was chosen for its ability to engage practitioners and researchers in a collaborative process to renew practices. The existing links between the school and the university enabled the inclusion of a research component after the school had received external project funding for promoting equality.

### **Research context and participants**

The present action research was conducted over one school year (2015-2016) at a lower secondary school in the Helsinki metropolitan area. In 2015, the school had 300 of its own lower secondary school pupils and an additional 300 primary school pupils temporarily studying in the same premises. Out of the 300 pupils, 30 had a home language other than Finnish or Swedish. In November 2015, two preparatory classes that hosted 24 pupils were introduced in an NGO premises nearby. In January 2016, the preparatory classes were moved to the school's premises. At that time, there were three classes of 36 pupils in total, all of whom were boys. At the same time, the primary school was moved out to its own school building, which freed a physical space in the school building itself. The number of preparatory class pupils increased rather fast, which meant that the school administration had to make some quick decisions about their schooling. Only two brothers who attended the preparatory class had come to Finland with their parents, while all the other boys had arrived in Finland alone. Staff and pupils donated school bags, school accessories, winter boots and warm hats, and teachers knitted woolly socks for the immigrant boys. The preparatory class had a strong focus on art and skill-oriented subjects. A Home Economics teacher was hired to teach the preparatory class pupils. The classes were planned according to the city curriculum for basic education and its section on preparatory classes, which emphasised on Finnish as a second language in teaching. The main aim of these classes is to ease the domiciling process and ensure the students meet the adequate prerequisites for joining mainstream classes.

This collaborative action research was carried out in a culturally diverse group consisting of pupils, parents, teachers, student-teachers and a researcher. A second researcher joined the team during the analysis stage. The number of actors and their key roles and responsibilities are summarised in Table 1.

Table 1 Actors and their roles in the present action research

Actor	N	Role and responsibility during the process
School principal	1	Applying for funding, contacting parents, chairing the first meeting
Parents (6 mothers and 2 fathers)	8	Taking part in meetings and events, planning the menu, cooking
Pupils (10 'old' pupils of the school and 12 new asylum-seeking pupils)	22	Taking part in meetings and events, planning the menu, cooking
Home Economics teacher	1	Assisting with recipe writing, purchasing ingredients, acting as a co-researcher
Preparatory class teachers	3	Acting as the mediator between the asylum-seeking boys and parents, recipe writing, purchasing ingredients
Teaching assistants	2	Acting as cultural interpreters
Student-teachers	2	Helping with organising Activity Evenings
Researchers	2	Collecting and analysing data, holding discussions with the Home Economics teacher, presenting the findings in a conference and leading the writing of the research article

As seen in Table 1, over 40 people were engaged in the activities in various roles. At the school level, the activities were led by the school principal and the Home Economics teacher. The preparatory class teachers and teaching assistants served as mediators between students, parents and teachers. The researcher and two student-teachers from the university supported the process both practically and analytically. The collaborative action research team was formed by the researchers, the Home Economics teacher and the school principal. The other actors can be defined as active respondents (Fielding, 2001) who engaged in discussions on the process that influenced the research direction, as explained later. The following sections of the article describe the process and the participants' changing roles in more detail.

### Steps of the action research process

The collective commitment to investigate an issue (McIntyre, 2008) arose as the entire school, including parents, were facing a new situation in the form of a group of young asylum-seeking boys who had newly arrived at the school. The principal of the school also felt the need to engage in self- and collective reflection to make sense of the new situation. This led to a joint decision to engage in individual and collective action that leads to a useful solution that benefits the people involved and helps build alliances between researchers and participants, altogether over 40, for the planning, implementation, and dissemination of the solution (McIntyre, 2008). The process is summarised in Figure 1. In the following section, excerpts from the data selected by the research team are used to describe the experiences, feelings and decisions of the team at different stages of the process.

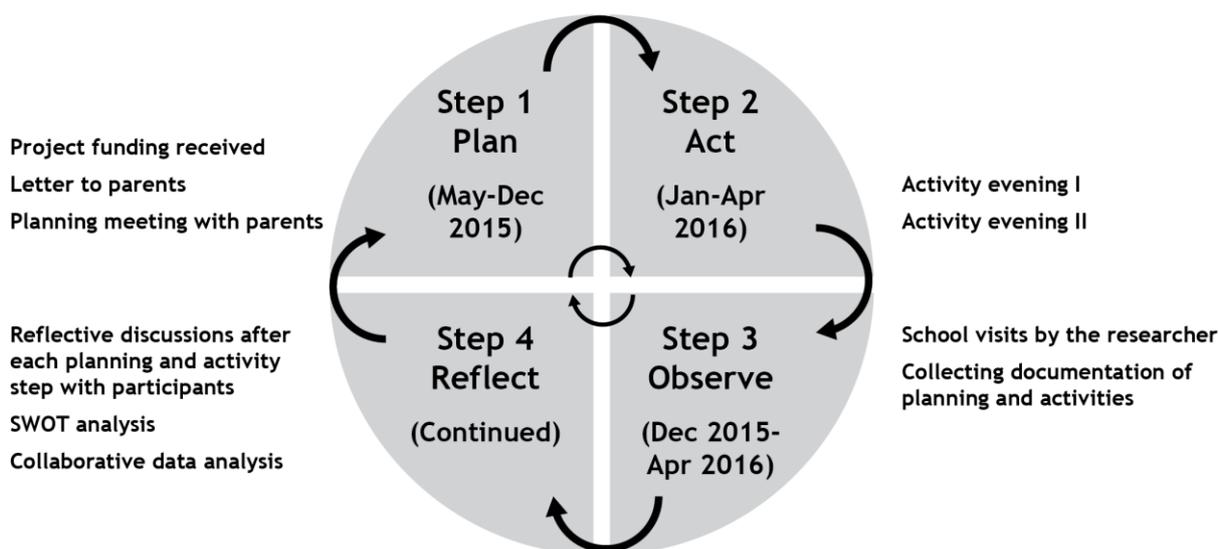


Figure 1 Steps of the action research

### Step 1. Planning: Seeking funding and arranging meetings

The process was initiated in May 2015 when the principal submitted an application for equality project funding to the Ministry of Education. The school received the funding, and in the beginning of the autumn semester, the principal presented the idea to the school staff. The funding was primarily assigned to activities to enhance school/home collaboration. At that time, the school's Home Economics teacher, who was actively engaged in the project planning, contacted Home Economics teacher educators at the University of Helsinki to identify opportunities to involve a research component in the project.

This adds to the workload and...so it does feel a little tiring and like something extra. But it is so interesting!  
(A text message from the Home Economics teacher to the researcher)

The initial plans to open an afternoon coffee shop run by parents were not successful. Moreover, attempts to engage university students as co-researchers in the process were not realised either. In the autumn of 2015, the school was asked to prepare to receive 36 unaccompanied minor asylum seekers and to integrate them into the school community. The youth had arrived in Finland in October, and teachers from the school had started teaching them in the reception centre. The reception centre was established by an NGO, particularly for this group of youth, in the school's catchment area, where very few immigrants reside in general. The school leadership, facing a new situation, took active initiatives to involve parents and some external actors to create activities for the whole community in order to enhance collaboration with the asylum-seeking students and other students and to create practices for home/school collaboration to support the integration of the new students and the appreciation of cultural diversity. The following email was sent by the school principal and the Home Economics teacher to all parents:

Our school is becoming more multicultural.

Our school is strongly multicultural and through opening two preparatory classes for immigrant students last week, we have even more nationalities present.

We are approaching you guardians to discuss multiculturalism in our school. We have received equality project funding for this purpose and are inviting you to discuss and share ideas over coffee to see how we could support our newly arrived students and 'old' students to collaborate. What could the homes and the school do to help the new pupils to adapt and to increase the appreciation of different kinds of cultures?

Home Economics is a popular subject in our schools; thus, we wonder whether we could spread cultural awareness through this subject. However, all ideas related to other subjects and school activities are welcome. Thinking about these together at this point would be very enjoyable...

Sixteen parents, 15 females and one male, attended the first parents' meeting arranged in December 2015. The principal informed the participants that the new asylum-seeking pupils were to start studying at the school. The two preparatory class teachers of the asylum-seeking pupils, the Home Economics teacher and the researcher from the University of Helsinki, also participated in the meeting. The following quotes from the parents are from the discussion conducted during the meeting:

We are indeed facing a big change. Then 'they' become friends of our children and they start visiting our homes like other friends. I wish I could come to this school.

My son cannot imagine what it feels like to arrive alone in a country where you don't know anyone and without knowing the language. He said he'd rather die.

The atmosphere was generally very positive, and new asylum-seeking pupils were welcomed by the parents. The parents also openly expressed their worries and concerns about the new situation. One parent immediately expressed willingness to volunteer in supporting the learning of the new students. The teachers of the students who at that time taught them at the reception centre talked about the students. One of them said, "I wish you could see these boys", to indicate that there was nothing to worry about. One of the parents who is a teacher in a more diverse school stated that multiculturalism is part of everyday life in some other parts of Helsinki: "You no longer see it, and it is good that this particular residential area receives more immigrants."

During the discussion, the idea of the activity evenings—cooking and eating together—took place. The idea was that the new and old pupils of the school, along with the parents, would cook and bake in the Home Economics classroom. A plan for action was made, and the time of the next meeting set.

The second planning meeting took place in February 2016. Parents, pupils (both asylum seekers and others) and the school staff took part in planning the activity evenings. The recipes were selected by both pupils and parents. The teachers purchased the groceries, and the parents agreed to bring some of the food required for preparing specialties from certain cultures.

I wish I could have video recorded the event! Even though there were only four guardians present (and one apparently in a wrong place—thinking of having come to the school trip planning meeting), the evening was overwhelmingly joyful! Two of my 7th grade students, one with family from Estonia and one whose mother is from an Eastern European country (the mother was also present) and seven pupils from the preparatory class (from Afghanistan, Iran, Iraq and Syria) were all present. The mixture of cultures was amazing! (Message from the Home Economics teacher to the researcher, who was unable to attend the meeting)

## Step 2. Acting: Activity Evenings

The first Activity Evening took place in March 2016, and the second in April 2016. The participants at both activity evenings were parents, asylum-seeking students, the school pupils and teachers. Two Home Economics student-teachers took part in the second Activity Evening as part of their teaching practice. The difference between the two evenings was only the number of participants.

The first evening was run at two separate Home Economics classrooms simultaneously, because over 30 participants were present. The preparatory class teachers helped the Home Economics teacher with the grocery purchases. All the ingredients were arranged in separate boxes to make the food preparation easy. It also helped with the forming of groups. Eight groups of four to five persons each were formed, representing diverse cultural backgrounds. The recipes were chosen to represent the cultures of the participants, and the culture experts taught the others how to cook or bake the food. The atmosphere was cheerful and very friendly. The dinner tables were set in both classrooms, as there was no space for one big table. The moment when everything was ready and the participants were gathered around the table was the most fruitful for cultural exchange. The food was a safe theme for discussion, even though there was no common language. English was the language that was mostly used.

The Home Economics teacher who organised the evening was rather exhausted from the preparations. Before the first Activity Evening, she sent the following text message to the researcher:

I've worked like crazy to make tomorrow successful and I'm quite tired and contemplating whether to organise the second evening or not.

After the first evening, the researcher received this text message from the Home Economics teacher:

Hi! Everything went really well...The second evening will not be organised. It is good to stop with this successful experience. This is a good framework.

The second evening was arranged because the pupils made several requests for it and there was still funding available. It followed the same pattern as the first one, except that the working space was changed. The first evening was arranged in two separate classrooms, but the second one was arranged so that everyone was in the same room and could participate together in the conversation and observe others. At that time, two Student-teachers were doing their teaching practice at the school and were very enthusiastic about participating and helping the Home Economics teacher. Although the Home Economics teacher reported that the process was exhausting, she emphasised the value of working together and particularly appreciated the discussion over the dining table after everything was cooked.

We can learn a lot of new things around food! Thank you for everyone who participated, particularly the pupils and mothers who taught food preparation, and to all enthusiastic cooks! Together we created a lot of memories and tasty food. (Extract from a blog post by the Home Economics teacher in the school's blog)



Picture 1 Frying doughnuts during an Activity Evening

### Step 3. Observation

Throughout the planning and acting steps, the events were systematically documented and the data collected, which include photographs, a blog, emails, text messages, the school homepage, minutes of the PTA meetings, the principal's letter to all the parents, the funding application and participants' observation notes. All the data were compiled by the researchers in electronic files that were shared with the action research team. The data are organised and summarised in a matrix (Table 2), which provides the time, type of data, core content, the actors involved, the challenges, resources for the information, and the researchers' specific comments.

Table 2 Excerpt from the matrix

<b>Time</b>	Parents' first meeting In January 2015
<b>Type of data</b>	Participant observation notes
<b>Core content</b>	The principal opened the discussion and chaired it.
<b>Actors</b>	Mothers, fathers, principal, teacher as researcher, researcher, preparatory class teacher, welfare officer
<b>Challenges</b>	How to attract parents to attend? How to find a suitable time for the next planning meeting?
<b>Resources</b>	Equality project funding provided by the Ministry of Education
<b>Researcher's interpretation</b>	I sensed some anxiety and concern amongst parents about the changing situation at the school. The principal was calm and confident. The parents were eager to share ideas, and were active and talkative. The atmosphere was positive.

### Step 4. Reflection

The process of organising and analysing the data gathered is the final stage of the action research cycle. Reflective discussions during the process amongst various stakeholders were carried out. These were both informal discussions that took place during and after each planning and action step and more formal ones based on the documents gathered during the process. A SWOT analysis (Väyrynen, 2010) was conducted to identify the successes of the process and to identify areas that need further

attention. Strengths and weaknesses are internal factors, whereas opportunities and threats are external factors. The results of the SWOT analysis helped focus on the process and identify critical points during each step of the action research. The findings of the SWOT analysis also guided qualitative content analysis (Creswell, 2007) of the data. The manifold data obtained from photographs to official documents, and from phone call transcripts to blog texts, posed some challenges for the analyses. The ability to combine different types of data was important for gaining a holistic picture of the project. The different types of data also brought valuable depth to the analysis process.

One of the main strengths of this project was the enthusiastic staff, who helped pull the project through. The team was also rather multi-professional and involved actors from outside of the school. Similar to Gay's (2013) culturally responsive teaching study, the project created a community comprising individuals from different backgrounds. The encouraging school spirit was the starting point for the project. As seen above, the meetings and activity evenings created spaces for forward-looking, positive interaction and joint activity. A project such as this is an invaluable attempt to build bridges between the former county of origin and new host culture, as asylum seekers experience many challenges (Björklund, 2015) in the new home country. The school staff also had a scientific orientation with regard to school practices. In addition, they had the courage to intuitively try out new practices and to involve actors from the university in the process.

One of the weaknesses of this project was that the school had no prior experience working with asylum-seeking pupils, as a result of which the project was dependent on one or two key persons and the interest of new preparatory class teachers. Moreover, the project was not planned in detail, but it started out quite open and grew *on its own* and evolved during the process. In addition, at the end of the school year, the extent to which the activities had an impact on the regular school practices was unclear.

There were several opportunities that eased the process. Extra funding provided by the Ministry of Education was needed to launch the project, and this turned out to be quite an important motivator. In this project, the sudden influx of asylum seekers was an opportunity for research, as the new situation had the entire community *on its toes* and created positive anxiety. The parents' enthusiastic participation and input were invaluable for the project.

There were several threats, such as the fear that some negative experiences would change the overall attitude in the school or that the school's inexperience in dealing with the new situation might be a problem. Luckily, these fears were not realised. The activities were funded through an extra budgetary project, as it might have not been possible to sustain the activities through the school's regular budget.

To summarise, the school's response to the unexpected was innovative. In particular, inviting all the parents and pupils to engage in the activities extended the space for home/school collaboration beyond the regular channels of communication with individual homes or through the parents' association. The previously acquired, yet unspent project funding for enhancing equality enabled the funding of the extra-curricular activities for students and their parents, to support the new students' integration into the school community. However, the process was heavily dependent on participants' own time, resources and intrinsic motivation. Although no formal feedback was gathered from pupils and parents, their active participation and enthusiasm indicate that the process was meaningful for all the actors involved.

## Discussion

The changes in school legislation and national curricula combined with an influx of asylum seekers have created an interesting change in momentum in Finnish society. The situation has provided an opportunity for a new kind of parent/school collaboration and provided a renewed frame for school/home cooperation, and this was the subject of study in a lower secondary school in the Helsinki metropolitan area. The action research approach was chosen as it is a useful tool for developing practitioners' own practice in a systematic manner. Further, the *bottom-up* approach for creating institutional or individual change (Cammarota & Romero, 2009) was used. As this approach focuses more on individual change, in the present research, the process was viewed mainly through one teacher's experiences. In addition, action research proceeds through small steps that can be observed.

Using a participatory approach makes the process inclusive and open, as it involves the people who are being acted upon and observed (Brydon-Miller & Maguire, 2003). Changing the culture of practice in any school requires changes in the roles of pupils, staff and parents. During the current project, a comprehensive learning space was built through genuine co-planning and a shared interest in the joint project. A change in professional roles was seen. The school staff provided space for others to work within the school and within the classrooms. The teacher stepped down from her leading role and acted more as a general support person. This allowed students' and families' *funds of knowledge* to be used as a resource for supporting learning (Gilhooly, 2015). Thus, recognising the trans-national family connections of minor asylum seekers could also provide opportunities for meaningful learning.

The Home Economics classroom provided the physical space for collaborative activities, including food preparation and eating together. However, what was more important than the activity itself was the interaction during the meetings and the activity evenings. Preparing and eating exotic foods is probably too naive a way of dealing with cultural differences, but it is a starting point for learning. Cooking does not increase cultural awareness, but may act as a mediator. Moreover, the power of working together should not be underestimated. The vigour of practical activities in children's upbringing and in education has interested researchers both from the pragmatic theoretical (e.g., Hickman & Alexander, 1998) and experiential learning (e.g., Kolb, 2015) point of view. Home Economics science researchers have also attempted to demonstrate the power of practical activities in education. Haverinen and Martikainen (2004) described an *atmosphere of care* in family interaction, focuses on the way of being together, tone of conversation and emotional climate. Their findings showed that an atmosphere of care was built by paying attention to one another's needs in practical activities and balancing between freedom and boundaries, and also through creating experiences for a sense of community. In particular, dialogical interaction was the point of reference when constructing an atmosphere of care. Although the present research was conducted in the school setting, one can see a parallel attempt to build dialogical interaction.

For the future of the project, a written document, guidebook, manual or even this article would help not only to record the activities, but also as a platform for developing the next phase. The research orientation of the school principal and the Home Economics teacher is a good indicator that there will be follow-up studies. This type of activity ought to be built into regular school work, teaching and parent/teacher cooperation. Further, the work that the staff does should be included in the teachers' working hours and in the school curricula. Co-operation with various non-governmental organisations such as parents' associations, Home Economics teachers' association and other teacher associations is necessary to disseminate the outcomes. In addition, spreading the findings to others and learning from the good practices are crucial.

## Biographies

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INTERNATIONAL FEDERATION  
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## *Special Issue*

Teaching and learning in Home Economics education

**Section II: Pedagogies for general education**



INTERNATIONAL FEDERATION  
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REFEREED PAPER

# Teaching sustainable food consumption in Swedish Home Economics: a case study

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## Abstract

*The introduction of a sustainable development perspective in Swedish national syllabus of Home Economics, anticipates teachers to facilitate opportunities for pupils to develop knowledge, skills and abilities to assess choices and actions as a consumer from the perspective of sustainable development. The aim of the present study is to explore and describe characteristic features of knowledge content regarding food-related education, implemented from a perspective of sustainable development in a teacher's classroom practice of Home Economics. With a single case study design and critical case sampling, 14 lessons in Grade 8 (pupils aged 14 to 15 years) were analysed using qualitative content analysis. The analysis reveals a knowledge content that places the practice of creating a self/homemade meal in the centre of implementing a perspective of sustainable development, which emerges in three main categories: sustainable food selections, sustainable cooking approaches, and sustainable food utilisation. In conclusion, the study implies that Home Economics could be a school subject that enables systematic education regarding sustainable food consumption with the multi-relational phases of a self/homemade meal practice as teaching ground. However, clarification of what teachers in Home Economics are expected to facilitate in regard to content, width, and depth, when teaching sustainable food consumption in classroom practice is needed.*

**KEYWORDS:** FOOD CONSUMPTION, EDUCATION, SUSTAINABLE DEVELOPMENT, HOME AND CONSUMER STUDIES, HOME ECONOMICS

## Introduction

### Food consumption and sustainable development

The notion of sustainable development (SD) has become a leading international agenda to meet the needs of the present, without compromising the ability of future generations to meet their needs (Brundtland, 1987). For this, the goal of sustainable consumption patterns has been outlined as one of its most urgent action orientations (Agenda 21, 1992), where food consumption is one of the three

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main consumption domains recognised as causing major impacts on public health, economies and the environment (Reisch & Thøgersen, 2015). Accordingly, food-related issues now have a widely accepted position in the global SD goals (UN, 2015).

There is not yet a common definition of sustainable food consumption, however, Reisch (2010) has positioned a broad understanding of sustainable food consumption as having to be “safe and healthy in amount and quality; and it has to be realised through means that are economically, socially, culturally and environmentally sustainable—minimising waste and pollution and not jeopardising the needs of others” (Reisch, 2010, p. 1). Further, emphasis has been placed on an expanded view of food consumption systems, taking into account perspectives of production, processing, transportation, packaging, marketing, handling, preparation, storing, cooking and discarding of food, each of the steps being considered both in terms of their impact on the environment and on human health (Reisch, Eberle, & Lorek, 2013). Thus, the concept food consumption could be regarded as multi-relational (Halkier, 2009), that is, incorporate far more elements and activities than merely dietary intake.

### Promoting transitions towards sustainable food consumption

Within the global policy agenda of promoting transitions towards sustainable food consumption, individual consumers are often ascribed with agency to play an active role in this process (Halkier, 2009; Micheletti & Stolle, 2012). The major food consumption patterns emphasised as being in need of urgent change is: to reduce the high consumption of meat and dairy products; to favour organic fruits and vegetables; to avoid goods that have been transported by air; and to decrease the amount of generated food waste (Reisch et al., 2013). Such consumption patterns can be viewed as part of people’s everyday food practice routines, rather than as a result of separate choices (Halkier, 2009; Wahlen, Heiskanen, & Aalto, 2012). For instance, Belasco (2008) outlines the complexities of food-related choices in terms of three dominant and competing forces; identity (e.g., culture, tradition, taste), responsibility (e.g., health effects, economic, and environmental consequences), and convenience (e.g., time, resources, availability), that influence food choices by either being in harmony or conflict with each other (Belasco, 2008). From this view, consumers are ascribed with agency as both being capable of making rational choices, as well as being conditioned by everyday surrounding structures (Halkier, 2009; Thøgersen, 2017). Accordingly, both consumer agency and conditionings to such agency should be targeted and tailored to different social groups when promoting changes in people’s everyday food practices (Reisch et al., 2013). One such advocated strategy that has gained greater recognition is food-related education (Contento, 2008; Sumner, 2016; Thomas & Irwin, 2012).

### Sustainable development in Home Economics

The Swedish compulsory school subject Home and Consumer Studies (henceforth referred to in its international preferred terminology HE [Home Economics]) is the formal Swedish subject that incorporates food, meals and health-related education with elements of nutrition knowledge, planning meals and practicing cooking, amongst other content areas (Skolverket, 2011a).

In the 2011 curriculum revision, the subject of HE was revised to incorporate “a perspective of SD” (Skolverket, 2011a, p. 42) as one of its responsibilities in teaching (Skolverket, 2011b, p. 6). Accordingly, the prescribed national syllabus anticipates teachers to “give pupils the opportunities to develop their ability to [...] assess choices and actions in the home and as a consumer, and from the perspective of SD” (Skolverket, 2011a, p. 43).

When using the term *SD*, the HE syllabus refers the three subject-specific perspectives of *health*, *economy*, and *environment* as a means to concretise the dimensions of SD in HE education (Skolverket, 2011b). However, the formulated linkage between the broad and ambiguous notion of SD and HE practice is expressed on a highly general level, leaving out a more concrete understanding of what this could entail in the various knowledge areas practiced in the subject, such as its substantial knowledge area of food.

In this light, a previous study (Gisslevik, Wernersson, Åberg, & Larsson, 2016) examined historical ways of describing food education in HE, and related to a perspective of SD. The result displayed that the content and mission of HE has changed and transformed into new complex ways of viewing the dimensions of food-related issues, and that individuals, and thus pupils’, responsibilities as food

consumers have expanded. The responsibilities now also involves critical thinking of global structures and the wellbeing of future generations, while the former is more about managing the wellbeing of family and household. Such a consumer/pupil view can be regarded as in line with *agency* described as *political consumerism* or *sustainable-citizenship* (Micheletti & Stolle, 2012).

### From formulation to implementation

Although the timetable of HE has remained at approximately 118 hours, there has been an expansion of content to cover the topic of food (Gisslevik et al., 2016). The abstract formulations of the subject's aim and knowledge requirement relating to SD give relatively little insight of how this perspective can (or ought to) be implemented in everyday classroom practice of HE. This calls for a consideration of the responsibilities placed on teachers and what content to expect in the actual teaching practice.

Accordingly, the aim of the present study is to explore and describe characteristic features of knowledge content regarding food-related education, implemented from the perspective of SD in a teacher's classroom practice of HE. We focused on the education practiced by one teacher who is self-identified as having implemented a perspective of SD. Thus, we do not attempt to define what SD in HE is or ought to be. Our guiding questions are:

1. In what ways is the perspective of SD concretised in the food-related education?
2. What content is centred and prioritised in this implementation?

### Method

An exploratory case study research design was used to explore content of HE education given by one teacher throughout the eighth grade in a school in south-western Sweden in 2013. A case study research design is preferable when a contemporary phenomenon is investigated within its real-life context, "especially when the boundaries between phenomenon and context are not clearly evident" (Yin, 2003, p. 13).

#### Case selection

The selected school fulfilled a number of strategic criteria. One of them was to meet frame factors required for quality HE education (Lindblom, Arreman, & Hörnell, 2013), such as having a formally qualified HE teacher, fully equipped kitchen units, and sufficient lesson duration ( $\geq 120$  min). Another main criterion was that the teacher had a pronounced interest and vision to work in line with SD as expressed in the syllabus. The intention was to find a "critical case" (Yin, 2003, pp. 40-41) that exhibited propositions for the searched phenomenon. Previous studies have shown that these practical conditions are not fulfilled in a number of Swedish schools (Lindblom et al., 2013; Lindblom, Erixon Arreman, Bohm, & Hörnell, 2015). Thus, the selection criteria was used to find rich enough data to make possible an analysis based on conditions matching what is intended/expected in the national syllabus of HE.

Teachers known by the University for their interest and work in education for SD, were contacted. One of them immediately responded positively to the request. After initial meeting and interview to confirm sample criteria and access, sample observations and a pilot study were conducted. Finally, an agreement between the teacher and researchers was made that the main study should be carried out over the course of the eighth grade year (adolescents aged 14 to 15 years), since the majority of teaching regarding SD was pre-scheduled in this grade. The HE eighth grade education was in this particular case given in 10 lessons, three hours each, and distributed over a three month period during the fall semester. Field visits were planned in two parallel classes, resulting in a total 20 possible observation opportunities. Out of these 20 lessons, 16 lessons were judged to be of relevance to the present study (the remaining four lessons contained teaching of non-food-related consumption such as clothing, electronics, mobile phone subscriptions, etc.). Further, two lessons were excluded due to classroom shortages and staff illness. This led to a total of 14 lessons eligible for further analyses, eight lessons in one class and six lessons in the other. In line with ethical principles of the Swedish Research Council, oral and written consent was received from pupils, with the parents' signature for pupils below the age of 15.

## Data collection

The events in an HE classroom consist of a wide range of activities and movements all around the room. This classroom consisted of a single square room, divided by eight kitchen units in one-half of the room and the teacher's desk, dining, and study areas in the other half of the room. Therefore, different data collection techniques were used to triangulate the practices taking place. For this paper, the analysis has a main focus on the teacher, and analysed data is primarily based on: the observer's field notes, audio recordings in the classroom, and printed assignment questions and theory tests.

The techniques of the observations and field notes were inspired by Delamont (2008) and Jeffrey and Troman (2004), thus, including as many details as possible when using all senses, for example, how the room looks, who talks to whom, how the teacher interacts with pupils, the atmosphere, and so on, just in case it will be important for analysis at a later stage.

## Procedure

Every observation session started during the teacher's preparation before the pupils entered the classroom. When pupils arrived, the observer was placed at the sidewall of the classroom with pen and notepad, which were the observers' position during the initial lecture and at the final discussion. During cooking activities, the observer moved more freely in the classroom. At the end of the day, the teacher usually had time for a short informal conversation with the first author about the lesson.

## Data analysis

The field notes were transcribed and expanded after each lesson. Audio recordings, written assignment and theory tests were transcribed and inserted into lesson narratives. Every source of data was marked for recognition. The transcribed text was analysed using interpretive qualitative content analysis described by Graneheim and Lundman (2004).

The material was read through several times to obtain a general idea of the content. Text was organised into words, sentences or paragraphs containing characteristics that were related to each other throughout content and context, so-called *meaning units* (Graneheim & Lundman, 2004). The meaning units were condensed and given a code. The different codes were compared based on differences and similarities and sorted into main and sub-categories (Table 1).

Table 1 Examples from the analysis and construction of meaning units, condensed meaning units, codes, sub-categories, and main category

Meaning unit	Condensed meaning unit	Code	Sub-category	Main category
Teacher: Where do you place the pot? Pupil: On a stove burner that fits. Teacher: Why? Pupil: You save energy. Teacher: Yes, you do. Since unnecessary heat does not disappear from the sides.	You save energy by placing the pot on a stove burner that fits.	Right size stove burner to save energy.	To reduce the use of energy and water through approaches of cooking	Sustainable cooking approaches
'The pot has been standing without a lid and with no boiling water, until the teacher asks the pupil what he thinks can bring the water to boil more quickly and at the same time save energy. The pupil puts the lid on. The teacher nods in the affirmative.'	Using a lid can bring the water to boil more quickly and save energy.	Use lid to save energy.		

## Results

### Overview of observed lessons

The structure of most lessons followed the same pattern with an introductory presentation of lesson objectives, main concepts, rehearsal, discussions and preparations for lesson activity. The lessons usually entailed some kind of cooking process followed by an oral or written evaluation and discussion. Table 2 shows an overview of the observed lessons.

**Table 2** Overview of lesson objectives relevant to food and sustainable development (SD) and the assigned cooking process

Observed lesson/class	Content relevant to lesson objectives relating to food and SD	Cooking process
1. 8B	Recognise difference between food and waste; practice resource management of raw materials when creating meals; apply environmentally-smart kitchen work.	Vegetable soup
2. 8A 3. 8B	Reduce/replace amount of meat; make use of what you've got, and avoid leftovers; evaluate cooking techniques regarding health, economy, and environment.	Meat, beans, and/or lentils casserole
4. 8A 5. 8B	Plan, prepare, and evaluate a sustainable meal based on plate model and environmental aspects; perform cost calculations for the meal.	Fish casserole
6. 8A 7. 8B	Understand meanings of various environmental and health labels; select and justify choices in a more developed way.	Meatballs, potatoes, and gravy
8. 8A 9. 8B	Apply informed reasoning regarding consequences of different choices related to planning, preparing, and management of leftovers/waste in reference to health, economy, and environment.	Written test Theoretical soup and bread
10. 8A 11. 8B	Discuss choices and actions in the home based on the written test. Discuss organic/non-organic, Swedish vs. imported apples, and differences in home-baked vs. purchased apple/crumble pie mix.	Apple pie
12. 8A 13. 8B	Contemplate consequences of choices and actions in the home related to SD. Consider applicable environmental and health labelling on own baked goods.	Carrot cupcakes
14. 8B	Plan and prepare a sustainable meal based on different energy needs and give reasons for choices.	Pie or lasagne

### Results from the content analysis

The analysis of the observed lessons resulted in nine sub-categories that reveal several food-related aspects ascribed to a perspective of SD, and deliberated throughout the perspectives of health, economy, and environment. Further, these deliberated aspects were analysed and organised into three main categories: A) sustainable food selections, B) sustainable cooking approaches, and C) sustainable food utilisation, which implied that the prioritised knowledge content regarding food and SD was ascribed to various elements within the practice of creating a self/homemade meal (Figure 1).

In the subsequent section, the centrality of the self/homemade meal is presented throughout descriptions of characteristic features of the prominent sub-categories in each main category.

#### A) Sustainable food selections

Sustainable food selections are characterised by the observed teaching content where pupils were given opportunities to reflect and evaluate food selections in relation to health, economy, and environment. This content area concerned both the selections of separate foodstuffs and the sum of meals, and covered a great part of teaching, most prominent during introduction and evaluation of the lessons.

##### 1. Healthy food selection

A prominent observed content ascribed to healthy food selections were individual needs of energy and nutrients in accordance to the Nordic guidelines (Nordic Council of Ministers, 2004), as well as nutrient function in/consequences for the body. Having pupils contemplate and practice how to tend to their own, and others nutritional needs in meal planning was a repeated and well-integrated part of the observed lessons. Other health aspects addressed were ethical considerations regarding the conditions for people working and living near places of food production. These aspects were discussed in reference to fair trade labelling. Food and health aspects related to culture or pleasure were not mentioned explicitly during these lessons, but were present in the teacher's choices of recipes and ingredients. When recipes sometimes deviated from the nutritional recommendations, the teacher explained that not

everything must be healthy all the time, and that it is possible to make a deviating choice a more healthy option by reducing sugar and fat in the homemade dish or by looking for a *keyhole-label* (a symbol of healthier food options, see Livsmedelsverket (2015)) on store bought goods.

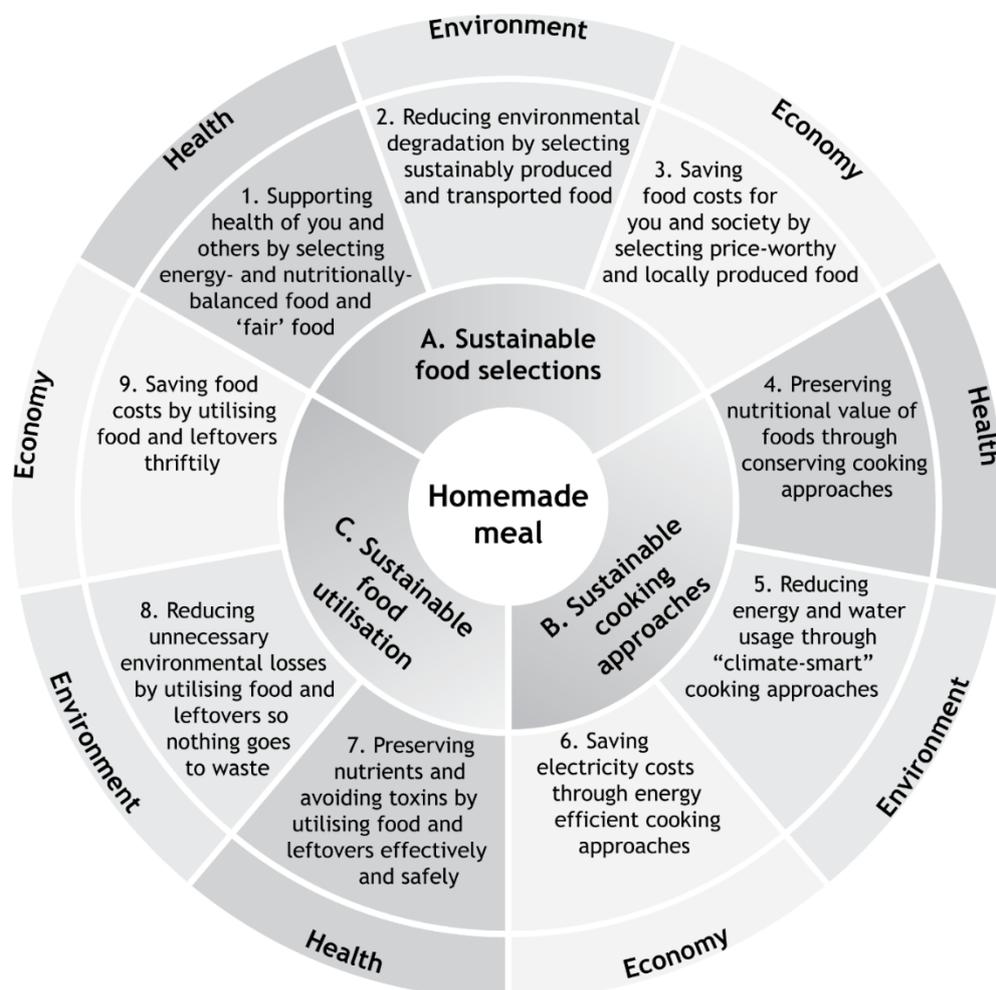


Figure 1 Results of prominent main and sub-categories of knowledge content regarding education about food from a perspective of sustainable development (SD) in Home Economics (HE)

## 2. Environmental food selection

Environmental concerns were another prominent content categorised in *sustainable food selections*. Factors emphasised by the teacher were whether the ingredients were organic, seasonal, if they were locally produced or had been transported far or by airplane, if the production had been free from artificial fertiliser and pesticides, and whether vegetables had been grown in energy-demanding greenhouses. Consequences of selections were discussed with an emphasis on degradation of land, the poisoning of groundwater, and emissions of greenhouse gases. Consequences of meat consumption were given extra emphasis and the teacher presented factual knowledge about disadvantages such as creation of methane gas and the massive amount of water and animal feed needed in the breeding of animals. To tie up lessons, the teacher at times clarified what percentage a meal needed to reach in order to be labelled as organic or meet the criteria of the Swedish KRAV-labelling (95% organic ingredients). The pupils were asked to discuss whether their entire meal could be classified as sustainable based on the above criteria.

### 3. Economical food selection

Not as prominent was the economic perspective of *sustainable food selections*. When discussed, it concerned on the one hand how to decrease personal food costs by calculating meal costs and evaluating cost differences of homemade meals and store-bought meals. On the other hand it concerned what impacts consumers could have on market prices and the national economy. Regarding the latter, focus was mainly placed on the high price of organic products. Why organic products have a higher price was discussed in relation to reduced harvests due to damage by insects or other types of damage caused without pesticides. The concluding agreement amongst pupils and teacher was that the prices of organic products could be lower if more people actually bought organic products because of competition regulation. Further, local goods were stated as positive for the country's economy, because of increases in employment opportunities, which in turn increase tax to the state.

## B) Sustainable cooking approaches

Sustainable cooking characterises the observed parts of teaching where pupils were given opportunities to contemplate consequences, and to carry out different cooking techniques in relation to health, economy, and environment. This sub-category covered a smaller part of teaching but was recurrent in every lesson since it was implemented in relation to cooking processes. In lessons with no cooking process, the issue was nonetheless highlighted through written assignment questions.

### 4. Healthy cooking approaches

With reference to the health perspective, cooking techniques were mainly focused on preservation of nutrients. For instance, the teacher highlighted that certain foods preserve nutrients better if they are put in instant heat, and instead of peeling the shell of vegetables they could carefully be scrubbed in order to preserve fibres. Nutritional benefits of making stews and soups were discussed, in which nutrients get preserved in the meal throughout the broth.

### 5. Environmental cooking approaches

The most prominent content observed in relation to sustainable cooking approaches was the contemplations and actions toward reducing the use of energy and water. The teacher emphasised a stance that all individuals can offer important contributions to SD by avoiding unnecessary energy losses and water wastage in cooking approaches. The explanation was that all distribution and use of energy and water affects the environment and the climate more or less negatively, since the electricity could come from coal-fired power plants, which through their large carbon emissions increase the greenhouse effect. This content was presented with support from the subject textbook, which contained climate-smart tips. All pupils were asked to write down five *to-do tips* in their notebooks, which would serve as guidelines for their own approach of working in the kitchen unit during the semester. Some of the to-do tips were: to match pot and pan size with stove burner, use lid when boiling water, turn off the heat early and let the food be cooked on residual heat, and to not let the water tap stand running, and so on.

### 6. Economical cooking approaches

The economic perspectives in reference to sustainable cooking approaches were mainly discussed in addition to the environmental benefits of reducing energy and water consumption. The two perspectives went hand-in-hand and contained thus all aspects of the above sub-category. However, the teacher outlined the environmental aspects to start with, and thereafter, the economic aspects were established. Arguments of saving money were not discussed on a deeper level and the teacher confirmed pupils' answers formulated as *you save water* or *saving electricity* when they discussed the corresponding test question: *why is it economical to cook everything in the same pot?*

## C) Sustainable food utilisation

Sustainable food utilisation characterises the part of observed teaching in which pupils were given opportunities to contemplate short- and long-term consequences of (and practicing) utilising raw

materials and food residues in relation to health, economy, and environment. The message that appeared particularly clear and permeated all teaching regarding sustainable food utilisation was: *Do not waste food*. This was mentioned by the teacher as a separate *work area* and was integrated in all parts of the lessons.

#### 7. Healthy food utilisation

The categorised health perspective of sustainable food utilisation concerned mainly food safety in how to avoid toxins and pathogenic organisms by utilising food and storing leftovers in an adequate manner. Carefulness when cooling and heating food, not reheating food more than once, and not microwaving plastic boxes that are not made for it were some of the content in teaching practice. Similar to the sub-category *healthy cooking approaches*, healthy food utilisation likewise contained teaching focusing on preservation of nutrients. For instance, how to utilise as much nutrients as possible by saving the broth from stews and to not discard the peel of vegetables, and so on.

#### 8. Environmental food utilisation

The observed environmental perspective categorised in sustainable food utilisation was emphasised throughout discussions about major energy losses from food waste. Against this background, the teacher presented various guidelines of how pupils can work to reduce their own food waste. The ability to distinguish what is eatable food and what is garbage was deliberated. Some of the teacher's methods to implement environmental food utilisation targeted pupils' emotional state. For instance, showing film clips of talking vegetables communicating an everyday struggle of being rejected because of their stained outsides. Composting was presented as an obvious action when leftovers or inedible food needed to be discarded. Leftovers could in this way have a purpose of renewable energy extracted from the waste. However the teacher emphasised several times that composting was not a solution for SD. The optimal pursuit would be to not get any compostable products at all, since the energy expended during production, storage, transportation, cooking, and keeping warm would be lost, even if the food is composted and re-used, which in itself demands energy. Some of the guidelines presented were to not buy more food than is consumed, to eat all of the food you put on the plate, and to utilise the leftovers into new dishes.

#### 9. Economical food utilisation

The observed economic perspective categorised in sustainable food utilisation was, similar to economical cooking approaches, implemented alongside the environmental perspective: the greatest focus was placed on the environmental consequences of unnecessary energy losses, but economic shortfalls for both society and individuals were deliberated. The affective approach was likewise seen in this sub-category. For instance: the teacher role-played a scenario where she threw various necessary and unnecessary waste into a trashcan. The scenario ended with her throwing away a wrinkled hundred bill (KR) with the statement: "So what? The paper bill was wrinkled and notched, just like the other things I threw away." The message discussed with class was that *throwing away food is the same thing as throwing away money*, and that *foodstuff is not worthless just because of a bad appearance*.

### Challenges in implementation

The teacher expressed a goal to offer pupils opportunities to deepen their reflections concerning different food choices. On the one hand the teacher expressed a vision to try not to be normative and pointed out that: "Pupils' reasoning about health, economy, and environment are not supposed to be right or wrong. The main thing for them is to know the ways of reasoning". However, on the other hand the teacher expresses: "It is hard not to be normative because I partly have syllabus objectives and partly my own beliefs to manage." This observed and expressed struggle could further be linked to conditioning aspects of *convenience*, *identity* and *responsibility* (Belasco, 2008) and will be described in the following sections.

#### *Reality versus theory in action*

Convenience aspects or frames within HE (time, space, budget, etc.) are, as in all school subjects, limited. The range of goods in the classroom is restricted due to space and budget. Even though it

was taught in theory that a sustainable food selection would be to predominantly choose organic and/or locally grown ingredients, this was problematic in action. For example the tasks to create and evaluate a sustainable meal that meets the guidelines of 95% organic ingredients were never met because certain ingredients, such as meat and eggs, were too expensive for the school to purchase as organic. Even though the educational exercise served its purpose in theory pupils expressed that this was contradictory in action.

#### *Preferred versus responsible consumption*

The responsible way of consuming, imbedded in the implementation and presentation of syllabus goal and knowledge requirements, regularly collided with identity aspects of pupils such as taste and sensory preferences, attitudes, and prior habits and knowledge. This sometimes contributed to resistance in following the teacher's assignments, involving guidelines from, for example, nutritional recommendations or environment-friendly ingredients.

#### *Responsible to what and whom?*

Teaching the perspective of SD also seemed challenging with reference to what and/or to whom the selection should be responsible towards. For example selecting organic food could be the responsible choice from an environmental and health perspective but not so responsible towards your personal economy. The challenge seemed to be that there is no simple heuristic rules for *what* food you actually ought to select to contribute to SD, as it reasonably varies for *whom* it is best for on both an individual and societal level.

The teacher dealt with the challenges by adopting different strategies, such as to assist pupils with *principles of reasoning*. For instance, advocating organic ingredients rather than locally produced non-organic ingredients, letting pupils choose according to their preferences but to verbally express consequences and what choices would have been a more sustainable selection. However the overall norm of SD was never questioned.

## **Discussion**

The main findings presented in this paper imply that education about food from the perspective of SD in this HE classroom is concretised throughout a knowledge content that places the practice of a self/homemade meal in focus of education for sustainable food consumption. The prioritised content in this classroom practice emerges as three main categories: sustainable food selections, sustainable cooking approaches, and sustainable food utilisation—with the subject perspectives of health, economy, and environment used as a basis for all implementation. Thus deliberating effects, consequences and alternatives of food choices with considerations extending far beyond the kitchen walls, that is, with an *expanded view of food consumption systems* (Reisch et al., 2013).

The concept of SD and its definition in the World Commission's report entails that people's choices can lead to SD (Brundtland, 1987). However, it is unclear what this means in practical terms since the generally accepted definition does not clarify the current needs or what the needs of the future look like. This could be problematic when education about food and cooking in HE should be assessed from this broad and ambiguous notion. The formulations in the Swedish HE syllabus imply a fairly comprehensive content regarding food education (Gisslevik et al., 2016), which the participating teacher expressed as challenging to manage within the frames of reality. One way of approaching this potential problem is to clarify what teaching about food—from the perspective of SD—could entail in actual HE practice.

In this particular classroom, the knowledge content related to SD formulated in handouts, lesson aims, assignments, and test questions was similar to the abstract formulations in the syllabus. However, the observed classroom practises revealed a concrete and in-depth implemented content; several challenges; and professional decisions in managing this task. For example, the centrality of a self/homemade meal practice when teaching SD dimensions imply a multi-relational (Halkier, 2009), system-thinking approach (Reisch et al., 2013), focusing on both specific food domains, the sum of meals, and meal patterns over time. In this way, education in HE could approach issues of food consumption in ways similar to what individuals do in everyday life situations (Halkier, 2009). Reisch et al. (2013) argue that a major gap in the already small debate of sustainable food consumption strategy is that the perspectives of nutrition/food, environment, health, and social cohesion are

rarely linked. Rather, it is more common with one-sided perspectives or one-dimensional approaches, that is, promoting a specific food domain. By applying a multi-relational meal-practice approach to food consumption, HE education seems to have the potential of being one element of a national strategy promoting sustainable food consumption that are flexible and adaptive to everyday agency (Halkier, 2009). If this is a desired goal, whether or not the prominent content and the concretisation of SD presented in this case are consistent with education for SD objectives, and with contemporary policies of healthy and environmentally supportive food should be considered (Barth, Fischer, Michelsen, Nemnich, & Rode, 2012; Reisch et al., 2013). Nevertheless, more research is needed to evaluate if the conditions and frames for this education are constructively adapted to achieve the desired goals, on both national and local levels.

Being an HE teacher and carrying out the difficult, complex, and socially relevant task of HE education demands great professionalism (Håkansson, 2015). At the same time, HE is a subject taught by a large number of unqualified teachers (Skolverket, 2016), who may not have the support of subject-specific education when interpreting the syllabus objectives of SD. We believe that if the HE syllabus uses more content-specific terms—such as *sustainable food consumption* rather than *the perspective of SD*—this would help clarify what SD could entail in the different knowledge areas practiced in HE, not necessarily to create certain rules or a standardised definition of the meaning of the concept, which is challenged by Wals and Jickling (2002), but to help teachers to find frames and space for ways of thinking, assessing, and implementing HE education in actual classroom practice.

The result further describes challenges and conflicts in implementing the intended knowledge content in practice. We do not believe that conflicts and challenges preclude teaching. In contrast, we agree with Lundegård and Wickman (2007), that the contradictions and conflicts underlying the sustainability discussion are a prerequisite for pupils to acquire competence of substantial reasoning and action. The important question is how teachers can educate pupils in recognising the diversity of conflicts in a professional and ethical way. For instance, the expressed contradiction of a school budget that strictly limits the purchase of organic products, together with the knowledge content that emphasises the importance of selecting organic products, can of course confirm the general truth: the SD approach is an ideal, but too expensive to live by. However, it need not to be fruitless educationally, depending on how the conflicting situations are managed. One could argue that a financial framework is always present outside school too, as a *structured conditioning* (Halkier, 2009). Rather, it may be more educationally problematic if the school has a strong economy and always a “proper way” compared to a pupil’s current and future private life.

Some of the strategies applied to manage these challenges were a construction of the teacher’s personal stance and could very well be scrutinised, yet they seemed to correspond to the situational demands considering the conditioning aspects in reality. Håkansson (2015) argues that the HE teacher profession should not be normative or advocate specific social ideologies, as this risks creating indoctrination. However, Fien (1997), Soo and Mok (2016) and Haapala, Biggs, Cederberg, and Kosonen (2014) argue that when education concerns caring about our planet, our lives, and others’ futures, teachers should feel no regret in promoting key principles or values. We agree with Fien (1997) and Haapala et al. (2014), that all educational objectives must be a selection of dominant cultural and political values since it is not possible to teach everything that could be taught in order for pupils to be truly autonomous. Perhaps teachers in HE would benefit from having access to agreed upon, practice-oriented principles, which give tangible strategies to support both teachers and pupils in their difficult task to assess complex and multidimensional aspects of food consumption.

This case study has presented an example of how a perspective of SD is concretised in food-related education of HE, as well as what content a teacher chooses to emphasise within the local timeframe of Grade 8, which had a pre-scheduled focus on SD. Hopefully the results may provide a basis for inspiration, critical scrutiny, and further development of educational content for researchers, teachers and teacher trainers of HE, both on a national and international level.

### **Strengths and weaknesses of the study**

The choice of following a single teacher in two similar classes allowed us to focus in-depth on characteristic content of SD in relation to food implemented by only one teacher, without having to take into account individual differences between teachers. The price for this is that we have no empirical reference point for how representative or deviant the teacher’s classroom practice in the study is. However, Linde (2012) argues that although teachers’ content repertoire is individual, there

is always a collective element through subject studies. Since the selected case fulfilled frames and conditions matching what is intended/expected for HE teaching, we hope that the results from this case study can provide an analytical frame for other schools, based on their conditions and circumstances.

## Conclusion

The results imply that HE could be a school subject that explicitly offers education for sustainable food consumption by implementing a multi-relational, system-thinking approach to the practice of creating a self/homemade meal as teaching ground. The implicit ideology of responsible consumption imbedded in the presented syllabus goals and knowledge requirements regularly collided with conditioning structures of time, budget, space, and pupils' identities and preferences in teaching. This reflects the challenging task of teaching and learning sustainable food education. To cover the complexity of life in today's society pupils are desired to become reflexive individuals and be able to make conscious choices based on their own conclusions. However, to do this they need access to collective knowledge and common values. If HE education should be viewed as an element of a national strategy to contribute to socialising tomorrow's sustainable food consumers, this case study implies that a clarification is needed of what HE education is expected to facilitate during its 118 hours regarding content width, and depth.

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## Biographies

Emmalee Gisslevik is a PhD candidate in food and nutrition at the Department of Food and Nutrition, and Sport Science, University of Gothenburg, Sweden. Emmalee's PhD thesis is written within the framework of National Research School for Home and Consumer Studies and focuses on education about food from a perspective of sustainable development. The overall goal of the thesis is to develop and strengthen the scientific knowledge base regarding education for sustainable food consumption in Home Economics. Emmalee is an IFHE member and serves under the Consumers and Sustainable Development Program Committee.

Inga Wernersson works as a senior professor in Educational Sciences at the Department of Social and Behavioural Studies, University West, Sweden. Her main research interest is in gender and gender equality in education. Inga's doctoral thesis of 1977 was one of the first in Sweden with an explicit sex/gender perspective, exploring classroom interaction between students and teachers. In ongoing research, overviews of what sex/gender entails for students' school situations and performances are conducted. Inga has served as supervisor for a large number of dissertations in Educational Science, of which some has focused on Home Economics.

Christel Larsson is a professor in food and nutrition and work as Vice Head of the Department with responsibility of research at the Department of Food and Nutrition, and Sport Science, University of Gothenburg, Sweden. Christel conducts research primarily in food habits of children and adolescents and dietary assessment methodology, and is involved in several ongoing studies aimed to promote healthy food habits and physical activity among children, adolescents and adults. Christel is a board member in the National Food Administration's expert group of nutrition and public health; Swedish Nutrition Foundation; Centre of Consumer Studies; and The Network in Epidemiology and Nutrition.

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INTERNATIONAL FEDERATION  
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REFEREED PAPER

## Learning about ethical fashion in Home Economics classes: Experiences, lectures, and information technology as tools for consumer education

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### Abstract

*This study investigates the effects of senior high school Home Economics consumer education classes on the ethical consumption of apparel by Japanese students. The class focused on the background of fashion and considered how our choices affect the environment and social matters. The aim of this study is to identify teaching methods that will encourage students to adopt a sustainable consumption mind-set, which is connected to students' subsequent actions to change society. The method was mixed, consisting of both an interpretive qualitative study of classroom activity and a quantitative survey. The students took part in experience-based classes, which included various collaborations with the private sector outside the classroom. Students distributed handmade brochures to inform others of their work. The brochures were distributed across Japan such as all national high schools and public consumer centres, and students handed them out to acquaintances along with a survey questionnaire. The survey results and the appearance of students' self-initiated activity after the class showed that teaching ethical fashion can help both students and society learn how to make decisions that can lead to a more sustainable future.*

**KEYWORDS:** ETHICAL FASHION, HIGH SCHOOL STUDENTS, HOME ECONOMICS, CONSUMER EDUCATION, INFORMATION TECHNOLOGY

### Introduction

The prosperity of developed countries is often based on their exploitation of poorer countries. A 2017 Oxfam report points out that the world's wealth gap is expanding, and states that the richest 1% of the world's population have owned more wealth than the rest of the planet since 2015; in fact, eight men now own the same amount of wealth as the poorer half of the world. Even in an earlier and less unequal time, Galtung (1969) insisted that this disparity, brought about by globalisation, is *structural violence*, and that the problems of poverty, hunger, oppression, and discrimination faced then and now are not the result of free competition under pure capitalism, but of structural problems created by developed countries. According to a United Nations report, 836 million people still live in extreme poverty: the UN adopted sustainable development goals (SDGs) (UN, 2015) to address this situation in 2015. Economist Jeffrey Sachs (2005) has calculated that less than 1% of the combined income of the richest countries in the world would suffice to end extreme poverty. Thomas Pogge (2008) claimed that it is a crime to leave poverty untouched, and social justice theory and related social movements have become major areas of sociocultural activity and controversy.

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What can Home Economics educators do to help rectify this gap and provide students with suggestions to realise a sustainable society? Elorinne, Arai, and Autio (2017) noted the importance of pursuing sustainable development, singling out Home Economics education in particular, which they said is “closely related to these issues because the important objectives of the field are not limited to the acquisition of knowledge and skills, and their application to everyday life” (Elorinne et al., 2017, p. 157). Exploring these affordances through Home Economics educational methods and taking advantage of the characteristics of Home Economics to raise global citizens for a sustainable society is imperative.

This study investigates the relevant effects of a senior high school Home Economics classes that uses *ethical fashion* as a topic. The subject was compulsory for second-year Ochanomizu Senior High School students in 2014. The investigating author was a teacher of the class.

In Japan, the rate of enrolment in senior high school was 98% in 2014 (Ministry of Education, Culture, Sports, Science and Technology [Japan], 2014), and all female and male senior high school students take Home Economics as a compulsory subject. The new government’s Home Economics course guidelines that took effect in 2010 (MEXT, 2009) also encourage the enrichment of consumer education content to build sustainable consumer lifestyles.

Japanese Home Economics covers almost all of the fields related to our daily lives, including consumer education, environmental education, family, children, food, clothing, home, symbiosis, and life planning. This research traverses three aspects of Home Economics—consumer education, clothing, and environment—using the topic of *ethical fashion* as a topic to investigate ethical consumption in the apparel field. This research focuses on the background of the field and considers how our choices affect the environment and social issues. It is an important aspect of realising a sustainable lifestyle. However, awareness of ethical consumption in Japan was only 6% in 2011 and 12% in 2015, according to Delphys (2011, 2015).

According to a 2013 pre-survey administered to students at the high school where the study would be conducted, before they had enrolled in this class, the students had no awareness of ethical fashion at all. Students tend to choose their clothes first by price, followed by matters of taste like colour and design, and did not care about who makes the clothes they buy. The pre-survey showed that many students agreed with the notion “the cheaper, the better”.

This paper presents results from 2014; however, this research into ethical fashion began in 2011. At the time, this school had become the first high school in Japan where Home Economics classes took up ethical fashion as a topic, although there had been previous Japanese classrooms in which fashion-related ecology and traditional crafts such as dyeing, which are part of the substance of ethical fashion, were considered. Conventionally, clothes are treated as teaching materials in Education for Sustainable Development (ESD), and environmentally friendly Home Economics classes in Japan focusing on clothes address issues such as dressing appropriately to adjust body temperature. However, there are limited studies about ethical fashion itself (Uchimura, 2012) and its use in education (Yoshiuchi, 2012) in Japan.

Internationally, there have been many studies on ethical fashion itself and especially on its marketing. These studies have revealed that consumer fashion-purchasing habits depend much on personal needs, and that while quality and aesthetics are highly important, people are not willing to pay a higher price for sustainable fashion (Joergens, 2006; Niinimäki, 2010; Chan & Wong, 2012). However, Hustvedt and Dickson (2011) noted that older adult consumers have a tendency to purchase organic cotton apparel with more social benefit reasons rather than personal benefit. Niinimäki (2010) also pointed out that because clothing is strongly connected to a person’s own self-image and identity, ethical commitments and values are a strong driver towards ethical consumption. Thus, fostering an ethical mind-set should be emphasised in consumer education. According to Javidan and Walker (2013), one’s *global mind-set*, the degree to which one is interested in global matters, is almost completely formed by the high school years. Therefore, learning about ethical consumption in high school is likely to have more effect on the student’s mind-set than in their later education or life.

## Aim

The aim of this study is to give insight into the teaching methods that will encourage students to adopt a sustainable consumption mind-set through ethical fashion education and provide them with a wider view regarding the background of their clothes and other products. Benne (2004) mentioned that the aim of consumer education at school has generally been to teach students to act rationally and make efficient choices, but that consumer learning outside school, in the “real world”, is connected to young students’ actual consumption, which is in turn related to their identity and self-image. Hence Benne suggested that teachers in consumer education must offer insights, ideas, and experiences to encourage their students for their sustainable choices. In addition, as McGregor (2005, 2008, 2009, 2011) stated, traditionally, consumer education and empowerment focuses on individual life-management-related finances and consumer purchases; however, consumer education can empower consumers to take on more social and ethical responsibilities as global citizens, helping them find ways to consume differently to change the entire system.

In this context, this study tries to promote ethical values in students that will lead to future ethical consumption consciousness, accompanied by fluent experiences and external cooperation connecting the students and their learning to the real world. Furthermore, this study verifies that the practical education employed not only imparts knowledge of sustainable consumption but also empowers students to be ethical consumers and to in turn share these ethics with others, thereby changing society.

## Methods

The primary methods used in this research were an interpretive qualitative study of the classroom and a quantitative survey. The students first took experience-based ethical fashion classes as part of their Home Economics course from spring to autumn 2014, as described in more detail below; then, the survey was completed by the students as well as their acquaintances outside of the class.

### In Class

0. Pre-survey (Age 16): 2013 academic year
1. Pre-learning: special lecture by senior students and a director of an ethical fashion brand: March 2014
2. Class (Age 17): Awareness-raising on garment factory conditions by watching a film
3. Making clothes with traditional indigo-dyeing at the high school. The class communicated with an indigo-dyer in Tokushima by using information technology (IT), a remote rural area. The indigo-dyer sent a video letter in advance.
4. Holding a mini fashion show and creating a fashion catalogue
5. Learning about ethical fashion using visual icons
6. Informing others—making brochures. Students made brochures for ethical fashion in order to consolidate their learning and have the experience of informing others. A design company art director advised the students. The brochures were issued nationwide.
7. A lecture was given by the CEO of global ethical fashion company Patagonia Japan.

### Outside the Class: Survey

8. Survey 1: students’ feedback. Three questions and space for written comments; 90 students answered.
9. Survey 2: target group was students’ acquaintances. 375 people answered. Each student distributed three to five of the brochures to people they knew, along with a questionnaire comprising five questions and a space for written comments. The students asked the people they passed the brochures to—personal acquaintances, friends, and family members—to fill out the questionnaire during their spring holiday. The completed questionnaires were submitted to school at the start of the next semester.
10. Post-survey (Age 18): 2015 academic year

## Results

### Results 1: In class

#### *Pre-learning lecture*

A special pre-learning lecture was given in cooperation with the senior grade and outside figures before the Home Economics classes for the new grades started. Senior students who had already taken ethical fashion classes the previous year gave a presentation to the incoming students about the ethical fashion presentation stage they had organised at Eco-Products 2013. Eco-Products is the oldest and largest environmental showcase in Japan, with 160,000 visitors. Following a panel talk by four experts, selected senior students had presented onstage about ethical fashion, including an explanatory video made in their Home Economics class, a quiz on child labour, and a fashion show held in collaboration with several ethical fashion brands. This was the first official ethical fashion presentation held by high school students in Japan, and it was lauded at the time. Following the senior students' presentation, the director of the ethical fashion brand Lee Japan addressed the students enrolled in the course about ethical fashion.

According to our previous research, the participating students had not been taught about ethical fashion. Therefore, almost all of them first encountered the idea through this special lecture, which was significant in facilitating communication between the senior and junior students.

#### *Awareness of garment factory conditions*

At the beginning of the class, students learned how the clothes they buy are actually made. The 2005 documentary film *China Blue*, directed by Micha X. Peled, showed the conditions in a sweatshop factory where blue jeans were made. The film shows teenage girls working over 18 hours every day for very low wages under harsh conditions. This film serves as a gateway to introduce students to a range of issues in the global economic system. Young (2007) presented such apparel sweatshops as an example of the injustice of global socioeconomic structures. The Rana Plaza disaster in Bangladesh in 2013, which killed more than 1,100 garment factory workers (BBC, 2013), is another typical result of the injustice of the global economic supply chain. The students were very shocked to see the severe situation of these girls their own age, and they noticed that consumers had also taken up the cause.

#### *Making clothes and indigo-dyeing*

Protecting traditional craftsmanship is also a part of ethical fashion. Students in the class regarded traditional crafts as being *for old people*, *expensive*, and/or *not attractive for young people*, although they do regard it as relatively important to maintain knowledge of traditional crafts and the products of traditional craftsmanship for the next generation. Therefore, this study aimed to educate these young students about traditional Japanese crafts through the experience of indigo-dyeing which has also been a previous topic in Home Economics research, such as in a study on traditional Paithani silk dyeing methods (Patil & Adhau, 2011). However, in this study it was treated from the viewpoint of ethical fashion, a new research topic, as also is the topic of educational indigo-dyeing classes using IT. This class was conducted in collaboration with an IT teacher, who provided technical support.

First, the author made an indigo-dye solution the traditional way (see Figure 1). Traditional Japanese indigo-dyeing uses *sukumo*, which contains a concentrated indigo pigment. It takes 100 days of special care to ferment fresh indigo leaves to make *sukumo* using traditional methods. There are only a few full-time *sukumo* artisans in Japan today; one of them lives in Tokushima prefecture, 640 km away from Tokyo. He provided some of his own high-quality *sukumo*, with which the author made a dye solution with 100% natural ingredients. The solution also included warm lye made from tree ash, Japanese liquor made from rice, and traditionally-used lime, although many indigo-dyeing craftsmen use synthetic materials these days. Watching the everyday process of making the dye gave the students a deeper understanding of the traditional method of indigo-dyeing, which requires time and sensitive care.



Figure 1      Making the dye solution

A traditional indigo dyer in Tokushima prefecture sent a video letter to the students in advance of the indigo activity, in which he discussed the history and methods of indigo-dyeing and addressed a message to the students. This piqued the students' interest and caused them to look forward to practicing indigo-dyeing. In addition, the craftsman was a fashionable younger man, which broke down the students' stereotypes of traditional craftsmanship as unfashionable work done by old people. Next, the students practiced indigo-dyeing in class. This research used IT effectively by connecting these urban high school students and the traditional artisan, in a remote rural area, via a tablet PC and an Internet connection (see Figure 3).

The artisan showed the students his atelier, made a few comments, and answered the students' questions about indigo-dyeing. Natural indigo-dye changes colour from brown to indigo blue through oxidation when the cloth is exposed to the air. The students enjoyed the moment when their original patterns were dyed and were impressed at the same time. Some of their comments follow.

I was very happy when the craftsman praised my indigo dyeing.

I also wish to tell others about indigo dyeing.

The blue was quite beautiful and fashionable.

Indigo dyeing in the natural old way was a precious experience.

I felt it was great to connect with Tokushima prefecture in real time during our indigo dyeing session using IT.

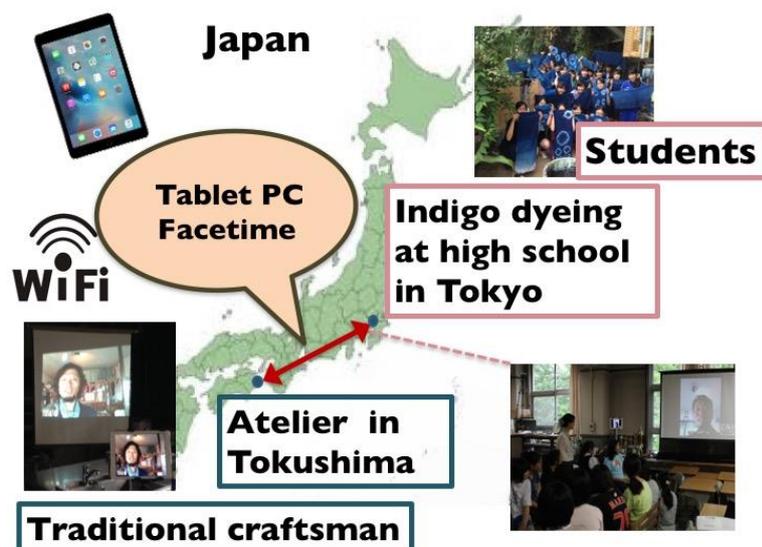


Figure 2 Indigo-dyeing classes using ITC

After the class, students pursued their own activities. Some students held a volunteer indigo-dyeing workshop for elementary school children. One student team won the first prize in the 2014 stock report contest held by the *Nikkei Shimbun*, Japan's largest business newspaper company. The students competed against 600 teams comprised of 1,361 nationwide students, aged junior high school to university students, using a stock portfolio that promoted traditional craftsmanship. The winning students explained their reasons for promoting traditional craftsmanship at the beginning of the report. They originally felt that traditional craftsmanship was only for old people and was not stylish, but they changed their opinion after they experienced indigo-dyeing in their Home Economics class. They came to feel that the clothing produced was very cute, and suitable even for young people. Other students sold handmade indigo-dyed goods for charity in partnership with an international NPO (non-profit organisation) at the school festival.

This project strengthened the students' awareness of traditional crafts through direct communication and online practice with a traditional artisan. Furthermore, it had repercussions on and fostered the students' own ethical actions, generating positive action.

#### *The fashion show and catalogue production*

A mini fashion show was held, and a fashion catalogue for the *Ochanomizu High School Girls' Collection* was produced. (The name came from a popular Japanese fashion show, *Tokyo Girl's Collection*). The students used their original indigo-dyed cloth to produce hand-made clothes as homework during their summer vacation. With this project, the students completed clothes that emphasised their individuality. They coordinated the new clothes with their own clothes, showed them to their classmates in the mini fashion show, and received comments on their work.

After the fashion show, the student groups chose some of the clothes they had made to be marketed as products, took photos, and made a group catalogue page. Each of the ten groups of four members was given a camera and an SD [smart drive] card, and one of the students in each group modelled the clothes in photoshoots in different locations around the school campus. The photos were printed out, and each group organised their own page of the catalogue using their photos.

The students were instructed to create a fashion brand name and set a price. Each group also constructed a promotional campaign. These campaigns included real-world marketing techniques, such as additional pictures of their model, limited-time offers, and so on. The ten group's pages were then given a cover page, making up a complete fashion catalogue. Thus, the students experienced a series of processes, from production to sales through making both clothes and a fashion catalogue.

## Learning about ethical fashion

As the next step, the completed catalogue was used in a class workshop to demonstrate to students the experience of choosing products for purchase and to continue learning about ethical fashion. First, the ten group's catalogue pages were projected onto a big screen in the class. Each group then presented their own clothes using their catalogue page. Next, each group of students discussed and chose their top three items to buy from the ten pages of options provided; they were instructed to write down why they chose each item on a sticky note. Finally, a piece of paper was positioned on the main class blackboard, onto which each group stuck the three catalogue pages they had chosen, along with their sticky notes detailing their reasons.

The written reasons revealed that students chose clothes for four types of reasons: *taste*, *practicality*, *advertisement*, and *price*. It was also revealed that eight of the ten groups had chosen their own page as one of the best three items. Therefore, the students saw there was one more element in their reasons to choose: *background*. That is, they chose their own clothes because they had worked hard on the catalogue, which resulted in a positive attitude to their own page.

The most popular catalogue page was agreed on by 32 students out of 40 in the class. It was a page with a model who was a popular student, photographed in an attractive atmosphere. The price of the item was \$18 (USD). The students were then told that the production costs, including the price of the material and the labour, was 20 to 30%.

The average price the students paid for the material for their clothes was \$10 (USD), and it took about ten hours to make the clothes. This shows that the hourly rate for making the clothes was less than \$1 (USD). If 32 students were to order clothes for short delivery from a classmate, she would have to work hard for the very limited wage and could not go to school. The students were very surprised to recognise this, and started to say that they could not ask a classmate for such an order and that the price should be fair. The students then discussed this situation in terms of the film *China Blue*, showing that they understood that there is a *background* of both positive and negative reasons to choose clothes and other products.

Afterwards, ethical fashion was introduced as fashion with a positive background, in that it fosters sustainability. Icons representing six categories of ethical fashion were shown to the students, who were then given a lecture about ethical fashion. The symbols (see Figure 3) were the ones used in the Paris Ethical Fashion Show, a showcase held annually in Paris from 2004 until 2012.



Figure 3 Ethical fashion symbols used in the Paris Ethical Fashion Show

The Paris Ethical Fashion Show used the six ethical fashion category symbols to explain to visitors the reasons why the fashion brands showcased are regarded as ethical. The six categories are recycling, fair trade, organic, natural materials, traditional craftsmanship, and social programmes. The social programme category is designed to help socially vulnerable people. Currently, other issues, such as animal welfare, are also regarded as aspects of ethical fashion.

The students easily identified the icons for recycling and fair trade but initially had difficulty with the other categories, and their knowledge level about fair trade was limited with regard to economic fairness. After the lecture, the students understood that fair trade protects local cultures, gives confidence to local people, empowers women, and protects the environment, as well as addressing issues of economic fairness. The lecture covered the meaning of fair trade, the environmental impact of clothing production, the effects of pesticides on farmers, organic cotton, ethical consumer history, child labour, economic disparity, and other issues. In addition to the lecture, the students viewed various examples of ethical fashion, including photos and samples of clothes, accessories, and bags.

The cases and examples were based on the author's research in Japan and abroad. One example given was that of several ethical fashion projects in Japan aiming to support and create employment for people affected by the Great East Japan Earthquake and Tsunami of 2011, which caused the deaths of nearly 16,000 people (National Police Agency, 2017). The examples were chosen carefully to be appealing and meaningful to students.

As in many other countries in recent years, many stylish, attractive, and high-quality ethical brands have emerged in Japan. This has encouraged students' interest in ethical fashion. The students in this class understood the negative background of unethical clothing industry practices and the idea that buying ethical fashion products would have positive effects on the environment, producers, and consumers themselves.

At the end of the lecture, fair trade chocolates were given to the students, to show that not only clothes but all products have backgrounds. These chocolates supported children rescued from child labour on cacao plantations in Ghana.

#### *Informing others: Making the brochures*

After the experience-based ethical fashion classes, students made brochures to inform others about their work. An external collaboration with a design company's art director was conducted to support this process. The director first explained principles of effective design in an easily understood way. Students were then tasked with developing a plan to explain ethical fashion to the general population. They were divided into teams of five and asked to make suggestions on seven ethical categories; each class had eight teams, for a total of 24 teams. The seven categories were organic cultivation, natural materials, up-cycling, traditional craftsmanship, child labour, social programs, and fair trade. It was announced that the art director would arrange for the works of the best teams to be printed and widely distributed. The brochures were made from Forest Stewardship Council (FSC) paper and vegetable ink, which is environmentally friendly.

The students discussed their group's policy and received advice from the art director about their designs. Discussion deepened in some groups regarding the importance of each category and the story they wanted to tell others. Ultimately, 24 well-designed brochures were completed. The teacher and art director chose the best brochures and the designer completed the final products (see Figures 4 and 5), incorporating the students' plans and designs. The students' ideas for overall structure, cover illustrations, photo arrangement, and commentary and texts about ethical fashion were utilised and refined by the art director.

The completed brochure was printed and issued to all national high schools, consumer centres, and the Ministry of Education (MEXT).



Figure 4 Brochures



Figure 5 The back cover of the brochure

The brochure was later also distributed at an event of the Consumer Affairs Agency of the Government of Japan. In addition, each student distributed three to five brochures to people they knew during their spring vacation. Transmitting to others their opinion through their brochures allowed them to experience self-sustaining behaviour as consumers. Learning is not the only aspect of consumer education: one’s experiences as a consumer acting on one’s own are an essential part of the process as well.

*Students’ self-directed activities*

After learning about ethical fashion, the students began taking action on their own, outside of class. An Ethical Fashion presentation and Charity Sale was planned for a school festival in the autumn, for which they collaborated with Home Economics classes, several ethical fashion brands, and an NPO Plan Japan, which assists children’s education in developing countries. Volunteer students held

presentations about ethical fashion alongside the ethical fashion show. As models, students coordinated the indigo-dyed clothing they had made in their Home Economics classes with items from the ethical brands Lee Japan, People Tree's organic cotton jeans, ethical accessories made by Feliz (a company which supports children's education by giving jobs to the mothers of poor children in the Philippines), Fabrica Fabrico's (a company which helps remove landmines left over from the war) ethical accessories made from landmines, and colourful bags made by disabled persons from the upcycling brand FAM. As part of the charity sale, students made and sold indigo-dyed goods such as hair accessories and bags; the money they earned was donated to the NPO. Another group of students also sold fair trade chocolates at school.

One student started an internship the following year at the NGO ACE, which had provided the fair trade chocolates to the class. Thus it can be seen that the effect of the Home Economics classes spread through the students in various forms.

## Results 2: Outside the Class—the Survey

### Survey 1: Student feedback

For the survey portion of the study, the students answered a questionnaire themselves and also administered it to the people to whom they gave the brochures.

Ninety students answered the surveys (see Table 1), of whom 97% indicated that the design of the brochures was *very good* or *good*. Similarly, 83% of the students regarded the explanation of ethical fashion in the brochures as easy to understand, and 92% of the students were positive about giving the brochures to others, while 8% were not so positive. None of the students had a negative attitude toward distributing the brochures. As the students' written comments showed, they gained many positive effects from teaching others about their study.

Table 1 Students answers  $N = 90$

	I agree very much	I agree	I do not agree so much	I do not agree
Q1 The design of brochures is good	63%	34%	3%	0%
Q2 It is easy to understand	43%	50%	6%	1%
Q3 I wish to distribute the brochure to others	49%	43%	8%	0%

### Survey 2: Students' acquaintances

Each student distributed brochures and a questionnaire to people they knew. The questionnaire had five questions and a space for written comments. The five questions are listed below. As a condition, students did not explain ethical fashion before presenting the questionnaire to each respondent when they distributed the brochures.

Q1. I already knew about ethical fashion.

Q2. I can understand the meaning of ethical fashion with this brochure.

Q3. The design of the brochure is good.

Q4. I got interested in ethical fashion.

Q5. It is good that the students' ideas for designs and sentences were professionally refined.

Q6. Written comments

There were 375 respondents, of whom 65% were members of the students' immediate families, 25% were friends, and 10% were others, such as relatives, coaches, and other teachers. Of the respondents, 63% were female and 37% were male. Regarding Q1, in all, 30% of the respondents reported being aware of ethical fashion, which is a much higher percentage than that in the general population as reported by Delphys (12%), because some of the information had already been shared by the students before they were distributed the brochures: the majority who answered that they

knew of ethical fashion reported that they had learned about it because the students had told them about their Home Economics classes. In addition, most of the respondents had positive attitudes towards the idea of ethical fashion. The responses to Q2, Q3 and Q5 were very positive.

Turning to Q4, 84% of the respondents answered that they were interested in ethical fashion: 32% were *very interested* and 52% were *interested*. Of the negative responses, 14% of the respondents were *not so interested*, and 2% were *not interested*. Differences between the classes were seen in the following answers: 86% of the respondents who were given the brochures by students in Classes A and B answered they were *very interested* or *interested* in ethical fashion, but the respondents approached by Class C answered at a rate of only 68%. The difference between Classes A, B, and C lies in whether their ideas were used in the final brochures; the ideas and plans of the teams in Class C were not chosen as being among the best student brochures, and hence the brochures used the materials of Classes A and B. In short, the classes whose work was used in the final brochure had a more positive effect upon survey recipients.

The written comments of the students reflected their gratification at being praised or included positive messages, often indicating that they were proud of their actions outside of the classroom. The other respondents' written comments also reflected positive surprise at the high quality of the brochure and a favourable impression of the idea of ethical consumption. A synergistic effect promoting sustainable ideas was created by students and other respondents through their communication.

Students are taught in class, and then spread ideas learned, such as the idea of ethical fashion for a sustainable society to their families and friends. This act of telling others allows learned knowledge to be sorted and consolidated, leading to action as an independent consumer. The students deepened their understanding and awareness of the class learning material by answering the questions from people they knew.

An after-survey was held the following year by the same students: the number who agreed to the statement that "the cheaper, the better" was reduced dramatically compared with the pre-survey in 2013.

## Discussion

This study has implications for today's consumer education. McGregor (2005, 2008, 2009, 2011) claimed that future consumer education must keep pace with today's global changes, and educators must empower individuals to act as global citizens with the power to change the social system for sustainability, although traditionally, consumer education programmes have tended to give consumers information and advice, teaching them how to make rational, efficient choices, and make them aware of their right and power to change their individual behaviour. This Home Economics study empowered students' ethical mind-set and bore fruit to various self-activities in an effort to create a sustainable society.

As practical educational research, this study revealed that using ethical fashion as a topic in Home Economics classes is effective in providing students with a wider view of the background of how apparel and other products are produced. Using this topic of ethical fashion, an experience-based study was conducted with abundant outside collaboration, utilising IT as an effective tool, and featuring communications between students and others about what they learned in their classes—all innovative Home Economics education methods that have helped students understand that ethical consumption is an issue relevant to them and to the real world, further encouraging them to take action themselves to change the world. Students were able to commit themselves to studying and enjoy it because fashion is generally a gratifying topic to work on, even though sometimes it comes with a socially unsustainable background.

The students appreciated their opportunities to cooperate with traditional craftsmen, NPOs, ethical fashion brands and companies, art directors, and senior students: these interactions helped the students understand how their studies connect deeply with the real world.

Giving students opportunities to share their perspectives about what they learned from the study is an important aspect of the method used here. In addition to the fact that such communication which is trying to affect others is crucial for independent consumers, helping students internalise what they

learn and expand their ethical mind-set. The students discussed their learning on many occasions, and after the course was completed, continued their work by passing on brochures to the people they knew and discussing the idea of ethical fashion with family members and friends. This shows the possibility that the learning pertaining to Home Economics studies can be propagated by students, who can also communicate the principles of ethical consumption to the general public and suggest ways to lead a sustainable lifestyle. Thus, consumer educators' encouragement of their students to share their opinion in this way is an important factor. Home Economics education can thus enable students to be active consumers who try to change the people around them and in doing so gradually change society.

The key to the future lies in understanding how students change their consumption behaviour, having trained their gaze on sustainable consumption.

A future task is to expand the debate, taking advantage of students of other ages and classmates in school.

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## Biography

Arisa Yoshiuchi is the chief Home Economics teacher at Ochanomizu University Senior High School in Tokyo, Japan. Arisa also teaches Home Economics education methods as a lecturer at Ochanomizu University. She started consumer education using ethical fashion at high school as pioneer in Japan and she is doing a widespread activity in general and the educational fields. She edits public Home Economics textbooks certified by the Ministry of Education (MEXT) and a member of the Ethical Consumption Research Committee of Consumer Affairs Agency Government of Japan.

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INTERNATIONAL FEDERATION  
FOR HOME ECONOMICS

REFEREED PAPER

## Teacher as a researcher: Developing your own teaching

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### Abstract

*Action research provides teachers with a methodology for analysing their educational practice. This paper shares the experiences of three Estonian handicraft and Home Economics teachers. The three teachers named Teacher A, B and C move through the four stages of action research: observing; planning; acting and observing; and reflecting. The study reveals that action research is an effective method to improve teacher practice. Furthermore, six common features are identified in the teachers' experiences providing new insights into the use of action research for this field.*

**KEYWORDS:** ACTION RESEARCH, TEACHERS PROFESSIONAL DEVELOPMENT, HANDICRAFT, HOME ECONOMICS

### Introduction

Changes in society bring forward continuous developments of the content and teaching methods of different school subjects. It creates the situation where subject teachers need to re-assess their teaching practice and make required improvements. As Benn (2010) states, teachers must change their old procedures and understand their subject in relation to the present time and the needs for the future. Similarly, handicraft and Home Economics teachers need to reflect on and change their teaching as they inevitably face new situations or problems for which they have not been specifically trained. Therefore, contemporary teachers cannot rely only on once-acquired knowledge and skills. Teaching is complex and demanding work that requires highly specialised skills and a range of strategies and practices that support student learning (Victorian Department of Education & Training, 2005).

Besides each school subject's aims and outcomes, teachers also need to acknowledge the general competences that are necessary in the development of a person into a human and a citizen (Estonia Ministry of Education and Research, 2014), to cope with constantly changing society. In the Estonian National Curriculum (Estonia Ministry of Education and Research, 2014), eight general competencies that should be developed in general education are outlined: cultural and value competence; social and citizen competence; self-management competence; learning to learn competence; communication competence; mathematics, natural sciences and technology competence; entrepreneurship competence; and digital competence. Supporting the development of all general

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competencies promotes students' active learning, self-awareness and action more broadly, which creates a conducive learning environment and facilitates the teacher's action (Kikas, 2013).

According to the Estonian curriculum (Estonia Ministry of Education and Research, 2014), the development of general competencies should take place in integration with all subjects as well as in collaboration with different subject teachers. Every teacher should keep in mind the overall objectives of the education in subject teaching. Having a broader goal in mind helps to avoid focusing on details and supports seeing things in a wider context. It challenges the teachers to create lessons that combine subject knowledge and skills with general competences. Handicraft and Home Economics in Estonia are handled in the school system as one subject (Taar, 2015). This unique subject allows combining subject knowledge and skills in lessons similarly to the way knowledge and skills are related in everyday practices. Handicraft and Home Economics education encourage integrating theoretical knowledge gained from various school subjects and areas of life with practical knowledge. In addition, there are good possibilities to develop also general competences in handicraft and Home Economics lessons. However, teachers might not have the skills to create the corresponding learning environment.

The challenge with most subject teachers in Estonia is that they focus mainly on subject aims and competences in their teaching. They lack experience to give sense to their actions in relation to the development of general competences (Kikas, 2013). Handicraft and Home Economics in Estonian schools is a rather practical school subject, teaching mainly manual working skills. Based on the Estonia Ministry of Education and Research (2014) students often work in groups in Home Economics lessons. However, in their teaching, subject teachers seldom pay attention to developing students' collaboration skills, for example setting individual and group goals, in addition to subject skills. Therefore, it is important to put reflective teaching practice into action, to apply reflective and exploratory approach, where the teacher acts as a researcher studying their own teaching in everyday school practice.

Action research gives several advantages for a subject teacher. First, it enables teachers to question and understand taken-for-granted ways of thinking and acting in their lesson (McNiff & Whitehead, 2009; Koshy, 2005). As an example, when a teacher notices that the lack of general competences are hindering students' development in subject-specific skills, they can decide to systematically study their actions and develop an understanding how to support students' growth in two aspects side-by-side. Kikas (2013) confirms that developing each individual student's general competences, such as highlighting self-development, using effective learning strategies, or peer interaction skills, creates a conducive learning environment, which in turn creates the basis for a better subject education.

Second, action research is about finding effective solutions to problems that teachers confront daily in their work life (Stringer, 2007). Some approaches to study are limited with just giving the knowledge, namely phrasing the problem in given lesson. In action research, such knowledge is a starting point for the process of development. Teachers are expected to improve their educational practice (Koshy, 2005). This makes the study specific and practical as teachers can find best practices that are suitable in particular school with distinct group of students, uniting the developed knowledge with the improved practice.

Third, action research includes evaluating the implementation of the change (Stringer, 2007). It allows the teacher to get valuable feedback on the developed changes from school life—in the cultural context they work in. Action research is a cyclical, ongoing reflection, visiting a phenomenon at a higher level each time (Koshy, 2005). Even the report in the end of action research study serves the purpose of continuing the inquiry (Craig, 2009).

## **The process of action research**

The cyclical nature of action research contains several steps in which the teacher reflects, acts and evaluates. This article explores each systematic step of action research in conjunction with the experiences of Estonian handicraft and Home Economics teachers. Authors and researchers (Craig, 2009; Norton, 2009 and McNiff & Whitehead, 2009) use slightly different divisions of steps inside the process of action research emphasising different components based on the peculiarity of their studies. Nevertheless, the general principle of action research study is the same. Each systematic step leads to the next step and continually begins anew (Hendricks, 2006). It is a spiral and constantly

evolving model that repeatedly moves through a series of steps (Craig, 2009). We hereby relay on the four-step model described by Norton (2009), namely *observing*, *planning*, *acting* and *reflecting*.

This article explores the experiences of Teacher A who valued the steps of action research as part of lifelong learning process which supports teachers' professional development. Having such strong and positive experience with action research gave her the willingness to share the benefits of her practice with other teachers as a co-author in this article. As action research is very context-driven, two more examples are chosen to describe the wide possibilities of the process when improving handicraft and/or Home Economics lessons in Estonian schools. Examples in this article demonstrate different aspects of problem set-up in action research. In addition, attention is on their reflections of their own professional development as a teacher. These stories aim to encourage other handicraft and Home Economics teachers to use this systematic and powerful tool in the development of their own daily teaching practices. The teachers in this study are:

Teacher A—entered the teaching profession after several years of experience in business enterprise. Her desire to become a teacher was based on a wish to get involved in the education system. Teacher A had worked as a teacher for two years when she carried out the action research study within one study year. Her example is more explored in Veskimägi (2016).

Teacher B—young handicraft and Home Economics student-teacher who started to work as teacher while she was studying at university. Teacher B had worked as a teacher one and a half years when she carried out the action research study within one study year. The details of this study are found in Lutter (2015).

Teacher C—had been working as handicraft and Home Economics teacher for five years before undergoing the action research study. She already sensed the routine in her Home Economics lessons and was therefore willing to make changes through collaborative action research together with researchers within three years. See more about this collaborative study from a researcher's perspective in Taar (2017).

All three studies in this article were conducted under the supervision of the lecturers in Tallinn University. Therefore, teachers had the possibility to discuss research steps and methodology with the supervisors. Nevertheless, they all took the responsibility in their study as researchers.

### **First step: Observing**

In action research, every step consists of several activities. McNiff and Whitehead (2009) suggest that first thing in the planning phase is to observe what is going on. Alternatively, as Norton (2009, p. 69) puts it, "noticing that something is not as it should be". Teaching is a very complex activity that offers challenges for teachers (Dana, 2013). Every now and then, they face situations that cause them tension and discomfort. Teachers are comfortable with the physical and social environment in their classroom and it may happen that these tensions are sometimes unreasonably taken-for-granted. Therefore, it is important to take time for exploring, identifying and analysing one's lesson. As Stringer (2007) suggests, the latter enables teacher to gather relevant information and by that, see what is really happening in the lesson. Describing the situation helps to understand why things are as they are. Only then, it is possible to think about how teacher could improve their actions.

Similarly for Teacher A the process started with analysing the problem. She noticed that students from the third stage of study, namely Grades 7 to 9, were not able to read educational texts purposefully in handicraft and Home Economics lessons. It was hard for students to rephrase the content of the text read and thereby, they were not able to analyse the information they had read. Teacher A sensed that students did not realise the importance of the theoretical knowledge they get by reading in this particular subject. Handicraft and Home Economics is considered to be a rather practical subject by students. The possibility to integrate theoretical knowledge into practical tasks is not valued. After identifying the essence of a problem, it was possible for Teacher A to develop her research question—*which questions asked in reading comprehension worksheets are achievable and understandable for seventh graders after working through reading tasks?* This question became the framework for Teacher A when planning, implementing and analysing the interventions. Typically research question(s) in action research, as in Teacher A's case, provide a focus to what takes place in the lesson and what is needed to improve conditions (Craig, 2009).

Research questions in action research may be specific or broad and overarching depending on the focus of the inquiry (Craig, 2009). Therefore, Teacher C's interest for improvement was much wider in comparison to Teacher A's. She sensed students' lack of interest towards theoretical exercises in handicraft and Home Economics lessons. Her research question was *how to motivate students to learn the theoretical aspects of Home Economics through social learning?*

Teacher B's concern was to find ways to consciously develop creativity in handicraft classes in basic school. During her school practice, she had perceived that little attention is on creativity development in the learning environment and students are not creatively involved in different learning situations. Analysing students' study process' as well as the outcomes of their work' she perceived students' uncertainty and saw only few truly creative solutions and results. She noticed that handicraft activities include potential to provide opportunities for students to develop their creativity.

### **Second step: Planning**

One important part of the planning step in action research study is reading about teaching methodology but also about the experiences from colleagues (Dana, 2013). For Dana (2013), reading is an important activity that every investigative teacher should undertake, as literature helps to interact with the topic and informs one of what is already there. Reading theoretical literature was an important part of Teacher A's study, too. She decided to concentrate on developing students' reading strategies that could be used by students as tools to get better and more systematic understanding of read texts. Functional reading is also part of the communication competence in Estonian curriculum (Estonia Ministry of Education and Research, 2014). Before designing new tasks, Teacher A needed to find suitable theoretical background for given problems that enabled deeper study of the issue and continue with designing tasks that support the development of reading strategies. Therefore, the development of different cognitive processes and the submission of text-related questions were studied. In addition, reading helped Teacher A to realise that in later phases she also needs a theoretical model for analysis if using reading strategies improved students' reading comprehension, hence, the six categories of revised Bloom's Taxonomy model (Anderson et al., 2001) were used already when designing new learning tasks. These six categories enabled students to use cognitive processes on different levels in learning tasks.

Having the understanding of the situation and the overview of the related literature, an action is planned which involves changing the situation in the classroom (Norton, 2009). The intervention plan consists of formulating the activities, choosing participants and potential collaboration possibilities (Hendricks, 2006). In the school context, the teacher may want to change many activities, for instance, to design new learning materials for implementing new methodology. As an example, Teacher A decided to design reading tasks that allow students to practice reading strategies. Reading strategies gave students a tool that supports getting better understanding of the text. At the same time, the revised taxonomy model gave the teacher the tool to support and evaluate students' thinking by asking questions on different levels. According to the revised taxonomy model *memorising*, *understanding* and *implementing* require lower-order thinking in comparison to *analysing*, *evaluating* and *creating*. Therefore, the teacher's task is to use proper level questioning to help students reach higher-order thinking skills. Consequently, Teacher A designed six reading tasks for seventh graders together with six tasks for evaluating students' understanding of the task. All tasks aimed to introduce new concepts for students before practical tasks, where they had the possibility to experience how learned concepts help them solve problems and questions they face in everyday situations.

Similarly, Teacher B needed to find the theoretical background for her study. In the planning stage, she had to familiarise herself with contemporary creativity theories and relate these with the handicraft lessons. She relied on Sawyer's (2013) eight stages of the creative process when creating the learning tasks that could be used in handicraft lessons in fifth to eighth grades. Teacher C, on the other hand, needed theoretical knowledge of how to increase students' social learning. A socio-cultural learning approach (Rogoff, 1990) became the basis for designing a new block of Home Economics lessons that would engage students actively in collaborative knowledge building.

Besides individual research process, action research is often organised collaboratively (Li, 2008; Benn, 2010). There are several possibilities for teachers to form cooperative groups (Dana, 2013; Somekh, 2006). As an example, teachers could form professional learning communities with their

colleagues that focus on the joint development of educational issues. By working collaboratively, participants develop shared vision of their situation that provides the basis for effective action (Stringer, 2007). This way of improving practice is especially good for finding solutions for broader educational challenges in contrast to subject-specific issues. Including students in the process of evaluating the implementation allows teachers to engage with their reflections (Donoahue, 2003; Könings, Brand-Gruwel, & van Merriënboer, 2010; McGlynn-Stewart, 2003). Könings et al. (2010) state that participatory design may promote mutual understanding of viewpoints between teachers and students. They claim that teachers tend to take a more positive view of their lessons compared to their students. Therefore, it would be beneficial to add another viewpoint to the study (Hume, 1998; Könings et al., 2010).

There are several examples (Benn, 2010) of adding an outside researcher to the study. A researcher will be engaged in meaning-making discussion and dialogue with the intent of developing mutually acceptable accounts of the issues and problems they are investigating (Stringer, 2007). According to Stringer (2007) the role of the researcher is more like a facilitator: assisting participants, setting an agenda, reviewing descriptive accounts, analysing information and developing reports. That was the case also in Teacher C's action research study. The teacher worked in collaboration with researchers already in the first steps for identifying the problem and setting research questions. In this case, researchers contributed with new theoretical knowledge and offered new didactical solutions while the teachers' experiences were with everyday school life. Similarly to Teacher A's study, new learning materials were designed for the seventh grade while for Teacher C the key words for designing were *collaborative learning*, *students' active participation* and *knowledge construction*.

### Third step: Acting and observing

Most important aspects of the action step are intervention and application of different materials into real activities while considering the research aims (Dana, 2013; Norton, 2009). During the implementation, the teacher constantly needs to collect data about the changes and analyse how the process is going. This process enables making changes during the first cycle of action research.

Different qualitative, but also quantitative (Savich, 2009) data collection methods are used depending on the focus of action research study. Field notes are used widely (Savich, 2009). Craig (2009) has identified two types of field note entries: *descriptive entries* and *reflective entries*. As descriptive entries try to give detailed description of an event or activity, it may be challenging for a teacher to complete. On the other hand, reflective entries allow the teacher to record her personal reflections—her thoughts, feelings and ideas related to students, lesson or the development of the study.

As an example, Teachers A and B used field notes written in a form of diary. Teachers wrote down theirs, as well as students', thoughts, notes and reflections, adding also students' emotions and behaviour. The diary was filled during and after the lessons. Making notes during the lesson turned out to be the most challenging aspect for Teacher A in her study and required consistency of taking time for writing, as the timetable in schools is tight for teachers. Therefore, Teacher A decided to make short notes about all students' emotions and remarks during the lesson and clarified these notes shortly after the lesson when still having these freshly in her mind. In addition, she made notes later during practical tasks, as students dealt with the same concepts and therefore had remarks and questions related with reading tasks. This proved to be an important action as it gave the teacher direct feedback on students' development—she noticed students recognising and using learned concepts in their talk.

Another widely used source for data are various artefacts (Savich, 2009) that provide insight in the situational milieu in the classroom. These items are readily available in the research setting (Craig, 2009). In a school context, teachers have the possibility to analyse a variety of students works from lesson activities or done as home assignments. In two cases, Teacher A and B analysed tasks that were designed with certain aim. Teacher A analysed students' understanding of the text with tests. As these tests were designed according to the revised taxonomy model, it enabled the teacher to get knowledge about the development of students' cognitive abilities. Thereby, it was possible to change the degree of difficulty of designed tasks so that these would be challenging enough but not too difficult for students.

The results of the analysis allowed Teacher A to make several changes in learning tasks. First, the formulation of the reading tasks was too complicated. More simple formulation made the work with tasks easier for students and thereby decreased the time spent with the task. Nevertheless, she understood that students need more time for the tasks than she had initially planned. Secondly the teacher realised that students expect grades as a reward after they have finished reading tasks. Although this situation was new for Home Economics, in other lessons students get grades for written tasks in addition to the oral feedback from the teacher. This notion made the teacher change her initial intervention plan by adding a small written test. Third, Teacher A had to change the formulation of questions. Based on observation, additional readings and students' tasks from the first three lessons, the teacher saw that in addition to the level of asked questions, these also need to be very precisely worded. The formulation of the question must support students' thinking on particular level, and not enable to use lower-order thinking, such as using analysing and evaluating, not just memorising or understanding.

Although Teacher B evaluated the appropriateness of creativity development tasks, similarly to Teacher A, her notes from the first cycle of the study also showed that the tasks were often unclear to students. Students asked her to reword the assignments and to give examples of the possible solutions. After lessons, she analysed and compared students' pictures or artefacts to receive the feedback about the students' willingness to apply their creativity. She noticed students' lack of motivation for doing independent creative tasks, and their low self-esteem. For example, students doubted their drawing skills, creativity and worthiness of their ideas.

Using students' feedback to get the knowledge about the suitability of the improvements was applied in Teacher C's action research study, where the researcher collected data: interviews with students several times within eight weeks, and asking students' reflections in a closed Facebook community after every lesson. As this study was strongly related with social learning, students had the opportunity to share their views and reflections on different aspects of working with peers.

#### **Fourth step: Reflecting**

The action research process always involves an ongoing data analysis in every step of the study as described and illustrated under previous step. Ongoing data analysis helps the researcher to develop and revise analytical questions and identify any additional data that is needed to improve the practice (Craig, 2009). Craig (2009) recommends integrating ongoing analysis into the schedule as it prompts the teacher to explore analogies and concepts to identify patterns that emerge in the environment.

In the end of every cycle, a summative analysis is done to get feedback on the intervention process. It helps the teacher to evaluate how developed changes fit to the needs of their classroom. As a result, it can be said that learning tasks developed by Teacher A had a positive effect on the overall classroom atmosphere and students' level of interest in reading. In addition to subject-specific knowledge, this also helps students to practice learning skills that are beneficial in any school subject. Through the described action research process, Teacher A learned to take notice of students' various developmental abilities. When the teacher conducts new learning tasks, she needs to consider the abilities of all students. Therefore, in the future, it is necessary to design reading tasks on several levels. Teacher A saw how the tasks she had conducted turned out to be too difficult for some students. These students were not able to organise their own learning and needed teacher guidance. In addition, the teacher learned to identify students, one or two in every class, who did not manage to finish the task within the given time. Without the teacher's attentiveness, they left the tasks unfinished.

Teacher B's reflection of her interventions in action research showed that created tasks should be related to the subject context. If the activities are unconnected to lesson topics, students did tasks reluctantly. Changing the aim and the presentation of the creative tasks during second phase of her study improved the students' attitudes about designed tasks—they participated enthusiastically finding creative solutions to different learning situations that arise in craft lessons.

Action research always has a practical value (Stringer, 2007; Koshy, 2005) meaning that in addition to the experience and knowledge that teacher gets through the steps of the study; she will also have a practical outcome—a needed skill, tool, material and so on. For Teacher A, the designed tasks proved to be suitable for handicraft and Home Economics lessons. Students' overall subject-related knowledge and practical skills increased. Students' willingness to participate in class activities,

express their own opinion, analyse study texts and give justified opinions increased, and students' insecurity decreased. Students demonstrated better listening skills and accepted the plurality of views. Simultaneously, this study showed that seventh graders lack subject-specific knowledge which hinders finding solutions to the given tasks. Therefore, in this study, it was not possible to analyse the students' analytical and evaluation skills. The teacher realised that she should pay more attention to everyday-related themes already in lower grades.

For Teacher C, action research enabled to think over a block of Home Economics lessons which were interrelated, enabling to construct coherent subject knowledge, and gave students plenty of possibilities to work with and from peers. The teacher sensed that the continuation of Home Economics lessons had a positive effect, previously it was done every now and then, between handicraft topics. Students demonstrated better integration of the subject-specific knowledge. It was possible for students to construct knowledge week after week.

At the same time, it is important to note that the process of action research continues going through the steps repeatedly (Craig, 2009). The teacher develops herself through applying gained knowledge, making needed improvements and following the cycle again. The cycle process visible from the studies of Teacher B and Teacher C. Developed tasks were improved and implemented again. Teacher B conducted two action research cycles while Teacher C completed three cycles within three study years. Nevertheless, it cannot be assumed that the designed and improved tasks will fit to every learning situation. Teachers constantly need to have the exploratory mentality in their lessons to recognise the possible developmental needs. Teacher C also stressed that although she got a good package of learning tasks within three study years, she sees the need to make changes every now and then.

## Discussion

The intention of this paper was not to make generalisable claims, but to tell the stories of three Estonian handicraft and Home Economics teachers to motivate other practitioners who may sense the need to develop their own teaching. The number of action research studies in academic journals confirms that research conducted by teachers in their own teaching environment is a credible and valuable source of knowledge in education (Hendricks, 2006).

Also, the handicraft and Home Economics teachers introduced in this paper valued the process of conducted action research study as it gave them the possibility to improve themselves professionally. Teacher A saw the benefits of the action research method as essential from the aspect of the teacher's developmental perspective. Above all, this process gave her an understanding how the teacher herself can and should influence, as well as improve, her teaching practice. This experience gave her a tool and above all self-confidence and the feeling of empowerment (similarly to Donoahue, 2003) to use exploratory approach towards her work. As a result of an analysis, Teacher A

- recognised that students should be engaged in many different learning situations in study process, not only reading and writing, to integrate the new concepts.
- noted that when students acquired subject terminology they started to express themselves precisely and accurately also in practical tasks and in discussions
- discovered that students' self-awareness was increased and they found out that the learned concepts could be used in practical tasks
- learned that students manage their subject-specific independent work better if they understand texts in worksheets and textbooks.

The most important thing Teacher B learned was the understanding that one cannot create or implement tasks in isolation. That means when she planned her intervention she concentrated only on the development of creativity, not the whole lesson. In the second phase of the study she combined creative tasks and other tasks to enhance study process. Her results of the analysis based on the findings that

- creativity in the learning process can only be developed by linking it to the subject,
- with the support of the teacher's skilled guidance, students develop their presentation skills, thinking skills, imagination, motivation, and the ability to see problems and solve them.

Teacher C appreciated the collaborative nature of the action research process as it allowed ongoing discussion regarding relevant issues (Craig, 2009). Joint development produced more ideas and solutions. In addition, it was good to get immediate feedback on designed learning tasks from collaboration partners for making improvements already before developed tasks were implemented in her lessons, although collaborative development of learning tasks also had an opposite effect. The teacher sensed that because researchers put some learning tasks together, she lacked the background logic of these tasks. Therefore, during the first implementation period Teacher C felt insecurity and difficulty when explaining developed learning tasks to students. As an overall result she learned

- to take the role of the supervisor in her lessons (instead of a traditional teacher) when students were engaged in collaborative tasks; and
- to give students more independence when constructing knowledge with group members.

Framed research questions in the examples presented here show how action research is very suitable for teachers when studying and guiding students on developing their general skills. Subject-specific techniques have been for a long time the focus in Estonian handicraft and Home Economics education. Therefore, teachers' broader understanding is needed. Many difficulties that students face in their learning process are general and not necessarily part of the content of specific school subjects, although the lack of general skills hinders students' learning also on the subject level. Thus, improving students' general competences, namely educating a person instead of giving students subject-specific knowledge, involves also the improvements of subject learning. Kikas (2013) concludes that if one acknowledges that general competences are a basis for achieving the subject competences, teachers complaining about lacking time to develop the general competences as well as teach the subject becomes meaningless.

## Conclusion

We have identified six common features of action research approach according to the experiences and knowledge gained through the examples introduced in this paper:

- Every teacher is facing challenges in their everyday teaching. Action research encourages teacher to "take the reins" on their situations. Alternatively, as Dana (2013) suggests, instead of denying the problem, a teacher with an exploratory attitude embraces the problem, defines it and frames a research question to study with action research approach.
- Action research may be a long and intensive process for a teacher as a researcher. Conducting a study is complex, time consuming and it requires ongoing reflection to be able to answer the research question. Although, collaborative action research study offers support in all research steps, teacher practitioners' self-directedness is needed.
- The process of inquiry in action research is as important as the outcomes of the study. Similarly to Koshy (2005), we have seen action research enabling a teacher's professional development through looking at situations closely—analysing them, recognising possible bias and interpreting data.
- Action research gives a systematic tool for the novice or less-experienced teacher for whom it might be challenging to see how to apply studied knowledge into their teaching. Exploratory approach on teachers' own teaching practice helps new teachers to find teaching methods or didactical options that are suitable on her needs and possibilities.
- For experienced teachers, action research helps to face new challenges and improve already ingrained practices. Action research does not require specific training. Instead, the teacher needs to develop research capacity through engaging with new ideas and literature (McNiff & Whitehead, 2009) as well as to be honest towards himself/herself.
- Action research enables teachers to widen their understanding of the teaching in their subject-field. As Benn (2010) states, researchers explicitly or implicitly bring their own perceptions of the teaching situations to the study and thereby, working collaboratively in action research enables to retrieve variate approaches to learning and teaching processes.

## Biographies

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Inga Veskimägi is Handicraft and Home Economics teacher at Peetri Kindergarten-Primary School, Estonia. She is the practitioner teacher with students at age 10 to 16. In her Master's thesis Inga concentrated on improving her teaching process through action research. Before starting teaching career she worked several years in business sector.

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INTERNATIONAL FEDERATION  
FOR HOME ECONOMICS

REFEREED PAPER

## A study of Japanese lesson study in Home Economics

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### Abstract

*The Japanese practice of lesson study is a professional development process for teachers to improve their lesson practices. This study explores the characteristics of the different types of Japanese lesson study in Home Economics and identifies issues that teachers should address for improvement. A literature review, interviews with officials at related Japanese organisations, and case studies were conducted, and demonstrated the following important findings. First, national and local organisations play important roles in Home Economics lesson studies. Second, the types of lesson study are: a) groups of teachers supported by the government, b) teachers at university-attached schools, and c) groups of academic societies or teachers' unions. Third, study groups often provide open classes at annual meetings. Detailed documents of lesson plans and post-lesson discussions play a vital role in the improvement of teaching best practices in Home Economics. Fourth, lesson studies offer long-term connections for spiral research studies. The three key characteristics of lesson studies with respect to Home Economics education in Japan are: continuity, collaboration, and equality. Professional lesson study knowledge needs to be shared both nation- and worldwide to improve Home Economics education.*

**KEYWORDS:** LESSON STUDY, HOME ECONOMICS, PROFESSIONAL DEVELOPMENT

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## Introduction

According to the International Federation for Home Economics (IFHE), “around the world Home Economics educated women and men demonstrate that their acquired competencies enable individuals, families and communities to overcome poverty and hunger and to improve wellbeing and contribute to sustainable development” (IFHE, 2015). Home Economics competencies are acquired through education and practice, and schools play an important role in acquiring basic skills. Home Economics curricula vary worldwide, and, according to Arai (2015), can be categorised according to three characteristics: comprehensive learning about home and family, citizenship learning, and technology learning. Each country has its own unique Home Economics curriculum according to its economic and social structure. However, the point of responsible living (PERL, n.d.), widely shared among different countries, represents an important objective in the education of consumers, householders, citizens, workers, and producers in modern Home Economics curricula.

For responsible living and developing Home Economics education, we need to build a strong foundation. Thus, it is essential to improve Home Economics lessons and evaluate their results, as well as considering not only the general learning and teacher education methods but also Home Economics-oriented learning theory.

In Japan, Home Economics education was introduced into the national curriculum in 1947 to build a democratic home and family system. Since then, Home Economics education has been evolving in conjunction with the domestic economy and changing family policies, as well as with trends in international education. In particular, the curriculum and learning methods have been improved through study of international Home Economics achievements. For example, the Japan Association of Home Economics Education (JAHEE) (2000) and the National Institute for Educational Policy Research (2005) implemented research groups for curriculum studies and international comparison. Many foreign textbooks for students and guidebooks for professionals, mainly written by American researchers, were translated into Japanese (e.g., Chamberlain, 1992; Couch, Felstehausen, & Hallman, 2002; Hitch & Youatt, 2005), leading to a greater focus on personal relationships and adolescents’ practical issues, as well as the adoption of more interactive teaching methods in Japanese Home Economics education. The latest course of study was revised in March 2017. Home Economics has been made compulsory for all students from the fifth grade in elementary school to high school and consists of a) family life, b) food, clothing and shelter, and c) consumption life and environment. Japanese teachers have begun to pay more attention to collaborative learning as well as practical life skills in response to international teaching trends.

However, there is little English language information available to the international community concerning Japanese Home Economics education, except for the overview of the school system, the course of study, and the history of Japanese Home Economics by JAHEE (2004, 2012). Furthermore, there are very few current examples of international collaborations through Home Economics lesson studies or class research, despite the many Japanese domestic studies on this topic (e.g., Tonedachi, Honoki, Maruya, & Inagaki, 1984; Watanabe, Murata, & Takabu, 1994; Bunko & Ueno, 2001).

Recently, in the international Home Economics community, classroom action research (e.g., Benn, 2010), analysis of pupils’ groupwork interaction (Lindblom, Arrema, & Hornell, 2016), and development of learning materials and methods (Janhonen-Abruquah, Posti-Ahokas, Palojoki, & Lehtomäki, 2014) have explored improvements in classroom practices. Additionally, research on teacher collaboration (Kuusisaari, 2013, 2014) and conceptualising inquiry-oriented approaches in Home Economics education courses (Smith & Zwart, 2016) have aimed to improve teachers’ professional development, but research collaborations discussing lesson quality have been lacking.

International research collaborations targeting school lessons began in earnest in the late 1990s in Japanese mathematics and science education (Isoda, Stephens, Ohara, & Miyakawa, 2007). This trend commenced with an international comparative study on teaching mathematics (Stigler & Hiebert, 1999) and due to the high regard for Japanese students’ performance, Japanese lesson study had attracted much attention. Japanese lesson study refers to a process whereby teachers strive to improve their teaching methods by working with other teachers to critique one another’s teaching techniques (Baba, 2007, p.2). Previously, comparative curriculum studies focused on intended curriculum and achieved curriculum-based improvements through international student assessments like the *Program for International Student Assessment* (PISA) and *Trends in International Mathematics and Science Study* (TIMSS). Recently, the focus of education research has shifted from

attained curricula, such as those mentioned above, to implemented curricula or lesson study (Fujii, 2013).

There are two main approaches to lesson study: (1) a subject-oriented approach to curriculum research and development and (2) lesson study for the learning community. In the former, learning objectives, contents, teaching materials, and the value of the subject, including scrutiny of the educational content of class work (Toyoda, 2011, p.15), are mainly discussed in lesson colloquia. The latter approach, which is based on school management (Chichibu & Kihara, 2013), requires collaborative learning in all classrooms and encourages teachers to perform daily mutual observations on their teaching practices (Saito, Murase, Tsukui, & Yeo, 2015, p.9). Teachers thus learn to respond to unexpected student behaviours, but this approach tends to be unsuitable for exploring pedagogical values in each subject (Watanabe, 2013).

Systematic information about lesson study in Japan, including its origin, history, theory, and research method, was published in English as *Lesson Study in Japan* (2011) by the National Association for the Study of Educational Methods. In mathematics education, international study exchange on lesson study has produced translated information for non-Japanese educators interested in lesson study in Japanese schools (Isoda et al., 2007). Some educational researchers have also published lesson study handbooks to share the practice with the rest of the world (e.g., Lewis & Hurd, 2011; Stepanek, Appel, Leong, Mangan, & Mitchell, 2007; Dudley, 2014). However, despite lesson study achieving global fame, there are few cases of Home Economics lesson study amongst these international discussions.

In this paper, we focus on Home Economics lesson study to establish appropriate contents and improve teaching methods. The following research questions were investigated:

- What are the types and processes of Japanese Home Economics lesson study?
- What are their characteristics and the challenges faced?

This study aims to facilitate international collaboration in lesson study in the Home Economics education community.

## Methods

In the preliminary survey, 15 organisations related to Home Economics education in Japan were extracted from lesson research conference reports and summaries of academic presentations possessed by the authors. From these materials, nine organisations that had implemented and reported on lesson study and one academic society that focused on Home Economics education were included in this research.

A literature survey was first conducted. From the organisations' secretariats, we gathered the annual reports for the latest three years prior to 2016. The organisations' website content was also used as data, to gather information on year and history of establishment, number of members, members' attributes, organisational structure, and the holding of an annual conference of lesson study presentation, its theme, procedure, and general participants. From July to October 2015, interviews were held via email and telephone with officials of the five organisations for which there was no documentary information on membership numbers or how lesson study groups were selected.

The actual situation of lesson study was confirmed based on the above information. The characteristics of lesson study in each organisation were classified based on the scale of the organisation and the degree of public intervention.

Next, case analysis was conducted on the lesson study conducted in the organisations. Some of the authors have abundant experience of direct engagement in lesson studies as advisors or collaborators. In the past five years, seven data cases were obtained from two regions where detailed records of the study process were obtained using the action research method. We evaluated case studies in relation to the quality of lesson study from the perspective of advisors, the involvement of stakeholders, the number of participants in the classroom discussion, and the extent of the spread of the results report.

In gathering data, this research was planned and implemented according to JAHEE ethics regulations. After collecting records and obtaining approval from the stakeholders to publish the research results,

we gathered and anonymised the information so that individuals would not be identified in the published results.

## Results and discussion

### Characteristics of Home Economics lesson studies by Japanese organisations

#### *Background of organisations related to Home Economics*

We identified organisations where Home Economics lesson studies were conducted or where presentations about lesson studies were held. Table 1 shows the history and members of each organisation. Ten organisations focus on improving Home Economics education. Home Economics research societies are organised for teachers in elementary, junior high school, and senior high school; for example, the National Elementary School Home Economics Education Research Society (ERS), the All Japan Junior High School Technology and Home Economics Research Society (JHRS), and the National Senior High School Home Economics Research Society (SHRS). The education centres of each prefecture, along with some municipalities and university-affiliated schools, organise lesson study groups. The remaining organisations, like the National Home Economics Education Society (ZKK), and JAHEE, are all societies for people interested in Home Economics.

Most of these organisations were established in the 1950s and 1960s, based on three background factors. First, the drastic democratisation after World War II resulted in Japanese teachers voluntarily organising to incorporate these ideas into their classroom practices; for example, the establishment of the Teachers' Union in 1947. Second, Home Economics teachers had to defend against the opinion that Home Economics was unnecessary and that life skills should be taught elsewhere (ZKK, n.d.). Third, in 1961, there was a government movement to make the teaching of the national curriculum a legal requirement. The national curriculum guidelines, published between 1947 and 1953, were initially recognised as simply guidelines. The JHRS, comprising a group of junior high school teachers, was established in 1962 to develop this new subject of Home Economics (JHRS, n.d.). At first, group members focussed on themes such as subject management and teaching methods. The ERS was also founded to study methods for learning evaluation and instruction and spread them to public schools from 1963 (ERS, n.d.).

The establishment of the abovementioned organisations was based on teachers' practices, but scholars and teachers also founded the JAHEE to facilitate academic research. The Organization of Educational Scholars of Home Economy (OESHE) was founded to oppose the movement to make Home Economics part of the national curriculum and acted by writing its own curriculum.

These organisations still exist today because their members share common objectives and continue to participate in lesson studies to develop subject content and teaching practices. The teachers' diligence and strong sense of mission support the continued existence of the organisations. As Japanese teachers who are trained under the teacher's licensure are chosen by a competitive examination in local districts, it is certain that they are dedicated and competent.

#### *Organisation members*

There are Home Economics organisations for teachers at every school level and for anyone interested in the subject. Membership is granted in several ways. Some organisations, such as the JHRS and the Association of Senior High School Headmasters Home Economics Committee (SHHEC), require application by school unit, while others allow for individual membership. For example, schools with regularly employed junior high school Home Economics teachers hold automatic membership of the JHRS. Elementary school teachers, however, must apply individually to join the ERS, because Home Economics is only compulsory for fifth and sixth grades. For high school teachers, it depends on the municipality as to whether membership in the SHRS is compulsory or voluntary. To maintain the organisations, school principals or vice principals, who are sometimes not Home Economics professionals, are assigned to the administrative posts of the ERS, JHRS, and SHHEC. The academic organisations and Teachers' Union provide voluntary memberships.

Table 1 History and membership of organisations providing lesson study groups in Home Economics in Japan

Organisations/groups	Year of establishment	National conference* (2015)	Members						
			Size (2014)	Elementary school teachers	Junior high school teachers	Senior high school teachers	Supervisors, administrators	Researchers	
1 <i>Zenkoku Shogakko Kateika Kyoiku Kenyukai</i> (National Elementary School HE Education Research Society: ERS)	1963	52nd	1618	✓					
2 <i>Zennihon Chugakko Gijutu Kateika Kenkyukai</i> (All Japan Junior High School Technology and HE Research Society: JHRS)	1962	54th	6387 **		✓				
3 <i>Zenkoku Koutougakko Kateika Kenkyukai</i> (National Senior High School HE Research Society: SHRS)	-	-	-				✓		
4 <i>Zenkoku Koutougakko Koucho Kyokai Kateibukai</i> (Association of Senior High School Headmasters: HE Committee: SHHEC)	1951	113rd	1890**					✓	
5 Research groups in education centres	-	-	-	✓	✓	✓	✓		
6 Schools affiliated with universities	-	-	167 **	✓	✓	✓			
7 <i>Zenkoku Kateika Kyoiku Kyokai</i> (ZKK: National HE Education Society)	1950	65th	1340	✓	✓	✓	✓	✓	
8 Japan Association of HE Education (JAHEE)	1958	58th	1094	✓	✓	✓	✓	✓	
9 Teachers' Union	1947	65th	-	✓	✓	✓			
10 The Organization of Educational Scholars of Home Economy (OESHE)	1966	50th	About 400	✓	✓	✓	✓	✓	

\* Groups 3, 5, and 6 are composed of multiple organisations, so the establishment year and the number of annual conferences cannot be specified.

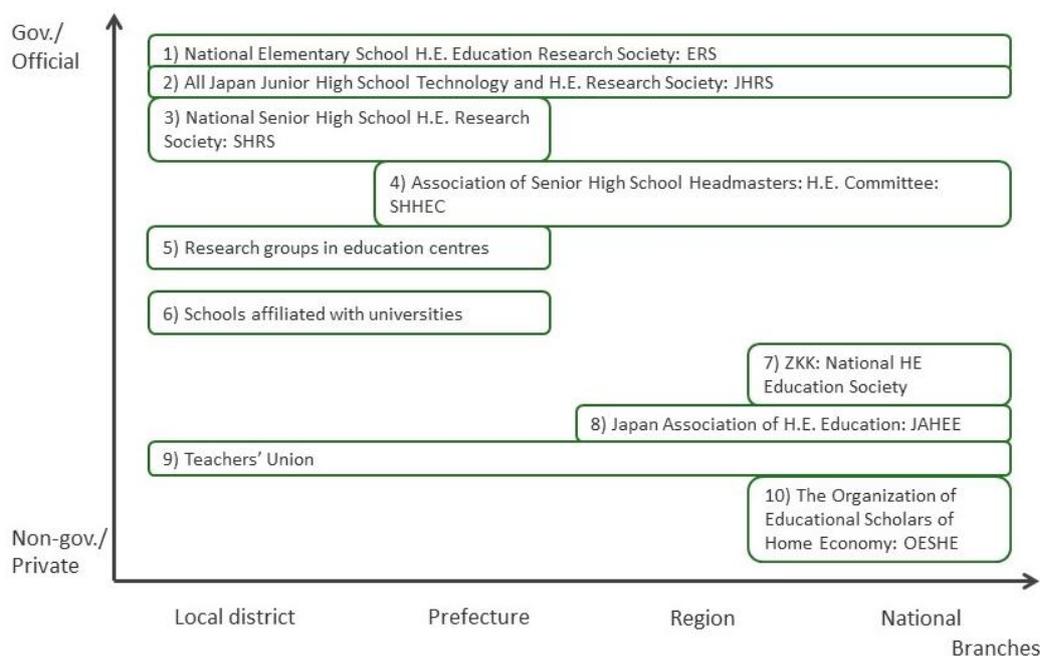
\*\* Number of members is the number of school units. Group 6 is the number of the national schools

Teachers at various school levels join these organisations and participate in lesson studies. However, the membership of some has been declining due to the declining national fertility rate and the reduction in lesson hours or specialised courses for this subject. For example, the HEC officer reported that school memberships had dropped from 2,705 in 2001 to 1,890 in 2014, mainly due to the reduced number of specialised Home Economics courses. The ERS has also seen its membership decline, as specialised Home Economics teachers are replaced with science teachers, special support teachers, and so on. It has thus become difficult for several local organisations to maintain Home Economics lesson study groups. On the other hand, the JAHEE has maintained its membership numbers by encouraging teachers to join, although it has mainly been a community for university researchers.

*Characteristics of lesson study conferences*

The main activity of these organisations is to hold annual conferences. Several classes are open for observation in the conferences of the ERS, the JHRS, and in university-affiliated schools. Post-lesson discussions are then held using records of discourse and teaching materials. This differs from conferences in other organisations, where reports or presentations about lesson studies are shared.

Figure 1 shows the characteristics of the 10 organisations. The horizontal axis shows the scale of the organisations, and the vertical axis shows the level of public intervention in lesson studies. Public intervention is judged by the following three factors. First, attending a research meeting on duty is recognised as an official trip. Second, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) or the education boards provide support for annual conferences. Third, conference budgets are provided by the national or local government. The ERS, JHRS, SHRS, SHHEC, and research groups of educational centres have more official status than the other organisations mentioned due to support from the Board of Education or MEXT. For this reason, participation in lesson study in the public organisations is mandatory for teachers.



**Figure 1** The characteristics of lesson study organisations

University-attached schools, which are independent administrative institutions, hold intermediate positions, while the ZKK, JAHEE, Teacher’s Union, and OESHE are entirely private. The organisations, with the exception of educational centres, university-attached schools, and the OESHE, have a layered structure, from school district branches to national headquarters.

### *Types of lesson study according to the characteristics of the organisation*

There are a variety of members and objectives in lesson studies, as well as ways of reflecting on learning from research in the field. Lesson studies can be categorised into three types:

- Type A: a group of teachers supported by the board of education or education centre
- Type B: a group of teachers at university-attached schools; and
- Type C: a group of academic societies or teachers' unions.

Type A lesson study groups are conducted by official research organisations and tend to implement the government-determined course of study and standardised education. As lesson studies are systematically arranged in the form of teacher trainings, it is generally compulsory for Home Economics teachers to participate. Participation is by rotation or upon request from the organisation officials.

Type B lesson studies are conducted by teachers at university-affiliated schools that provide teacher education courses, mostly national schools. Some teachers are assigned to these lesson studies because of their superior teaching skills and positions in the attached schools, while others are sent in preparation for future leadership roles. Even generalist elementary school teachers are assigned to lesson studies on their specialty subject in attached schools. The roles of such schools are to implement the government-determined course of study and spread teaching models to local schools. Furthermore, attached schools play an important role in demonstrating experimental teaching methods that provide ideas for revision and improvement of the course of study. The attached schools try to set more challenging and experimental themes for lesson studies, as they generally have strong connections with the university researchers who conduct the research.

Type C lesson studies are conducted by non-governmental organisations that represent academic societies or teachers' unions and meet voluntarily. Previously, their themes were more experimental and hypothetical than those of official organisations. However, it became somewhat difficult for teachers to conduct lesson studies without considering the government-determined course of study, as it has become accepted in Japan that teachers must follow the course of study. The main objectives of lesson studies in this context are to demonstrate theoretical methods and share practices for improving individual skills.

In addition to these three types of lesson study, small groups exist to expand participants' networks and improve their teaching skills. However, research on these groups was beyond the scope of the current study.

### **The cycle of lesson studies**

By examining annual reports and teacher interviews, we found the methods and processes of Home Economics lesson studies to be diverse. In reviewing case examples, it is apparent that the common process has been well represented by Lewis, Perry, & Murata (2006). First, teachers study a curriculum and set a theme and goals. The theme focuses on teaching methods, teaching materials, or evaluation, and is discussed among the members of the Type A lesson study, while the focus tends to follow the specific school theme in the Type B lesson study. Second, they plan a research lesson and share the related documents. Third, they conduct a research lesson, while other members observe and record data. An annual conference is held where the research lesson is opened to the public in the Type A and Type B lesson studies. Fourth, they conduct a lesson colloquium with observers to discuss the student learning practices.

We also found that the first three steps are almost the same as in Lewis et al.'s (2006, p.4) description, whereas the methods of reflection and data sharing of the research lesson are divided into four more components. One is a post-lesson discussion. After the research lesson teacher has reviewed their self-evaluation, the teachers and observers discuss the achievements and challenges of the lesson. Post-lesson discussions are held using the records of discourse and teaching materials. Second, supervisors, who are usually university researchers or educational supervisors of education centres, are invited to offer summary comments at the annual lesson study conference. In some cases, several advisers attend the conference. Third, a presentation is given to the participants before the discussion (this is common in Type B lesson studies). The final component is documentation

of the study. The documenting of the research lesson plan is essential in the lesson colloquium and often includes a description of the study theme or the reports of student reactions in prior lessons. Therefore, teachers can access the lesson study contents even if they were absent from the conference. A final report is published by most public organisations. Further, in academic societies, research presentations of lesson studies are frequently reported.

In practice, these reflection methods are combined to form a lesson study. Japanese Home Economics lesson studies are actively conducted and involve many teachers and concerned parties.

### The lesson study process illustrated through two case studies

This section presents the ideal features of the entire cycle of a lesson study, from the planning to the reflection stages, as exemplified through two case studies.

#### A lesson study supported by an educational centre in Osaka Prefecture (Type A)

##### *Members and theme*

The details of the lesson study are shown in Table 2. The core members were three Home Economics teachers, the educational supervisor of an education centre, and university researchers specialising in Home Economics education and childcare. In this case, research lessons were conducted by the Home Economics teachers in three senior high schools with different levels of academic achievement and geographic areas. The goal was to encourage students to increase self-esteem affirmations, and the theme was the effect of child abuse on child development. Interactions with toddlers and their parents, and experiential reflections on these interactions were commonly adopted in the research lessons of each school.

Table 2 Details of the case study of the lesson study supported by an educational centre (Type A)

School(s)	Three different types of public senior high schools in Osaka prefecture
Core members	Three HE high school teachers A, B, and C, an educational supervisor of the education centre, and two university researchers of HE education and child development
Period	From April 2010 to March 2011
Goal	Encourage students to increase self-esteem affirmations
Theme of research lesson(s)	Child abuse in the lessons of A: Child development—Basic HE (10th grade) 10-12 hours B: Child development—Integrated HE (11th grade) 16 hours C: Child development and care (12th grade) 48 hours

##### *Flow of the project*

Figure 2 shows the flow of the project. The three lesson cycles are continuous. Three teachers could be inspired by teaching ideas from the other core members during each lesson study cycle. The teaching methods and program effects were analysed according to evidence from the data on students' self-esteem, gathered from pre and post surveys. Following the lesson study, a report on the research results was prepared. Finally, follow-up research lessons were conducted and observed by newly employed teachers in the second year of the lesson study.

##### *Achievements and issues*

This lesson study was implemented with research funding from an incorporated foundation. These lesson studies offer long-term connections to spiral research studies, which means that the problems of the first cycle are improved in the subsequent cycle. Furthermore, the child development and Home Economics education researchers were joined in class planning, and advised on active learning methods and how to create scales for measuring student self-esteem. Using such advice and grasping the actual condition of the students, an interchange of different ages of infants, parents, and high school students and a workshop reflecting the high school students' review were developed as programmes common to the three high schools, and the transformation of high school students' learning was captured. This is an effective way for Home Economics specialists to collaborate with different professionals to provide professional development for teachers. The three teachers involved

had different levels of experience, but their involvement in the study was equal. However, in the case of Osaka, it became too difficult to maintain this kind of lesson study cycle focusing on a given subject matter, due to policy changes by the education centre that affected both the budget and mandates.

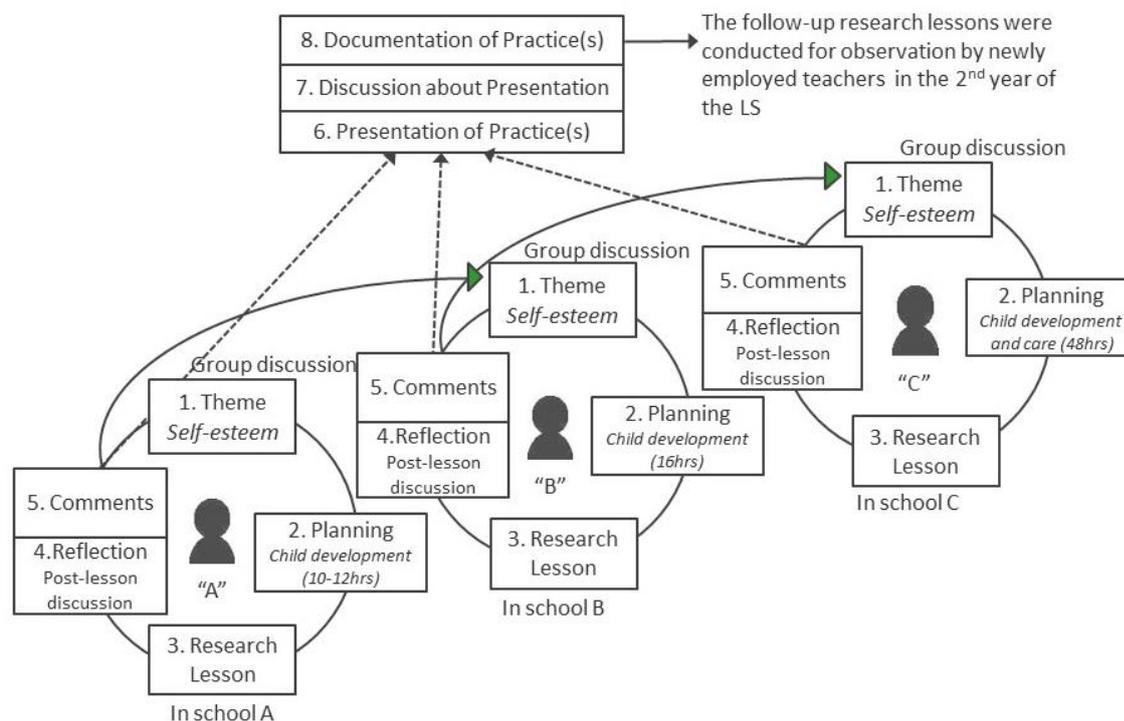


Figure 2 the cycle of lesson study supported by education centres (Type A: case study in Osaka)

**Lesson study in a university-attached elementary school in Fukuoka Prefecture (Type B)**

*Members and theme*

In this case, the core members comprised the teacher in charge of Home Economics, school colleagues, previous Home Economics teachers at the school, and a university researcher of Home Economics education (Table 3). The theme was the development of students’ information handling abilities. The teacher designed the lesson, focusing on the jigsaw method for gathering and selecting better information. The jigsaw teaching technique is a cooperative learning strategy designed by Aronson (n.d.).

Table 3 Details of the case study of the lesson study by the university-attached school (Type B)

Goal(s)	Encourage pupils to problem-solve in real life
Period	From April 2014 to Feb 2015
Core members	HE specialised schoolteacher D, colleagues at the school, predecessors of HE in the school, and university researcher of HE education
Theme of research lesson(s)	The jigsaw teaching methods for improving information handling abilities in the lessons of <ul style="list-style-type: none"> <li>• Sewing for enjoyable living (6th grade) 11 hours</li> <li>• Let’s think ecological: life for future living (6th grade) 9 hours</li> </ul>

*Flow of the project*

In the first cycle, the lesson plan designed by the Home Economics teacher was discussed among her colleagues. The plan was then improved and discussed again with her predecessors (Figure 3). The university researcher consulted with the teacher before and after the discussion. The teacher then conducted the research lesson with the pupils on collecting data for creative sewing using the jigsaw

method, and her colleagues and the university researcher observed and gave feedback. In the second cycle, after another round of lesson plan discussion with her colleagues, the teacher asked for the university researcher's advice in planning a research lesson that required students to develop an action plan for sustainable living. This time, the lesson was opened up for review by other teachers at the annual conference. At the conference, a booklet including an outline of the research theme, the report on the research lesson, and the lesson plan was distributed to the participants. Approximately 20 teachers observed the lesson and participated in the post-lesson discussion. The teacher then self-reflected on the lesson, and observers commented on the materials, methods, and lesson plan. The possibility of practising in a local school and challenging issues of the lesson study were discussed for approximately 30 minutes. Evaluation and advice were provided by the university researcher.

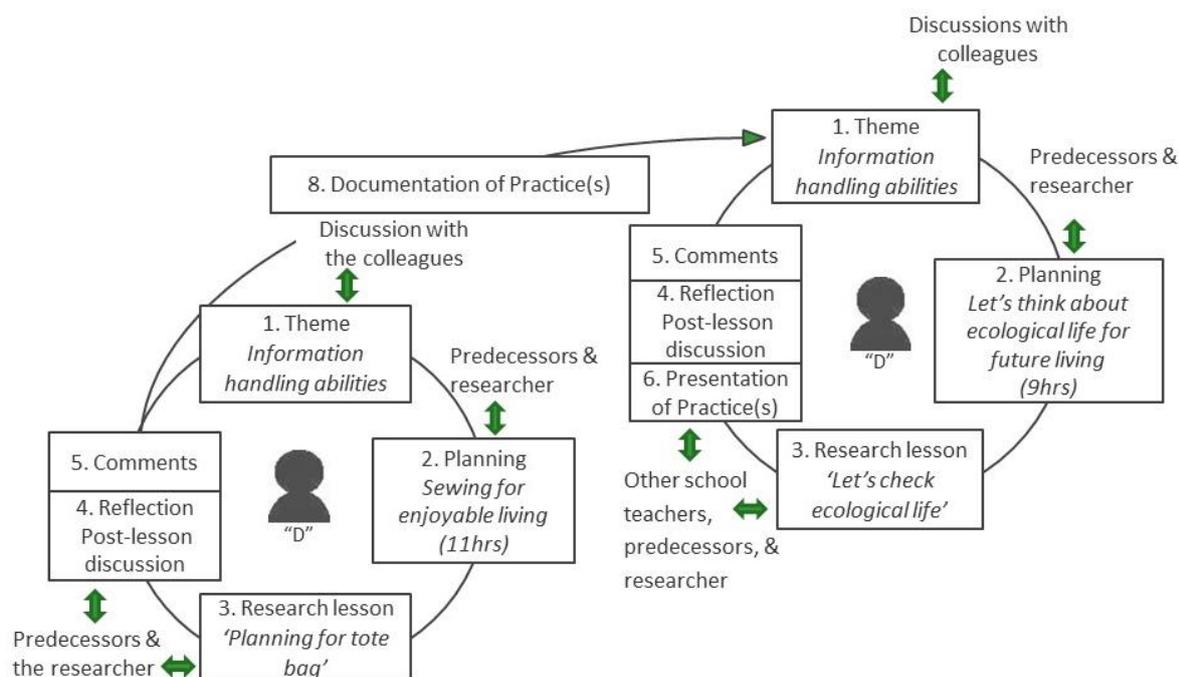


Figure 3 The cycle of lesson study by a teacher in a university-affiliated study (Type B: case study in Fukuoka)

### Achievements and issues

The cycle of this case also provided long-term connections for spiral research studies with specialists to collaborate with different professionals. In this case, the colleagues and predecessors had a vertical relationship to teacher D to train her into a leading position. The colleague advisers asked teacher D about the value of the class from the viewpoint of their abundant teaching experience. Teacher D improved the lesson plan by explaining it to them.

The university researcher supported the teacher, playing a cooperative role. The researcher provided information on the characteristics of Home Economics and then explored contents desirable for Home Economics from a research perspective in collaboration with the teacher. This equal relationship with the researcher gave her the confidence to improve her plans. Moreover, the participants attended the conference with a friendly and sincere attitude, and actively exchanged opinions. They evaluated the jigsaw learning method based on the lesson study theme as effective for Home Economics learning. However, since information gathering activities needed to be commonly introduced across all subjects and were prioritised in the lesson, the lesson content explaining the concept of environmentally friendly living was judged inadequate. Challenges remain in terms of effective education around responsible consumer choices.

### Conclusions

This paper has described four main features of Japanese lesson study in Home Economics. First, national and local organisations play important roles in Home Economics lesson studies. Many Japanese teachers, from elementary level to higher education, belong to such organisations, and

have participated in lesson studies. Second, it is not only teachers, but also supervising directors of education centres, managers of subject research groups, and university researchers who collaborate in lesson studies. Thus, they allow Home Economics specialists to collaborate with other professionals and to provide professional training for teachers. Third, lesson studies are characterised as: a) groups of teachers supported by the board of education or education centre, b) teachers at university-affiliated schools, and c) groups of teachers' unions or academic societies. Fourth, lesson study groups often provide open classes at annual meetings, which are held at both the national and local levels. Detailed documents of lesson plan and post-lesson discussions play a vital role in improving teaching practices. Many lesson studies offer long-term connections that facilitate spiral research studies. Most lesson studies are well planned and utilise various methods such as documentation, presentation, and discussion. Fifth, the equality of stakeholders' relationships is considered to encourage lesson study. This shows the possibility that lesson study comprising only vertical relationships has become a formal process; that is, it is seen as a duty rather than an opportunity for growth.

Based on these findings, the following three characteristics of lesson study were extracted with respect to Home Economics education in Japan: *continuity*, *collaboration*, and *equality*. These features make Japanese teachers aware of the necessity of improving their instructional methods and teaching practices by realising the philosophy of the national curriculum. While only a small number of teachers conduct open classes, other teachers are also expected to engage in collaborative lesson planning and visit open classes. The variety of on-going lesson studies facilitated by research organisations is establishing the basis for Home Economics to become a compulsory school subject.

However, it is uncertain whether students are sufficiently benefiting from lesson studies. Qualitative considerations such as the influence of lesson studies on teacher growth and lesson improvement for children were not investigated in this study. Thus, this topic may need further exploration. Of particular concern now is how the accumulated teaching skills and materials used in lesson studies may be passed on to the next generation of Home Economics teachers, since the reduction in lesson hours for this subject has inevitably caused a decrease in the number of teachers. Additionally, lesson study as a systematic and organised activity is limited, in that independent research can easily be restricted by policy changes or coordination with other subjects.

It is thus necessary to widely share professional knowledge of teaching methods and materials accumulated by lesson studies with the next generation of Home Economics teachers. These findings should be shared not only in Japan but also internationally, and their significance should be discussed to enhance Home Economics education.

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Shino Kanzawa is a Home Economics teacher of Kojimachi Girls Junior and Senior High School. She has been conducting on lesson studies on themes such as active learning.

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## Estonian multi-subject teacher's competence and experiences

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### Abstract

*Competence has become a steadfast feature in education inherent in the concept of a good teacher. Teaching competence is a complex combination of aspects needed to ensure effective teaching. Due to demographic changes in Estonia, multi-subject teachers are needed, especially in handicraft and Home Economics (HHE) education. This study used document analysis for mapping the information on all school webpages (n = 358) in Estonia to analyse how many handicraft and Home Economics teachers teach other subjects. Interviews with teachers' (n = 3) supplied comments on the results gained through document analysis. Our interest in this paper is how Estonian HHE teachers experience being multi-subject teachers. Being a multi-subject teacher is often not the teachers' first choice but rather an inevitable decision caused by the social situation. Thus, identity of multi-subject teachers is an issue and, above all, the question if a teacher can be a good professional simultaneously in several subjects.*

**KEYWORDS:** PROFESSIONAL COMPETENCE, TEACHER'S IDENTITY, MULTI-SUBJECT TEACHER, HANDICRAFT, HOME ECONOMICS

### Teachers' professional competence

Competence has become a steadfast feature in today's society, especially when talking about educational issues. Learning competences are determined by the curricula. Different subject areas define their subject's specific competences to articulate the knowledge and skills necessary in the 21st century. Similarly, teachers need to meet highly qualified requirements; various documents regulate their work in classroom and evaluate their competence of being a *good teacher* (e.g., for competence frameworks in Europe see also Caena, 2014). As an example, Estonian professional standard for teachers (Estonian Qualifications Authority, 2013) describes, among other things, the competency requirements needed for successful carrying out of professional activities. There are various definitions of teacher professional competence (Zakirova, 2016) which take into account different aspects, such as teachers' certification; teaching experience; mentoring experiences; teachers' expectations and motivation or content knowledge (Frome, Lasater & Cooney, 2005). Zakirova (2016) states that teachers' professional competence is a model of several interconnected components. In this paper, Liakopoulou's (2011) definition of teachers' professional competence is taken into account. She names two broad sides of the competence—*personality traits* and *professional knowledge*.

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Teachers' professional traits can involve such aspects as *commitment to the job* or *knowledge of self* (Liakopoulou, 2011). These aspects are related to teachers' self-image and task perception (Day, Kington, Stobart, & Sammons, 2006), more specifically, how teachers describe themselves through their career stories and how they define their job. In the Estonian context, one could ask if teachers feel themselves to be more handicraft or Home Economics teachers (as these are combined as one school subject). Although the same teacher provides instruction in these subjects, not all teachers feel confident in both areas; they might lack required professional knowledge (at some stages).

According to Liakopoulou (2011) *professional knowledge* contains several "knowledge fields that constitute a necessary prerequisite for every teacher", for instance, *curriculum knowledge*, *subject (scientific) knowledge* and *teaching methodology* among others. Curriculum knowledge influences the didactical choices of teachers (Liakopoulou, 2011). In addition to knowing curriculum (and syllabus) thoroughly, the teacher needs to be able to plan the lesson and to create learning environment and materials in given subject.

Teaching a particular subject, for example HHE, requires teachers to be familiar with the scientific knowledge of the area. Moreover, scientific knowledge gives teachers an understanding of social norms and everyday value of the subject they teach (Liakopoulou, 2011). Wenglinsky (2002) claims that teachers' education is related to students' achievement. Moreover, knowing their subject well is in correlation with high-quality instruction in lessons (Frome, Lasater & Cooney, 2005).

To provide high-quality instruction, teachers should know how to engage students in the particular concepts of the subject effectively (Frome, Lasater & Cooney, 2005). According to Liakopoulou (2011), in addition to general pedagogical knowledge, knowing teaching practices of a particular school subject is needed as it influences the teacher's lesson planning, teaching performance as well as evaluation of teaching in the context of given subject. Here, the nature of a school subject (traditional theoretical subjects like *mathematics*, *physics* and so on versus practical and artistic school subjects, like *craft*, *Home Economics*, and *arts*) may cause the difference in the selection of methods. Teaching in different subjects is unique. Cochran (1997) claims that teachers need to transform their subject-specific knowledge in teaching process by, for example, critically reflecting on and interpreting the subject matter; adapting the material to students' developmental levels and tailoring the material to students (Cochran, 1997). Correspondingly, teachers need different training in subject didactics.

As seen, teachers' professional knowledge is dependent on many factors. In addition, societal developments in a given country influence teachers' professional knowledge. The brief summary of development of HHE education in Estonia is introduced below, pointing out the four aspects affecting teachers' professional knowledge in the school subject.

First, the role of HHE as a school subject in Estonia has changed over the decades and therefore ongoing changes of the image of this school subject are reflected in curricula. In addition, the two parts of the subject—*Handicraft and Home Economics* have had different importance in history (for better overview of the developments of HHE education in Estonia see Taar & Vänt, 2017; Taar, 2015; Lind, 2012). For instance, during Soviet times, the content of Home Economics was not valued, meaning that lessons were held minimally if at all, topics were narrowed to practical food preparation and these were organised as a part of craft lessons for girls (see Figure 1). The name of Home Economics disappeared for years until 1996 when it became united with handicraft and was renamed in the Curriculum (National Curriculum ..., 1996).

As seen from Figure 1, the name of this school subject has changed a lot in Estonian curricula (see names in boxes), due to the changes in the regime of the state that also influenced educational regulations (Taar & Vänt, 2017). It is not known why the name of the school subject has been so unstable during last decades in Estonia. Nevertheless, developments have left their mark in the image as well as in everyday use of the name of this school subject (see names above the timeline and possible connections with arrows).

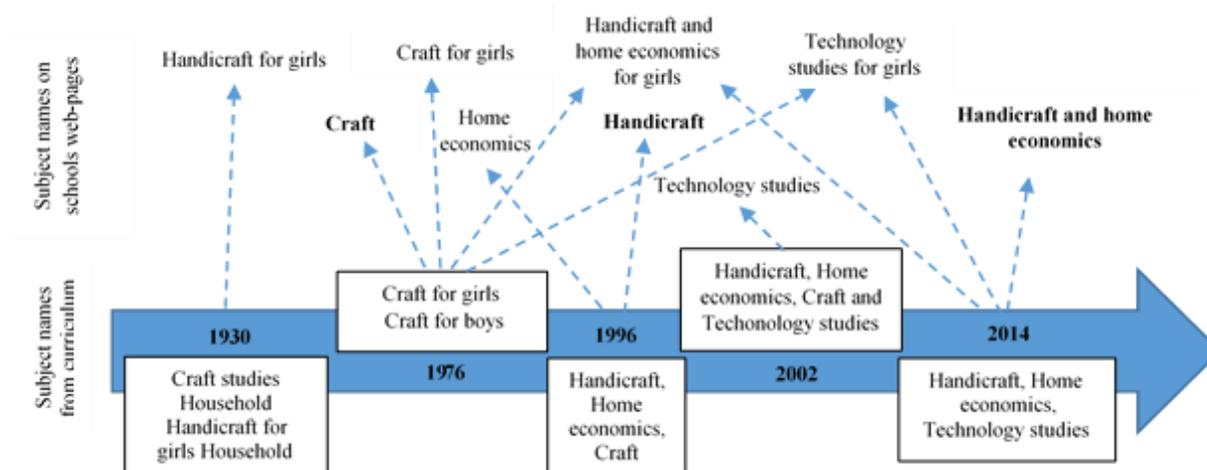


Figure 1 The development of the subject's name in the curricula compared to the names actively used on schools' webpages (Taar & Vânt, 2017)

In addition to the changes in name, the content of HHE have been widened through the decades, especially the content of Home Economics since 1996 (Taar, 2015). New topics like consumer issues, nutrition, etiquette and food safety have been added to the syllabus over the years (Taar, 2015). Today, learning Home Economics is associated with everyday life and real life problems. In addition, Home Economics in schools is gender-neutral, educating responsible, capable and independent citizens (National Curriculum ..., 2014).

Constant developments in the content of the subject as well as in its name make it hard for the teachers to adapt their curriculum knowledge. Changing (and widening) content of the subject requires teachers to become lifelong learners who need to keep themselves up-to-date. Only then are they able to adjust their practices in response to the changes (Williamson, Morgan, 2009). The situation is even more challenging when teachers sense the lack of teaching materials, as pointed out by Estonian HHE teachers (Randla, 2012).

Second, the image of a school subject is related to teachers' professional knowledge and self-image. Bleazby (2015) claims that some school subjects have lower status in society due to their content. It is argued that subjects associated with concrete experience (e.g., crafts and Home Economics) are not valued in the traditional curriculum which equates knowledge with certainty. Predictably, teaching practical subjects allows lower teaching and teacher quality (Hovland & Söderberg, 2005), giving teachers the wrong impression that may also influence their self-image. Besides, named school subjects do not have state exams in Estonia. According to HHE teachers (Randla, 2012), the latter is also jeopardising the value of these subjects in society.

National Curriculum (Estonia Ministry of Education and Research, 2014), in Estonia defines HHE broadly but in reality the content of the subject seems to be more limited, with practical cooking activities being dominant in Home Economics lessons (Taar & Vânt, 2017; Randla, 2012). As Home Economics is taught in combination with handicraft—and textile works take more time—teachers claim that it is not possible to find time to cover all topics in Home Economics syllabus (Randla, 2012). Teachers desire to separate these school subjects as both HHE contain a broad list of topics to be studied. Thus, practical skills are trained and theoretical aspects of the subject are left aside, displaying a wrong image of the school subject (Taar & Vânt, 2017).

In addition, the subject's name is one of the important elements of its image (Taar & Vânt, 2017). It should clearly represent the complete content of the subject. As seen from Figure 1 the names presented in schools' webpages are not correct and some versions represent the subject only partly. It has a two-sided effect on teachers' scientific knowledge. Teachers should evaluate the value of the subject as well as societal norms in the light of scientific knowledge (Liakopoulou, 2011). At the same time, teachers' scientific knowledge creates the image and by that the societal value of a school subject, as these are projected through the statements and all field-related activities of teachers (Martin, 1998).

Third, teachers' scientific knowledge is connected to their education, meaning that Estonian HHE teachers from different age groups have unlike scientific knowledge. The age of an average Estonian teacher is 48 years, while the average teaching experience is 22 years (Übius et al., 2014). Therefore, it is predictable that a considerable number of teachers got their education when this school subject was treated as giving only practical skills, before the major changes in the curricula in 1996. The scientific value of the subject has transpired only recently. It means that majority of HHE teachers in Estonia were trained to become craft teachers for girls (see Figure 1) and it is challenging for them to widen the understanding of the subject and thereby make changes in their teaching practices (Taar & Vânt, 2017). Therefore, they sense the subject to be too fragmented and wish to have better instructions how to balance handicraft and Home Economics lessons and how to choose the topics (Randla, 2012).

Fourth, the changing learning approach in the curriculum expects teachers to develop their teaching methods to fulfil the contemporary needs of the curriculum. In Estonian context, the learning approach has changed dramatically (see more in Tamm, Palojoki, 2012) compared to the understanding of teaching and learning when the average Estonian teachers got their training. Therefore, their teaching practices may not meet the needs of latest curriculum.

As seen, several factors influence teachers' professional competence. Constant changes and everlasting development of teachers' professional knowledge is a natural part of the profession in contemporary society, where teachers are seen as professionals who can decide what the most appropriate content is for their students in a particular subject. However, we do not know how Estonian HHE teachers manage it in the context of multi-subject teaching. What becomes of their self-image when they need to add new subjects to their workload? And how does this influence their professional competence when they need to teach school subjects they have not been trained for?

The latter is the case in many Estonian schools. A study (Oksaar & Lepajõe, 2014) shows that 68% of school leaders face the difficulty of finding enough teachers to fill all teaching positions in their schools. This challenge is more relevant in small rural schools, where teachers are not able to get a full workload when teaching only their major subject. Common subjects, where full loads cannot be filled are arts, HHE, musical education, biology, physics, chemistry and languages (Oksaar & Lepajõe, 2014), that is, subjects which have one or two lessons per week or which are not taught at every school stage.

Our interest in this paper is how Estonian HHE teachers (who already have two subject areas combined) feel themselves being multi-subject teachers. Teachers may consider multi-subject teaching challenging as school subjects differ from each other in terms of knowledge, learning environment, teaching methods, lesson preparation as well as societal status.

## Methodology

We have conducted two small-scale studies to map the situation of Estonian HHE teachers as multi-subject teachers. First, document analysis (Altheide, 1996) was used for mapping the information related to Home Economics education on all schools' webpages in Estonia, collecting information on the amount and combinations of sub-subjects taught by teachers who also teach HHE. According to Altheide's (1996) definition of a document, it can be any symbolic representation that can be recorded or retrieved for analysis. A big number of schools in Estonia have their own webpages that can be retrieved, and most schools use this to list the teachers' names together with the subject(s) they teach. All school webpages as documents were visited in June and July 2016, and information on HHE teachers was saved into MS Excel table for further analysis. Altogether 492 webpages of schools from 15 counties were searched and/or visited. Pages that did not open were revisited in October 2016. A number of webpages (47) had technical problems, did not give information about single school subjects or the school did not have a website. In addition, there are 87 schools where HHE lessons are not compulsory by national curriculum—for example, in schools for students with special needs or in kindergarten-primary schools. Therefore, information from 358 schools was included into the analysis. The information was systemised and analysed according to the content.

Second, telephone interviews (Hughes, 2012) were conducted to understand how/why teachers made the decision of giving instruction in several school subjects and how this influences their professional competences. Participants for interviews were chosen by the results of document analysis. It was important to include teachers who, in addition to HHE lessons, teach at least one more school

subject. An email with the invitation to take part in the interview was sent to ten teachers, three of them agreed to participate. The email informed all the teachers that the interview would be recorded, and the exact date and time of the phone interview were agreed. The phone interviews were conducted in January 2017. All the interviews were recorded and transcribed. A more detailed information on the participants as well as time and date of the interviews is shown in Table 1.

**Table 1** Details of conducted interviews

Participant	Subjects	Teacher's education	Date of interview	Length of interview
Teacher 1	Handicraft and Home Economics, art, art history	Vocational School for Light Industry, Tartu Art College, Tartu University	12.01.2017	0:28:56
Teacher 2	Handicraft and Home Economics, mathematics, physics	Tartu University	12.01.2017	0:17:30
Teacher 3	Handicraft and Home Economics, mathematics, chemistry, IT study	Estonian University of Life Sciences, Tartu University	18.01.2017	0:21:37

Semi-structured interviews were used (Hughes, 2012). The questions involved several sub-topics: teacher's background; teaching several subjects at the same time; participation in supplementary training courses; the name of the subject HHE and its usage; comments on the results of the document analysis (see more detail in Taar & Vânt, 2016).

Among the interviewed teachers of HHE Teacher 1 is also a teacher of art and art history, Teacher 2 teaches mathematics and physics as sub-subjects and Teacher 3 additionally provides instruction in mathematics, chemistry and IT studies (see Table 1). All teachers have higher education, teaching experience about 20 years and the experience of being a multi-subject teacher over five years.

## Results

### Multi-subject teachers who provide instruction in handicraft and Home Economics

In 358 schools the subject of HHE is taught by the total of 347 teachers. 18 teachers (5%) work in several schools simultaneously (however, a big school may have up to three teachers for HHE). 183 teachers (53%) out of 347 teachers of HHE are multi-subject teachers. The number of subjects taught by multi-subject teacher ranges from two to seven and all subjects of National Curriculum of different school stages are represented (see Table 2).

**Table 2** Other subjects taught by handicraft and Home Economics teachers

Other subject	Frequency of occurrence	School stage where the subject is taught		
		Grades 1 to 3	Grades 4 to 6	Grades 7 to 9
Art studies	109			
Human studies	17			
Mathematics	14			
History	11	•		
Craft	10		•	•
Russian	9	•		
Natural sciences	9			
Chemistry	6	•	•	
English	6			
Social studies	5	•		
Estonian	5			
Technology studies	4	•		
Music studies	4			

Other subject	Frequency of occurrence	School stage where the subject is taught		
		Grades 1 to 3	Grades 4 to 6	Grades 7 to 9
Geography	3	•	•	
Biology	3	•	•	
Literature	2	•		
Physics	2	•	•	
Physical education	1			

118 (64%) teachers out of 183 provide instruction in one sub-subject, 49 (27%) teach two sub-subjects, 12 of them (6,5%) give lessons of three sub-subjects, three teachers teach four sub-subjects and one teacher provides instruction in a surprising number of six different sub-subjects (see Table 3).

**Table 3** The number of sub-subjects taught by handicraft and Home Economics teachers

Number of sub-subjects	Number of teachers	Percentage among multi-subject teachers ( $n = 183$ )
One sub-subject	118	64%
Two sub-subjects	49	27%
Three sub-subjects	12	6.5%
Four sub-subjects	3	2%
Six sub-subjects	1	0.5%
<b>Total</b>	<b>183</b>	<b>100%</b>

The most frequently occurring sub-subject is art studies (109 instances, i.e., 59%), followed by human studies (17), mathematics (14), history (11) and craft in primary school (10). In addition to the subjects of National Curriculum, schools' websites show IT studies as a sub-subject despite the fact that it ceased to be a separate National Curriculum subject in 2014. The IT related topics are dealt with in all subjects to acquire the digital competence of the secondary school stage according to the National Curriculum (National Curriculum..., 2014).

The combination of subjects taught by a HHE teacher may vary considerably and contain both natural sciences and humanities. For instance, one teacher gives lessons of HHE, music and natural studies; another may combine the instruction of HHE with art, history and Estonian. Therefore, one teacher needs to know and use very diverse teaching methods depending on whether the subject is more theoretical or more practical.

Out of 18 teachers who work simultaneously in several schools, nine teachers (50%) teach only one subject—HHE—in several schools. Working in different schools but teaching only one subject enables them to devote themselves solely to the instruction of HHE. The remaining nine teachers give lessons in several sub-subjects in different schools. This means that even holding positions in several schools simultaneously does not guarantee the chance to teach only one subject. The probable reason is small number of students and high percentage of small schools in rural areas of Estonia.

In addition to teaching HHE 31 out of 347 teachers are also class teachers in basic school. One of the reasons can be that HHE as a subsidiary subject has been offered for many years for class student-teachers, giving a qualification to teach HHE in the first three school stages. In addition to their primary subject, teachers of HHE also teach different optional and free choice subjects, such as technical drawing, etiquette, design, basics of research and culture history. There are also HHE teachers who hold non-teaching positions in schools, such as headmaster, secretary, gardener, laboratory technician and hobby group instructor.

### Teachers' commentaries on current situation

All the respondents ( $n = 3$ ) explained being a multi-subject teacher by the small number of lessons in one subject which does not enable them to work full-time as one subject teacher. Therefore, becoming a multi-subject teacher is not their choice but a situation forced upon them. Teachers

prefer to work in one and the same school as multi-subject teachers rather than to teach only one subject but in different schools.

... ours is a country school with combined grades classes and only four lessons of handicraft and Home Economics per week here. That means I cannot get a full-time workload at all. (T3).

The choice of sub-subjects is determined by different factors. In some cases, the teacher chose art studies as closely related to HHE and to the personal interests. In another case, the teacher happened to get the subject by chance, for instance, due to the resignation of a colleague.

... our chemistry teacher left and the head master asked me if I wanted to teach chemistry ... (T3)

Multi-subject teachers consider themselves primarily the teachers of that subject they teach most or which subject they are teaching at the moment. One of the positive sides to being a multi-subject teacher is reportedly the possibility to teach cross-curricular topics. It also provides a change and adds variety to the daily schedule. In addition to that, different subjects give a chance to use versatile teaching methods and communicate with teachers of other subjects.

However, being a multi-subject teacher has also some negative aspects. Firstly, teachers do not have enough time to fully devote themselves to one subject. As the content of the newly added sub-subjects may vary considerably, teachers have to acquire the knowledge of the subject on their own. Secondly, getting ready for several different lessons takes more time. The teacher also has to acquire the new subject's teaching methods. Thirdly, it is complicated for the teacher to prepare students for contests and competitions in several different subjects. And fourthly, little time is left to participate in time-consuming practical supplementary training courses (e.g., in handicraft) to learn new techniques.

Teaching several different subjects is more complicated for the teacher. You have to be up-to-date in different areas of day-to-day knowledge and be aware of the developments and know what is going on in the society and in the subject area as you cannot get stuck in the book. (T1)

... I would explore the subject more thoroughly if I taught only one subject ... (T3)

The work of a HHE teacher is seen as being the most labour-intensive and time-consuming. Its specific feature—cooking lessons—requires especially much preparation such as planning and organisation of the activities as well as procurement of food products (which is in most cases the teacher's task in Estonia).

... much easier to teach a science subject than handicraft. It is difficult to organise cooking lessons, all the time you have to think how and where and what foodstuff to buy and worry if everything is ready. It is a very stressful time when we have cooking lessons ... (T3)

Participation in supplementary training courses is very important for all teachers and they attempt to take part in at least one training course a year for each subject they teach. There they meet colleagues and share experiences. The most popular are free tuition courses; positive experience is also reported after participation in e-training courses.

Though teachers try to attend training courses related to all the subjects they teach, the preferred choice are the courses for the subject in which the teacher lacks professional training, which causes the feeling of uncertainty. For example, the HHE teacher (T2), who has the background of mathematics teacher, wishes to attend supplementary training in HHE, whereas the teacher of IT studies with the professional training of HHE (T3) wants to participate in IT studies.

Yes, I have attended much more handicraft courses because I don't feel sure in this subject. (T2)

All interviewed teachers considered the name of a school subject (HHE in particular) important. The respondents held that the name of the subject should convey its content and give a comprehensible idea of it to all stakeholders, including teachers, students, parents and colleagues.

... to show the subject's or lesson's content and to be understandable for all—colleagues, students, their parents ... (T2)

It has to be comprehensible for all the stakeholders involved—for the teacher, parent or student ... (T1)

Though the respondents consider the name of the subject important, there are noticeable differences of its usage in the teachers' speech and schools' websites. The name of the subject in schools' websites is HHE (information on Teacher 1 and Teacher 2) and only *handicraft* (Teacher 3). Teacher 1 introduced herself as a teacher of creative subjects, teaching handicraft and art studies, and used the name *handicraft* when talking about the subject. Teacher 2 introduced herself as a teacher of mathematics, physics and handicraft and throughout all the talk used the word *handicraft* when discussing the subject. Teacher 3 named herself a teacher of handicraft, mathematics, chemistry and IT studies and used the term *handicraft* during the whole interview. This indicates considerable differences between the subject's name in the curriculum, schools' websites and the terms used by the teachers.

At the same time, not all teachers are aware of the actual name of their subject in the school's website. There is no definite information on who chooses the wording and enters the text in the school's home page. Subject teachers are not usually consulted about the subject name and text in the school's website. The subject's name can vary from school to school though the teacher may be the same person working in several schools. From 18 teachers working simultaneously in different schools, 13 have different names of the subject on schools webpages.

The results of the research on the name of HHE (Taar & Vânt, 2017) were interesting for all teachers. They consider the prevailing use of the term *handicraft* logical and understandable. The reason why *Home Economics* is not reflected in the name can be the absence of special Home Economics classroom, that is, study kitchen in the respective schools. Another suggested reason was smaller number of Home Economics lessons in the syllabus.

... It seems logical, as from that point you go on to see if the school has a Home Economics classroom at all ... (T1)

... I actually put a greater emphasis on handicraft, and the syllabus also has a bigger number of handicraft lessons compared to Home Economics. (T2)

The teachers hold an opinion that the name of the subject should be gender-neutral nowadays, that is, the usage of the words *boys* and *girls* is not justified.

Boys can come to this lesson and girls can go to the boys' lesson. It should not be determined according to gender ... (T3)

The results of the study by Taar and Vânt (2017) were surprising for teachers and it was hard to believe that so many different names are still used. At the same time, teachers claimed that the name of a school subject is important for several stakeholders (teachers, students, parents, etc.) and it should reflect the true content of that subject. In reality, in teachers' speech as well as in everyday school life the name is not used correctly.

## Discussion

As seen from this study, being a multi-subject teacher is not teachers' first choice. The societal situation in the rural areas of Estonia has challenged them to take additional subjects they have not been trained to teach. In this situation, it is understandable that teachers feel stressed. However, interviewees also point out the positive sides of being a multi-subject teacher.

The results of this study are in accordance with previous studies on Estonian teachers. Oksaar and Lepajõe (2014) presented the results of a broader study on educational needs of Estonian multi-subject teachers. A majority (82%) of participating school leaders claimed that there are multi-subjects teachers in their schools with different combination of subjects. As they did not include all Estonian teachers (only 81 schools, instead) in their study, the result was not sufficiently reliable to understand the situation of multi-subject teachers in relation to HHE. According to our study, we claim that 53% of all Estonian HHE teachers are multi-subject teachers. The most frequently occurring sub-subject is arts as was also found by Randla (2012). Thirty-six percent of all HHE teachers gave arts lessons in 2012, while today the number of HHE teachers giving instruction in art as sub-subject has increased up to 59%.

The number of HHE teachers with art as a sub-subject is big due to various reasons. Both handicraft and arts are considered to be creative, and their content is not too different. As there are many

connections between these subjects, they have also been united in teacher training. During Soviet period (until 1991) the training of handicraft teachers included arts and technical drawing (see more in Taar, 2015). Considering the average age of teachers in Estonia, it is expected that a big number of today's teachers have such educational training. Thus, these teachers can be expected to have the professional competence of instruction in handicraft and arts but might lack the knowledge and skills of planning and teaching Home Economics lessons.

Multi-subject teachers trained in certain subjects or who have been able to educate themselves enough to know the subject knowledge in these areas have the advantage of cross-curricular integration of different school subjects. For integrating and making connections between several subjects, they need to know the subject's specific knowledge as well as the curriculum and syllabus well. In addition, deeper subject knowledge enables teachers to diagnose students' misinterpretations of the knowledge (Liakopoulou, 2011).

Teachers realise the lack of their professional competence and are interested in acquiring more subject-specific knowledge at various courses. Similarly to the results of Liakopoulou (2011), teachers in this research recognised the importance of acquisition of both subject and methodological knowledge. To ensure high quality of their instruction (as stated also by Frome, Lasater & Cooney, 2005), they focus more on educating themselves in the areas of sub-subjects. According to Liakopoulou (2011), teachers need to know the teaching methodology of the particular school subject. Teachers in this study agreed that teaching practices are unlike in different school subjects, especially when comparing traditional and more theoretical subjects (like mathematics, physics, etc.) to creative and practical school subjects (like HHE). They claim that preparation of lessons for practical school subjects is harder and more time-consuming as these subjects require a more complex learning environment. Similarly, instructing students in practical subjects is different—activities in the lessons are hectic and students deal with different activities and at different speeds. Therefore, teachers need training and pedagogical knowledge of how to transform their subject's specific knowledge in teaching process (Cochran, 1997). Only then are they able to fulfil the high requirements of teachers professional competence set by various standards (see, for example, Zakirova, 2016; Estonian Qualifications Authority, 2013).

Liakopoulou (2011) has claimed that teachers' professional traits include such aspects as teachers' commitment to their job or their *knowledge of self*. Teachers' self-image in this study was revealed in the interviews when they were asked to introduce themselves and talk about their job. All the interviewed teachers used the full name of their subjects when introducing themselves, with the exception of HHE reduced to *handicraft*. The fact that none of the teachers used the full name of the subject in their talk demonstrates that this is not an essential aspect for them. Although they claim that the name of a school subject should reflect its total content, they are not practicing it in their talk. *Home Economics* as the second half of the subject's name is often left aside. We interpret this as a historical influence or as a simplified modification of the long official name HHE for everyday use (see also Taar & Vânt, 2016).

## Conclusion

Teachers who participated in this study have accommodated the image of being multi-subject teachers. Their self-image has developed throughout their working life when accepting new challenges through the inclusion of new subjects as well as through continuous professional development. Despite or maybe due to the extra effort, they feel good in their position.

This paper has studied a small fragment of Estonian HHE teachers' ( $n = 3$ ) professional competence. Professional identity and professional competence include much more aspects, which have not been dealt with in this research. As an example, teachers' subject knowledge could be investigated in relation to HHE teachers. In addition, more profound studies are needed to unveil the full picture of multi-subject teachers' identity as well as their own cognition of professional competence.

## Biographies

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INTERNATIONAL FEDERATION  
FOR HOME ECONOMICS

REFEREED PAPER

## Saudi Arabian Home Economics curriculum: Searching for deep learning

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### Abstract

*Effective learning by students is judged according to specific outcomes. The development of curriculum documents typically includes a description of specific skills, knowledge and dispositions that students are expected to achieve through engagement with classroom practices. By focusing on the cognitive elements in curriculum documents it is possible to determine whether these are sufficient to encourage development across simple to more complex processes including critical thinking. The main goal of this study was to analyse two sets of student learning outcomes in the Saudi Arabian Home Economics national curriculum developed in 1978 and 2013. This was done by determining the extent to which student learning outcomes reflected the cognitive domain of the revised Bloom's Taxonomy, and then determining the similarities and differences. Findings revealed greater emphasis on student learning outcomes in the Understanding and Applying levels within both curriculum and higher levels being evident in 2013. The Taxonomy is predicated on the idea that if students are to become critical thinkers, educators would provide learning activities at the higher levels of thinking. The paper has implications for future curriculum development in Home Economics in Saudi Arabia and may provide a framework for curriculum analysis in other jurisdictions.*

**KEYWORDS:** HOME ECONOMICS, CURRICULUM DEVELOPMENT, BLOOM'S TAXONOMY, SAUDI ARABIAN EDUCATION

### Introduction

A curriculum provides a focus for education and training that is interpreted by teachers and enacted in classroom contexts. Teachers have concerns for the cognitive development of the students, and learning outcomes are key to this development. Biggs (2003) observes that one of the keys to successful learning is the aligned curriculum where learning outcomes are clear and learning experiences are designed to assist student achievement of those learning outcomes. It is the ideal that learning outcomes reflect the various levels of the cognitive domain of learning and was originally suggested in Bloom's Taxonomy (Bloom, Engelhart, Furst, Hill, & Krathwohl, 1956) as nouns. When reviewed the cognitive domain was viewed as requiring active processing and use of knowledge, the names of the categories were changed to verbs (Anderson & Krathwohl, 2001). This would allow recognition of when students develop varied cognitive abilities and skills.

Learning outcomes articulate the expected knowledge, skills, attitudes, competencies and dispositions that students are expected to acquire on completion of a learning process. They describe a student's ability to synthesise many discreet skills using higher-level thinking skills and to produce

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something that asks them to apply what they have learned, and in the case of Home Economics, in everyday contexts.

Home Economics is a subject that provides young people with unique and lifelong skills that are meant to benefit them both at work and at home. In order to be relevant, curriculum should reflect the students' culture and societal needs. Thus learning outcomes are considered to be relevant when they produce in students the expected results of being able to live well after they have graduated out of school. It is on this basis that learning outcomes ought to be geared towards the needs of society's contemporary life, tradition, enduring values and aspirations at the curriculum development stage (Flinders & Thornton, 2013). There is an expectation that curricula mirrors the country's culture while also accommodating societal needs and economic changes (Al-Abdulkareem & Hentschke, 2014; Alshatti, Watters, & Kidman, 2011; Kirk, Martin, & Cummings, 1993) therefore learning outcomes ought to reflect this too. Students become reflective as they learn and develop a sense of inquiry in order to understand what their contribution is towards the development of their own community.

Bloom's Taxonomy (Anderson & Krathwohl, 2001) is one way that curriculum developers and the enactors (teachers) can set learning experiences for the students and to develop assessment to determine their students' learning across the cognitive domains. According to Krathwohl (2002), the Taxonomy was designed to be more than a tool to assess students. It also offers a common language about learning, a means to perceive the breadth and depth of a course or curriculum; and a way to determine if a course or curriculum is meeting broad educational goals. For the purpose of this paper we are drawing on the last intention to frame our analysis of student outcomes within two Saudi Arabian Home Economics national curriculum.

### Learning Outcomes and Bloom's Taxonomy

Learning outcomes are described as goals that describe how a student will be different as the result of their learning that is based on acquisition of knowledge, or developing new or refining existing skills, together with attitudes and habits of mind that are derived from the experience (Suskie, 2009). Learning outcomes are considered to be constructivist (Fosnot, 1996) in nature as they are designed to support progressively complex knowledge construction. This is consistent with Brooks and Brooks' (1993) view that in order to achieve learning outcomes, it requires a student-centred classroom where knowledge and the creation of knowledge are interactive, where different viewpoints exist, and where all students' questions are valued. With the learning outcomes as the elements of analysis, it was therefore appropriate to draw on the framework of Bloom's Taxonomy (Bloom et al., 1956) to analyse the two sets of learning outcomes with an explicit focus on the cognitive domain.

Given that learning outcomes provide a way of describing what learners are supposed to have learnt through instruction, this paper is informed by the revised Bloom's Taxonomy developed by one of Bloom's former students, Lorin Anderson (Anderson, 2002; Anderson & Krathwohl, 2001; Krathwohl, 2002; Pickard, 2007) that demonstrates a refinement of the domain. The Cognitive Domain (Bloom et al., 1956) presents what educators can want students to know within statements of educational objectives that are hierarchical, from simple to more complex conceptualisation that have been posited as being sequential (Huitt, 2011). However, there are critics who have disputed this view. For example, Paul (1993) observes that while some critics of Bloom's Taxonomy's cognitive domains agree to the existence of the six categories, they question the sequential and hierarchical link between the categories. Orlich, Harder, Callahan, Trevisan, and Brown (2004) have argued that the hierarchical arrangement of the cognitive categories was based on the understanding that learning at the higher levels is dependent on having attained prerequisite knowledge and skills at lower levels. In another interpretation, Bloom's critics view the three lower categories of the cognitive domain as hierarchical and the other three higher categories as parallel (Paul, 1993). Paul (1993) argues that on one hand, the three lowest categories of the cognitive domain focus more on surface learning and involve more facts and short-term memory. On the other hand, the three higher categories involve deep learning, require long-term memory, focus on details and emphasise the idea of the whole (Krathwohl, 2002; Paul, 1993). Figure 1 compares the original and revised versions of Bloom's Taxonomy. It demonstrates the hierarchical arrangement in the original version and how the partial hierarchical and parallel conceptualisation of the cognitive domain categories can be seen in the revision. The presentation of the original taxonomy provided for a "one-dimensional cumulative hierarchy" (Pickard, 2007, p 46) however within the revised version the categories emphasise cognitive processes—to make sense of what is being studied in meaningful ways. It is the second revised version that is used in this study as a means of analysis.

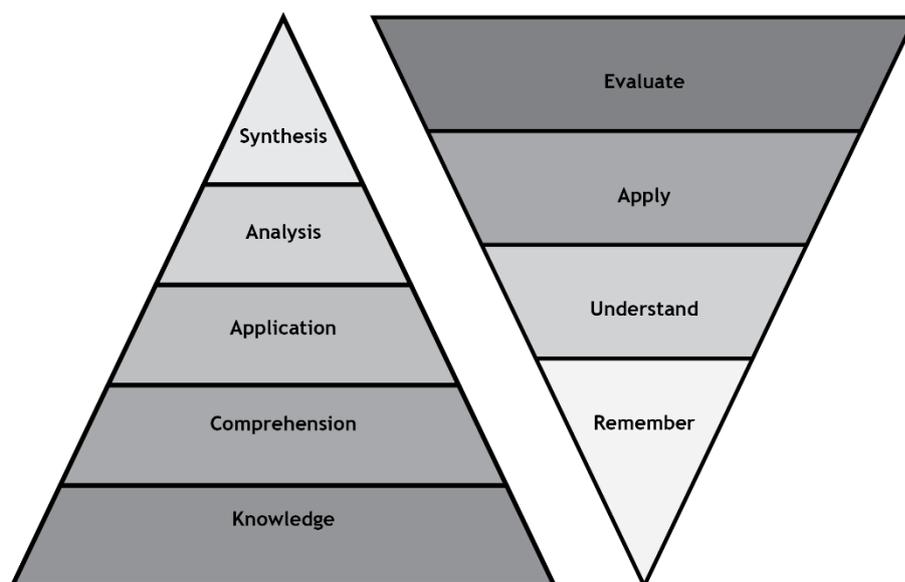


Figure 1 Comparison of original and revised Bloom's Taxonomy

Note. Based on Anderson & Krathwohl (2001)

Understandings about child development encompass the physical, social and cognitive changes that are experienced between infancy and adolescence. Curriculum documents draw on constructivist theories of cognitive development (including Piaget and Vygotsky). However Piaget's structural stage theory has been widely used as a signifier of cognitive development and this approach can be seen in interpretations of Bloom's taxonomy where it is often equated with a staged, hierarchical model. However Piaget's structural stage theory has been contested over a long period (Bidell & Fischer, 1992) on the basis that Bloom's taxonomy is not developmental (Paul, 1993). Rather Bereiter and Scardamalia (1998) argue that Bloom's Taxonomy refers to processes that operate in concert with each other, and can and should occur in all grade levels. For instance, Bogan and Porter (2005) describe how all levels of the Taxonomy can be used with children at the preschool level. Thus functioning with the higher-order cognitive skills identified in Bloom's Taxonomy is not linked to significant amounts of knowledge about a subject area. Instead there is an implication "that students are in a position to take a sophisticated, constructive role in the pursuit of understanding and to engage in the kinds of purposeful activities that develop knowledge-processing skills" (Bogan & Porter, 2005, p. 689) irrelevant of their level at school.

## Home Economics education

The essential contribution of Home Economics is the emphasis on everyday life of people (McGregor, 2010). The focus on daily life includes the social, economic and environmental impact of the management of everyday life of individuals, families and households and is one of the IFHE mission statement aims (IFHE, n.d.). Home Economics builds its capacity from a series of actions on daily living which include family, food, textiles and clothing that need critical, interpretive thinking to rich the final decisions before acting (McGregor, 2010; Renwick, 2016).

The public school system of Saudi Arabia reflects a particular approach to balancing increasing engagement in global processes that are inherently Western against maintaining its particular cultural heritage as it is expressed in everyday life experiences. This is comparable to other Middle Eastern countries such as Kuwait (Alshatti et al., 2011) where there is a commitment to parallel schooling based on gender. In the Saudi Arabian school system, Home Economics is entitled Family Education within the curriculum. It is a required course for girls in Grades 1 to 6 at elementary school level; Grades 7, 8 and 9 at intermediate school level; and Grades 10 and 11 at the secondary school level (Ministry of Education in Saudi Arabia, 2017a). This organisation that reflects the Western arrangement of schools can be observed in other Middle Eastern countries (Alshatti et al., 2011), such as Kuwait, Qatar, the United Arab Emirates and Jordan (Ministry of Education, 2017a). The subject of Home Economics includes food and feeding, childcare, health education, family relations, housing

and home management, and sewing that involves flat pattern work and tailoring (Ministry of Education in Saudi Arabia, 2017a). It is also important to note that Saudi Arabian schools continue to be strictly segregated according to gender into boys- or girls-only schools (Ministry of Education in Saudi Arabia, 2017b). This segregation continues within the curriculum and therefore boys do not undertake any formal study in Home Economics.

Home Economics as Family Education in Saudi Arabia reflects the broader purposes of education to enable students to develop a strong sense of citizenship and cultural values. Family Education is positioned within Islamic values with its strong support for relationships, and communication within family. There is also concern for students developing life skills and being able to apply these to healthy living particularly at their current stage of life (Ministry of Education in Saudi Arabia, 2017a).

This paper examines two versions of the Saudi Arabian national curriculum, developed in 1978 and 2013 with specific attention on the learning outcomes found in the Home Economics curriculum at the elementary level for students aged between six and eleven years. The intention is to determine the extent to which learning outcomes reflect the various categories of the cognitive domain of learning, to identify any similarities and differences between the two sets of learning outcomes and to make recommendations for future curriculum revisions. Drawing on the work of Bereiter and Scardamalia (1998) this paper assumes that students, at any stage of development will purposefully work at “understanding and ... (engaging) in the kinds of purposeful activities that develop knowledge-processing skills.” (p. 689). Thus the capacity of young people to engage in higher-order thinking offered in Bloom’s Taxonomy is not be tied to a particular grade level.

## Materials and methods

### Research design

Researchers have suggested that the revised version of Bloom’s Taxonomy (Anderson & Krathwohl, 2001), especially with its focus on the cognitive domain, is a useful framework to categorise educational goals for purposes of analysis (Alshatti et al., 2011; Jideani & Jideani, 2012; Pickard, 2007; Razmjoo & Kazempourfard, 2012). Using this approach this study aims to determine the extent to which the learning outcomes of Saudi Arabian elementary school Home Economics curriculum reflect the six cognitive levels of the revised Bloom’s Taxonomy (Anderson & Krathwohl, 2001). The primary questions to be addressed are:

1. How are the six cognitive levels Bloom’s Taxonomy represented in the 1978 and 2013 Home Economics elementary curriculum?
2. According to Bloom’s Taxonomy, how similar or different are the learning outcomes of the Home Economics elementary curriculum in 1978 and 2013?
3. What are the implications of these similarities or differences for perceptions about the cognitive value of Home Economics elementary curriculum in 1978 and 2013?

This study uses content analysis (Baxter, 1991; Fairclough, 2003) and is presented as a case study (Merriam, 1998) “an in-depth study of a single, restricted entity” (Merter & Charles, 2011, p. 205) that is, the Saudi Arabian Home Economics curriculum. Ordinarily, content analysis is descriptive and aims for richer understandings of the content (Baxter, 1991; Krippendorff, 2013; Mayring, 2000) thus interpretive case studies contain rich and thick descriptions (Merriam, 1998). Content analysis as a research methodology examines words or phrases within texts or sets of texts for meanings and relationships (Mayring, 2000) and describes content analysis as a “technique for making inferences by objectively and systematically identifying specified characteristics of messages” (Holsti, 1969, p. 14). It is a flexible approach to analysis that can be applied to a wide variety of written text, allowing comparison of the content across a variety of settings. According to Krippendorff (2013) content analysis is a research technique for making replicable and valid inferences from texts to the context of their use. Overall, content analysis is defined within the qualitative framework as an approach of empirical, methodological controlled analysis of texts within their context of communication, following content analytical rules and step-by-step models, without rash quantification (Mayring, 2000).

## Method of analysis

The learning outcomes in the Saudi Arabian National Curriculum Elementary School Curriculum for Home Economics, both 1978 and 2013 versions were the data sources for this research. The 1978 curriculum was sourced from Bahrani (1981) and the 2013 from Kingdom of Saudi Arabia Ministry of Education website (2017a). The learning outcomes are presented in the curriculum documents in two ways. Those that provide a holistic subject orientated understanding of what students are expected to achieve and a second “layer” of outcomes that are year-level-specific and that become a focal point for teachers’ assessment of students. It is the purpose of this paper to provide an analysis of the holistic set of outcomes.

Within each curriculum there were a different number of learning outcomes, a total of 14 in 1978 and 27 in 2013. The procedure for reviewing these involved three steps. Initially, the learning outcomes were translated from Arabic into English. Each outcome was reread several times to determine fidelity between the translation and original intent of the statement. Subsequent rereading of the statements focused on identifying the overarching patterns in the content, based on Bloom’s taxonomy. As a result of this process it was possible to categorise and sort them into the six categories of the cognitive domain of Bloom’s Taxonomy (Anderson & Krathwohl, 2001) (see Table 1). Validity of the data is achieved through the application of a pre-existing nomenclature (Pickard, 2007). Both researchers applied the nomenclature independently to achieve reliability of the analysis.

On closer consideration of the outcomes it was evident that a number were in fact programmatic outcomes rather than student outcomes. For example, one learning outcome in 2013 stated “To introduce students to noble goals that family education seeks to achieve in the community” and another from 1978 “To develop the students’ ability physically, mentally, morally, psychologically and socially”. With the intention of this paper to focus on student learning outcomes according to Bloom’s Taxonomy rather than programmatic outcomes, a total of two statements were removed from the 1978 set and four from the 2013 version and any subsequent analysis, leaving 12 and 23 student learning outcomes respectively.

The remaining statements were defined as student learning outcomes and are the basis for the analysis of each curriculum. In the remaining statements the verbs provided at the beginning of each learning outcome provided the basis for the content analysis and were italicised to ensure clarity. These were then manually categorised by the researchers into specific cognitive domain categories (see Table 1), presented in a taxonomy table as a tool for analysis (see Table 2 and 3). Finally the two sets were then compared to determine similarities and differences (see Figure 2).

## Findings and analysis

The learning outcomes were framed according to the cognitive domain of the revised Bloom’s Taxonomy (Anderson & Krathwohl, 2001). The focus on the verbs used within each learning outcomes was based on the following nomenclature provided by Pickard (2007).

**Table 1** The Cognitive Processing Dimension of the Revised Bloom’s Taxonomy

Dimension	Examples of the cognitive processes involved
Remember: can the student recall or remember the information?	define, duplicate, list, memorise, recall, repeat, reproduce state
Understand: can the student explain ideas or concepts?	classify, describe, discuss, explain, identify, locate, recognise, report, select, translate, paraphrase
Apply: can the student use the information in a new way?	choose, demonstrate, dramatise, employ, illustrate, interpret, operate, schedule, sketch, solve, use, write
Analyse: can the student distinguish between the different parts?	appraise, compare, contrast, criticise, differentiate, discriminate, distinguish, examine, experiment, question, test
Evaluate: can the student justify a stand or decision?	appraise, argue, defend, judge, select, support, value, evaluate
Create: can the student create new product or point of view?	assemble, construct, create, design, develop, formulate, write

(Source: Pickard, 2007, p. 48)

### Representation of the cognitive domain

As already discussed, there were fourteen student learning outcomes provided in the 1978 curriculum. Two were eliminated, as they did not meet the criteria of a learning outcome (Pickard, 2007). The groupings revealed that none of the learning outcomes were associated with the four categories of *Remembering*, *Analysing*, *Evaluating* and *Creating*. Learning outcomes in the *Applying* and *Understanding* category were determined as being more common (see Table 2).

Table 2 Learning Outcomes within the 1978 Home Economics Curriculum

Category	Learning Outcomes
Remembering	-
Understanding	To <i>acquire</i> certain skills that fit their natural process of life. To <i>differentiate</i> between fashion styles, the fashion's suitability for the seasons, and how to <i>select</i> and <i>care</i> for clothing. To <i>recognise</i> the habit of taking responsibility as well as helping their families.
Applying	To <i>apply</i> their experiences and express their different tendencies. To <i>choose</i> materials that exist in their environment which they can <i>use</i> in their daily life. To <i>manage</i> their time and money wisely. To <i>apply</i> creativity in completing a decorative project. To <i>practice</i> selected manipulative skills such as hooking and needlework. To <i>demonstrate</i> handicrafts as well as help them <i>develop</i> their own skills. To <i>use</i> their kitchen equipment properly and avoid misusing them. To <i>use</i> the various materials skilfully at home, particularly those, which are available in their local environment. To <i>employ</i> Islamic values and avoid those which are in contradiction with the Islamic ideology such as being extravagant in dressing.
Analysing	-
Evaluating	-
Creating	-

(Based on Bahrani, 1981)

Using the same procedure to analyse the 27 learning outcomes of 2013 (see Table 3) four were eliminated, as they were not deemed to be learning outcomes. Of the remaining 23 it was evident that the *Understanding* category had the most statements at eleven, followed by *Applying* with eight, *Evaluating* with two and finally *Analysing*, and *Creating* each with one. Thus the strongest emphasis is on the lower level cognitive skills with a very limited number of higher-order skills. This emphasis reinforces the curriculum value for learning outcomes that are of direct relevance for students' everyday situations and contexts. There is some provision for higher-order learning outcomes that engage students with what they have learnt and how this learning could be transferred to new situations. However this increase is perhaps less significant within the greater number of total outcomes that would need to be demonstrated by students. As in the 1978 curriculum, there were no learning outcomes that aligned to the *Remembering* category.

Table 3 Learning Outcomes within the 2013 Home Economics Curriculum

Category	Learning Outcomes
Remembering	-
Understanding	<p>To <i>deal with</i> the facts of modern technology.</p> <p>To <i>appreciate</i> health and nutrition rules that facilitate healthy and balanced body growth.</p> <p>To <i>recognise</i> positive attitudes towards social services provided by the state to all citizens.</p> <p>To <i>describe</i> family life requirements and its health, economic and social dimensions.</p> <p>To <i>appreciate</i> manual work and respect for workers.</p> <p>To <i>identify</i> physical changes that occur at different developmental life stages of adolescence.</p> <p>To <i>describe</i> the need for hygiene and respect in all aspects of life.</p> <p>To <i>develop</i> first aid skills</p> <p>To <i>explain</i> the close relationship between clothing, appearance, customs and Islamic values.</p> <p>To <i>demonstrate</i> awareness about health and nutrition for all family members.</p> <p>To <i>interpret</i> the need to maintain public health and safety.</p>
Applying	<p>To <i>employ</i> scientific and practical skills of social and economic dimensions of beneficent.</p> <p>To <i>practice</i> professional skills to invest the time in beneficial activities.</p> <p>To <i>employ</i> teamwork skills.</p> <p>To <i>draw</i> on the correct scientific method relevant to different situations they are faced with.</p> <p>To <i>employ</i> appropriate interactional approaches.</p> <p>To <i>practice</i> activities necessary for ensuring security and safety in homes.</p> <p>To <i>participate</i> in local campaigns for cleaning the environment.</p> <p>To <i>employ</i> communicative skills through drawings, symbols and language.</p>
Analysing	To <i>prioritise</i> consciousness based on scientific thinking.
Evaluating	<p>To <i>judge</i> the economic use of resources in all aspects of family life.</p> <p>To <i>support</i> problems solving skills in students for practical and appropriate use.</p>
Creating	To <i>produce</i> a sense of responsibility in students towards the nation, environment and local community.

(Based on Kingdom of Saudi Arabia Ministry of Education, 2017a)

### Similarities and differences

Comparing the learning outcomes of the 1978 and 2013 curriculum documents it can be seen that there are ways in which the curriculum documents and embedded learning outcomes are both similar and different. Initial comparisons of the two demonstrate how both enable thinking skills that cluster within the lower levels of *Understanding* and *Applying*. Of difference was the doubling of the total number of learning outcomes in the later curriculum document.

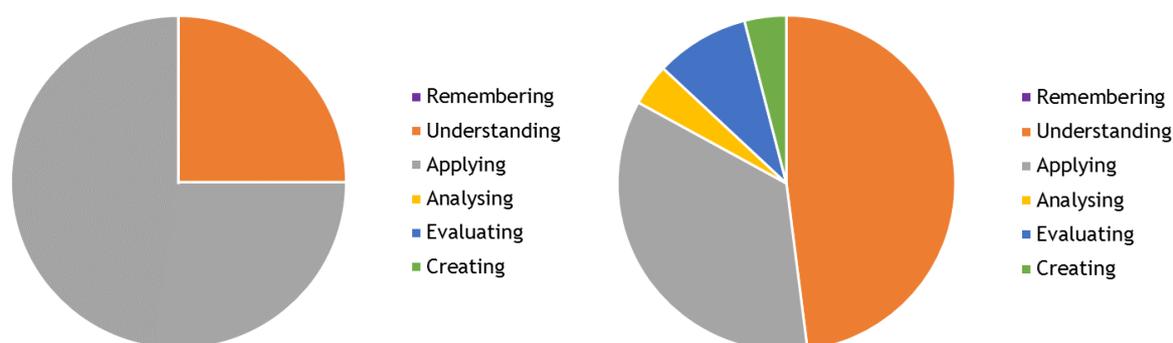


Figure 2 Comparison between Learning Outcomes of the 1978 and 2013

In addition to the total increase from 14 statements in 1978 to 27 in the 2013 document, the learning outcomes vary in other ways. Firstly, there are related areas of study evident in each list although the learning outcomes as statements are not identical. In both lists the delivery of teaching and learning is explicitly within context of Islamic values and this is given pre-eminence in the 2013

document presented as the first listed outcomes. Since the Home Economics learning outcomes relate to Family Education curriculum it is not sufficient for Islamic values to be provided within a broader understanding of the curriculum, rather it is explicitly presented within the subject area.

Secondly, there is a greater number of learning outcomes used in the second curriculum. The topic areas evident in the two curriculum include Islamic values, family, textiles, food, resource management and living well in the everyday. The 2013 curriculum also conveys intentions about citizenship, health and hygiene, learning using scientific methods, and preparation for professional/work life.

## Discussion

The similarities and differences between the 1978 and 2013 learning outcomes that emerged from this analysis have implications for development and implementation of curricula. There is an underlying assumption that learning and thinking critically requires that teachers are facilitators of student learning. Instead, teachers often become merely transmitters of knowledge, rather than facilitators of student learning in regard to helping students to develop critical thinking. It is this reduced emphasis on higher-order skills that in Home Economics in Saudi Arabia sees students potentially leaving elementary school education system without any or with underdeveloped critical thinking skills that are necessary for a quality of life within their communities and home environments.

Any explanation of the similarities and differences in the two curriculums and the embedded learning outcomes can, in part be attributed to socio-cultural expectations of education and Home Economics specifically. As McGregor (2010) points out Home Economics has a focus on everyday life that “presupposes cognitive, social, emotional and practical skills and dispositions” (p. 27). In order to be able to live well in the everyday individuals need to action what they know either through coping, adapting/participating or taking control (McGregor, 2011) and to do this students draw on all six cognitive categories and especially the higher-order ones. And while being able to engage the higher-order categories requires some known facts, students do not need to engage with this quite so explicitly within the classroom rather they are learnt within the wider socio-cultural environment including the home. Hayibor (1990) observes that students with critical thinking skills tend to question the current social conditions, which may lead to better understanding for their world and environment.

Each curriculum can be seen as a representative artefact of the time in which it was developed and written. The prevailing sociocultural context of Saudi Arabia around 1978 emphasised teaching girls skills that addressed their future roles particularly as mothers and wives. Bahrani (1981) observed that since elementary school was the first and last level for girls’ education in Saudi Arabia at that time there was an emphasis was on teaching practical skills. In the forty-five year difference to 2013, the inclusion of work-related outcomes represents a significant shift in the purpose of education. There is evidence of a move away from learning outcomes that predominately focused on demonstrating what was to be learnt in the classroom to beginning to incorporate vocational work-related outcomes such as generic or soft skills including teamwork and communication. This shift is also evident in the curriculum of other Middle Eastern countries. For instance, Alshatti et al. (2011) comment on how the Kuwaiti curriculum also focused on meeting “the progress needs of the country and the ever changing internal labour market conditions” (p. 16).

Formal public education for girls was introduced in 1960 and subsequently declared compulsory (Hamdan, 2005). In a highly gendered context, women who had a sufficient level of education to be able to teach belonged to a privileged class. For example, during the 1970s teachers of Home Economics were predominately the daughters of Saudi chiefs and who had been accorded a special level of education that went beyond the minimum required (Hamdan, 2005).

Gashan (2015) argues that in early establishment of formal education in Saudi Arabia in the 1940s, teachers who were enrolled in teacher training colleges had been found to have inadequate knowledge about critical thinking skills. Thus prior to 1978, very few Saudi teachers, male or female, had been highly trained. However in the period after 1978, Saudi Arabia underwent significant change, particularly in the area of curriculum and instruction (Al-Salloom, 1991). Teachers were now perceived as nation-builders and as a result, teacher education was given priority (Al-Salloom, 1991). It was during this time that the Ministry of Education and Vocational Training was established

(Kingdom of Saudi Arabia Ministry of Education, 1981) with its concern for developing a quality citizenry who could draw on what is learned in schools to think critically about ways to improve the country. In addition, this was a time when research was geared towards improving curriculum and its enactment (Kingdom of Saudi Arabia Ministry of Education, 1981).

During the same time period was an oil boom that brought to Saudi Arabia a growing desire to modernise through globalisation processes (Hamdan, 2005). This shift in educational purpose has implications for practice in the classroom. For instance, how might teachers who rely on textbooks (Al-Abdulkareem & Hentscke, 2014) take up the Ministry of Education's (2017b) proposition that they can offer student-centred learning opportunities that includes being prepared to engage their students in critical thinking? This propelled Saudi Arabia towards international cooperation, particularly in the area of education. Educational experts have been brought in to educate key personnel that included training of teachers and expansion of the education system from elementary to intermediate and secondary school levels as well as college education (Al-Salloom, 1991).

Political changes within government also had a huge bearing on the transformation of the education system and curriculum in particular (Kingdom of Saudi Arabia Ministry of Education, 1981). Every Education Minister that came into office at the time articulated plans for curriculum reform with the aim of portraying Saudi Arabia not only on par with her neighbouring Gulf countries, but also as a global player (Al-Abdulkareem & Hentschke, 2014) and similar responses can be seen in other countries within the region (Alshatti et al., 2011). Recently, the Ministry of Education started standardised tests and assessment tools pertaining to teachers who are applying for teaching job (Alnahdi, 2014). The assessments are based on professional standards and require skills that aim to examine new teachers with regard to their competencies and teaching knowledge in different subjects which include Home Economics (Alnahdi, 2014).

There is limited evidence of the use of Bloom's taxonomy to inform curriculum development in Saudi Arabia, compared to its wider use in Western countries (Pickard, 2007). However there is specific reference to the Taxonomy within the introductory section of Home Economics curriculum (Ministry of Education website, 2017a) and Ministry of Education officials have tried to incorporate more critical thinking principles into public education curricula, and to classrooms through pedagogical approaches (Kingdom of Saudi Arabia Ministry of Education, 2017b). While this paper provides some limited evidence of this in the learning outcomes for elementary Home Economics, there is a policy emphasis and effort to incorporate critical thinking instructional practices used within Saudi Arabian textbooks, an important resource heavily relied upon by teachers (Al-Abdulkareem & Hentschke, 2014). According to the Ministry of Education (1995) "teachers apply diverse teaching methods and techniques in order to develop students' different thinking skills, such as critical thinking, problem-solving, creativity, and concept building" (Al-Abdulkareem & Hentschke, 2014, p.17). However, as indicated in this study, more emphasis has been placed on lower-level cognitive development rather than higher-order thinking skills.

Using all six categories presented in Bloom Taxonomy's cognitive domain (Anderson & Krathwohl, 2001) is one way to provide students with the opportunity to demonstrate what they have learnt in context of their family and community. The purpose of Saudi Arabian Home Economics curriculum reflects two of three systems of action described by McGregor (2011), specifically technical (coping) and interpretative (adapting/participating) however the critical (taking control) system is missing. We argue these are not fully realised with the disproportionate number of learning outcomes in both curriculum documents sitting with the categories of *Applying*, *Understanding* and *Creating*.

The educational policy intention in Saudi Arabia is to develop critical thinking capabilities in young people. By analysing the curriculum for Elementary Home Economics using Bloom's Taxonomy it is possible to determine that the curriculum does not yet support the intended, broad educational goals.

## Conclusion

The focus of Home Economics in Saudi Arabia is to respond to the societal needs that encompass and conceptualise societal development, and ensure the competence of future mothers and wives within today's contemporary fast-changing and challenging world. The analysis of learning outcomes of Home Economics National Curriculum at elementary level using Bloom's Taxonomy demonstrates the extent to which lower level thinking has been emphasised over higher-order thinking categories.

While not the only available means to determine how a curriculum attempts to engage students with higher-order thinking (Bereiter & Scardamalia, 1998), Bloom's Taxonomy has been previously used to examine student outcomes in Home Economics education (Pickard, 2007).

The study calls for the need for curriculum developers to diversify learning outcomes by incorporating more learning outcomes in higher-order thinking categories, so that deeper understanding can enable students to better analyse circumstances surrounding various occurrences in their environment and differing viewpoints. This is consistent with Tsai, Chen, Chang, & Chang's (2013) view that in order to engage students in critical thinking, teachers need to act as facilitators to allow for discussion and encourage a freer thought process. Similarly, McCollister and Saylor (2010) suggest that critical thinking can be infused in lessons by utilising in-depth questioning and evaluation of both what is being learned and their sources. In this way, students gradually move away from simply memorising information and learn to look at the information being learned as a process. In so doing, they develop comprehension and problem-solving (McCollister & Saylor, 2010).

In thinking about what this research has offered and what questions it has revealed, we offer the following recommendations for further study. Firstly, addressing the Ministry of Education's expressed goal for students to leave school with critical thinking requires consideration about the learning outcomes. Bloom's taxonomy offers one way to inform the work of curriculum developers in Saudi Arabia so the clustering of learning outcomes especially at the lower-order is avoided and attention is given to developing student-centred learning and thinking skills. Secondly, the revised taxonomy also addresses a knowledge dimension that includes factual, conceptual, procedural and metacognition (Anderson & Krathwohl, 2001). While not a focus of this study, this aspect offers an additional possibility for interrogating curriculum for its potential to develop thinking skills. It is intended that future research will consider the learning outcomes that are specific to year levels and how teachers use these to inform pedagogy and assessment practices. Finally, the heavy reliance on textbooks developed by the Ministry of Education for use in Saudi classrooms invites analysis about their ability to enable students to think critically. Additionally, what are the possibilities for professional development for teachers, and how might teachers need to balance their use of textbooks against providing students with learning that is connected to the localised context of their families and communities?

In designing learning outcomes there is a need to take into consideration all six levels in Bloom's Taxonomy of the Cognitive Domain, while fostering a student-centred curriculum that allows student inquiry. In the case of Home Economics in Saudi Arabia, allowing students to question freely would improve the future of female students and endow them with greater ability to solve their own problems. In view of the intention to develop higher critical thinking skills in students, it is important that teachers attend to the Ministry of Education's (2017b) suggestion that they evaluate what is suitable for their students and class levels. Within Home Economics classrooms, paying attention to learning outcomes at the higher levels of Bloom's taxonomy and building critical thinking skills requires moving beyond the textbook and building from students' everyday experiences.

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INTERNATIONAL FEDERATION  
FOR HOME ECONOMICS

REFEREED PAPER

## Close neighbours, different interests? Comparing three Nordic Home Economics curricula

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### Abstract

*The main objective of Home Economics (HE) education in modern curricula is to help students identify and develop their own resources and capabilities in order to manage their present and future lives. The study described herein seeks to investigate this objective from the curriculum perspective through comparison of contemporary curricula from Finland, Norway and Sweden, by studying which resources and capabilities are emphasised. HE curricula from the three countries were analysed by means of documentary analysis. Codes and categories were inductively developed to produce an analytical instrument for comparison of the curricular texts. Descriptive categories were applied deductively to compare the curricula. The analysis revealed similar understandings of the main contents of the subject, but with varying emphases among the countries. Taking a historic perspective, we relate our discussion to the previously shared Nordic model of education. Represented by the concept of bildung, this model holds the idea of an education system that balances local values and practices with international influences, while at the same time valuing the autonomy of teachers and schools. Seen through the lens of the three HE curricula, we conclude that this perspective is still visible, however, only to a certain extent.*

**KEYWORDS:** CURRICULUM, DOCUMENTARY RESEARCH, HOME ECONOMICS, NORDIC COUNTRIES

### Introduction

According to the International Federation for Home Economics (IFHE), a major goal in Home Economics (HE) is to achieve optimal and sustainable living for individuals, families and communities (IFHE, 2008). When striving towards this goal, it is possible to work through different areas of practice and with different means. The focus of the work herein is to study HE in basic education through curriculum texts from three Nordic countries: Finland, Norway and Sweden.

The role of HE in basic education is to help students discover and develop their own resources and capabilities, such as practical wisdom and the understanding required for coherently promoting active participation in their present and future everyday lives (Benn, 2009; IFHE, 2008). To achieve this, students need:

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1. an understanding of coherence, such as that between resource use and environment;
2. everyday life competencies, for example, being able to cook;
3. responsibility and participation, for example, taking a stance on production; and
4. to be caring, such as willingness to assist others (Benn, 2009).

The study herein has its base in comparative curriculum research (e.g., Keeves & Adams, 1997), our aim being to answer the following research question:

Which foci and emphases characterise HE curricula of the three neighbouring Nordic countries, Finland, Norway and Sweden?

This research question is further divided into two sub-questions:

1. Which content areas, including their relative emphases, are focused on in the HE curricula of the three Nordic countries?
2. Which similarities and differences are found between the HE curricula of these countries?

## Background

### Curriculum

A curriculum can be examined from various perspectives. In the early stage of curriculum studies, Tyler (1949) suggested that it could be seen to consist of four elements: objectives, content, methods and evaluation. Nowadays, this model is often seen to excessively simplify the complexity of the curriculum, hence contemporary curriculum studies generally focus on a larger picture involving the mechanics of curriculum planning, development and innovation (Kelly, 2009).

Herein, *curriculum* refers to the national legal and formal guiding document for basic school education (Mølsted & Hansén, 2013), thus obligating teachers to follow its guidelines. It is seen as an official statement comprising the knowledge and skills students are expected to learn. By setting the objectives and core contents of the different school subjects, it includes means for conducting the teaching, and for structuring the content and time-frame of education.

### Curriculum describing society

A curriculum can be seen as the result of a process reflecting a political and societal agreement about what, why and how education is considered relevant for the future (Goodlad, 1979). The societal context of a curriculum is associated with the school system's controlling agency. Governance is incorporated into the process of curriculum development through control over who is able to influence the curriculum. Thus, the curriculum can be understood as a reflection of the contemporary society (Goodlad, 1979; Mølsted, 2015; Mølsted, & Hansén, 2013). In this vein, the Nordic model of education was developed after World War II as part of the social democratic project to rebuild and modernise the Nordic societies. Education for all was considered essential as a means to reduce social differences and increase social mobility (Imsen, Blossing, & Moos, 2017).

Antikainen (2006) defines the Nordic model of education as “an attempt to construct a national education system on the foundation of specific local values and practices, but the same time subject to international influences” (p. 299). *Nordic* refers to the countries Denmark, Norway, Sweden, Finland and Iceland traditionally representing social democratic welfare states (Imsen et al., 2017). They all implemented the Nordic model of education from the 1950s and throughout the 1970s sharing its traditional common values: equality, equity, democratic participation, nation building, and the ideology of social learning and inclusion in the classroom. As described below, this situation can be said to have changed to a certain extent lately (Arnesen, Lahelma, Lundahl, & Öhrn, 2014b; Antikainen, 2010, 2006; Benn, 2009; Imsen et al., 2017). The foundation of this Nordic model of education is based on a trust in professional teachers and individual schools to maintain a *bildung* perspective, having flexible national curricula with open-ended learning objectives. *Bildung* is defined by Hopmann (2007) as “the use of knowledge as a transformative tool of unfolding the learner's individuality and sociability” (p. 115). Historically, the Nordic model of education has built on a balance between economic, social and educational aims, yet during the past two decades,

neoliberal management reforms have affected the educational systems (Arnesen, Lahelma, Lundahl, & Öhrn, 2014a; Imsen et al., 2017).

Studies have revealed differences between these countries in more recent state-authority policy conditions for the control and construction of curricula. According to Mølstad (2015), a stronger product control now exists in Norway, where local curricula are expected to be locally constructed to *deliver* the national curriculum. In contrast, in Finland, process control was found to be the dominant notion of management: the national curriculum was seen as a pedagogical tool to support local curriculum work by teachers, with a high degree of autonomy in *developing*, not only delivering, the local curriculum. This is supported by Sahlberg's (2015) claim that, in Finland, teachers are collectively responsible for developing curricula. The system in Sweden bears resemblance to the Norwegian model, characterised by orientation towards national goals, together with a stronger prevalence of national testing (Imsen et al., 2017). Mølstad and Hansén's (2013) study showed that, in recent years, the curricula in Norway, and likewise in Finland, have more clearly become part of a prescriptive legal framework, having earlier been more of an instrument for facilitation and preparation of teaching. In line with this, Hudson (2010, 2011) argues that, in the Nordic countries, the new forms of governance for compulsory education include indirect methods, such as regulating through evaluation and quality control. These can have an even more powerful impact than direct control methods, and even challenge the Nordic model of education (Hudson, 2011). Imsen et al. (2017) confirm this recent influence in the development of comprehensive education in Denmark, Norway and Sweden. The researchers found that, in all three countries, recent restructuring processes based on neoliberal tendencies have influenced the education model through new legislation emphasising efficiency and excellence, introducing requirements for results and increasing assessment and testing. However, the authors argue that the Nordic model of education still exists in these countries at the institutional level, while at the governmental level the ideas of liberal education, *bildung* and cultural values for all have been replaced by an emphasis on instrumental skills to satisfy the needs of business and industry. This is, in part, assigned to international standardised tests, in turn, resulting in reduced trust in teachers and legitimisation of a move towards control and competition (Imsen et al., 2017). In Finland, the neoliberal tendencies have not yet affected the education system to such a degree, and efficiency has not been made the criterion of legitimacy, at least thus far (Sahlberg, 2015). However, also in Finland, marketisation, causing both profiling and specialisation of compulsory schools, has had some influence (Arnesen et al., 2014b).

Following the notion that the curriculum is affected by political and societal motives, the described differences in educational systems in these countries can be assumed to have affected the contents and foci of the curricula.

### Home Economics in the Nordic countries today

In Finland, Norway and Sweden, HE is described in the national curricula for compulsory education as a self-standing compulsory subject. Furthermore, HE or variants thereof are found as elective subjects in all three countries. In Norway and Sweden, HE is taught throughout primary and lower secondary level. In Finland the subject is taught only at lower secondary level (Grades 7 to 9, ages 13 to 15), whilst at primary level (Grades 1 to 6, ages 7 to 12) topics that naturally belong to HE are taught as part of the subject *Environmental Studies* (Fi. *ympäristöoppi*; Finnish National Board of Education, 2014).

HE curricula are referred to by different names in the three countries: *Home Economics* in Finland (Fi. *kotitalous*), *Food and Health* in Norway (No. *mat og helse*), *Home and Consumer Studies* in Sweden (Sw. *hem-och konsumentkunskap*).

In all three curricula, the content is divided into three sub-areas. Although these are inherent in the curricula and not the subject of our analysis, where the actual curriculum contents and frequencies are examined and compared, they serve as background for comparison. The Finnish HE curriculum (Finnish National Board of Education, 2014) is divided into the following areas: *Food knowledge and skills and food culture*, *Housing and living together* and *Consumer and financial skills at home*. The respective Norwegian curriculum (Norwegian Ministry of Education, 2006/2013) consists of *Food and lifestyle*, *Food and consumption* and *Food and culture*, whilst the Swedish (Swedish National Agency for Education, 2011) is divided into *Food, meals and health*, *Consumption and personal finance* and *Environment and lifestyle*.

However, curricula may also describe learning and development contexts external to specific subjects, and these need be considered when comparing subject curricula. One such issue falling within the field of HE is the school lunch. In Finland, the school lunch is described explicitly in the curriculum as a pedagogical situation that may promote learning about topics such as food culture, nutrition and table manners (Finnish National Board of Education, 2014; Lintukangas, 2009): “School meals have an important recreational role, and they promote a sustainable way of living, cultural competence and the objectives of food-related education and instruction in good manners” (Finnish National Board of Education, 2014, p. 45).

In Sweden, hot meals are also served at school but not described explicitly in the national curriculum as a pedagogical practice per se. In Norway, school lunch is neither described in the curriculum nor usually served at school, as students as a rule are expected to bring their own packed lunch. Such differences may affect interpretation and should be taken into account when comparing and contrasting the curricula.

### Previous studies of Nordic Home Economics curricula

Previous studies of HE curricula in Nordic countries, limited to those from 2005 to 2017 described below are, to our knowledge, scarce.

In the research on environmental education and how the eco-certified citizen has been constructed through Swedish curricula from 1962 to 2011, subject curriculum texts from HE and its equivalents were included (Hillbur, Ideland, & Malmberg, 2016). As a main result, the researchers indicate a move from the citizen engaged in the family and local community through practical activities, towards the *eco-certified citizen*. That is, one willing and able to make everyday decisions informed by scientific knowledge with an understanding of one’s own role in an abstract global world (Hillbur et al., 2016). In the present Norwegian HE curriculum, the personal economy aspect is downplayed compared to previous curricula, representing a shift towards the citizen as a critical and responsible consumer. Whilst the curriculum from 1997 described austerity and sensible consumption on a personal level, the 2006 curriculum emphasises making critical choices based on knowledge about humans and environment in a complex society (Holthe, 2009).

Other studies touch upon HE curricula through their studies of teachers’ views and practices. Examples include a study by Lange, Göranson and Marklinder (2014) on food safety teaching among Swedish HE teachers, and Øvrebø’s (2015) study of Norwegian HE teachers’ understandings, attitudes and practices concerning sustainability. Together with other studies, they indicate that teachers’ qualifications, teaching experience, own interests and educational visions, together with time constraints, affect the way teachers use the curriculum and implement the curricula in their own teaching (e.g., Hovland & Söderberg, 2005; Håkansson, 2015; Højjer, Fjellström, & Hjalmskog, 2014; Lange et al., 2014).

### Delineation of the study

We wanted to study the content and foci of what the curriculum says should be taught within the bounds of HE. Since we wanted to investigate the HE curriculum experienced by *all* students, we have limited our study to only include HE as a compulsory school subject, thus excluding elective courses. However, in order to cover all grades in compulsory school in the three countries (Grades 1 to 9 in Finland and Sweden, Grades 1 to 10 in Norway), Environmental Studies in the Finnish curriculum is also included, since HE content is covered by this subject at primary level.

### Methods and materials

Based on selection criteria described above, Home Economics curriculum texts from Finland, Norway and Sweden were examined and compared by means of documentary research methods (Cohen, Manion, & Morrison, 2011). Each curriculum document was analysed by two researchers applying inductive and deductive content analysis through a four-phase process to produce both quantitative word-counts as well as qualitative descriptions and excerpts (Cohen et al., 2011):

1. Inductive content analysis to identify keywords
2. Inductive generation of codes from keywords
3. Deductive content analysis and consensus negotiation

#### 4. Reduction of codes to categories.

The curricula chosen for the analysis were the current ones in each country: the Finnish curriculum of 2014 (Finnish National Board of Education, 2014), the Norwegian curriculum of 2006, revised in 2013 (Norwegian Ministry of Education, 2006/2013), and the Swedish curriculum of 2011 (Swedish National Agency for Education, 2011). As the three curricula follow different designs, the texts were studied and discussed prior to the content analysis, in order to ensure that the analysed materials were structurally comparable. Selections were made from the three curricula for which text sections to include and which to exclude (e.g., general description, final assessment criteria, basic skills) to cover the content of the respective subject whilst, at the same time, preventing counting the same codes twice due to recurring content descriptions (Table 1).

**Table 1** Frequency counts of codings, total word count and selection of texts for analysis

Country	Year	Frequency counts of coding	Total word count of text	Part of curriculum text included in analysis
Finland	2014	49	1847*	Objectives of instruction in grades 1-2 and 3-6 (Environmental Studies), 7-9 (Home Economics); Key content areas related to the objectives in grades 1-2 and 3-6 (Environmental Studies), 7-9 (including C1-C3) (Home Economics)
Norway	2006/2013	98	548	Competence aims in the subject
Sweden	2011	65	467	Core content

\* Environmental Studies 1431 words, Home Economics 416 words

#### Data Analysis

During the first analysis, keywords were inductively identified and linked with generated codes. Categories were produced based on the codes, and frequencies were counted (Table 2).

##### *Phase 1 Inductive content analysis to identify keywords*

An inductive content analysis of the Finnish curriculum text was carried out independently by two researchers following the confines described above to produce a list of keywords drawn from various content areas in the curriculum.

##### *Phase 2 Inductive generation of codes from keywords*

After the independent analyses, the researchers compared keywords and negotiated to produce codes descriptive of content areas. This inductive process was informed by the researchers' prior familiarity with HE, curricula, teaching and research in HE and perspectives from IFHE (2008). The two other curricula were then surveyed by each two researchers for any content areas not covered by the initial codes. The resultant codes were used in the forthcoming deductive content analysis. The list of codes and keywords are presented in the Table 2.

##### *Phase 3 Deductive content analysis and consensus negotiation*

A deductive content analysis was carried out following the agreed codes, using *ATLAS.ti 7* software (Archiv für Technik, Lebenswelt und Alltagssprache). In the case of the Norwegian and Swedish curricula, the original and the official English versions of the curriculum texts were analysed: one researcher coded the original and another coded the English version. The Finnish curriculum was analysed by both researchers using the Finnish language version. After independent coding, the results of the analyses were negotiated to consensus. In cases of differences or ambiguities between the content in the original and the English curriculum translation, the original was used.

##### *Phase 4 Reducing codes into categories*

The initial seven codes (Table 2) were combined into six categories (Figure 1). The process of re-grouping and re-naming was implemented to create as relevant, consistent and descriptive categories as possible, avoiding overlaps between categories. As such, the newly formed categories are believed to display key features of the curriculum texts. Based on the absolute frequency of the categories, relative percentage frequencies were calculated.

Table 2 Resultant codes with keywords and examples of quotes from the three Nordic HE curricula. Grade levels are given in parentheses.

Code	Keywords from texts associated with code	Finland Examples of coded text excerpts	Norway Examples of coded text excerpts	Sweden Examples of coded text excerpts
Food	Food, meal[s], food [tradition][culture], drink, foodstuff, meal customs, food security, safe food, product, eating habits; goods	[...] the production and routes of food (3-6)  The planning and implementation of meals and different meal occasions guide the pupils to consider their choices and habits related to food and eating from the viewpoints of nutritional recommendations, food safety, the food chain, food knowledge and skills, economical and ethical choices as well as reliable information related to food. (7-9)	Compose [...] breakfast, school meals and snacks (1-4)  [...] industrially prepared food and food prepared in large-scale catering (5-7)  [...] give examples of how kitchen utensils, methods of preparation or eating habits have changed over time or geographically and explain how this has influenced people's lives (8-10)	Importance of meals for a sense of community (1-6)  How food and other goods are produced and transported [...] (7-9)
Cooking	Cook[ing], prepar[e][ation], make food, bak[e][ing], build/put together, [find][test][modify][follow] recipes, develop [food product], test [food product]	The contents are selected to support the development of food preparation and baking skills (7-9)	[...] prepare breakfast, school meals and snacks [...] (1-4)  Use mathematics to increase or reduce the amount in recipes, and then test and assess the result (5-7)  Assess the content of energy and nutrients in food and beverages, and apply the findings when preparing food (8-10)  Create and test new dishes based on different raw materials, ways of preparing them and food cultures (8-10)	Different methods of baking and cooking [...] (1-6 & 7-9)  Comparisons between recipes and calculating quantities when preparing food [...] (7-9)
Consume	Consum[e][er][ing][ption], choice and use of [...], food security, production [system], product information, advertising, marketing, media, choose, choosing [goods and services], evaluate, purchase/shop, nature as resource, [consumer][food market], responsible decisions, assess [, choose and shop] [and choose]	The contents allow the pupils to get acquainted with [...] equal use of resources, and taking responsibility in the family (7-9)  Cleaning as well as caring for textiles and materials with appropriate substances, appliances, equipment, and working practices (7-9)	Practise rules for good hygiene (1-4)	Planning and organising [...] and other tasks in the home (1-6 & 7-9)  Different routines and methods for washing and cleaning (7-9)  Distribution of work in the home [...] (7-9)

Code	Keywords from texts associated with code	Finland Examples of coded text excerpts	Norway Examples of coded text excerpts	Sweden Examples of coded text excerpts
Domestic work	Domestic work, clean[ing], wash[ing], hygiene,[tasks][work] in the home, household skills, textiles, materials	to guide the pupil to adopt a sustainable way of living by paying attention to environmentally conscious and cost-conscious daily-life choices (7-9) The contents are selected to guide the pupils to use services and know their rights and responsibilities as consumers who make choices and contracts (7-9) The contents [...] encourage them [pupils] to reflect on the influence of peer groups and the media on their personal choices as consumers (7-9)	Tell others about a selected raw material [...] from production to consumption (1-4) Assess food information and advertising in the media (8-10)	The difference between advertising and objective information for consumers (1-6) Issues to consider when choosing goods and services [...] (7-9) Rights and obligations of consumers (7-9)
Money	Money, econom[y][ics], finance[s], saving, price, buy[ing], cost, purchase	The contents are selected to support the development of skills related to [...] environmental consciousness and cost-consciousness related to housing (7-9) The contents also provide the pupil with tools for recognising situations and problems related to the use of money in households (7-9)	Assess and choose foods from a large food market when planning purchases (8-10)	Finance, saving and consumption for young people (1-6) Personal finance for young people, such as buying over the Internet, borrowing money, buying on credit or hire purchase and subscriptions (7-9) Current societal issues concerning personal finances [...] (7-9)
Nutrition	Nutriti[on][ous], health[y], beneficial, nutritionally safe, wellbeing, lifestyle, nutrients, diet, public dietary recommendations, nutrient content, illness/sickness, nutrition information, safe food, energy, [balanced][compose] meals [distribute over day]	They learn about everyday health habits and practise the related skills (1-2)	Select food and beverages that are part of a healthy diet (1-4) Talk about guidelines for healthy eating from the health authorities [...] (5-7) Compare meals pupils prepare themselves with eating guidelines from the health authorities (8-10)	Choice and use of goods and services in the home, and how they impact health (1-6)
Sustainable	Sustaina[ble][bility], environment[al], environmentally [conscious][aware], common resources (natural and social), environmental labelling, re[cycling][covery], nature [as resource], food system/network, food safety/security, industrial[ly produced], ethical, effective use, [goods are] produced and transported, waste, industrial[ly prepared]	They learn to reduce the amount of waste they generate, to recycle, and to sort waste (1-2) They practise environmentally responsible actions in their surroundings [...] (3-6) to guide the pupil to adopt a sustainable way of living by paying attention to environmentally conscious [...] (7-9)	Assess, choose and shop with environmental awareness (5-7) Prepare food in nature and use nature as a resource (5-7) Assess and choose foodstuffs based on ethical and sustainable criteria (8-10)	Recycling in the home and in the local area [...] (1-6) [...] how they [goods and services] impact the environment (1-6 & 7-9)

## Results

Inductive and deductive content analysis of the curricular texts resulted in seven codes, as given in Table 2, displayed with respective keywords and text excerpts.

Content areas covering food, meals and cooking were found to connect and overlap, for example, in cases such as *food preparation* (see Table 2). Thus, during data reduction, we chose to collapse the codes *Food* and *Cooking* into the category *Food, meals and cooking*, to produce six distinct categories, as shown in Figure 1.

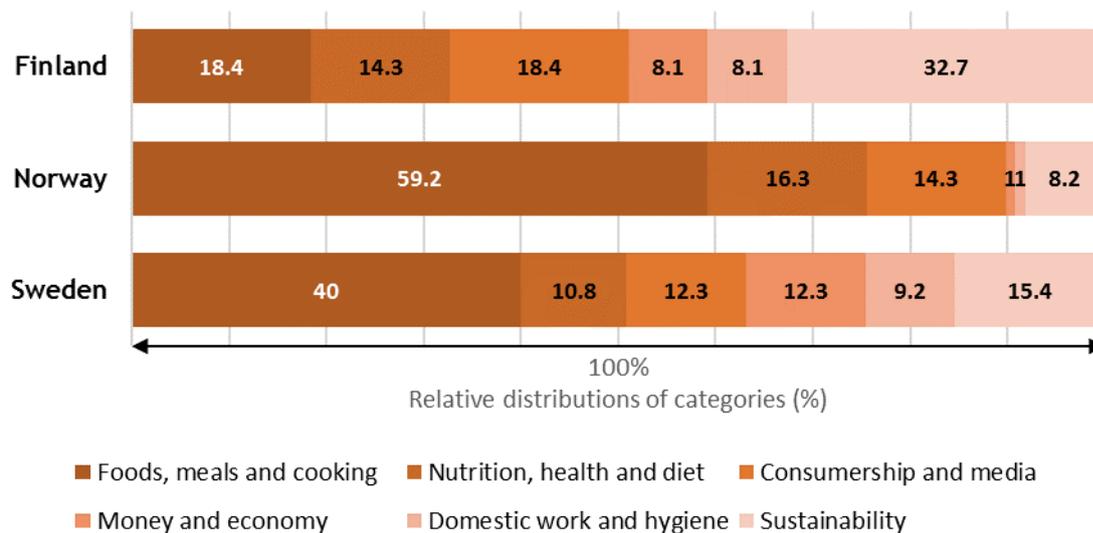


Figure 1 Distribution of inductively generated categories to characterise Home Economics curricula in the three Nordic countries.

The Finnish curriculum has a considerably lower amount of food preparation theory and practice and, at the same time, a high quantitative emphasis on sustainability issues. In the Norwegian and Swedish curricula, the emphasis on food, meals and cooking is strong.

Contrary to Finland and Sweden, domestic work, including cleaning and distribution of tasks at home, is virtually non-existent in the Norwegian HE curriculum, except for one statement about hygiene practice (Table 2). Likewise, issues of personal economy are clearly present in the Finnish and Swedish curricula, whilst not visible on the Norwegian.

## Discussion

### Validity and reliability

Validity was ensured through clear method descriptions combined with parallel coding by two researchers, followed by negotiation to provide methodological rigor and transparency. Being policy documents, curricula need to be interpreted in the contexts in which they reside, which, in turn, requires a certain insider perspective to ensure reliability (Cohen et al., 2011). The researchers herein can all be considered professionals in the field of HE education, both research and teaching. The researchers are native speakers of two out of three languages (Finnish and Norwegian), thus these languages and national contexts are well known. Mastery of Swedish is considered sufficient to ensure good understanding of the Swedish curriculum in its original language. Although none of the researchers can be considered professionals within the Swedish education community, it is expected that familiarity at the Nordic level combined with the cultural similarities between the Nordic countries is sufficient to ensure contextual insight (although we indeed later point to larger differences than could be expected, see Results). Adequate understanding of the school system and original language of the texts is an essential requirement when using an instrument for curriculum analysis such as the one developed herein. Finally, detailed method descriptions, accompanied by examples and extracts from the texts, contribute to ensuring reliability (Schofield, 2002).

### Similarities and differences in the Nordic Home Economics curricula

The data analysis revealed both differences and similarities in the three curricular texts in terms of emphasis and content foci (Figure 1 and Table 2). The most notable difference is seen in the content area of food and cooking, as both the Norwegian and Swedish curricula place substantially stronger emphasis on these issues than the Finnish. In the Finnish and Swedish curricula, food is mentioned as one out of three sub-areas, whilst, in Norway, food is mentioned in all three sub-areas. Within the content area of food (code *Food*), the Norwegian curriculum has a substantial emphasis on food culture and food traditions, both domestic and foreign, and differs from the other two regarding its strong emphasis on health and nutrition. The Swedish curriculum has a particular emphasis on monetary issues. The Swedish and Finnish curricula share a strong focus on sustainability, Finland being the most prominent. The fact that sustainability enjoys such a great emphasis in the Finnish curriculum may, in part, be because HE content at primary level is taught as part of interdisciplinary Environmental Studies. Likewise, the apparently low emphasis on food, meals and cooking in the Finnish curriculum is also a reflection of HE not being a separate subject at primary level. Furthermore, compared with the other two countries, the smaller emphasis on food may also be due to different school lunch practices, and the fact that these are explicitly described as a pedagogic context in the Finnish curriculum (Lintukangas, 2009). Overall, the relative proportions of the categories seem to be more equally balanced in the Finnish curriculum.

According to IFHE (2008), the main objective of HE education in basic education is to help students discover and develop their own resources and capabilities and prepare them for life. To achieve these goals, HE education in schools should provide students with the appropriate tools and adequate competence in the right proportions, such as practical wisdom and understanding of coherence (Benn, 2009). The curricular texts in the three Nordic countries studied in this paper seem to be in line with this objective, and share many interpretations of the required skills and competencies—all of the categories are present in all three curricula, albeit quite differently balanced.

The historical roots and the distribution of HE content into other school subjects has affected the current situation in these countries. This can also be verified with the different names of the subject, which can be seen to reflect the content. In Finland, the name Home Economics does not indicate emphasis towards one specific content area, which is also seen in our results. In Sweden, the name Home and Consumer Studies indicates an emphasis on consumership, which is in line with findings by Hovland and Söderberg (2005), especially when combining the categories of *Money* and *Consumership and media* to account for almost one quarter of the text. However, our results indicate that the greatest emphasis seems to be on food, meals and cooking, following Höijer et al. (2014), who argue that the Swedish HE curriculum has always had a strong focus on food. Furthermore, Hillbur et al. (2016) report a strong focus on sustainability, especially at the global level, whilst our quantitative results indicate this emphasis not to be particularly strong.

In Norway, the name *Food and Health* clearly indicates a strong focus on these areas, which is indisputably supported by our results, quantitatively accounting for more than three quarters of the content. The move away from personal economy and personal domestic issues between the 1997 and 2006 curricula described by Holthe (2009) is clearly confirmed, as the text, to a large degree, emphasises issues connected with consumership and citizenship in a broader societal perspective. This aligns with a shift towards a more neoliberal perspective on citizenship, with notions such as consumer sovereignty and consumer power (e.g., Carrington, Zwick, & Neville, 2016), as indicated also to apply to the Norwegian curriculum in general (Arnesen et al., 2014a; Imsen et al., 2017).

Part of the foundation of the Nordic model of education has been the trust of professional teachers and individual schools (Imsen et al., 2017), as reflected by the *bildung* tradition (Hopmann, 2007). Several studies have indicated that there has been a shift away from this tradition, particularly in Norway and Sweden (Hudson, 2010, 2011; Imsen et al., 2017; Mølsted, 2015; Mølsted, & Hansén, 2013). However, to a certain extent, our results nevertheless align with Antikainen's (2006) definition of the Nordic model of education combining the national education system with specific local values and practices as well as international influences. Thus, there are similar understandings of the elements of the subject across the three countries, but the emphasis varies. Imsen et al. (2017) state that the Nordic model of education still exists at the institutional level, while, at the governmental level, the emphasis on instrumental skills has affected the curriculum. Besides these levels of curriculum, the teacher's interpretation and implementation of the curriculum, along with the students' ability to grasp the goals of HE, all play a role in the actual learning outcomes. Curricula,

as national legal guiding documents for basic school education, describe the knowledge and skills that students are expected to master (Mølstad & Hansén, 2013) and reflect governance control over who is able to influence the curriculum. (Goodlad, 1979). Our study reflects the intention of the legislator for expected outcome from the perspective of the written curriculum, yet the actual outcome is the result of a complex process, as shown by Lange et al. (2014), Håkansson (2015) and others.

Teaching activities applied in schools are expected to reflect the curriculum and seek to extend or modify the knowledge, skills or attitudes of identifiable learners (Goodlad, 1973). Herein, the curriculum was only examined at the intended level, although, according to the research literature for comparative education (e.g., Keeves & Adams, 1997), the implemented curriculum is dependent on the intended curriculum whilst the achieved curriculum refers to students' resultant learning. Further studies are recommended to compare the outcomes of teaching practices in schools with the findings of this study. Another natural extension of this study would be to explore how content matter from HE is included in other school disciplines and elective courses.

The method developed and employed herein may be of use in analyses of curricula from other countries, which would provide a broader international picture of HE curricula. The results can be seen as a starting point for both interdisciplinary and cross-national collaboration, as well as a starting point when searching for fruitful connections between HE and other school subjects. The study offers an insight into the contents of HE education in these three countries that are relevant for more than just Home Economists. With an understanding of the broad content and emphases in HE, stakeholders, political actors and other interest groups can make conscious decisions and influence the emphasis of the HE curriculum in the future.

## Biographies

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## *Special Issue*

Teaching and learning in Home Economics education

**Section III: Home Economics pedagogy for higher education**



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REFEREED PAPER

## Towards practical mastery of food-preparation skills and reflective learning

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### Abstract

*Research on Home Economics teachers' practical skills development is scarce. Mastery of practical food preparation skills form the cornerstone of being a qualified Home Economics teacher. Data were collected from Finnish Home Economics student-teachers. At the beginning and at the end of the spring and autumn terms, learning assignments on personal study aims and achievements were collected from each student (n = 27). This provided a written data-set of 108 A4-pages. Qualitative content analysis (Silverman, 2006) was used to explore students' perceptions on a reflective approach to learning and their ideas for the development of food-related practical courses. The findings revealed a change in study aims from the beginning of the spring course, which were focused on basic levels of knowledge, towards a more holistic view on what students should understand when they become teachers. Developments in the students' critical thinking skills and meta-skills of planning and evaluating learning activities were observed alongside with their practical skills. Future Home Economics teachers should have strong pedagogical, cooperative, and practical food preparation skills. Without the latter, they will be unable to support the development of their students and act reasonably within the quickly changing environment of the Home Economics classroom.*

**KEYWORDS:** FOOD PREPARATION SKILLS, FOOD EDUCATION, HOME ECONOMICS TEACHER EDUCATION, REFLECTIVITY, HIGHER EDUCATION

### Introduction

The main objective of the Home Economics teacher education program at the University of Helsinki is to provide students with qualifications for teaching and consulting within the domain of Home Economics, including skills for a range of educational settings and sectors of society. Mastery of food, food culture, and practical food preparation skills form the cornerstone of being a qualified Home Economics teacher. All studies in these areas integrate scientific inquiry and practical mastery of the subject. A strong emphasis is placed on studies that support the integration of pedagogical theory and practice, as well as studies on research methodology. All students earn a master's level degree and broad teaching qualifications.

The aim of this article is to discuss the experiences that students of Home Economics teacher education have during a single one-year food-related course focused on the practical mastery of food

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preparation skills and deepening the understanding of food choice and food culture. The course places an active emphasis on reflective learning, since both research-based and reflective practices are essential features of university-level food studies in Finland.

We collected data from students at the beginning and end of their course, contributing to the analysis of university students' perceptions on the usefulness of reflective practices and the difficulties they encounter when incorporating these practices into their learning. As a conclusion to this article, we discuss ideas for the development of food-related practical courses in master's programs on Home Economics teacher education.

### Food discussion and critical thinking

Regarding contemporary everyday food choices, factors such as the desire to make enjoyable and tasteful food, or the taste preferences and habits of household members, can have a stronger impact on food choices than factual knowledge (Palojoki, 1997; Fjellström, 2009). The personal, context-dependent way that we make sense of the world around us encourages us to create different meanings for the same issues, thus increasing the variety of food choices among households (Murcott, 1997). Making food choices and using factual knowledge are intertwined in the everyday life of a household (Palojoki, 1997).

From a physiological perspective, food is important for human survival and needs to be prepared every day (Lupton, 1996); however, its many meanings indicate that it is more than just nutrition and fuel, as previous research has shown (e.g., DeVault, 1991; Douglas, 1997; Murcott, 1982;). Fjellström (2009) suggested that the term *food preparation* must be extended, stating "It is a very complex activity, consisting of a series of decisions and actions, resulting in different dishes or different types of meals as well as various nutrients" (p. 20). Food preparation also implies social activity, providing a social structure and organising the people who are eating together (Murcott, 1982). Cooking today means having the competence to choose what is most adequate at that moment, according to time, taste, money, nutritional quality, and, in recent years, environmental friendliness (Fjellström, 2009).

These aspects should be better understood in order to develop food-related education and research in Home Economics teacher education programs. The aim of the University of Helsinki program is to help students obtain the relevant skills and understanding, enabling them to have critical views on food media and develop their own critical thinking skills. This program also provides students with the tools to identify whole structures instead of bits and pieces, a regular feature of the narrow views found in media.

Based on our experiences within schools, the traditional method of teaching nutrition-related facts in Home Economics education begins with developing a knowledge of the nutrients and their roles in the human body. Food preparation skills are learned for the purpose of preparing meals, but in the worst cases, food-based knowledge remains detached from nutrient-based knowledge, resulting in a fragmented view of food preparation skills (Palojoki, 2009). Nutrient-based facts are taught in such cases, but are they learned?

Teaching and learning about food-related facts is one aspect of food education, but how well do modern school systems support the analysis of social and cultural aspects of food and eating? Food does have implications beyond merely providing the nutrients and energy needed to sustain life. Food plays a role in identity expression, communication, social interactions, and also in delineating status and gender roles (Fjellström, 2009). These aspects should be better integrated, especially in higher education, since good teaching and learning practices in Home Economics teacher education programs result in a tighter coordination of skills, understanding, theoretical knowledge, and the skilful use of contextual cues (Lave & Wenger, 1991; Postareff & Lindblom-Ylänne, 2008).

There have been some concerned voices (e.g., Stitt, 1996; Lyon, Colquhoun, & Alexander, 2003; Höijer, 2009) that the acquisition of food preparation skills has failed in Western countries, when compared with times past. This is partially true, since food preparation requires less time and is now easier than before, and there are many new food products that demand less work at home (Lyon et al., 2003). Yet the reason for this perceived decline in food preparation skills remains unclear. There may be a lack of government interest in teaching cooking skills in schools, or the economic interests of food manufacturers who market products that require fewer cooking skills may be affecting the situation (Höijer, 2009; Höijer, 2013). On the other hand, there is a growing public interest in food

preparation and gastronomy. This is a sign of the times, indicating that students and their homes are more heterogeneous than ever in terms of their relation to food and food preparation (Höijer, 2013). In this social climate of food-related discussion, we see that there is a societal need for providing all comprehensive school students with an education in Home Economics, and the role of qualified Home Economics teachers has become more important than ever. Our claim is that if a Home Economics teacher has strong practical and theoretical skills in the subject matter, then they have more pedagogical resources available for supporting the learning processes of their students.

## Changing conceptions of pedagogical expertise

During the past decades, the conception of learning and pedagogical expertise has changed (Wenger, 1999). The qualitative changes that also affect Home Economics teacher education include an increased emphasis on problem-solving skills, recognising that teaching and learning occur within multiple contexts, assisting students to become self-regulated learners, a stronger connection between teaching and the diverse contexts of students' lives, encouraging students to learn from each other, and employing authentic assessment methods (Palojoki, 2009).

Postareff (2007) claims that students' learning can be enhanced through research-based teaching (see also Marton & Säljö, 1984; Marton, Beaty, & Dall'Alba, 1993). She also suggested that pedagogical training should offer opportunities for reflection and conceptual change (Postareff, 2007). Learning new teaching "tricks" is of limited usefulness if there is a lack of pedagogical knowledge or if the teachers' intention is not to improve the quality of students' learning outcomes (Postareff, 2007). This need for reflective learning can be applied to Home Economics teacher education as well. Teaching should be based on the latest research for food and nutrition, and students should be guided on how to search for relevant research (Lonka & Ahola, 1995; Postareff & Lindblom-Ylänne, 2008). Deep-level learning and research-based learning improve the transfer of knowledge and skills (Tuomi-Gröhn & Engeström, 2003).

Reflective practice has numerous definitions within the research literature, but in broad terms, it includes two key elements

1. making sense of an experience in relation to oneself (e.g., the ability to learn new food-related and practical skills), to others, and to contextual conditions (e.g., the ability to understand various factors affecting food choice); and
2. reimagining and/or planning future experiences for personal and social benefit (e.g., becoming a Home Economics teacher in various educational and counselling settings).

These kinds of reflection are not easy and students need much support in cultivating their reflection skills (Oosterheert & Vermunt, 2001; Oosterheert, Vermunt, & Denessen, 2002; Lindblom-Ylänne, Trigwell, Nevgi, & Ashwin, 2006; Fullana, Pallisera, Colomer, Fernández Peña, & Pérez-Burriel, 2014).

Research-based teaching applied to courses on practical food preparation skills should aim to develop a deep level of learning (Marton et al., 1993; Marton & Säljö, 1984). During these courses, the students should gain a broader picture of teaching and learning in the context of Home Economics education. Central tools for achieving this goal include discussions with other students and peer-reflections on one's own practical skills. The students are active participants in the course and can also make suggestions on what is being learned. This kind of open and supportive learning climate encourages students to learn from their mistakes. They are able to provide constructive feedback and learn from each other, using the techniques of authentic assessment during their reflections. The development of metacognitive skills is supported through constantly monitoring one's own skills and practices (Reid & Johnston, 1999; Richardson, 2005). New techniques are first learned together, and as students' skills grow, they move into the phases of application and then transfer.

## Data collection and analysis

### Description of the course and the participants

The course studied here, *Theory and Applications of Food Preparation*, is equivalent to 11 European Credit Transfer System (ECTS) study points, and was divided into two parts: spring term (34 hours of lectures and 60 hours of practical assignments) and autumn term (36 hours of lectures and 58 hours

of practical assignments). Most students complete the course during the first two years of their studies. The students ( $n = 26$  females,  $n = 1$  male) had various backgrounds; some ( $n = 11$ ) had previous vocational education (e.g., cook, patissier, and restaurant server), but the majority did not have any previous food-related education at all. Two thirds of the participants belonged to age group 20 to 26 years. In addition to practical cooking skills, the course focused on, for example, how traditions and constructed artefacts, such as cookbooks or kitchen appliances, affect modern food preparation. Practical learning assignments always included reflections on how to apply skills and knowledge to future work as a Home Economics teacher. National health perspectives and nutrition recommendations were essential, such as how to apply and teach aspects of health education and nutritionally varied diets. The focus of all learning tasks was always pedagogical; the students should understand how to teach practical skills to people of varying age groups and how to support those with learning difficulties.

### Data collection

We have previously published an article on data collected during an earlier course held in 2014 (Soljanto & Palojoki, 2015). The data analysed in the present article was collected during the spring and autumn terms of 2015. At the beginning of the spring and autumn terms, written data on personal study aims (hereafter “AIMS”) was collected from each student ( $n = 27$ ). They all provided their individual written consent to release their study assignment for research purposes. The research had no influence on their assessment. The instructions for AIMS were as follows:

PART 1. Reflect now on your personal study goals during this course, as well as your means to achieve them. Focus your reflections on practical food preparation skills from the viewpoint of your own development. At the end of this term, you will reflect on your achievements and how they compare to your goals.

At the end of both terms, written data on personal study achievements (hereafter “ACHIEVEMENTS”) was collected from the same students ( $n = 27$ ). The instructions were as follows:

PART 2. At the beginning of this course, you reflected on your personal study goals, as well as your means to achieve them. Now you should reflect on your achievements and how they compare to the goals you set earlier, as well as how you will further develop your skills (following the end of the autumn term). Focus your reflections again on practical food preparation skills from the viewpoint of your own development.

This data collection process resulted in four separate data sets (i.e., AIMS, spring and autumn; ACHIEVEMENTS, spring and autumn), which are analysed in the present article. The lengths of the collected responses varied from several sentences to more than one A4 sheet, providing us a written data-set of 108 A4-pages. The data was analysed using a qualitative content analysis technique (Silverman, 2006). The unit of analysis was written material carrying the same meaning. The original writings were in Finnish and selected quotations were translated to English by the authors. This analysis process resulted in three main themes, which were visible in all four data sets: a) activities in the classroom, b) thinking skills, and c) interest and courage (see Table 1).

## Results

### AIMS, spring term

Table 1 summarises the three main themes, as well as the subthemes, found in the data set from the beginning of the spring course. Frequencies are also mentioned in the table (i.e., how many students mentioned the theme/subtheme in their writings).

Learning activities that focused on basic food preparation skills were important, according to the students. They had a strong understanding of the importance of being an active learner:

I aim to be active during lectures and practical classes. I think I do not have to be afraid of making mistakes—the main goal is to learn. Focusing on my own activities and following what the others do will teach me a lot. (11518 [these numerical codes refer to individual students])

Table 1 Study aims set by students ( $n = 27$ ) at the beginning of spring term

Main themes	Subtheme	Description
Activities in the classroom	Food items (23)	To learn new food items and their use(s) in food preparation.
	High-level food preparation skills (12)	To learn how to apply basic food preparation skills, to organise, and to work systematically and sequentially.
	Planning and deepening an understanding of food culture (11)	To learn how to plan menus in the context of food culture and traditions, to deepen knowledge of food items and food choice, and/or to deepen practical skills.
	General food preparation skills (8)	To learn new food preparation skills and to apply them in practice.
	Food recipes (7)	To learn to read, apply, and develop recipes.
	Food preparation tools and machinery (5)	To learn new tools and their safe and ergonomic use.
	Table setting and serving (3)	To strengthen skills in table setting and serving and other skills related to evaluating and eating prepared food.
Thinking skills	Knowledge (14)	To learn more about the chemical and physical changes of food items during food preparation, and/or to understand why and how each food item is used.
	Developing and arguing teacher behavior (9)	To learn how to act in Home Economics classrooms, how to teach practical food preparation skills, and how to understand students' perspectives.
Interest and courage	Feeling safe and secure about own skills (8)	To have more courage on own skills and knowledge related to food preparation.

This student's mention of "what the others do" refers to learning activities, called *demonstrations*, where the students teach their peers new skills and techniques. These activities are short (5 to 6 minutes) but their aim is to strengthen students' pedagogical skills in teaching practical food preparation. Another student stated:

During the practical classes, I will strongly focus on demonstrations and, if possible, exercise new skills at home. (11521)

Learning with other students in the practical classes is cooperative:

I will develop my cooperation skills ... by acknowledging my peers better. I could ask if anybody needed help more often, after I had completed my assignments. (11520)

A better understanding of the learner's perspective was also mentioned in many responses. For example:

I would like to learn more about the teacher's perspective. How do I teach skills to others? Which skills are more important than others? (11522)

At this stage of their studies (first year), the students had not yet taken any indepth courses on pedagogy, but through the practical assignments they began to see and understand the need for pedagogical principles in teaching work. They also understood the need for practice outside of class. For example:

I searched afterwards for information regarding the issues that I started wondering about during class. (1158)

### ACHIEVEMENTS, spring term

The students learned a great deal about new food items and food preparation techniques:

It is great that we have learned basic skills but also alternative techniques, and we have learned about the latest food products on the market. (1152)

The students had very versatile abilities at the beginning of their studies, according to their previous experiences and skills. Their responses revealed that there must be more challenging tasks to motivate those who already have basic skills. For such students, it is important to provide alternative techniques. For example:

Actually, I have learned more than I thought I would in the beginning. There are many alternative ways to do things and there are hardly any tasks that have only one right and wrong technique. (11517)

The continuum of food-related learning starts from the basics and continues rapidly into practical applications. Basic skills are primarily concerned with reading recipes, as one student noted:

My ability to read recipes critically has developed. (11520)

The next stage is application, as cited by one student:

I have learned to apply the recipes in many ways. (11519)

After this stage, the students can start being creative, as mentioned by one student:

I have learned a lot about the 'background' of different foods. What I mean is that I now see more clearly how every recipe has this basic core, and by changing that, you can create a large variety of dishes. (1151)

The students were able to reflect on their thinking skills and cooperative skills, and they could see the benefits of these activities. Pedagogical skills were also developed:

I have also learned a lot about teaching: how to prepare a good demonstration and how to emphasise the correct elements of a food preparation process (critical moments). (11517)

In order to apply food preparation skills, the students had to understand the chemical and physical principles of cooking. One student stated:

After this term, I have a far better understanding of the kinds of phenomena that affect food preparation and cooking. (11518)

The students also noticed changes in their metacognitive skills, with one student noting:

I have now started to watch myself more. I have a better understanding of why I had failed when I tried to comprehend the connections to chemical phenomena in cooking. (1153)

Interestingly, the skills learned throughout the course were transferred from the classroom to the student's own home, as exemplified in one student's response:

I have learned how to clean the dishwashing machine with citric acid, and I cleaned my dishwashing machine at home using the same formula. I have really strived to apply and transfer my new skills to my home. (11520)

### **AIMS, autumn term**

Table 2 summarises the main themes and subthemes found in data collected from the beginning of the autumn term.

These new study aims indicated that students wanted to continue in their practice of using novel food items. One student stated:

I want to go out of my comfort zone by deliberately choosing recipes that are new to me. (21520)

Developing high-level food preparation skills was also seen as important, as one student noted:

I aim to be more organised and manage my time better, both with regards to my own work and the work of my peers. I am quick to start a task, but I should plan better beforehand. (21517)

Time management was also seen as an important aim with regards to future work as a Home Economics teacher:

I will try to better understand the time required for different phases of food preparation. In the future, I can better plan how much time is needed for different parts of the lesson. (2157)

**Table 2** Study aims set by students (*n* = 27) at the beginning of autumn term

Main themes	Subtheme	Description
Activities in the classroom	Food items (39)	To learn new food items and their use(s) in food preparation.
	High-level food preparation skills (32)	To learn to apply basic food preparation skills, to organise, and to work systematically and sequentially. To learn to work in a responsible and independent way. To learn about the critical phases of food preparation. To learn how to convert passive knowledge into active knowledge and how to teach that to future students.
	Planning and deepening an understanding of food culture (8)	To learn how to plan menus in the context of food culture and traditions. To be able to use pedagogy in conducting each phase of the lesson, while students are having meals. To learn sensory evaluation. To strengthen cooperative skills.
	General food preparation skills (12)	To learn new food preparation skills and how to apply them in practice.
	Food recipes (5)	To learn to read, apply, and develop recipes.
	Food preparation tools and machinery (3)	To learn new tools and their safe and ergonomic use. To learn how new technology can save time.
	Table setting and serving (3)	To strengthen skills in table setting and serving.
Thinking skills	Developing and arguing teacher behavior (13)	To learn how to demonstrate skills to students and provide reflections from the student's viewpoint. To learn to trust one's own skills and be friendly, clear, and calm while teaching future students.
	Knowledge (8)	To learn more about the chemical and physical changes of food items during food preparation processes. To learn how to use appropriate terms and concepts.
Interest and courage	Feeling safe and secure about own skills (22)	To have more courage about own skills and knowledge related to food preparation. To be more secure while working alone or in groups. To have more courage in using new dishes, food items, and preparation methods.

The students also linked reflective practices to these planning skills:

If I were to be more precise in my own work, then I would need more time to think on how I should teach this technique to my future students. (21526)

The scope of the study aims that students set at the beginning of the autumn term were also broader, compared to those set at the beginning of the spring term; for example:

I want to learn more and study more routines for sensible and responsible work in the kitchen. (2152)

One tool for achieving this was finding alternative methods, as cited in the responses:

Sometimes, it will be useful to scrutinise the old routines I have already learned. (2158)

This set of aims also raised new subthemes, compared to data collected at the beginning of the spring term as well as data collected in 2014 (Soljanto & Palojoki, 2015). The students wanted to learn about teacher leadership in the classroom:

I want to gain more confidence while working with my peers. This is a tool for developing my teacher identity. It is not enough that you can do something yourself; you should also be able to teach your skills to others. (2159)

One student, whose background was in vocational education, had started to reflect on the difference between teaching food preparation skills as a teacher and preparing food as a cook. This student aimed to focus more on being understandable and concise while explaining various food preparation processes, stating:

My aim is to more intensively follow what the other students demonstrate. During the spring term, I did not understand why I should stop doing my own work and follow somebody else's explanations on some phases of food preparation. I had previously learned that you do not stop your work for nothing and need to prepare food quickly. Now I understand that the point is to learn how to teach and verbalise phenomena. Good Home Economics teachers can explain things simply and understandably. (2154)

## ACHIEVEMENTS, autumn term

This last opportunity for students to reflect on the goals they achieved during the autumn term were important in revealing their developmental paths. They were again satisfied that they had gained new skills and knowledge about food, but also that they could reflect on high-level food preparation skills. One student noted:

I found time management skills to be very useful. Previously, I just persevered in completing my tasks. Now I have the skills to better plan my timeline. (21522)

Other high-level skills that the students mentioned were the abilities to plan; to work systematically; to organise tasks; to be able to focus on the task at hand; and to be patient, persistent, and independent. One student reflected on this, stating:

I can work more fluently now, and this helps me to focus better and plan what I need to do. Now I have more time to cooperate with my peers. (21511)

The thinking skills that students developed were related to teaching and pedagogy:

I have always learned about teaching, and I think it is important to understand the most critical phases of food preparation processes and be able to choose recipes using a pedagogical perspective. Compared to restaurants, Home Economics classes consider factors other than gastronomical values in choosing recipes. (2154).

The students also experienced how important it is for the learning climate to be supportive and secure; for example:

Our team had a good spirit and I was encouraged to try new things. I did not have to be afraid of mistakes, since I learned a lot from them. (2156)

## Discussion

During the 21st century, there has been a shift towards increasingly complex and diversified food choices and practical cooking skills (Richardson, 2005). As such, future Home Economics teachers should have strong pedagogical, cooperative, and practical food preparation skills. Without the latter, they will be unable to perceive the pedagogical development of their students and act in a reasonable way within the quickly changing environment of the Home Economics classroom. Our data shows that the students varied in their mastery of these skills when the course began in spring; however, the aim of the course has been, and will continue to be, focused on higher-level learning, empowering the students and cultivating their self-reflective skills (Marton et al., 1993). Table 3 summarises the main changes found across the four data sets, revealing that the students' early study aims, which were focused on basic levels of knowledge, moved towards a more holistic view on what they should understand when they become teachers in the future.

**Table 3** Summary of the main changes between students' ( $n = 27$ ) aims and achievements over the course of the academic year

Term	Aims	Achievements
Spring	<ul style="list-style-type: none"> <li>focus on single food items</li> <li>focus on basic food preparation skills</li> <li>deepening simple food preparation skills</li> </ul>	<ul style="list-style-type: none"> <li>seeing alternatives</li> <li>learning about lesson organisation</li> <li>understanding the learner's perspective and seeing it as important</li> </ul>
Autumn	<ul style="list-style-type: none"> <li>focus on high-level food preparation skills</li> <li>gaining more confidence</li> <li>learning how to demonstrate skills and techniques</li> <li>acknowledging peers</li> <li>focusing on cooperation</li> <li>gaining a more holistic perspective on the whole process of learning food preparation skills</li> </ul>	<ul style="list-style-type: none"> <li>understanding the value of cooperation</li> <li>being able to better manage time</li> <li>reading and choosing recipes from a more critical, pedagogical perspective</li> <li>confidence in own skills</li> <li>self-reflections on the need for further learning after the course is completed</li> </ul>

The ability to critically reflect on their own skills will help the students evaluate and give feedback to learners who are learning basic cooking skills (either in comprehensive school or in adult

education). This kind of reflective practice and research-based critical thinking (i.e., understanding the phenomena) will be of great value to them in their future careers, which were skills that were shown to have become well developed throughout the course of this study. The students were also able to cultivate their critical thinking skills (e.g., regarding food media) and gain courage in experimenting with novel techniques and skills. This kind of explorative attitude will become even more crucial as the revised Finnish national curriculum took effect in 2016, which requires special attention towards supporting students' practical skills and their development (POPS, 2014).

The students' meta-skills of planning and evaluating learning activities were also shown to have developed over the academic year. The changing views on teachers' expertise in schools means that young teachers should foster the strong cooperative attitudes they have learned during their education. In our data, chemical and physical phenomena in food preparation has been emphasised as tools for cooperating with science teachers; however, this is only achieved if the Home Economics teacher can first demonstrate a strong ability for practical skills themselves.

## Conclusion

Home Economics education is surely a complex, yet highly important learning environment for food-related skills and knowledge, one that everybody needs now as much as they will in the future. There should be more research focusing explicitly on Home Economics teachers' practical skills development because teachers' practical mastery of food preparation skills is key for obtaining a high level of professionalism.

Without having one's own foundation of strong practical skills, the Home Economics teacher will be unable to focus on pedagogical issues within the learning environment, build a safe learning environment where the students feel free to make mistakes, and provide individual support for their students. The development of strong practical skills is a continuum starting from basic food-preparation skills to more holistic and higher-level food-preparation skills. For achieving this the Home Economics student-teachers need enough time and support.

Home Economics teachers in higher education must also find a balance between cultivating generic skills (i.e., being reflective and critical) and subject-specific skills (i.e., having practical skills and knowledge of one's own regarding the complexity of food and food preparation in homes). There cannot be one without the other. As demonstrated here, along with strong practical skills, the future Home Economics teacher should have good pedagogical skills. Demonstrations of practical skills and well-managed time, using recipes that were chosen from a pedagogical perspective, are essential for qualified Home Economics teachers. In our data, the focus on how skills are learned and taught is important. The students were able to be self-reflective and saw this as a key element for developing one's identity as a teacher (Postareff, 2007).

## Biographies

Helena Soljanto, MEd, teaches at the Faculty of Educational Sciences, University of Helsinki, Finland. She has held lecturing positions at various levels of Finnish institutions, from comprehensive school to higher education, and is deeply experienced with the challenges of teaching Home Economics. Her research interests cover the development of food education, pedagogy of Home Economics education, and teaching practical skills.

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INTERNATIONAL FEDERATION  
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REFEREED PAPER

## Student-led lessons as inquiry-based learning in a food and health subject curriculum

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### Abstract

*The aim of this article is to reflect, analyse and describe didactical considerations of inquiry-based learning (IBL) as a method in teaching practical student-led lessons in the food and health subject curriculum at Oslo and Akershus University College of Applied Sciences, education and international studies in primary and secondary teacher education (HiOA). Student-led lessons are an example of teaching in which disciplinary and pedagogical knowledge are simultaneously applied in producing professional knowledge.*

*These lessons provided students with experience in teaching, in searching for information from different sources, discussing didactical considerations, giving and receiving feedback as well as being leaders in the classroom. These lessons raised several topics for reflection, such as learning outcomes and learning goals, a teaching plan, a relevant introduction, and explanations of the learning activities. Practical demonstration and the students' justifications of their practical and didactical choices proved to be important reflections. Our findings indicated that the students appreciated IBL as an active form of teaching. IBL contributed to the students' activity in their own learning, having a high degree of interest, and using making use of problem-solving and communication. Creative, critical, and reflective thinking and knowledge construction processes were also noticed.*

**KEYWORDS:** INQUIRY-BASED LEARNING (IBL), KNOWLEDGE CONSTRUCTION, FOOD AND HEALTH SUBJECT CURRICULUM (FH), HOME ECONOMICS, STUDENT-LED LESSONS (SLL)

### Introduction

The subject Food and Health (FH) replaced Home Economics in the Norwegian national curriculums for knowledge promotion in primary and secondary education and training (LK06) in 2006 (Education Directorate, 2006). This resulted in a paradigm shift in the subjects' knowledge base that now focused only on food and health. More research is needed to prove the quality in primary and secondary teacher education (TE) of FH.

The Norwegian TE is based on research and experience, while simultaneously being profession-oriented and innovative. This includes practical and theoretical perspectives (Norwegian Ministry of

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Education, 2016) corresponding to the new learning information environments of the 21st century (Kuhlthau, Maniotes & Caspari, 2015) and to new learning theories (Qvortrup, 2005).

Students can choose 30 (Food and Health 1 (FH1)) or 60 (FH2) ECTS. TE institutions must develop evidence-based practices (EBP), resulting in effective learning facilitating students reaching desirable learning outcomes. EBP has been discussed widely, resulting in the introduction of many definitions of EBP (Kvernbekk, 2016; Biesta, 2014).

## Theory and concepts

### Learning outcomes and learning goals

The learning outcomes of TE in FH are governed by the regulations of Norwegian TE, (Ministry of education, 2016), the National Guidelines for TE (National Council for Teacher Education (NCTE), 2016) and the institutional curriculums for FH. Learning outcomes are learning results that students are expected to achieve at the end of larger learning experiences (Ross, 2000). The mandatory governmental executive learning outcomes for TE state that students must develop a research mindset, and be able to alone, and together with others, use relevant methods of research. They must also work continuously with developing their own and their schools' collective and professional practices (Ministry of education, 2016).

The national guidelines (NCTE, 2016a, b) state specific learning outcomes for FH1. The most relevant learning outcomes concerning practical student-led lessons (SLL) are that students must be able to critically evaluate dietary information and teaching materials. They should find, use and evaluate research-based knowledge relevant to FH1, and be able to use professional terminology as well as digital devices.

SLL are based on the following learning outcomes of the curriculum of FH1 at HiOA: Students can plan, organise, lead and evaluate learning activities in FH in accordance with the curriculum LK06. Students are able to lead the learning activities of FH by differentiating and varying their teaching, and by implementing a learning-oriented assessment practice. Students are able to use working methods that promote engagement, creativity and the ability to work systematically with disciplinary topics. Learning outcomes for general competencies state that students must have knowledge about didactical categories and the planning, implementation and evaluation of the learning of primary and secondary school pupils.

### Concepts of teaching, learning and teaching method

This paper explores the idea of SLL in the light of Luhmann's (1995) theory of social systems. The theory provides distinct concepts for understanding teaching, learning and recognition (Qvortrup, 2005). According to Luhmann, teaching is a social system with the particular intention to promote student learning through participation in communication. Learning outcomes in national curriculums and local curriculums express these intentions. Qvortrup (2005) explains that communication takes place in group interactions, it is a selective process where the psychic systems of teachers and students are presently reciprocal environments to each other. Learning is recognition related to a self-referential psychic system where consciousness operates reflectively by observing its environments. Thus teaching is a context where teachers and students collaborate and interact, with the purpose to construct and reconstruct knowledge. Teachers can stimulate and facilitate communication by actualising goals and contents, keeping the communication going. Qvortrup (2005) refers to Luhmann who claims that all communication must apply which are actualised as interactions in education.

A teaching method is according to Klafki (2000) one of the didactical categories in didactical analysis. IBL is one learning method. Learning outcomes drive current curriculums rather than point out the content of teaching (Karseth & Sivertind, 2010). Learning outcomes can be approached in many ways, which is why teaching methods are of particular relevance, especially in TE where students learn not only how to teach, but also how to learn.

### Student-led lessons as a process of inquiry

Minner, Levy and Century (2010) described inquiry as what scientists do, how students learn (e.g., actively inquiring) and as a pedagogical approach used by teachers. There are several core

components in an inquiry regardless of whether the inquiry is done by scientists, students or the teachers. Spronken-Smith et al. (2011) proposed the following core elements in IBL: Questions or problems drive the process, the purpose is constructing new knowledge and understanding and learning is student-centred and student-directed. The teacher is a facilitator. Teaching in IBL promotes learning through communication, and the active participation of students in their own learning (Dostál, 2015).

IBL corresponds to the constructivist view of learning as an active construction and reconstruction process of new experiences of learners in a certain context. IBL facilitates problem-solving, critical and reflective thinking skills (Zafra-Gómez, Román-Martínez & Gomez-Miranda et al., 2015). Minner et al. (2010) noticed that IBL starts not with teachers presenting established facts, but with challenging students to investigate learning tasks and formulate problems.

Kuhlthau, Maniotes & Caspari (2015) presented a framework to guided IBL through seven stages: Opening, immersing, exploring, identifying, gathering information, creating and sharing, and evaluating. The intention of the framework was to promote the collaborative construction of knowledge and emphasise the significance of reflection and the assessment of learning during the process.

We applied framework to Kuhlthau et al. (2015). Our students worked with compulsory inquiry-based learning tasks outside of their regular timetable and they choose the working style and time commitment on their own. In the inquiry process, the teacher educators guide students to build background knowledge and act as facilitators (Kuhlthau et al., 2015). This involved brainstorming about the students' earlier experiences with teaching and for instance, a diet, and about all the potentially interesting, exciting and relevant pieces of knowledge and activities that could be included as content in a SLL. Students should browse information about teaching and diets. This exploring stage included a literature search, charting various available resources, for example textbooks, teaching guidelines, educational and disciplinary web resources. Students should discuss the intentions of curriculum LK06 (Education Directorate, 2006), should study official research-based guidelines for healthy and sustainable diets in groups and in dialogue with the teacher. In this early phase of new learning, students need to especially explore ideas and survey the information rather than accumulate facts (Kuhlthau et al., 2015).

The next stage formed the focus for inquiry. Here the students need to go into the details of curriculums, LK06 and didactical categories (Skagen et al., 2008). They should consider the learning goals, chose the content and methods of teaching and evaluating, clarified the conditions and settings for teaching/learning and considered the learning process.

The stage of collection entailed gathering the information that supported and eventually extended the focus. In this phase, students finished the plan for conducting the lesson. They needed to impose the scheduling of different teaching sequences, divide the work and responsibilities and perform the practical preparations. The teacher educator was available during the whole process as a discussion and dialogue partner. In the stage of presentation, the students should display their understanding of the professional knowledge, the practical and pedagogical skills they had developed for teaching and assessment of the topic. The last stage in the inquiry process was evaluation (Kuhlthau et al., 2015). This included self-assessment, constructive feedback from teachers and the other students, reflections of the teaching profession within FH1 and evaluating the learning outcomes of FH1. Groups shared their results of the inquiry process using a digital learning platform.

Recent research indicates that qualified teachers are the most significant school-level factor that influences pupil learning (Hattie, 2009; Darling-Hammond, 2012), and that good TE prepare students with research literacy and skills to conduct their own research to actively explore the quality of their own pedagogical practice (Tatto & Furlong, 2015). The methods of teaching influence the ways in which students learn, and inquiry-based learning (IBL) has been used as a means to improve education. It implies a shift from the traditional towards more active forms of teaching and learning (Rochard, Csermely, & Jorde, 2007). IBL is practiced in many disciplines in universities, but there is little sustained research on IBL (Aditomo, Goodyear, & Biuc, 2013). To our knowledge, no peer-reviewed articles about IBL in Home Economics or Food and Health subject curriculums have been published.

## Aim

The aim of this article is to reflect, analyse and describe didactical considerations of implementing IBL as a method in SLL in the context of FH1 in primary and secondary school TE at HiOA.

## Methodology

### The practitioners' research and self-study

We examined IBL in the context of our own professional educational practice as a social phenomenon in contemporary society. Our theoretical approach falls within the scope of the social sciences and the paradigm of complexity theory, and is inspired by system theory (Cohen, Manion, & Morrison, 2011). The study has a qualitative and empirical orientation (Brinkmann & Kvale, 2015; Elbaz-Luwisch, 2007) and was conducted as practitioners' self-study. In their own learning activities, students are knowers. (Cochran-Smith & Lytle, 2009).

### Study participants

Both students and a teacher educator participated in this study. In the SLL, one group of four students were appointed to be student-teachers and 12 other students were students. These 12 students had two simultaneous roles, one being students (participating in SLL as learners) and the other being observers in SLL. There were two groups, each consisting of 16 students at a total of 32. In SLL, a student group of student-teachers had complete responsibility for the preparatory work, didactical planning, conducting, teaching, leading, follow up and management of one lesson suitable to primary or secondary schools. The teacher educator participated as a facilitator and as a researcher.

### Observations

The significant insight in Luhmann's (1995) theory is that the observer (human subject) plays an unavoidable role in that what they observe (object in the world) and that there exists no (objective) observer position. Therefore the observation must be done as an observation of others' observations. The practitioners' research and self-study (Cochran-Smith & Lytle, 2009) was used as a research approach. This consisted of the teacher educator doing systematic participatory observations (Angrosino, 2007) of students' working process with SLL. She observed how both student-teachers and students observed SLL. Notes of observations and teacher educators' reflections were written down immediately afterwards (Crewell, 2017).

We used practical SLL with a topic of a vegetarian diet as an example when we described, analysed and discussed SLL as an inquiry process. SLL have four parts. Student-teachers gave a theoretical introduction, including the nutritional, cultural, sustainable and aesthetic values of the topic as well as the didactic considerations of the teaching and learning activities. The second part followed immediately, with each of the four student-teachers in charge individually presenting a short didactical demonstration of practical cooking skills relevant to the SLL content. Feedback on the presentation was given in plenary by the teacher educator and students. Third part was when student-teachers conducted a practical lesson to the students. Feedback was the last part in SLL. These four parts of SLL correspond to the two last stages in the previous mentioned framework for IBL of Kulthau et al. (2015).

### Questionnaire

A questionnaire was used to collect individual data from the students. The questionnaire was printed on paper and anonymous. Of 32 participants, 20 received the questionnaire and 20 questionnaires were analysed. The main questions were:

- What kind of learning output did you get from SLL?
- What do you think about IBL and SLL as a teaching method?
- How did the theoretical introduction to the SLL work?
- How did the demonstrations work?
- How did the practical session work?
- What was most relevant in this teaching given your own learning?
- Is there something you missed in SLL?

### Data analysis

Data consisted of notes and questionnaires. The data material was analysed using qualitative inquiry research design (Crewell, 2017) as a content analysis of notes and questionnaires. The two authors of this article read notes several times individually and in reflective discussions selected out the most important items that seemed to make sense of using IBL. We present our main findings, reflections, analysis results and didactical considerations in detail in the findings and discussion section. This might contribute to transparency of our didactical considerations, and reflect our theoretical and empirical foundations (Birkmann & Kvale, 2015). Our findings are generalisable only in similar contexts, and can be valuable as an example of *good practice*.

### Findings and discussion

Our intention was that SLL would contribute to research and experience-based TE. SLL was meant to be an example of a teaching method in which the disciplinary and pedagogical knowledge was simultaneously applied in the construction of students' professional knowledge (Cochran-Smith & Lytle, 2009). The disciplinary and pedagogical knowledge of TE subjects including FH1, should, according to requirements (Ministry of Education, 2010) be research-based (analytical and universal) and experience-based, (particular and personal) in this case about a vegetarian diet. IBL is a teaching method in which students learn through a research process (Aditomo et al., 2013).

### Learning outcomes

Student-teachers analysed curriculums of the subject FH1 as well as LK-06 and used these as a starting point in planning teaching in SLL. They recognised the learning outcomes in curriculums that connected to SLL. The statements in the outcomes were focused on student learning in SLL rather than the role of the teacher, and students seemed to be able to interpret the learning outcomes and understand the inquiry process to some extent. One of the roles of the teacher was to coordinate the students' participation in the study and properly inform what IBL and SLL were.

The learning outcomes were statements of what students should have learned at the end of the FH1 course. TE has some broad institutional goals and mainly to improve students' learning of critical thinking and writing (Walvoord, 2010). Information about SLL and discussions about learning outcomes proved to be necessary for students understanding the task of SLL. Several questions concerning outcomes were raised:

- What were the students' learning outputs after SLL?
- How good must the students' work effort be so that the presentation can be approved?
- What was the minimum of skills required?

Furthermore, Luhmann (1995) claimed that there is no linear or causal ratio between teachers teaching and learners learning. That is why teachers should ensure that students have really understood what they are expected to learn, and try to communicate learning goals and outcomes in such a way that students realise how to work towards achieving them. It is more important to set difficult goals than *do your best* goals. (Hatti, 2009).

### The inquiry and presentation

Our study supported previous findings that students needed support from libraries, web-resources and teachers mainly in the stages of exploring and forming the focus. Important learning seems to occur in these stages (Kuhlthau et al., 2015). Student-teachers discussed theoretical and didactic models and didactic categories in relation to the given topic. They synthesised theoretical knowledge and practical skills into various forms of vegetarian foods, expanded the actual information material and constructed new knowledge of vegetarian diets in this teaching context. In this stage, teacher educators contributed with comments and critical questions and assured good internal communication within the groups. Furthermore, the student-teachers were critical with the web resources and other sources when seeking information about vegetarian food, but they did not give any documentation for this process. The student-teachers reflected on what kind of recipe they wanted to use, and how they should present the dishes practically and didactically.

Vegetarian food dishes as a topic in SLL should be suitable for the intended school level. Our findings corresponded with those of Banoobhai (2012), in that there are several theoretical and practical reflection themes in using IBL:

- Is the purpose of tasks clear?
- What are the learning outcomes?
- Do we have a good working plan?
- What should the short introduction, explanation and demonstration include?
- The student-teacher could have clear learning objectives, but how did the students understand them?

Clarity is key, as the following example illustrates. One of the 32 students did not understand the importance of hygiene details and presentation of every step in preparation of the vegetarian dish. Some other students remarked that the students in FH1 shall work with children and the teaching must therefore be more exact than when teaching adults.

SLL provided students with theoretical and practical insight into various forms of vegetarian foods and didactical practices. The student-teachers showed what they had learned about teaching the topic of a vegetarian diet through presentations. They had major opportunities for creative and esthetical expression; for example, students should find spices that harmonised the dishes as preparation for the lessons.

Student-teachers had constructive discussions about how they could support the learning of students. They planned and demonstrated dishes such as vegetarian burgers with walnuts and beans, tzatziki, stuffed peppers with spinach and feta cheese, vegetarian lasagna, sweet potato and lentil stew, roasted falafel, hummus, tortilla de patatas, beet salad and blueberry pie. It was important that everyone saw and heard what was happening in the SLL demonstration. Student-teachers indicated critical points with foodstuffs and cooking processes. These demonstrations lasted for 15 minutes. It was essential that student-teachers practiced skilful cooking and didactical reasoning simultaneously, because it is, in our opinion, a sign of high professional knowledge. Practical-methodical experiences during the presentations is important for all students, and the display took place in front of the whole class. Our results are comparable to those of Anderson (2002), that collaboration is a powerful stimulus for reflection, which is fundamental to changing students' beliefs, values and understandings (Anderson, 2002).

### Questionnaires and observations

In the student questionnaire, we asked: *What kind of learning outcomes did you get from SLL?* Our analysis of the students' answers of the questionnaire indicated that most of the students were of the opinion that they had excellent or good learning outcomes of the SLL. Only one out of 20 students indicated that the learning outcomes was good to some degree.

Students replied positively when the question was *What do you think about IBL as a teaching method?* Students' answers seemed to support teacher educators' observations of good learning outcomes in pedagogical competences and a good learning environment in the SLL. The following quotations illustrates this:

Nice with varied teaching. Useful.

This indicated that the student has made pedagogical reflections concerning the quality of teaching where IBL was used. The student has also benefited from teaching.

Nice to see other students teaching cooking, nice to practice cooking myself and learn cooking.

This shows that the student has observed others teaching from outside the teaching act, and at the same time experienced to be a learner. The student might have got a deeper understanding of teaching and learning as complementary activities (Qvortrup, 2005). Furthermore, the student reveals interest for construction of further practical knowledge and learning:

Very good. Great recipes. It was obvious that students had made many preliminaries and had knowledge in teaching and the topic. They were good teachers.

This student has evaluated student-teachers' teaching and reflected over what it means to be a *good teacher* in FH. The student has observed others as a good teacher, in addition to her/his self-reflection about the same phenomenon. This also indicates essential pedagogical knowledge in TE.

This was good regarding my future profession and exam.

This indicates, possibly, that students view teaching as mostly instrumental, they noticed that teaching gives learning results relevant to the short- and long-term future.

Engaging, activating, promotes my learning, interesting and relevant. It is very fun to teach co-students.

This can show that the teacher student has experienced good teaching and is able to describe it. They also expresses an emotional attitude to teaching.

The answers of the questionnaire indicated that students liked to observe other students teaching and provided pedagogical and didactical reflections. The student statements can show intellectual and emotional engagement that is promoting learning (Kuhlthau et al., 2015).

However, students did not mention IBL explicitly. They might rather describe SLL as such, without paying attention to the method IBL used in SLL. One can not exclude that some of the students were not aware of learning outcomes in national and local TE programs which emphasise research-based teaching. Despite this, these students were positive to SLL.

### **The teacher educators' and researchers' observations and reflections**

IBL is a well-known and acknowledged pedagogical approach in higher education (Minner et al., 2010). Minner et al. (2010) noticed that it was a positive trend in inquiry-based instructional practices. Zafra-Gomez et al. (2015) also found a significant relationship between IBL and academic performance. There is little systematic knowledge about what kind of tasks university teachers regard as IBL and what the educational objectives that teachers intend to achieve through IBL are (Adittomo et al., 2013).

Students learned the IBL method gradually. Several of the students succeeded with active interpretation of information, considering alternatives and making reflective professional didactical choices. Students' teaching acts were results of this process. The teacher educator and students observed and evaluated the student-teachers and gave recommendations for missed items or items that could have been discussed more thoroughly or effectively. Student-teachers got feedback concerning their theoretical introduction and performing leadership. The teacher educator noticed that several students ignored didactical explanations adapted for children. Both teachers and students benefited from the others' perspectives and understanding of teaching and learning.

The demonstrations of dishes were central in SLL. Demonstrations were the basis for reflections and learning. Emphasis on didactics was central in the demonstrations. The following assessment of related reflections emerged: the preparation, design, plan and sequence of work; the organisation of the students work; the nutritional, cultural, sustainable, aesthetic values of the topic; the efficiency, order, hygiene, selection and use of tools and equipment. Furthermore, the practical skills, techniques, use of time and finished product, communication, management and follow-up were also discussed.

SLL revealed students' reading comprehension of a recipe. The core question was not whether a dish was easy or difficult to prepare, but how the demonstration of the dish worked. The didactical explanation about how and why different operations of the dish could be done and explained is important for acquiring the professional knowledge of a teacher. Koopman, Baakx and Beijaard (2014) suggested that the students' ability to construct relevant knowledge, develop effective practical teaching skills from their own premises and learn how to be professional teachers are hallmarks for an evidence-based practice.

An interesting question is whether students' learning has been improved and how. According to Walvoord (2010), this requires critical and ongoing argumentation for answers. The teacher educator expected the student-teachers to inform their students about argumentations. The inquiry process should not be understood as a linear prearranged chain of actions, but as an ongoing and back and forward going reflection process.

The teacher educator noticed that many students were very active in the classroom and in their own learning process during SLL. Students confirmed this in their responses in the questionnaire. The students displayed skills such as problem-solving, creativity, critical and reflective thinking to different degrees, and they were speaking more than usual in plenary. This indicated that these observations of the teacher educator were in accordance with the results of Zafra-Gómez et al. (2015). They observed that students learned more and obtained better results if the participants conducted research projects and worked together on activities. Furthermore, Saravanan (2012) found that in initial TE programs, the development of teacher competencies have moved from random practices to practices that encourage the development of children's thinking.

Enhanced thinking and reflection can be achieved in several ways. Lahti (2012) suggested that a diary method could help a reflective practice that facilitates students' IBL. Students should have more opportunities to answer questions that affect their thinking in a positive way and encourage them to strengthen their contributions (Farahian & Rezaee, 2012). However, Banoobhai (2012) concluded that TE programs must have skills and knowledge for critical reflective classroom practices in order to survive changing challenges in policy, society and the classroom.

The students and teachers (as psychic systems) have to join the communication by observing their environments in order to learn. These environments could be the other students and teachers. They must also be conscious of how the others are conscious on their own consciousness (Luhmann, 1995). At times, some students did not understand the teacher educator's perspectives. Not all students understood completely what they should learn and why. The explanations given by the teacher must be very thorough. One comment was that the teacher educator talks too much. There are always differences in motivation among students and there is a relationship between motivation and self-regulatory strategies, such as planning, exercising, organisation and elaboration, monitoring and regulating guidance and use of time (Berger & Karabenick, 2011). The students are also influenced by many physical, social, psychological and environmental factors before and during the learning process (Pepe, 2012).

According to Dostál (2015) a didactical inquiry activity is when the didactic situation is supporting students in their inquiry activities and enables them to realise it. General criteria can take attention away from competence and learning outcomes. Therefore, it is important to stress continuous feedback, and formative assessments.

More research is needed about varied perceptions and beliefs about feedback. The roles of feedback can be divided into categories such as correction, reinforcement, forensic diagnosis, benchmarking and longitudinal development (Price, Handley, Millar et al., 2010). Feedback can be brief, concise comments and include an overview that highlight both positive and negative sides of evaluated work (Ferguson, 2011). The efficiency of teacher feedback will be affected if it stimulates students' reflective thinking (Van der Schaaf, Baartman, Prins et al., 2013). Examinations of teaching and learning conducted by Organization for Economic Co-operation and Development (OECD) reported that feedback, evaluation and follow-up are often lacking (OECD, 2013). An important question is how students respond to teachers' comments (Higgins, Hartley & Skelton, 2002) and the question is what the students do with such feedback (Bailey & Garner, 2010).

One case study of staff and students' satisfaction reported that students were neither satisfied nor dissatisfied with their ability to use feedback in future learning (Maggi, 2014). She suggested that this higher education institution can make considerable improvements to its feedback practices.

Our students demonstrated their understanding of the professional knowledge in their teaching in SLL and contributed to the achievement of the lesson objectives, learning outcomes for knowledge and skills and general competence. Furthermore, the students generally began to achieve some expertise about a vegetarian diet and develop ownership of the lesson. Students applied disciplinary knowledge about a given topic. Professional knowledge is the knowledge that students construct when they apply disciplinary and pedagogical knowledge and transform it to the knowledge they use in teaching (Cochran-Smith & Lytle, 2009). Student-teachers seemed to be able to acquire skills to find, understand, evaluate and apply information, and construct the professional knowledge they needed in the particular context of teaching SLL. They did not only consume knowledge produced by others, but they produced new knowledge in groups, contributing to research-oriented practices (Cochran-Smith & Lytle, 2009).

Aditomo et al. (2013) observed that research might be seen as *research-like*. There is little systematic knowledge about the kinds of tasks that university teachers regard as being inquiry-based and the educational objectives that teachers intend to achieve through IBL (Aditomo et al., 2013).

Thus, the following questions may be asked:

- To what extent could SLL be understood as research- and experience-based teaching?
- How does IBL reflect new views to professional practice, teaching and learning?

These questions have different answers in different classrooms and situations and more research is necessary.

## Conclusion

In conclusion, SLL were an example of teaching in which disciplinary and pedagogical knowledge are simultaneously applied in producing professional knowledge. Our findings indicated that the students appreciated IBL as an active form of learning. IBL contributed to that students becoming active in their own learning and contributed in interest, reflection, communication, creativity in knowledge construction processes.

## Biographies

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## Emotional Intelligence attributes in Family and Consumer Sciences tertiary curriculum

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### Abstract

*Emotions provide people with valuable information about themselves and how they relate to others. The objective of this paper is to outline and advocate for the inclusion of Emotional Intelligence (EI) attributes in tertiary level Family and Consumer Sciences (FCS) curriculum. The ability to recognise, choose how one thinks, understand and manage the emotions of oneself and those around is emotional intelligence. FCS graduates' training and occupation involves imparting skills, knowledge, interacting with and addressing the challenging issues that impact individuals, families, and communities on regular basis. Such interactions may elicit various emotions that an FCS professional may need to control and balance with action. Hence, understanding and management of emotions by FCS graduates is crucial for effective implementation of work-related programmes and tasks. The paper addresses the importance of and advocates for the inclusion of Goleman's (2005) EI attributes in FCS formal and hidden curriculum and suggests ways that can be applied. It is crucial to purposefully acquire these skills through education as they enhance emotional, communication, problem-solving and social skills that are important in the profession of FCS. Therefore, we strongly recommend that EI attributes should be integrated in the FCS tertiary level curriculum.*

**KEYWORDS:** FCS LEARNING, CURRICULUM, TERTIARY TEACHING, EMOTIONAL INTELLIGENCE, SELF-MANAGEMENT

### Introduction

Globally, education is known to prepare students for the pending challenges such as the working environment where competencies other than academic achievement matter most. Lately, good use of emotions has taken centre stage over academic achievement and expertise in determining good working relations and success in personal and career life. However, it is essential to consider emotions in the teaching/learning process since they can be used to interpret social situations in various environments especially in the work environment. Emotions influence a host of cognitive processes and affect the motivation to learn and work (Goleman, 2005). Emotions are complex feelings resulting in positive and negative physical and physiological changes which influence thought and behaviour. These feelings are associated with personality, motivation, and temperament. When one is able to understand and manage their feelings and for others, they possess a social skill called Emotional Intelligence (EI) (Mayer, Salovey, & Caruso, 2008). Such skills are critical in professions that have high interactions with people.

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Previous researches have shown the importance of Intelligence Quotient (IQ) while elevating emotional intelligence as one of the best predictor of successful leadership. Empirical researches revealed that social skills such as the ability to assess, regulate and utilise emotions greatly influence academic performance, social wellbeing as well as job competence (Abraham, 2000; Goleman, 2005; Jaeger, 2003; Servan-Schreiber, 2004).

While a lot of research has been carried out concerning promotion of emotional intelligence in the curriculum, there is less focus in developing EI at tertiary level as part of preparing a well-rounded future employee in the field of FCS. Using Goleman's (2002) Emotional Intelligence theory, this paper addresses the need to promote and incorporate emotional intelligence into formal and hidden curriculum of FCS at tertiary institutions in order to improve work competencies. This is done by using the literature and the authors' experiences in teaching FCS. EI skills have been studied and recommended in professions that interact with people such as nursing (Freshwater & Stickley, 2004; Kooker, Shoultz, & Codier, 2007; Quoidbach & Hansenne, 2009), hospitality (Wolfe, Phillips, & Asperin, 2014) and business studies (Sigmar, Hynes, & Hill, 2012; Tucker, Sojka, Barone, & McCarthy, 2000) but not in relation to FCS. The specific objectives are to

- a) discuss the importance of emotional intelligence in education and competency development
- b) justify the use of emotions in the field of FCS, and
- c) outline ways in which formal and hidden curriculum can incorporate emotional intelligence attributes in FCS.

The rationale of the paper was that basic skills and curriculum content are not enough to produce competent future employees in the field of Family and Consumer Sciences. However, for FCS students to excel academically and socially, there is need for the curriculum to integrate problem-solving skills, public speaking, and technical knowledge that elicit emotional/social skills necessary for competence in personal life and in the work field, furthering the mission of the profession. The observation is that most FCS students, especially at the University of Botswana, have become more concerned in other forms of intelligence and in being competent in content but not considering the type of professionals they are going to be for the work environment. The quality of the student products that is competent enough in life is greatly influenced by the type for curriculum used and other activities encountered throughout the learning process in preparing students for leadership and job competency. Observations from internship and teaching practice exercises also indicate that students experience emotional situations that at times they are not ready to address or handle.

### **Family and Consumer Sciences mission**

The mission of FCS is to facilitate the process and improve the wellbeing of individuals, families and communities in their own context. FCS professionals empower, impart knowledge and provide livelihood opportunities for others thus interact with people of different backgrounds on a regular basis. This is achieved mainly through formal (schools) and non-formal (extension) education. The profession involves "an integrative approach to the *reciprocal relationship* among individuals, families, and communities" (Kato, 2008, p. 24) in the environment they function in. The FCS curriculum is developed to address real family and community problems (Laster & Johnson, 2001) that can elicit certain emotions from a professional addressing and implementing those needs. The curriculum covers family relationships, health issues, child development, social housing, nutritional issues and so on that meets the physical, social, cognitive and emotional needs of individuals and families. Hence, EI skills are necessary for the successful implementation and achievement of the profession mission.

Incorporating EI skills in the FCS curriculum will supplement and strengthen the theoretical knowledge and practical skills (cognitive, affective, psychomotor/practical, etc.) that are already applied in FCS. FCS practitioners work with individuals, families and communities with various issues/challenges that may include people with terminal illnesses and/or disabilities, vulnerable children, or helping individuals achieve against the odds they face. As a result, an FCS practitioner may experience emotions such as some discomfort, anger, sadness, pity, regret and so on when they see their challenges, and satisfaction, pleasure, joy and so on when they assist them to overcome their challenges. The FCS graduate will need EI skills to be more sensitive, and to properly use and

control their emotions including those of their clients. The most important question is: what can be included into the FCS curriculum to cater for EI skills and needs?

The University of Botswana (University of Botswana, 2008) has come up with six Priority Areas as part of its Strategic Plan for 2009 to 2016. Priority 2 addresses *Providing Relevant and High Quality Programmes*, which is preparing graduates for effectively handling life, work, and citizenship. The university recognises the need to produce and provide skills to graduates that will assist them in effective integration in workplaces, having good leadership qualities, and have successful careers. Therefore, we are advocating for the incorporation of EI skills in FCS curriculum which will be critical in meeting this priority area. The priority also addresses graduate attributes that provide guidelines for curriculum/programme development at the university. The majority of the attributes indicated in the priority area have EI characteristics, for example: problem-solving skills; communication skills; organisational and teamwork skills; social responsibility and leadership skills; and interpersonal skills (University of Botswana, 2008). Therefore including EI characteristics in the FCS curriculum will be critical in achieving these attributes for most FCS programmes at tertiary level.

### **What is Emotional Intelligence?**

Emotional intelligence is not the same for everyone but differs with individuals. The roots of the debate revealed social intelligence issues as influenced by emotional aspects of human behaviour contributing to performance. In 1995, the concept was made famous after Daniel Goleman's book titled *Emotional Intelligence: Why It Can Matter More Than IQ*. Other researchers took it from there criticising and adding on the concept. Servan-Schreiber (2004, p. 25) describes it as a balance "between emotion and reason". He further stated that Intelligence Quotient (IQ) and EI are both predictors of success in life. Emotional intelligence is the ability to shape one's understanding and interactions with others. This defines how and what is learnt by an individual permitting them to set their priorities and influencing most of their daily actions (Goleman, 1998). It is the level of one's ability to recognise and understand what motivates other people and working cooperatively with them. Kaufman (2000) indicated that knowing what another person feels is a mental ability and qualifies as a form of intelligence.

### **Key components of Emotional Intelligence**

Although several EI models have been developed, for example Bar-On's (1997) model (first EI model) and Mayer et al. (2004), Goleman's (2002) model was applied in this paper for inclusion in formal curriculum. Goleman developed a model in 2002 on Emotional Intelligence with four key items of EI:

- a. self-awareness means that one understands self and other's emotions, strengths and weaknesses which are a humility factor important in leadership;
- b. self-management is recognising and being in control of one's emotions and actions, resisting temptations to make rushed decisions. These values leads to adapting to change, thinking fast, acting creatively and innovatively to solve problems;
- c. social awareness which means understanding the emotions of others and the ability to see and accept other people's view points, expertise in valuing diversity and organisational goals and
- d. relationship management which involves social skills to manage emotions, make decisions, inspire and influence others and work positively with others.

### **Benefits of Emotional Intelligence**

According to Bar-On (1997), emotions can influence the way one acts and react in different situations. He further explained that EI is the ability to recognise one's behaviours, moods, and impulses, and manage them in a positive way, resolve conflict and manage stress so that interaction is effective, then the individual is intelligent emotionally. Emotional intelligence is correlated with greater individual performance, often above and beyond that associated with one's level of general intelligence (Mayer, Salovey, & Caruso, 2008). The ability to perceive, understand, and regulate emotions helps one to perform effectively when gathering knowledge and skills.

Literature indicates both positive and negative outcomes of EI with the former outweighing the latter. High EI has been attributed to characteristics such as leadership skills, good choice of career, being cooperative and increased employability. Leaders who portray excellent social skills are often very good at teamwork, communicating with others and resolving conflict (Jaeger, 2003). In comparison, mastering EI (i.e., controlling emotions, being cooperative, and dealing with various emotions) has been found to be a better predictor of success in school performance and academic success (Parker, Creque et al., 2004; Parker, Summerfeldt, Hogan, & Majeski, 2004; Petrides, Frederickson, & Furnham, 2004), successful transition from high school to tertiary education if introduced and applied at the beginning of the programme (Parker et al., 2004), good leadership, and work progression (e.g., getting recognition from peers and higher salary) than IQ (Goleman, 1995; Servan-Schreiber, 2004).

The theory has however received criticism from researchers. They include the argument that it is not a relatively new concept but there are existing similar concepts to it, disagreements on its definition, measurement problems of the concept, if EI is really an important part of intelligence, and considered to be too broad among others (Smith, Profetto-McGrath, & Cummings, 2009).

### **Benefits of EI to FCS Students in tertiary curriculum**

The aim of FCS as a discipline and profession, is to improve the quality of lives of individuals and families through education and extension. This is achieved by interacting with, providing leadership and assisting individuals in making informed decisions. The implication is that the graduates work with individuals and families on regular basis (Kato, 2008). Graduates assist families with various cultural values and beliefs that may present challenges. Hence, FCS graduates will benefit from EI skills in order to work with families and improve their quality of lives. It is important that FCS graduates first acquire the necessary EI skills that will assist them professionally when they find themselves in highly emotional situations of individuals, families and communities. They need to be better prepared to control their emotions and of others, have empathy, manage conflict, communicate and work cooperatively with others. The skills allow them to be sensitive to the needs of people they are serving (Lust & Moore, 2006).

For example, during internship supervision of students enrolled in the FCS programme at the University of Botswana, students have indicated emotional-related challenges they have experienced in relation to self and others. Students that were attached to places that assist people living with HIV/AIDS, trade and consumer affairs (where they have to deal with complaints from highly emotional clients), addressing child/adolescent-related issues and so on have expressed emotional challenges for self and others in dealing with the cases. Although some of the recommended EI aspects may have been already applied in the FCS core curriculum content (e.g., groupwork, problem-solving skills, etc.), their aim was not necessarily to recognise and to target the development of emotional skills but more for cognitive purposes and adding to variety of teaching methods. The different areas and experiences in FCS work may require different skills to address various issues. For example, some situation will require empathy (e.g., when working with terminally children) while others will require conflict management (e.g., when dealing with interpersonal relationships). It is therefore important that the students develop the EI skills early on in their programme to understand and apply skills as they progress with their studies, and later in their workplace and life.

### **Application of Emotional Intelligence in FCS curriculum in tertiary education**

It is vital for all FCS tertiary educational programmes to step up and deliberately incorporate and develop emotional intelligence through their curriculum. Natural ability is not enough to stir EI traits. Deliberate external forces are needed to help instil the much-needed emotional and social skills because the way people feel and handle emotions is not the same for everyone but social expectations are the same. Goleman (1998) elaborated that a limited graduate professional programme curriculum adequately addresses the emotional and interpersonal skills that prospective employers expect from their employees. In agreement, Jaeger (2003) stressed that professional education programs are rarely designed to help students discover and develop levels of emotional intelligence even though the connection between emotional intelligence and academic achievement has been shown. Hoberman and Mailick (1994) noted that lecturers rarely have the time, training, experience, or willingness to help students acquire emotional competencies necessary when relating to clients, fellow professionals, and demands of the workplace. Incorporating, enhancing, and strengthening EI in educational institutions were reported to be possible through both formal and hidden curriculum but research has put less emphasis on the latter.

## Ways of Incorporating Emotional Intelligence in Formal Curriculum

Although some EI characteristics are applied in various FCS courses (e.g., groupwork), the applicability is mainly from the cognitive perspective but not necessarily to elicit EI skills they will need to effectively handle cases and address issues. The application can be done by first adding EI in the curriculum content of courses at level 100 (e.g., an FCS Introductory course) indicating what EI is, and its importance and applicability in the FCS profession. In taking the course or learning EI content, students need to understand the benefit value of knowing and having EI skills in their profession (Lust & Moore, 2006) in addition to FCS core content and knowledge. In relation to Goleman's model, EI can be integrated and applied in the formal curriculum content of at least 75% of the courses as follow (Curtis & Norgate, 2007; Freshwater & Stickley, 2004):

### a. Self-awareness

- Incorporate self-motivating class tasks or activities.
- Role-play by students to express their own emotions. This has been found to be a critical approach for students to be in touch and dealing with their emotions (Curtis & Norgate, 2007).
- Reflective learning experiences: students will need to reflect on their own emotions.
- Assign creative projects that will elicit emotions. Other authors (e.g., Elias & Weissberg, 2000; Freshwater & Stickley, 2004) suggest inclusion of arts (e.g., drama, music, art, etc.) in the curriculum. Lemchi, Ezema, and Iloeje (2016) recommend intensifying of creative strategies in FCS Curriculum to develop positive self-esteem and to allow students to be self-reliant.
- Encourage keeping of a private journal of hopes and feelings to identify and be aware of their own emotions.

### b. Self-management

- Encourage creative activities followed by self-evaluation or self-reflection.
- Provide opportunities for role-playing by students to learn to control emotions.

### c. Social awareness: the programme should provide for practical application of EI (Lust & Moore, 2006)

- Assign interesting learning experiences and case studies that will elicit emotions and develop empathy. For example, in a course taught by one of the authors, *Housing and Services for People with Special Needs*, the students used a wheelchair for 24 hours then wrote a journal noting their experiences and accessibility challenges. In the journal entry, in addition to accessibility issues, the students recorded strong emotions that ranged from anger to empathy. Appreciation of accessibility from that perspective helped them in designing accessible spaces in the interior design studios.
- Community work assignments/projects that will deliberately elicit and apply EI skills to create caring professionals.
- Problem-solving skills: incorporating social problems case studies in assignments and allow students to reflect and learn to control their emotions.
- Developing assignments that encourage empathy.
- Create panel discussions/debate activities that will teach student to listen to and accept other people's opinions.

### d. Relationship management

- Groupwork with the intention of teaching teamwork, working with people of different characteristics, and managing one's own and other's emotions, because emotions are always involved when working with others. According to Farouk (2004, p. 212) the group (with a facilitator who will ensure emotional wellbeing and control of each member and group ability to function) should consider the following role and process clarification to make it effective and manage the different emotions and opinions brought by the members:
  - the purpose of the group;
  - clarification of the role of the group consultant and the members of the group;
  - clarification of the process that each group meeting will follow; and

- the ethical considerations that need to be taken into account, such as respect for others, confidentiality and the right not to participate.
- These should be communicated to the students at the beginning of the project and assessment by other members should be continuous until submission.
- Request regular self-reports about the individual and/or groupwork that will show relationship management in an emotionally stressful situation (communication skills used, conflict and emotion managements, etc.). This can be done in class and during internship and teaching practice for the students to acknowledge their emotions and how they managed or failed to manage them.
- Receiving graded group participation/contribution feedback (with emphasis on emotion control) and presentation feedback from peers to learn to accept criticism from others besides lecturers.

### Hidden curriculum and Emotional Intelligence

In this paper, hidden curriculum refers to anything learnt by students other than from the formal curriculum. What is learnt is sometimes not formally stated in the syllabus and/or not taught by anyone but results from the interaction with others and communication from the social environment, but is essential in academic and job success (Hashemi, Fallahi, Aojinejad, & Samavi, 2012). Hidden curriculum shapes the attitudes of students for proper learning beyond class especially in socialising. Students gain from the hidden curriculum by analysing, interpretation and responding of their emotions. Hence, incorporating EI skills is crucial and more applicable in FCS hidden curriculum using Goleman's model as follow:

#### a. Self-awareness

- Sensitise students to their own emotions as they happen in class especially in practical subjects where there is lots of pressure and expectations that can elicit negative emotions.
- Encourage students to reflect on their emotions when they are expressed in class.
- Encourage students to keep a reflective journal to perceive and understand their emotions.

#### b. Self-management

- Modelling by lecturers: being an example and modelling EI behaviours. Examples of these include:
  - Show appreciation and recognition of their emotions and address them.
  - Share personal experiences and show your human side.
  - Being sensitivity to student diversity especially in front of other students.
  - Give a balanced feedback (strengths and weaknesses) after grading assignments/projects.
  - Teaching how to communicate effectively with others and listening skills.

#### c. Social awareness

- Teach students to be caring and have people skills.
- Incorporate listening skills and stress management activities.
- Work cooperatively with others.
- Teach student how to manage others in group settings.
- Assign projects that will elicit empathy from the students.
- Practice use of facial expression in determining others' emotions. This is more critical for those in education specialisation to apply in classroom setup.

#### d. Relationship management

- Incorporating problem and conflict solving skills that teaches them to handle emotions especially at group level. For example, if problems are experienced in group settings, students need to learn how to handle them. From experience, if one member does not participate in group effort for an assignment or project, other members only communicate to the concerned lecturer during submission and respond by excluding the student from their assignment/project. This is an opportunity to teach them conflict management and managing other people's emotions as they progress with the project/assignment. In their study,

Lindblom, Arrema, Bohm, and Hornell (2016), identified four group forms (integrated, expert, divided and parallel). It is important that in each form, the students are able to recognise, know, and manage their emotions that lead to any of the forms. For example, in the divided groupwork, students should address why the other student was left out and how they can all manage their feelings to include them.

- Learn to set personal goals and continuous self-evaluation as part of measuring their abilities (personal SWOT analysis) and developing resilience.
- Encourage interactive and cooperative learning in and outside class.
- Professionally and clearly express and manage their and others' emotions.
- Assign rotational leadership roles to inspire leadership and collaboration skills.

## Discussion

The paper explored and examined the importance of emotional intelligence in the FCS programme and ways in which it can be applied in formal and hidden curriculum. Recognising emotions and the ability to control emotions is of value to the profession of FCS in dealing with individual, family and community challenging social issues. The nature of FCS involves dealing with everyday issues as experienced by individuals and family, and emotional aspects that graduates may experience as they interact with them cannot be ignored. Successful implementation of FCS skills and knowledge require self-control, empathy, stress management, communication skills, conflict resolution skills and problem-solving skills. According to Goleman, these are skills that can be learned as they are important for academic and work success, hence the need to incorporate EI skills in FCS curriculum. The argument is that core curriculum content and knowledge is not enough for success in work and in life. The FCS curricular already incorporate problem-solving skills, communication skills and critical thinking skills (Mimbs, 2005) but their learning and application will be more fruitful and vital if the students first understand how their emotions are intertwined with them. They need to learn how to control their own and other's emotions they will experience when addressing family issues.

## Implications for researchers and future research

Studies on the application of EI in technical/practical subjects and interactive professions such as Family and Consumer Sciences should be done since they are few, yet the graduates require EI when dealing with individual and family issues. Future research may also look into the development of assessment or evaluation tools that can be utilised to ensure that the EI skills are learnt and understood by the students. The suggested applications in this paper can be tested for more refined approaches. Furthermore, future studies should focus more on hidden curriculum since emotions as an affective domain are best exhibited through informal interaction, not cognitively under formal instruction. Future research should focus more on understanding the importance of EI by conducting pre and post tests on FCS students and graduates. Benefits of using emotional intelligence for work and social gain for FCS professionals need to be explored.

## Implications for curriculum planners and implementers

Emotional intelligence should be integrated in the formal curriculum and enhanced properly in a warm conducive learning environment. Although the focus was on tertiary level, courses or subjects addressing EI should be compulsory from early childhood through out to tertiary education. Students should know the importance and impact of their emotions on their academic achievement, in the workplace and as they interact with other people in life. Educators should be trained and sensitised on the importance and need to incorporate and develop EI in educational programmes to help produce better products. There is need for curriculum planners to restructure and incorporate ways of enhancing EI in teacher education curriculum/programmes for the knowledge to be imparted to learners at all educational levels.

## Conclusion

The general consensus from previous research revealed that emotions play an essential role for one to be successful in life (academic, social, and work life). Both positive and negative emotions help mould personal awareness and of others. EI was found to predict academic success with formal curriculum being the favourable one at the expense of hidden curriculum, which is just as important for FCS professionals to successfully achieve their mission hence the need to include it. Understanding

the implications and outcomes of EI as potentially important to the process of FCS teaching and learning, and enhancing social skills for job competence is crucial to the successful implementation of FCS operations.

## Biographies

Lily C Fidzani is currently the Chair and Senior Lecturer at the Department of Family and Consumer Sciences, University of Botswana. Her research interests are in children's and adolescents' places, FCS education, human behaviour in different built (interior) environments, with a focus on the impact of housing and interior environments, personalisation, design and special populations, and design and human development.

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## Exploring an approach for teaching Home Economics Science students to envision the future

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### Abstract

*This paper explores a teaching approach designed to enhance students' ability to think creatively about possible future scenarios of individuals and families living in the year 2040 or later. The aim of the approach was to guide the students as they navigate through their professional lives as Home Economists. The Finnish and Ghanaian students were asked to write stories in response to these two questions: How do you as future Home Economics science student-teachers envision a future home? and What are the implications of these visions for future everyday life and education? Their stories were analysed through content and narrative analysis. The students envisioned that human interactions in everyday living are likely to diminish, leading to increased interest in communal living. New professional roles, potentially involving major occupational health- and technology-related specialisations, will be extremely viable.*

*Based on our experience, we think that educators should encourage students to engage in creative thinking. Various ways to ignite creative thinking, including films, science fiction, novels, visits, scientific future studies and joint discussions, ought to be regularly incorporated into the teaching and learning process. Curriculum designers should also be brave enough to include technology and natural sciences modules into Home Economics education programmes.*

**KEYWORDS:** ENVISIONING FUTURE, HIGHER EDUCATION

### Background

More than ten years ago, the Copenhagen Institute for Future Studies (Larsen, 2006) identified the following megatrends for the future: globalisation, increase in the presence of technology and digitalisation, local communities and networks, an ageing population, increase in ethical and ecological awareness, individualisation and lifestyle diversity. In 2012, Home Economists worldwide used these trends as a basis for reflection (Pendergast, McGregor, & Turkki, 2012). McGregor (2012) took a critical look at these megatrends by proposing possible countertrends, such as an inability to age, a redefining of prosperity, deceleration and ruralisation. By contrast, Pendergast (2012) summarised the megatrends as follows: popularity of the “less is more” ideology, a focus on individualisation, global mobility and the iWorld, referring to a situation where everything in the natural world has a digital counterpart.

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In 2015, the global megatrends were identified (Hajkowicz, 2015) through seven patterns of global change: resource scarcity, the challenges of protecting biodiversity and the global climate, the world's ageing demographic, digital technology transformation, rapid economic growth and urbanisation in the developing world, societal and consumer expectations of experiential goods and services, and finally, a world where human innovation makes just about anything possible. A year later in Finland, megatrends were defined as three intertwined themes: firstly, technology will change everything; secondly, global interconnectedness will be evident in all walks of daily life; and thirdly, there will be an imbalance between economic growth and excess resource use (Kiiski-Kataja, 2016).

The United Nations launched its *Global Sustainable Development Goals 2030* (UN, 2016) according to which 17 goals were designed to end all forms of poverty, fight inequality, tackle climate change and ensure that no one is left behind by the year 2030. The goals call for action by all countries—poor, rich and middle-income—to promote prosperity while protecting the planet. The United Nations has recognised that ending poverty requires strategies to build economic growth and address a range of social needs, including education, health, social protection and job opportunities, while also tackling climate change and environmental protection (UN, 2016). For the goals to be achieved, action at the global, national, community and family levels is needed. Twenty-first century skills, which refer to the key personal and academic skills and competences that are needed for the current and next generation, are summarised by Binkley et al. (2012). They look at knowledge, skills, attitudes, values, and ethics and come up with four groups:

- 1) *Ways of Thinking* encompass creativity and innovation, but also critical thinking, problem-solving, decision making and learning to learn;
- 2) *Ways of Working* comprise communication and collaboration skills;
- 3) *Tools for Working* are based on information and ICT literacy; and
- 4) *Living in the World* is composed of citizenship, life and career skills along with a focus on personal and social responsibility, including cultural awareness and competence (Binkley et al., 2012).

Based on promising feedback from teachers attending professional development training organised in foresight education, Goldbeck and Waters (2014) recommend introducing foresight education in school education for all students. Teachers with various specialisations and from various countries have commented on how enthusiastically students approach their futures studies, noting that they embrace the opportunity to create statements about their preferred futures (Goldbeck & Waters, 2014).

This article first looks at various future scenarios in Europe and development plans in Africa. Next, the teaching approach that was implemented is described. Lastly, we analyse the Home Economics science students' narrations as they envision their future professional lives as Home Economists.

### **Possible scenarios for sustainable lives**

A large European think tank called *Sustainable Lifestyles 2050—A Social Platform for Identifying Research and Policy Needs for Sustainable Lifestyles* (SPREAD) (Backhaus, Breukers, Paukovic, Mont, & Mourik, 2012) identified several possible scenarios for sustainable lifestyles. Their work, summarised as their future scenarios, presents a more concrete approach to the megatrends described in the previous section. The work defined two critical variables, and the assumptions were as follows: technology is either pandemic or endemic, and society's governing principle is either human-centric or meritocratic.

Pandemic technology would mean that most human tasks and needs require the use of one (or more) of a few dominant technologies. The technologies for construction, transportation, energy production and communication are similar and omnipresent. Considering these characteristics, today's technologies could be considered a pandemic. Virtually everyone is on Facebook, drives a car produced by one of a few global manufacturers and uses globally exchanged petrol or diesel fuel. By contrast, endemic technologies are tools, infrastructures and solutions that are born and grown locally. These technologies emerge out of local conditions, resources and peculiarities and are ruled by local living conditions. The corpus of global science and technology is wide, yet its applications

are highly local. The economy is driven by efficiency and innovations achieved by thinking and acting locally. (Backhaus et al., 2012)

A meritocratic society focuses on professional skills. The most commercially valuable professional skills are those that form the engine of the economy. Members of these professions are paid accordingly. Policies and structures are customised to facilitate the work of these leading industries and professions. The division of labour is at its extreme—people do only what they are very, very good at. In contrast, a human-centric society focuses on widening the use of human capital in all its forms. Both civic and public use of skills is valued. Everyone is believed to have some valuable contribution, and the success of society depends on everyone contributing and being good citizens, family members, neighbours and professionals. There is some division of labour, but self-improvement through leisure, such as through family time, active consumption, civic activities, handicraft and arts, is also highly appreciated. Based on these potential realities centred on pandemic/endemic technology and the human-centric/meritocratic societal principle, the think tank identified four possible future scenarios: *Singular Super Champions*, *Governing the Commons*, *Local Loops* and *Empathetic Communities*. (Backhaus et al., 2012)

In the *Singular Super Champions* scenario, Europe has entered a new type of sustainable, competitive and equitable economy—the result of numerous treaties, declarations and goals beginning in 2035. The change is achieved through radical reform of the conditions that have shaped European lifestyles in recent decades. It is a society that embraces learning, achieving and self-mastery. *Governing the Commons* is a scenario rooted primarily in a digital reality that helps people break free of many cultural constraints and, eventually, achieve sustainability. Widespread computing enables the smart use of resources and instantly redirects people's behaviours and attention away from material consumption and their physical surroundings to interactions in the digital sphere. People leave many of the institutions of the 20th century, engage in new forms of collaboration and set themselves free in order to live more meaningful lives. (Backhaus et al., 2012)

*Local Loops* is a scenario in which a fundamental energy crisis forces communities to re-evaluate the foundations of their wellbeing. Energy and resource systems are increasingly seen through *Local Loops*, a technical concept that refers to local and regional production cycles. People build their lifestyles and ways of belonging around their work, while technologies are better adapted through local design solutions that create room for new kinds of professionalism. *Empathetic Communities* is a scenario in which Western societies face a long-dreaded crisis and find eventually that the resulting change is easier than what had been expected. The global economy fails, and the nation-states lose their political decision-making power. New forms of collaboration and governance are built at the levels of cities and towns, making these the most powerful tiers of public decision-making. In *Empathetic Communities*, global culture and technological enhancements are widely used, but people focus primarily on communicating and developing local solutions. (Backhaus et al., 2012)

## Sustainable development from African perspective

Africa is a diverse continent that is currently in search of extensive and sustainable human development (Aryeetey, Devarajan, Kanbur, & Kasekende, 2012). It is experiencing major transitions that are rapidly restructuring its nature, and as Africa's population and economy have grown over the last decade, urbanisation has increased (Cilliers, Hughes, & Moyer, 2011). Although new technologies in telecommunication and agriculture, among others, are widespread, Africa still faces an uncertain future. Several concerns about Africa's future have been raised (Cilliers, Hughes, & Moyer, 2011), including the control of communicable diseases, the accessibility and affordability of education for all citizens, and the establishment of extensive infrastructure that the continent needs. Good quality of governance and ways for external actors, including both governments and firms, to approach and influence Africa's development are also being discussed (Cilliers et al., 2011).

The African Union launched an action plan called *Agenda 2063*. It describes how the continent should effectively learn from lessons of the past, build on the progress now underway and strategically exploit all possible opportunities available (African Union Commission, 2015). The ultimate goal is to secure three ideals—unity, prosperity, and peace—for all its citizens (DeGhetto, Gray, & Kiggundu, 2016). It aims to create a prosperous Africa that is based on inclusive growth and sustainable development. The integrated continent would be politically united based on the ideals of Pan-Africanism and the vision of Africa's renaissance. African good governance is based on democracy, respect for human rights, justice, and the rule of law. It will be a peaceful and secure continent with

a strong cultural identity, common heritage, values, and ethics. The development is people-driven, and it relies on the potential of African people, especially its women and youth, and caring for children. Africa will also be a strong, united, and influential global player and partner (African Union Commission, 2014). To put it simply (African Union Commission, 2014), the aim of *Agenda 2063* is to do things differently in Africa by having people at the centre, to do bigger things in terms of scaling and scoping up, and to do better things through better governance, performance outcomes, and impact on citizens.

The key drivers of change have been identified (MDGs to Agenda 2063/SDGs—Transition Report 2016, African Union Commission, 2016). These include globalisation and changes in the structure of global markets, with an expanding middle class and the markedly rising importance of developing countries in global trade; new technologies and innovation, especially in health, agriculture and energy; changes in the rules governing global trade and finance, including the role of aid. The key drivers in terms of the physical environment include climate change, land and water scarcity, and a pervasive infrastructure deficit, and those in terms of human resources include delayed demographic transition, the gender dividend, skill development, and the continued heavy burden of HIV. Moreover, private sector development and democratisation are likely to result in accelerated urbanisation, an increase in migration, and increased agricultural productivity, while the role of natural resources will remain prominent (MDGs to Agenda 2063/SDGs—Transition Report 2016).

The continent is striving to tackle its issues to ensure that the future is favourable for all forms of diversity. Each African country however, must resolve its own unique issues and challenges, which require solutions tailored to suit diverse contexts. In Ghana, the plans (NDPC, 2016) provide future directions regarding policy areas for the nation to guide successive national- and district-level governments to prepare for and implement annual plans and budgets. By their nature, these plans do not make explicit projections on the micro-level a matter of concern, for example, lifestyle trends or household level use of technology. These policy documents, however, provide a glimpse into the future of Ghana concerning areas such as population growth and gender or age trends, housing deficit, energy demand and supply, among others.

Beside developmental plans and policy documents for the future of Ghana, there have been efforts to engage the youth in future development through the *Future of Ghana Youth Leadership Forum* (Me Firi Ghana, 2015), an annual training, networking and design-thinking forum. The forum connects the next generation of young Ghanaian leaders with forward-thinking and experienced leaders and companies from around the world. It acts as a platform that provides practical advice, training, job search assistance, mentorship and funding. The *Future of Ghana Publication* (2017), released as one of the forum's products, is the beginning of what is hoped will serve as a catalyst to encourage greater youth participation in Ghana's development. The publication is also intended to be a source of inspiration for the emerging generation and as a talent resource for investors and organisations

## Teaching through the Guided Story Writing Method

The focus in this article is on helping future Home Economics leaders engage creatively as they envision their futures and their implications. The teaching approach developed here was inspired by several research data collection methods. Future studies have used research methods such as Delphi (Aichholzer, 2009) and participatory visioning in workshops (Davies, Doyle, & Pape, 2012) to envision futures. In the Delphi method, a set of experts from different fields is asked to envision probable solutions as a challenge. The experts read each other's responses anonymously and respond. After a set of such rounds, a common vision for the probable future is drawn. By contrast, in a participatory workshop, the experts work in a face-to-face setting. In another research method called the stimulated recall method (Dempsey, 2010), a certain stimulus, such as a text, a picture or an object, is used to evoke ideas and memories and facilitate thinking. In the empathy-based story method (Posti-Ahokas, 2013), respondents are given a short, imaginary story and asked to continue the story with the help of both positive and negative narration.

We call the teaching approach used here the *Guided Story Writing Approach*. In this method, both researchers first gave introductory lectures to first-year Home Economics science students about Home Economics as a field of study. Then, the students were shown a short video clip called *House of the Future* (1957). The video portrayed a Monsanto house of the future that had been an attraction at Disneyland, California, from 1957 to 1967. It was a tour of a home of the future, set in the year 1986. After the students had watched the video, they were asked to write projections for a minimum

of 20 years after the period shown in the video (that is, 2015). However, many of the students suggested that the year 2040 and beyond be used as the target for projection, so the year 2040 was utilised. After the video, the researchers gave a short introductory lecture on the megatrends projected by future studies (Larsen, 2006) and the *United Nations Sustainable Development Goals* (SDG, 2016) to inspire the students. The students were asked to make projections about five probable trends in 2040, keeping in mind their own roles as Home Economics professionals. They were asked two questions: *How do you, as future Home Economics science student-teachers, envision a future home?* and *What are the implications of these visions for future everyday life and education?* The responses in the form of stories were then written by 107 Ghanaian and 32 Finnish participants. The Ghanaian students worked in groups of seven and the Finnish students worked individually. In this way, the number of stories written in both countries was approximately the same.

The Finnish data included 30 stories as two of the authors did not grant the researchers permission to use their stories. Altogether, the corpus comprised 29,835 words and 80 pages, which means that each story was approximately 1000 words long. The Ghanaian data included 15 stories, with a minimum length of two pages and a maximum length of ten pages with attached pictures. The stories, both the individually written Finnish stories and the results of the Ghanaian co-writing, were first discussed and pre-analysed together with the students and then analysed by the authors. The idea was not to compare or differentiate between the stories according to their source country, as cross-cultural comparison was not the focus of the teaching approach. In fact, the aim was to try out as similar a teaching approach as possible with students from different cultural backgrounds who share the same professional approach. Data-driven content analyses (Atkins & Wallace, 2012) focusing on the themes *health, technology, security* and *ecology* that emerged from the stories were carried out. These themes are intertwined, but they were analysed separately. Through narrative analyses (Bruner, 1991; Burck, 2005), the themes were written in the form of narrations. The summary of the narrations is presented first, and then the theme narrations follow.

## Co-envisioning futures with students

Here is the summary of the narrations:

Home is a fully automated unit producing its own energy through solar, wind and muscle power. Food is cultivated in rooftop, pillar and community gardens, and insects farmed. Automated service systems take care of food and cleaning tasks. Food is tasty food cubes, and surfaces at home are made with self-cleaning materials. There is no waste, since everything is recycled. Water is reused several times and then purified. Homes are small, and there is no need to store items as shared ownership is a common practice. Entrance and interior space features like lighting, sounds, scents and moisture are adjusted through sensory and voice commands. Transportation is done through self-driven vehicles. Despite all these changes home is still a safe haven for humans to rest and charge their batteries!

### Importance of human wellbeing

Students envisioned the importance on human wellbeing. As a result of the rise in the incidence of diseases and new threats, homes now have cleansing stations that are typical of biomedical industries and nuclear plants. Programmable self-cleansing and disinfecting floors, bathrooms, toilets and bed linen are common. Water closets serve an additional function as test sites for stool and urine samples. Individuals and families can use body samples such as sweat, hair and urine to check and monitor their health in the morning. Daily food and exercise programmes are suggested based on the test results. During the course of the day, sensors embedded in clothing detect diseases based on sweat and body temperature measurements. In private spaces, such as the bedroom, bed linen can be adjusted according to feelings and emotions—on hot nights, the linen turns a cooling blue, while on cold nights, it changes to a warming red. The colour and pattern of wallpaper can be changed with the click of a switch. African homes are encapsulated in mosquito-free spaces. Most surfaces in homes worldwide are made of self-cleaning materials, which means that individuals and families do little to no direct cleaning.

### Artificial intelligence assistance in household activities

A major trend that is already affecting our way of life is *The Internet of Things*. The Internet of Things is envisaged to lead to smart household management. Future homes are equipped with programmable smart cooking, grocery shopping and dining applications that keep track of dietary reference intake tables, the nutritional value of foods, recipes, and menus. These technologies combine and simplify the act and art of cooking, menu planning and dieting in the daily lives of

individuals and families. Most homes use refrigerators that can auto-order groceries. Food is prepared and eaten together and the dining area is connected to social media devices. Artificial intelligence is everywhere. When, for instance, a coffee-making machine is bought, a firewall to protect it from viruses needs to be purchased as well.

There are essentially no household chores as we know them. Various household appliances are merged into service systems. Smart laundry and wardrobe management applications are available. Individuals have closets that are designed to wash, iron, fold and hang clothing, as well as save and suggest clothing matches. The closet system comprises four chambers. The first chamber is the rinse, wash, rinse and spin chamber. This first chamber follows the traditional operation pattern of existing washing machines, except that at the end of the cleaning cycle, the chamber opens up and transports the clothing to the next chamber via built-in rollers. No one has to bring clothes out to dry, iron, fold or hang. The second chamber is the drying chamber, and the third is the ironing chamber. The final chamber is the folding or hanging chamber. Here, clothes are set to either fold or hang in their respective sections in the closet. The system may be pre-set to fold according to colour, size or clothing type. This closet is able to keep records of all clothes within it, while also saving clothing matches or pairs that have been programmed into the system for specific occasions. Once the programming is done, an individual can key into the closet software a function, colour scheme, theme or any other criteria he or she has programmed the system to process and, in return, receive suggestions for clothing options that are either entirely new or drawn from the individual's past matches. Closets automatically open when they sense hand or feet movement, and racks and shoe racks automatically emerge to grab and hang jackets and clean and polish shoes.

The envisioned future homes are small, so walls can be easily moved and spaces can be rearranged. Windows have various settings such as daylight, dusk and complete darkness. Beds, tables and sofas flip over to serve multi-functional purposes. The characteristics of the interior space such as lighting, sounds, scents, and moisture can be adjusted through voice commands. Drones deliver goods, and virtual entertainment is the order of the day. People simply put on 3D hoods or helmets to enter the virtual entertainment space. Cities are built tight, and cars are self-driven through voice commands.

Convenience technology is envisaged to be on the rise, such that massage and rocking chairs are standard domestic furniture and robots are the smart solution to assist with manual labour tasks. For instance, homes are cleaned when they are left empty, and robots vacuum, clean the air and pick things up and put them in their right places. The usefulness of robots goes beyond psychomotor limits to include the provision of services requiring the affective and cognitive domains; in other words, there are *keep-me-company robots* and robots that act as "friends". Home access control systems are linked to central databases to detect potential criminals and record the criminal activities of first-time offenders. That is, if someone shows up at your door with a past criminal record, this will be detected. There will be no need for keys or door handles, as access will be granted through fingerprint sensors and facial recognition.

### Homes as ecological units

The homes of the future mostly produce their own food. With the help of artificial intelligence, pots are watered and fertilised automatically. Home-grown foods include mainly vegetables and edible insects. Homes also produce most of their energy from renewable sources. There is practically no waste, since all waste is recycled and reused. Advanced recycling methods eliminate paper from schools and offices. The home produces its energy from its waste, including solar panels and gym equipment. When left empty, homes go into an offline mode. There are no electricity bills because it is unnecessary to buy a resource that homes produce in surplus. Electric cars are charged in the garage.

Water is re-used several times, since homes are equipped with efficient cleaning and purifying systems. Shower water is cleaned and recycled. The toilet uses recycled water, not drinking water, to flush. Shared ownership is widely practiced. There is no storage of unnecessary things; rather, people share and use common items, engage in efficient borrowing and lending systems, and form *communities of sharing*. Individual ownership is no longer valued. At all times, people carry personal ecological footprint devices, which measure their carbon dioxide emission in real time.

### Constraints of the projections

To actualise these projections, several constraints must be managed. The primary implied constraint is energy. Scarce energy supplies may limit the development of convenient technologies. To address this potential limitation, countries should plan for inevitable growth in reliance on energy for virtually every activity. Furthermore, privacy and civil rights may need to be redefined or reviewed, since these considerations may limit the availability of criminal records needed for private home security systems. Finally, since technologies are often limited by size and/or economic considerations, it is vital to ensure that new technologies are small, inexpensive and powerful enough to execute complex processes.

### Analysis of the teaching experiment

The introductory lecture and the video acted as stimuli for the students' creative thinking and writing process. The danger here is that these teaching tools may guide or restrict the students' thinking too much. Nonetheless, guiding students to think in various ways, for example, imagining an optimistic future scenario or pessimistic future scenario, as done in empathy-based stories (Posti-Ahokas, 2013), aims to create richer variations of probable futures. It is very difficult for people to imagine things that they have never seen, thought or read about. Prior to their university education, some of the participants had not travelled outside of their region of residence. Furthermore, some of the Ghanaian students had never had any experience with the Internet due to its cost and limited availability in their localities. These characteristics were evident during the analysis of these students' stories, as some students described possible futures that, in fact, already exist. In this sense, the purpose of the introductory lecture and video—that is, to serve as springboards for students' creative endeavours—perhaps justifies their inclusion.

The use of policy documents has its limitations in this teaching approach. For example, one of the predecessors of a current development plan of Ghana was the *Vision 2020* (NDPC, 1994). Within this document, the effect of technology on activities such as money transfer and wireless communication is not mentioned (NDPC, 1994). However, there have been significant developments that have affected communication and banking trends, which have challenged the status quo of these industries. For example, the CEO and co-founder of WhatsApp, Jan Koum, noted a trend in Ghana where WhatsApp messenger was being used as a platform for discussions between students and lecturers (Citifmonline, 2014). This is something that he acknowledges that he and his co-founder never envisaged when they developed the application (Citifmonline, 2014). A banking survey (PWC, 2016) also shows the significant growth in mobile money transfer operations in 2016. As noted, all these were not projected by *Vision 2020*.

Help from innovative artists and designers could be useful when envisioning futures. In the *Venice Biennale for Architecture* (Self, Bose, & Williams, 2016), the British Pavilion called *Home Economics* took a stance on the current British housing crisis and envisioned future living. The Pavilion includes a communal living room, where, in the interest of saving time and space, flat dwellers share as much as possible: tools, vacuum cleaners, and even clothes, which are kept in a transparent communal wardrobe. The goal is to make sharing a luxury, not a compromise. The rooms have qualities rather than designated functions such as bedroom, bathroom and kitchen, but are, to varying degrees, able to change the lightness, openness, privacy and the feeling of the space (Self, Bose, & Williams, 2016). The notion is that spaces can adapt to people's changing needs and desires over the course of their lifetimes. Together with journalists from *The Guardian* (Michael, 2016), the curators of the exhibition illustrated six examples of new living ideas that are already practiced in the real world, portraying different forms of shared housing and alternative ways of owning a house. This could be a stimulus to inspire students' visions for the future.

One option worth exploring is digital storytelling (Fletcher & Cambre, 2009). Even in the stories in this experiment, the Ghanaian students added pictures. The practice of digital storytelling began among visual artists, designers, performers and videographers in California in the early 1990s (Lambert & Mullen, 2000). Digital stories build on the intersubjective process of collective meaning-making. Fletcher and Cambre (2009) have used digital storytelling in visual anthropology university classrooms. They noted the power of this method to engage both teller and listener in the same story space, to illuminate social complexity and to engage students in an unusually intense learning experience. Digital storytelling rejects the artificial constructs of the academic and "real" worlds as

separate entities. Instead, it situates the intellectual as a social actor within the social system he or she is attempting to describe.

However, an issue with this experimental teaching approach relates to course evaluation. Since guided story writing involves no right or wrong answers, the students' assessment criteria need to be changed. The new assessment criteria should focus on the process of exploring a topic rather than the answers or end results of the thought process, since with a guided story writing approach, "answers" may vary according to the participants' exposure to the story topic. Thus, teaching creatively may entail reducing the emphasis on scoring answers and increasing the emphasis on the approaches taken to produce these answers. However, this does not expunge absolute principles or laws, including, particularly, scientific laws. Hence, when using creative teaching approaches, caution must be taken to ensure that the teaching is contextualised and not in violation of absolute laws or principles, and mediation is essential.

## Conclusion

To conclude, we project through students' narrations that human interactions in everyday living are likely to diminish, leading to increased interest in communal living (Backhaus et al., 2012). By 2040, communities and neighbourhoods play an important role. In addition, new professional roles with major occupational health- and technology-related specialisations will become extremely viable. Home Economists may take on roles as household inspectors or supervisors responsible for checking, monitoring and advising overall recycling practices, energy solutions, food preparation processes and water and wardrobe management. A new ethos of craftsmanship and professional communities shapes the ways in which people live, organise their work and spend their leisure time. New versions of extension services are also likely to emerge. Cleantech and upcycling businesses flourish as sustainability becomes the business opportunity of the century. Widespread computing enables the smart use of resources and instantly redirects people's behaviours and attention away from material consumption and their physical surroundings to interactions in the digital sphere.

Reviewing our teaching approach, we maintain that educators need to encourage students to engage in creative thinking. Various methods to ignite creative thinking, such as films, science fiction, art, novels, scientific future studies and joint discussions, must be incorporated into the teaching and learning process. Moreover, curriculum designers must be brave and creative enough to incorporate technology and natural sciences modules into Home Economics education programmes.

Interestingly, we found that though students are able to envisage future scenarios (Goldbeck & Waters, 2014), they need to be encouraged to do so. The teaching approach used here has the ability to enhance students' creative thinking skills. Students should, thus, be encouraged from the beginning of their studies to not take educational knowledge as a given, but to understand their roles as future field developers. In other words, students need to take on an active role in thinking about, criticising and creating useful knowledge (Binkley et al., 2012) for themselves and for the future of Home Economics. Students also ought to be actively encouraged to write their own future profession profiles and not wait for others to do this for them.

Based on the projections of students from both countries, it appears that although the students' cultural contexts differed, they shared similar hopes, wishes and fears regarding family life and their roles as Home Economists in ensuring sustainable living in the future. According to their stories, even after 2040, the home will still provide shelter, a sense of belonging and communality, a space for rituals and common practices, privacy and uniqueness.

## Biographies

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## A framework for project-based learning in Consumer Studies teacher preparation

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### Abstract

*Consumer Studies is a South African high school subject selected by a growing number of learners, requiring that more teachers need to be trained to facilitate the subject in schools. Teacher preparation is based on a Consumer Sciences degree, followed by a one-year Post-Graduate Certificate of Education (PGCE). Student-teachers have to be prepared with the pedagogical and subject knowledge required for teaching a complex subject, as well as the skills required of teachers for the challenges and needs of a changing society, within the limited time available. A suitable teaching/learning strategy that actively involves students in their learning needs to be utilised to achieve this extensive goal. As part of a qualitative case study, the Consumer Studies teacher preparation module at one South African university was therefore restructured to utilise project-based learning as primary teaching/learning strategy. The structuring and implementation of project-based learning in the module was refined over a four-year period. Subsequently, a framework for the planning and preferred structuring of project-based learning in the preparation of Consumer Studies student-teachers was developed. The framework provides uncomplicated, scaffolded guidance for planning and implementing project-based learning. It can be used in teacher preparation modules, as well as in Consumer Studies classrooms.*

**KEYWORDS:** CONSUMER STUDIES, PEDAGOGY, PROJECT-BASED LEARNING, TEACHER PREPARATION

### Background

Consumer Studies is an elective subject offered in the final three years of the South African high school curriculum. Although Consumer Studies share some content with international subjects such as Home Economics, the focus in Consumer Studies is on helping learners to develop into responsible consumers and entrepreneurs, who are able to make informed decisions both inside and outside the home (Umalusi, 2014). The number of learners selecting the subject has been increasing since its introduction in 2011 (Department of Basic Education [DBE], 2015), requiring that more teachers need to be prepared as subject specialists in Consumer Studies.

Teaching Consumer Studies is challenging, as it covers an expansive selection of knowledge content in considerable depth (Umalusi, 2014) and teachers have to keep up-to-date and include the latest changes in content, such as when South African consumer laws are amended (DBE, 2011). The content knowledge is offered in combination with one of five practical skills development options, specifically Food Production, Clothing Production, Soft Furnishings Production, Knitting and Crocheting, and Patchwork quilting by hand (DBE, 2011). Consumer Studies student-teachers therefore need to be

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prepared to teach subject-specific content knowledge as well as have practical expertise of all five practical options available at various schools. In addition, student-teachers need to be informed regarding subject-suitable pedagogy (Du Toit, 2014b) and be able to function effectively in a fast-changing world, especially considering transformations in technology and societal structure (Hodelin, 2008). The same trends influencing social change in the United States of America noted by Baugher et al. (2000), and referenced by Nickols and Collier (2015), are noticeable in South Africa. These trends include the acquiring and appropriate use of technology, changes in patterns of work, profound changes in family structure, as well as increased diversity in population composition and culture, and are only some of the challenges that teachers in the field of Consumer Studies will face in a modern world (Janhonen-Abuquah, Posti-Ahokas, Palojoki, & Lehtomäki, 2014; Nickols & Collier, 2015). Consumer Studies student-teachers need to be prepared with skills, such as lifelong self-directed learning, communication, collaboration, problem-solving, critical thinking and planning skills, which will help them to deal with these changes.

### Consumer Studies teacher preparation in the PGCE

In South Africa, Consumer Studies teacher preparation is typically structured in the form of a Consumer Sciences or similar bachelor's degree, followed by a Post-Graduate Certificate of Education (PGCE). The structuring of such teacher preparation is based on the expectation that subject content knowledge and practical skills are developed during students' undergraduate studies and that the PGCE focuses on providing pedagogical guidance for the teaching of Consumer Studies as a subject in the South African high school curriculum. The PGCE qualification for Consumer Studies teachers includes only a single semester module, including about eleven weeks of teaching time, that exclusively focuses on Consumer Studies, necessitating that this limited time be optimally utilised to develop subject-suitable pedagogy that include skills in preparation for the challenges they would face when teaching Consumer Studies in the 21st century. According to Smith and De Zwart (2016), the goals of teacher preparation include the developing and expanding of knowledge and skills, as well as instructional and pedagogical strategies.

Guidance available for the preferred pedagogy to be used in South African Consumer Studies teacher preparation is inadequate (Du Toit, 2014b; Du Toit & Booyse, 2015) and is still being developed. Principles underpinning Consumer Studies education, preferred teaching/learning strategies utilised in Consumer Studies education, as well as the 21st century skills which teachers need to function optimally in this age, identified in one of the few studies of its kind in South Africa (Du Toit, 2014a), were used to develop the outcomes of the teacher preparation module at the centre of this investigation. The underpinning principles for Consumer Studies education in South Africa is informed by the subject's core concepts of *the consumer* and *entrepreneurship through small scale product development* (Du Toit, 2014b; Umalusi, 2014), as well as the principles of *encouraging an active and critical approach to learning, rather than rote and uncritical learning of given truths* and developing "high knowledge and high skills [sic]", as stated in the South African National Curriculum Statements (DBE, 2011). The shift toward active and critical, problem-centred learning rather than lecture-based learning is a global occurrence (Roessingh & Chambers, 2011). In addition, Consumer Studies education should be learner-centred, life-relevant and transferable to novel contexts (Du Toit, 2014a), which is also true for the preparation of teachers in the subject.

The 21st century skills that were determined to be required of Consumer Studies teachers, and that have to be explicitly developed as part of their teacher preparation module include problem-solving, planning skills, time-management, collaboration, critical thinking skills and assessment skills (Du Toit, 2014a). These 21st century skills, together with the principles underpinning Consumer Studies education and the preferred teaching/learning strategies associated with the subject, were used to develop the outcomes for the Consumer Studies teacher preparation module at the university where the study was conducted. A suitable teaching/learning strategy that could support and foster the module outcomes had to be selected and implemented for the Consumer Studies teacher preparation module.

Project-based learning has been utilised successfully as preferred teaching/learning strategy in preparation modules for teachers in other school subjects, such as Geography (Golightly & Guglielmino, 2015), Mathematics, and Science (Marshall, Petrosino, & Martin, 2010), however, research on the utilisation of PBL in the preparation of Consumer Studies teachers is scarce. Smith and De Zwart (2016) noted that students would benefit from having scaffolds to guide them in the learning process. The implementation of the PBL teaching/learning strategy therefore had to be

carefully planned and scaffolded to ensure that the outcomes set for the preparation of these Consumer Studies pre-service teachers were met.

### Project-based learning

Project-based learning (PBL) is “an innovative approach to learning that teaches a multitude of strategies critical for success in the twenty-first century” (Bell, 2010, p.29) in which learning content is intentionally combined with particular skills and values as part of a planned and scaffolded process to solve a life-relevant problem (Du Toit, Havenga, & Van der Walt, 2016; Habók & Nagy, 2016). The problem is used as a starting point around which the teaching and learning of knowledge and skills development is planned and constructed. Students usually present their findings, including the process and solution(s) to the problem, as well as a product (a physical item or plan as part of the solution) to a selected audience consisting of peers or members of a target group. Although project-based learning shares similar elements with problem-based learning, and both are referred to using the acronym PBL, the distinguishing feature of project-based learning is the construction of a product at the culmination of the project (Helle, Tynjälä, & Olkinuora, 2006).

In PBL the students fulfil an active and participatory role in their own learning process, and the lecturer facilitates and guides this learning process, rather than being the *giver of knowledge* (Bell, 2010). Lecturers (or teachers) fulfil the roles of facilitator and mentor in PBL (Guglielmino, 2008) to support the development of students’ thinking skills and provide scaffolding for students’ metacognitive processes (Hmelo-Silver, 2004). Facilitators also act as motivators to foster the learning process in PBL (Habók & Nagy, 2016). Students play a prominent role in their own learning in PBL, becoming *creators of knowledge*, as part of a self-directed learning process, which is guided by the facilitator (lecturer) (Guglielmino, 2008).

Utilising PBL as main teaching/learning strategy holds several advantages for students, including that real-life problems (that are sometimes related to global issues) are addressed (Bell, 2010; Swafford & Dainty, 2010), students learn to value the opinions of others through collaborative work (Mitchell, Foulger, Wetzell, & Rathkey, 2009), and important 21st century skills are developed, such as communication skills, planning skills, higher-order thinking, critical thinking and lifelong learning (Bell, 2010; Buck Institute for Education, 2012; Roessingh & Chambers, 2011). Project-based learning has been found to increase learner motivation, including that of differently-abled learners (Habók & Nagy, 2016). Bradley-Levine et al. (2010) additionally found that students in classes that used PBL were better at transferring knowledge and applying it to different situations, than students who were not in classes using PBL.

Despite these advantages, literature indicates that there are also some challenges related to PBL, which can be avoided if PBL is planned and scaffolded appropriately. These challenges include that facilitators need training to enable them to facilitate PBL effectively (David, 2008), that facilitators and learners need to adjust to the different teaching approach and manner of assessment associated with PBL (Barron et al., 1998) and that learners might need additional guidance in the development of skills like critical thinking (Mergendoller, Markham, Ravitz, & Larmer, 2006), which facilitators have to take into account when planning PBL.

Project-based learning should therefore be structured or scaffolded to gain the most benefits from the strategy, while also aiming to address or avoid the challenges that others have experienced with it.

### Research aim, questions and purpose

The aim of this research was to investigate how project-based learning can be structured and implemented to contribute positively to the development of Consumer Studies pre-service teacher preparation. The following two questions guided the research:

1. How should project-based learning be structured as part of a Consumer Studies teacher preparation module?
2. How does the implementation of project-based learning contribute positively to the development of Consumer Studies pre-service teacher preparation?

The purpose of this paper is to report on the resultant framework that was developed for the planning and preferred structuring of project-based learning in the preparation of Consumer Studies student-teachers, as well as how the students in the module perceived the process.

## Research design

A qualitative case study, underpinned by a constructivist worldview, was used. The construction of the learning process as part of a planned PBL strategy was the main consideration of the study being reported on. Understanding how knowledge and learning is constructed as part of a particular teaching/learning strategy, and the contribution of each part of the process to the whole learning experience of students, were key in the research. The case was bound by Consumer Studies subject specialisation, and limited to the Consumer Studies teacher preparation module as part of a PGCE qualification at one South African university. All students for the module in 2013, 2014, 2015 and 2016 were invited to participate in the study. The students were all female, between the ages of 22 and 26, and had each completed a prior degree that was aligned with Consumer Studies content. Appropriate permissions and ethical approval was obtained from the relevant Ethical Committee for conducting the research, and informed consent was obtained from participants.

To address the first research question, the study commenced with a broad literature review to analyse and compare designs for the structuring and implementation of PBL being utilised in other subject fields. Qualitative analysis of the PBL designs found in literature, in combination with the requirements for Consumer Studies teacher preparation, were used to identify and develop several sequenced steps. These steps were used to construct an initial framework for the scaffolding of PBL as main teaching/learning strategy in the Consumer Studies teacher preparation module. The Consumer Studies teacher preparation module content was restructured to align with the PBL framework and was implemented in 2013. The restructuring involved apportioning more responsibility to the students for their own learning, which required the lecturer to carefully scaffold the module content to support students in attaining its outcomes. The lecturer also had to consider and apply the requirements of PBL, such as developing a problem that would guide the learning, determining what type of product would be acceptable to address the problem, as well as how the whole PBL process would be assessed formally, without compromising the students' learning of the original module content. As part of the PBL process, specific tasks were set for students to complete individually and in a group. Using feedback from the students in the module, the steps and resulting framework for PBL in Consumer Studies teacher education was refined over the subsequent four years.

To address the second research question, how the implementation of project-based learning could contribute positively to the development of Consumer Studies pre-service teacher preparation, all students in the module for 2013, 2014, 2015, and 2016, were invited to participate. Data was collected about students' experiences and thoughts regarding PBL as teaching/learning strategy using a variety of strategies, including focus group sessions, individual interviews, and the completion of documentation, such as weekly project sheets, student reflections, and weekly journals. Focus group sessions and interviews were planned around semi-structured questions aligned with the requirements of PBL and Consumer Studies education, and was recorded digitally and transcribed verbatim. The analysis of all these data sources was supported by the utilisation of Atlas.ti software which, according to Friese (2012), saves time and contributes to the validity of the findings.

## Findings and discussion

From the literature, six existing PBL designs, each comprising of a number of detailed steps, design principles, elements or processes, were selected, analysed and compared for similarities and differences. These six designs contain detailed descriptions regarding the structuring of PBL and were analysed: Barron et al. (1998); Begay, Bender, Stemkoski, Raines, and Walker (2006); Grant (2002); Mergendoller et al. (2006); Roessingh and Chambers (2011); and Stix and Hrbek (2006) (Table 1). From these an initial framework was developed for PBL in Consumer Studies teacher preparation in 2013. The initial framework was adapted and improved in subsequent years based on the students' feedback regarding their learning in the module, as well as the experiences of the students and lecturer of PBL as a teaching/learning strategy.

The findings are discussed in two sections, aligned with the research questions. In the discussion of the findings, the lecturer of the module is referred to as the facilitator. Comments from participants

that were made in the Afrikaans language, were translated verbatim and used as quotes to support the findings.

**Table 1** Overview of steps or elements in existing PBL strategies

	Barron et al. (1998)	Begay et al. (2006)	Grant (2002)	Mergendoller et al. (2006)	Roessingh & Chambers (2011)	Stix & Hrbek (2006)
1	Setting learning goals	Outlining purpose and objectives	Introduction to "set the stage"	Launch project, orientate learners, clarify details		Setting the stage using real-life examples
2	Scaffolding to support teaching and learning	Focussed research, develop a plan for carrying out the project	Challenging task guiding problem; collaborative groupwork	Guided instruction, merged with the project process. Facilitate resource usage, define and manage progress, scaffold work	A central problem is a catalyst for learning	Design project
			Guidance and scaffolding is provided to support learners		Explicit teaching and learning objectives	Discuss and gather back-ground information
					Mediate and integrate instruction	Resolve evaluation criteria
3	Participative behaviour	Problem-solving and collaborative work	Identifying and using resources Process to solve problem, include critical thinking and higher-order thinking skills	Project conclusion: presentation of the project and summative assessment; learners reflect on the process and learning which took place	Promote critical reflection and higher-order thinking skills	Constructing projects Preparing project presentations
4	Self-assessment, reflection, revision	Artefact produced. Reflect on and evaluate work	Reflection on what was learned		Continuous assessment and monitoring of learning	Presenting projects Reflect on process, evaluate projects
5		Connecting learning to real-life situations. Critical and creative thinking skills applied			Learning tasks are authentic and engaging	

### Planning and structuring of project-based learning

The preferred framework for the planning and scaffolding of PBL in Consumer Studies teacher preparation that emerged and was refined from the research is shown in Figure 1. To effectively structure PBL, a great deal of planning should precede the implementation thereof, to ensure all the requirements of PBL are adhered to, and to gain the most benefits from PBL as teaching/learning strategy. Habók and Nagy (2016) affirm the importance of careful planning for effective PBL, stating that it is time-consuming and requires great attention to detail. During the planning phase, the facilitator determines the depth and breadth (scope) of the PBL project, which is informed by the amount of time available, the depth and breadth of knowledge and skills to be developed, and the weighting of the project as part of formal assessment. The facilitator formulates or selects a real-life problem that will guide and orientate the PBL project and outlines the specific subject knowledge and skills, as well as the particular 21st century skills that should be developed as part of students' learning. Other administrative and organisational planning at this stage includes planning how and when assessment will be included as part of PBL, as well as determining which resources will be made available to students. After the planning phase, PBL is scaffolded in four consecutive phases: introduction, structuring, designing, and presenting the product (Figure 1).

The first two phases are organised and guided to a large extent by the facilitator, with some input from the students. Involving both the facilitator and the students in the planning process contributes to the success of PBL (Habók & Nagy, 2016). Students gradually become more self-directed and

independent in subsequent phases, working almost autonomously in phases three and four of the PBL project.

Each phase is followed by purposeful formative assessment in which the facilitator’s feedback is given to support students’ learning (Figure 1). Such continuous assessment were noted as one of the guiding principles used by Roessingh and Chambers (2011) in their development of PBL instruction strategies for teachers. Feedback from the facilitator support students’ learning (Mc Sweeney & Gardner, 2014; Roessingh & Chambers, 2011). Students also give feedback and reflect on their own learning and the learning process in a structured manner, which the facilitator can use to adapt the PBL strategy if necessary, as was done in this study. Formative assessment and feedback increases students’ involvement in their own learning, as well as their achievement (Mc Sweeney & Gardner, 2014). Smith and De Zwart (2016) mention that the development of critical reflection skills is an important part of teacher preparation in the field of Consumer Studies. In the current study, concise analytical rubrics, checklists and carefully planned reflection forms (to support metacognition) were found to be useful in this regard.

In **Phase One**, the PBL project is introduced to the students, using a real-life problem which students can relate to. The problem guides the learning in the project and is meant to trigger students’ interest and support their understanding of the importance of the learning that is included in the PBL process.



Figure 1 The preferred scaffolding of PBL in Consumer Studies teacher preparation

Slightly different problems were used in each year, but all related to challenges experienced in the teaching and/or learning of Consumer Studies as part of the South African school curriculum. The facilitator clarifies the aims and objectives of the PBL project for the students in this phase. These

should relate to content knowledge and skills, as well as anticipated 21st century skills development. Clarifying such objectives will help students to understand that the learning encompasses more than 'mere content', and that it is structured and purposeful. Such an introduction should support students in setting their own learning goals in relation to the PBL aims and objectives, which in turn contributes to self-directed learning. One participant stated that "I set challenges to myself, which motivated me to achieve them." Smith and De Zwart (2016) refer to bringing the student into the process of inquiry—a phenomenon becoming more and more apparent in current teaching/learning strategies. Another of the students noted "I absolutely applied self-directed learning. Our lecturer provided guidance, but I decided myself what I would use for my project and what not, and I determined what I learned from this..."

In **Phase Two**, the project is scaffolded or constructed in a meaningful way, incorporating input from the students. The different aspects of the anticipated learning embedded in the PBL project, in combination with aspects such as timetabling, the students' formal assessment schedule and public or university holidays, are considered and discussed to develop a suitable schedule for the completion of all phases of the project. At least some (if not all) of the learning in PBL should take place in collaborative groups (Habók & Nagy, 2016), and the planning of groups take place during this phase, when students have a better understanding of the anticipated learning as part of the project. It was found that the collaboration is noticeably more functional if students choose their own team members for groups than if the facilitator handles this aspect. Each year, the students in the module were divided into small groups of four to six students, which worked best in our study.

In **Phase Three**, students identify and select resources (in addition to those made available by the facilitator), which they will utilise in developing a solution for the PBL problem. They design and develop potential solutions (typically in the form of a product or service) for the problem that was stated at the start of the project. The learning of content knowledge and skills, as well as 21st century skills, are planned and embedded in the analysis of the problem and the designing of potential solutions. At this stage, the guidance of the facilitator is imperative to support students in the development of critical and creative thinking, problem-solving and other skills, such as effective teamwork and communication. Carefully structured learning tasks contributes to facilitating increasingly higher cognitive demands (Roessingh & Chambers, 2011).

In **Phase Four**, students finalise their product and formally present the product, as well as the PBL process they followed to arrive at their final product. The product is supposed to provide a solution to or address the initial problem that was set to guide the learning in the PBL project. Students assess themselves regarding their learning process, as well as the potential of their product to effectively address the problem. Habók and Nagy (2016) stresses the value of self-evaluation as part of PBL and as an *essential skill in the 21st century*, which sustains its inclusion in the PBL framework developed in this study. In addition, peer assessment is utilised to give feedback on presentations, products and possible alternative solutions. This is in line with suggestions by Habók and Nagy (2016) that peer assessment contributes to the effectiveness of PBL, as peer pressure is so important in young people's lives. In addition, Roessingh and Chambers (2011) found that peer assessment contributes to deep learning, which is essential in teacher preparation.

Formal summative assessment follows this phase, usually consisting of a comprehensive analytical rubric that includes the aims and objectives set for the project, with various levels of attainment indicated. As recommended by Roessingh and Chambers (2011), all assessment rubrics were made available to students at the start of the PBL.

### **The positive contribution of PBL to the development of Consumer Studies pre-service teachers**

The reflections of students over the past four years, in the form of written text, completed documentation, as well as verbal comments, have shown that they enjoy PBL because it is well-structured, life-relevant and have clear and attainable aims and objectives. Students enjoyed feeling "more in control of their own learning" and felt "empowered" by the knowledge that 21st century skills, which would be useful to them in many other aspects of their lives, were explicitly being developed in the PBL project. One of the students said "As a student that have just finished my PBL project, I cannot begin to describe how much I learned during this process. I am not only talking about the knowledge that I have gained, but also the skills that I developed." Habók and Nagy (2016) reported similar positive outcomes and that teachers in practice often prefer PBL as teaching/learning strategy. In line with their findings, over the years as part of submitted reflections,

interviews and completed documents, several students in this study commented that they would “remember the content knowledge and skills better” (than they would have with other teaching/learning strategies, such as lecturing), and were of the opinion that they “would be able to implement [such] knowledge and skills more effectively in [their] own classes one day” (when they became Consumer Studies teachers in schools). These findings also relate to the finding of Mc Sweeney and Gardner (2014) that one of the aims of Home Economics education (closely related to Consumer Studies) is that students will take ownership of their learning and will retain that learning for life. All these feedback comments, but especially the last one, supports the suitability of PBL as an effective teaching/learning strategy for the preparation of Consumer Studies student-teachers for the profession.

## Conclusion

Project-based learning is well-suited as main teaching/learning strategy for the preparation of Consumer Studies student-teachers. Students enjoy PBL and find the benefits thereof useful for their own personal development, as well as for the application possibilities thereof in their future careers as teachers. The active, learner-centred approach aligns suitably with the requirements set out for Consumer Studies education, fosters the development of desirable 21st century skills which student-teachers will need to function optimally, and involves students deeply in their own learning process. Meticulous planning of PBL prior to its implementation, and phasing the PBL process in a structured manner, supports its effectiveness as a teaching/learning strategy. Formative feedback from both the facilitator to students, and from students to the facilitator, together with continuous assessment, augments the strategy.

Although there are a number of suggested structures for PBL, this framework, developed from the literature and augmented with feedback from the students and facilitator in the study, has suited the Consumer Studies teacher preparation module the best over the past few years and we will continue to use it as main teaching/learning strategy. The planned and structured guidance that allows for learning of knowledge and skills required of Consumer Studies teachers, together with the perceived value the process contributes to these pre-service teachers’ preparation for the profession, supports this conclusion. Further opportunities exist for research in this field, including on-going research focussing on the use of technology to support teaching and learning in the PBL strategy as part of Consumer Studies teacher preparation.

## Biography

Adri Du Toit is a lecturer at the Potchefstroom Campus of the North-West University in South Africa. She specialises in preparing students as Consumer Studies and Technology teachers. Her research interests include curriculum development and analyses, pedagogy and entrepreneurship education. Adri has been involved in the education of Consumer Studies and closely related subjects in this field in both South Africa and the United Kingdom. She is currently heading a multi-national project for the benchmarking of the Consumer Studies curricula of South Africa, Botswana, Lesotho and Swaziland.

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INTERNATIONAL FEDERATION  
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## Health Promotion and Home Economics belong together—progress towards extended curricula in teacher education

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### Abstract

*The role of the school subject Home Economics has always been broad, from teaching pupils how to cook to preparing them as independent consumers in society. Food is central to the subject, as well as its associations with the environment and culture, and not least health.*

*The aim is to describe the rationale for extending the education of Home Economics teachers in Iceland towards health promotion. Clarifying the feasibility and interest of moving the subject towards a more holistic view of the subject as an integral part of health promotion in schools is considered.*

*We base our framework on findings from three components described that each have been a step in the progress towards extended curricula: a modified Delphi study for defining competencies related to health promotion, faculty division work, and pilot interviews with Home Economics teachers.*

*Home Economics and Health Promotion have much in common and there is interest in adding health promotion to teachers' education. The current Educational Act and the value that has been set on health promotion in schools in Iceland further sets the venue for making this extension to the Home Economics teachers' education enabling them to become a driving force to work with health promotion in schools.*

**KEYWORDS:** HOME ECONOMICS, HEALTH PROMOTION, CURRICULA, COMPULSORY SCHOOL, TEACHER EDUCATION.

### Introduction

The role of the subject Home Economics has always been broad, from teaching pupils how to cook to preparing them as independent consumers in society, and everything in between. One definition of the perspective of Home Economics is a holistic view on what happens in everyday life with focus on the home (Parinder, 2012, p. 24). The subject is an interdisciplinary one, aiming at strengthening people to reach their goals for the good of the society (Palojoki, 2007, p. 41). Home Economics is a

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subject where food is central, as well as its associations with the environment and culture, and not least health. In the 2016 resolution of International Federation for Home Economics (IFHE) it is stated that IFHE will develop policies and strategies that “promote the pursuit of happiness as a measure of health and wellbeing” (IFHE, 2016). Health is a wide concept where the physical, social and mental aspects are equally important. Furthermore, the concept of health promotion is a broad one: the process of enabling people to increase control over and to improve their health (World Health Organization, 1986).

The background for this study is a change in the faculty organisation within the University of Iceland, School of Education. Until 2017, the education of Home Economics teachers at University of Iceland has been situated within the Faculty of Teacher Education within the School of Education. From 2018 this education will have its home within the Faculty of Health Promotion, Sports and Leisure Studies. This change has created an opportunity for rethinking the curricula of teachers’ education.

The change of the name of the subject in Iceland from *Home Economics* to *Food, culture and health* in 2008 may be viewed as the first step in the development of a subject focusing on a more health-oriented education. This was instantly well-received among university students in teachers’ education, doubling the number of students attending courses related to the subject (from 22 to 44) between spring 2007 and spring 2008. Since autumn 2008 numbers of students in teachers’ education (including the subject of *Food, culture and health*) have however fallen, most probably due to two reasons; the financial crisis starting late autumn 2008 and teachers’ education being prolonged from three to five years to get a license to teach (Icelandic National Audit Office, 2017). Among reasons for relocating the subject within the School of Education is its role within schools, where it has no obvious place within the crafts subjects. In attempts to increase the attendance and build a strong new faculty, the process of defining the new Home Economics teacher is on-going: A health promotion teacher with focus on food environment and food education in line with the increasing use of the concept food education in recent years (Janhonen, 2016, p. 18).

Another reason is the apparent gap in offering teacher education with focus on health-related matters, whereas schools are increasingly expected to have a role in health promotion. Since 2011 *Health and welfare* is one of six pillars within the national curriculum in Iceland. According to the Educational Act:

Schools have to create a positive atmosphere and health-promoting environment where development and health are systematically supported in various ways. The main health factors that are to be encouraged are: positive self-image, exercise, nutrition, rest, mental wellbeing, positive communication, security, hygiene, sexual health and understanding of one’s own feelings and those of others. (Ministry of Education, Science and Culture, 2014, p. 21).

Furthermore, “schools are to create an environment that contributes to healthy ways of life for children and youth” (Ministry of Education, Science and Culture, 2014, p. 21). To date there is no specific education for teachers or other school personnel to support the holistic approach called for in this Act.

The beginning of Home Economics teaching in Icelandic compulsory schools was in 1930 when the first school with a fully equipped teaching kitchen was built. The Home Economics teacher school of Iceland was founded in 1942 and in 1977 it merged with the Iceland University of Education (Bjornsson, 1998, p. 177). The University of Education then merged with the University of Iceland in 2008 and the former became one of five schools within the University of Iceland; School of Education. (Icelandic Law on the merging of Iceland School of Education and University of Iceland no. 37/2007).

Home Economics first appeared in the Icelandic Education Act in 1960 under the name *Cooking and house management*. The subject was limited to 13 to 14-year-old girls, and boys were not supposed to study the subject with one exception; one lesson a week where both boys and girls should learn about accounting (at household level), nourishment, house management and cleanliness (Ministry of Education, 1960). In the Icelandic Education Act 1974 *Cooking and house management* was renamed to *Home Economics* and became obligatory for both girls and boys throughout compulsory school. This was in line with the spirit of the Equality Act 1976 (Icelandic Law on Gender Equality no. 78/1976).

In Iceland, the first detailed curriculum in Home Economics for all grades is from 1989. Home Economics was divided into six study components; nutrition, food science, cooking and preparation, cleanliness and household management, and consumer education while nothing was included on child upbringing (Ministry of Education, 1989). There have been few changes in curricula in Home Economics from 1999 and 2007; mainly minor adjustments like more emphasis on sustainability and healthy lifestyle. The subject Home Economics is now still obligatory in Grades 1 to 8 (6 to 13-year-olds) but elective in Grades 9 to 10 (14 to 15-year-olds) (Ministry of Education, 1999, 2007). In the national curriculum in Home Economics based on Educational Act 2011 however, extensive changes were made and objectives simplified with more emphasis on the new pillar *Health and welfare* (Ministry of Education, Science and Culture, 2014). Based on these changes, opportunities have evolved to strengthen the focus on educating teachers with knowledge and skills in health promotion.

While Home Economics are taught in many parts of the world the main emphasis of the subject and the pupil group may differ. In Europe, Home Economics is either taught as a separate subject, included in other subjects, or not taught at all. It may also be optional or mandatory (Eurydice Network, 2012). The core in Home Economics in the Nordic countries can however be described as food preparation, food choices, hygiene and culture (Ministry of Education Science and Culture, 2014; National Agency for Education, 2015; The Danish Ministry of Education, 2009; Finnish National Agency for Education, 2014; The Norwegian Directorate for Education and Training, 2008).

There is a general agreement that healthy school food environments are of importance, and found to be so according to adolescents (Kainulainen, 2012), head-teachers (Clarke, Pallan, Lancashire, & Adab, 2015) and parents (Slater, 2013). When interviewing 22 head-teachers in UK schools, Clarke et al. (2015) found schools to have a prime position in offering health promoting support to parents. However, teachers' attitudes and personal beliefs were found to be important for successful health promotion within schools. In a Finnish study (Turkki, 2005), students in teachers' education identified some of the strengths of the subject Home Economics as being a subject with holistic perceptions and understanding of people. Home Economics professionals were seen as educators with integrated understanding of everyday life and being able to take leading roles inside schools and in other areas of society such as in community work and policy-making. The contribution of Home Economics to health promotion and vice versa is obvious, and Slater (2013) furthermore emphasised the need to close the loop between food and nutrition education, and health and wellbeing. Home Economics education would, according to her, be a suitable vehicle for translating the essential knowledge and skills as the subject, according to Smith and de Zwart (2010), promotes critical thinking.

Since initiated in Iceland, *Health Promoting Schools* (preschools, compulsory schools, high-schools) driven as projects on behalf of the Directorate of health in close collaboration with schools (Directorate of Health, 2013) have been well received. These initiatives have, just like the pillar of *Health and welfare* in the National curriculum (Ministry of Education, Science and Culture, 2014), put the holistic approach of health forward as an important and integral part of the school spirit and its environment. Teacher education associated with this approach or the skills needed to move it forward have however not been put in focus; an extended role for Home Economics teachers may therefore be proposed.

As Turkki (2005) points out, the discipline of Home Economics includes three levels: the individual, the community or family level, and societal level. This is also true for the concept of health promotion, which is described by the WHO in the Ottawa charter (World Health Organization, 1986) as the process of enabling people to increase control over their own health. The Ottawa Charter proposes strategies for health promotion ranging from individual (developing personal skills) to societal level (building healthy public policy), emphasising the settings approach, where schools are key settings for health promotion. The knowledge base of Home Economics is necessary for future societies, as Turkki (2005) argues. From that perspective, Home Economics professionals are central in society.

The aim of this paper is to describe the rationale for extending the curricula of Home Economics teachers' education in Iceland towards health promotion. Furthermore, clarifying the feasibility and interest of moving the subject of Home Economics towards a more holistic view of the subject as an integral part of health promotion in schools is considered. We will base our framework for this paper on findings from three components of work in progress towards this goal.

## Methods

Three components of work will be presented that each has been a step towards structuring a new curriculum in Home Economics with the inclusion of health promotion. Each of them is an integral part of the developmental process that has taken place over the last years. This approach allows for multiple ways in exploring the needs and wants of stakeholders at all levels (i.e., policy makers, educators, and workforce). Following are descriptions of these three components we build our framework and results on, that is:

1. e-Hap project
2. Faculty division work, and
3. Pilot interviews (see Figure 1).

### Health Agents (e-Hap)

The *E-learning for the Health Agents Programme* in Europe (e-Hap) was a five-country project (Iceland, Denmark, Norway, Portugal and Belgium) funded by the European Commission Leonardo da Vinci Programme in 2009 to 2011. The aim was to develop a programme to educate *Health Agents*; a person who can integrate activities of health promotion in the main tasks and responsibilities of their workplace. The concept finds its inspiration in the term *Change Agent* as it is used in organisational theory. e-Hap was aimed at persons who work in the primary health care sector, in the educational system and in catering (Kruse, Mosdol, Olafsdottir, & Gray, 2011). As part of the e-Hap project a modified Delphi study was performed involving one round of focus groups and two rounds of questionnaires. The aim of the method is to determine the extent to which experts agree about a given issue, and the technique can be applied to both the measurement and development of consensus (Keeney, Hasson, & McKenna, 2006; Rowe & Wright, 1999).

The Delphi survey in the e-Hap study was conducted among experts relevant to the sectors to identify core competencies needed for the so-called Health Agents to promote health among their user groups. We present data from the Icelandic part of the study, with a focus on the school setting. Possible categories of front-line staff to be targeted by the e-HAP programme were identified through analyses of European and national policy documents, action plans, contact with key persons from national institutions or similar, as relevant in each of the participating countries. A list of preliminary competency areas and items was compiled based on these documents and studies of the literature regarding competencies for the *public health nutrition workforce*. The identification of core competencies and development of consensus followed a three step-procedure (Delphi Rounds 1 to 3).

Seven participants were invited to the focus group interviews (Round 1); three allocated to health care (two nutritionists and a school nurse) and four from the school system (two preschool teachers, one sports teacher and one Home Economics teacher). A list of preliminary competency items was used as a starting point for discussion to formulate competency items. For Rounds 2 and 3 a total of 22 participants from Iceland answered web-based questionnaires (QuestBack, Oslo, Norway); 10 from schools, six chefs/catering and six from health care. Data presented in Table 1 is based on results from Round 3 for teachers only ( $n = 10$ ), with most of them teaching Home Economics or physical education, that is, the subjects most commonly associated with health in the schools. The overall question the experts were asked to consider, having in mind the front-line staff of the sector, was: "If your profession/sector should do more to promote health through nutrition and physical activity, which competencies would they need?" For each suggested competency, the experts were asked to rate two questions:

- 1) How relevant is this competency for your profession, and
- 2) How relevant would further education regarding this competency be?

The questions were scored using a 6-point Likert-based scale (1 *Not at all relevant* to 6 *Very relevant*). The experts filled in the questionnaire twice. The second time (Delphi Round 3), the average scores given by all experts within each sector were presented as part of the questions. Responses to Rounds 2 and 3 of the Delphi survey were transferred to and analysed by Statistical Packages for the Social Sciences version 22.0 (SPSS Inc., Chicago, IL, USA).

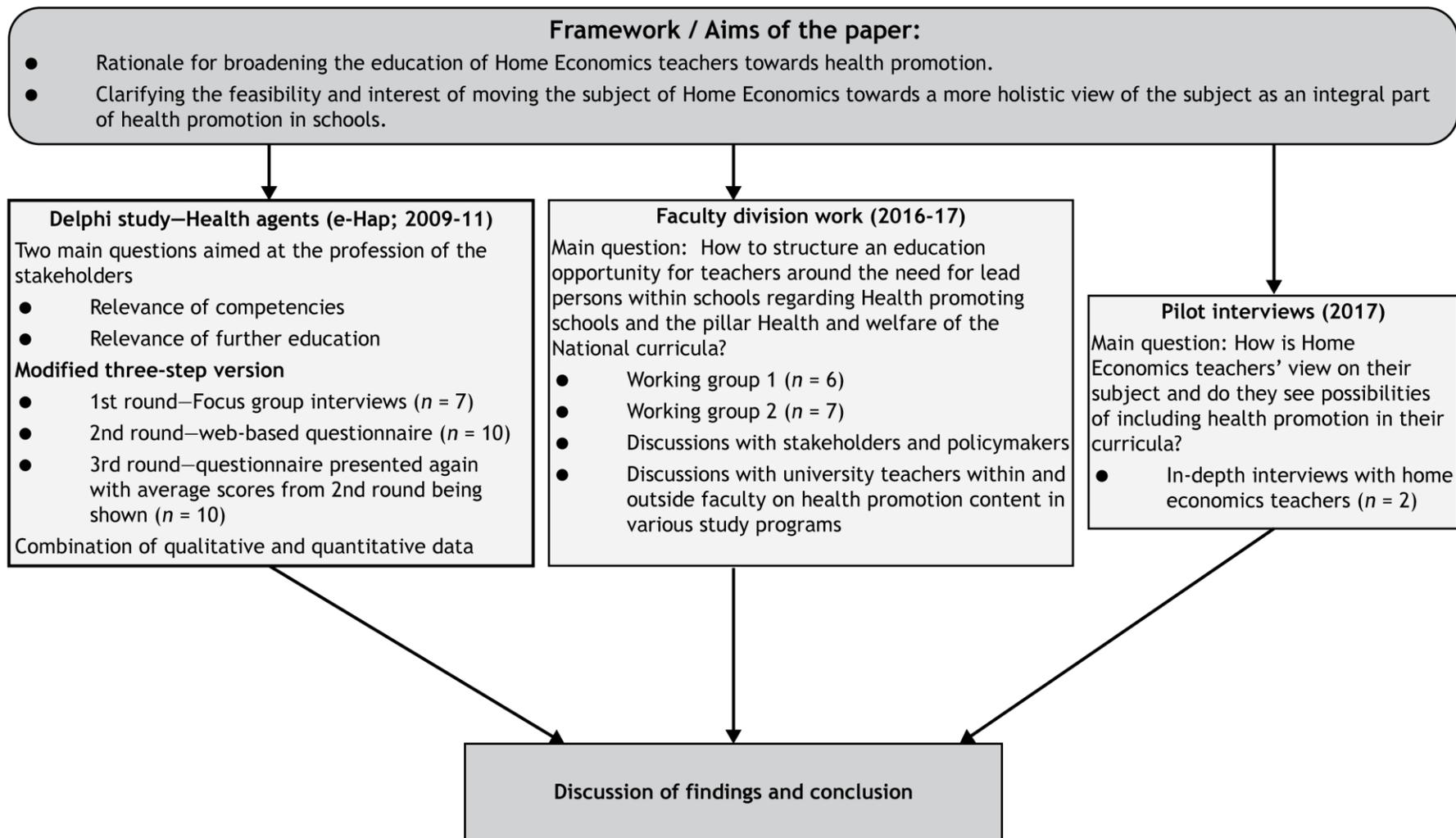


Figure 1 Study design—three components of a progress towards an extended curriculum

### Faculty division work

The main question in this component was how to structure an education opportunity for teachers around the need for lead persons within schools regarding Health Promoting Schools and the pillar Health and welfare of the National curriculum. Data was acquired by notes from working group meetings and a report on the faculty division work. Autumn 2016, Working Group 1 was created to propose the programs and vision for one of four new faculties at the School of Education, University of Iceland. The group consisted of the first and last author of this paper, and four persons in addition (faculty staff and one student). The new faculty (Faculty of Health Promotion, Sport and Leisure Studies) will be running from autumn 2018. During five meetings in the autumn 2016, the group created the vision for the faculty and proposed programs. This was included in a report (in Icelandic, unpublished) on the four faculties and the structure of the School of Education presented for all staff late 2016. After that, Working Group 2 was formed, consisting of seven persons (first and last author and two faculty staff again, and three faculty staff in addition) with the aim of organising and developing the curricula for the different programs within the faculty. This group met five times regarding the faculty as a whole, and four times in addition with an aim at viewing the current status and opportunities in educating teachers for health promotion; two times with stakeholders (representatives from other Schools within the University of Iceland) and policymakers (Directorate of Health) and two times with staff within and outside the faculty teaching courses related to health promotion. This work and the work on the curriculum, aims and courses is still on-going.

### Pilot interviews

This component's main question was describing the view of the profession Home Economics teacher on their subject and if they see possibilities of including health promotion in their curricula. Two teachers in Home Economics in Iceland (capital area) were interviewed on their view on the subject, its scope and future possibilities. One of the teachers has decades' experience of teaching and the other one has taught children for two years. The interviews with the respondents were approximately 40 minutes each, taken by the first author and guided by a semi-structured interview guide. The interviews were transcribed verbatim and analysed with qualitative content analysis.

## Results

Following are the main results from the three underlying components for the development and progress of an extended curriculum in Home Economics teacher education. First, the results of the e-Hap study may be seen as a baseline for initiating this work since the idea emerged from the shared views and needs experienced during that project.

### Health Agents (e-Hap)

Seven core competencies were identified as relevant for *Health Agents* and the e-Hap programme, each with a number of subcategories (not shown).

Table 1 The seven core competencies needed to promote health—average score and SD for Icelandic teachers based on relevance of competency and further education for the profession

Competencies (n = 10)	Competency		Education	
	Mean	SD	Mean	SD
Competencies related to basic knowledge of nutrition and physical activity	5.2	0.8	5.1	1.3
Competencies related to professional conduct and collaboration	4.7	1.3	4.3	1.5
Competencies related to communication with the users	4.5	1.2	4.5	1.4
Competencies related to change in health behaviour	4.2	1.3	4.3	1.4
Competencies related to analysis of the situation (assessment)	4.1	1.7	4.1	1.8
Competencies related to food, cooking and the production chain	4.1	1.7	3.8	1.7
Competencies related to planning and implementing small interventions	4.0	1.3	3.9	1.6

Scores are based on a Likert scale (1-6), with higher numbers showing higher priority.

Among teachers, the core competency related to basic knowledge of nutrition and physical activity was considered most important (average score 5.2 of possible 6 on Likert scale, *SD* 0.8) and also as for relevance of further education related to this competency (average score 5.1/6, *SD* 1.3). Some variations were seen within the subcategories reflecting variations in relevance to daily practice (profession-specific) and related to the environment in which these professions work (context specific). When considering changes in average scoring between Rounds 2 and 3 of the Delphi study the group as whole was in good agreement, with 76 to 93% being satisfied with former scoring within their group of profession.

### Faculty division work

The main results of the faculty division work regarding this paper's aim, is the proposed program of Health Promotion and Home Economics from Working Group 1. In addition to the process of the faculty division work already described in the method section, the process included fruitful discussions where some issues were raised in dialogue between the representatives of the different study programs in the working groups (Health Promotion, Sport and Health Science, and Leisure Studies). These were, for example, on the difference between health promotion and health science (sports and *health science*), and between health promotion and prevention (a prominent concept within leisure studies). The short results of those discussions are that health promotion is "the process of enabling people to increase control over, and to improve, their health" (World Health Organization, 1986) and has very much to do with both the health science part of sport and health science (where sport is however the largest component), and with prevention, as prevention is a part of health promotion. The representatives in the working groups agreed that these contact surfaces strengthened the ties between the different study programs within the new faculty. The meetings were discussion meetings and the faculty's part of the report was written in cooperation in the group, led by the representative of the leisure studies program.

The Health Promotion and Home Economics program will host the education of Home Economics teachers as well as in the future hosting new programs for students aiming at becoming health educators in schools, with focus on *Health Promoting Schools* (preschools, compulsory schools, high-schools) driven as projects on behalf of the Directorate of Health in close collaboration with schools (Directorate of Health, 2013) and the pillar of *Health and wellbeing* in the national curriculum (Ministry of Education, 2014). A part of the vision for the new faculty was to use the opportunities of educating teachers in Home Economics, physical education, and leisure studies in the same faculty, and the possible synergy effects for research and supervising students. Examples of content areas within the Health Promotion and Home Economics program are: body image, health literacy, physical activity, food habits, media and health. This has been discussed with stakeholders, policymakers, and teachers from various study programs considering the needs of students as individuals as well as society needs. The discussions led to the National curriculum pillar of *Health and wellbeing*, where those needs are reflected, whereas all work in compulsory school shall promote health and support wellbeing of the pupils. The teachers equipped to supervise this will be educated in the new faculty.

Work on curricula, aims and courses in Working Group 2 is ongoing, as well as discussions with stakeholders and policy makers.

### Pilot interviews

Five themes emerged when analysing the interviews with qualitative content analysis:

- broad scope of Home Economics
- popular and fun subject
- the obligations towards society
- the importance of educated teachers
- the links to health promotion.

### *Broad scope of Home Economics*

The respondents both mentioned that the subject of Home Economics was a broad one, with diverse matters of interest. *Healthy lifestyle* was mentioned as an important focus, and not only regarding food.

I try to convey to them that they should not let the smartphones and tablets steal their sleep

Both teachers stressed that by healthy lifestyle, they did not mean only physical health, but also mental and social. *Nutrition* was important to both of the teachers as a foundation, which the subject of Home Economics builds on. Also, the *determinants of food choice* were seen as a core content of the subject. *Health education* was mentioned, including education about *commercial influence* and the *situation of consumers*. Within the broad scope, the synergies of cooperating with other teachers and subjects, was of importance. Possible collaboration between Home Economics teachers and physical education teachers was suggested as well as a common textbook for those two subjects that are so connected.

### *Popular and fun subject*

The subject of Home Economics is the most popular subject of compulsory school, according to the teachers. The pupils, especially the youngest, seem to have fun: “The teacher is like a rock star” as one of the respondents said. For teenagers, this subject is an elective course and since the number of pupils in the classroom is limited, there is not always an available slot for everyone interested in attending it.

### *The obligations towards society*

The teachers answered questions on the obligations Home Economics might have towards society. They mentioned conveying old food traditions and *food culture* to the pupils. They saw *educating on health* as their duty: “it always comes back to health education”. Also, they found it preferable to be able to start in the early years as healthy habits are formed in young age.

### *The importance of educated teachers*

Both respondents stressed the importance of having educated teachers in the positions as Home Economics teachers in compulsory schools. Cooking skills were not enough:

In some teachers' positions there are people who have cooking skills but no base in nutrition or healthy food choice or the health and wellbeing aspects of the curriculum.

### *The links to health promotion*

The link between Home Economics and health promotion was apparent for the respondents. The categories drawn from the interviews were, for example, that Home Economics teachers should be the contact persons for the *Health Promoting Schools* project from the Directorate of Health, and that the Home Economics teacher program was a natural home for health promotion.

The respondents mentioned the support of principals or head teachers, adequate textbooks and material for teaching, and teachers' knowledge as the most important aspects in order to be able to increase focus on health promotion within the subject of Home Economics, but this would be different depending on different teachers and different principals. The cons mentioned of involving health promotion in Home Economics were lack of time and possible risk of increasing theoretical teaching at the cost of practical teaching.

The health promotion aspect of Home Economics is mainly within food and food habits but many pupils are active in sports and the health promoting aspects of the subject could focus on the importance of physical activity as well. I personally can see myself focusing on mental health, relaxation and mindfulness. This is of course different between teachers.

## **Discussion**

The aim of this paper was to describe the rationale for broadening the education of Home Economics teachers in Iceland towards health promotion. By using information from the three components of our progress work it was evident that Home Economics and health promotion have much in common

and there is interest in extending the curricula of teachers' education towards an integration of health promotion.

First, the results from the Delphi study, performed for the e-Hap programme in 2010-2011 formed a basis for the interest in moving Home Economics more towards health promotion. The findings of the Icelandic focus group interviews and second round questionnaires revealed that knowledge, respect and collaboration between Health Agents from different disciplines was somewhat lacking. It was also evident that teachers were in need of basic training in nutrition and a support in comprehensive approach to health and health promotion in the general school work. Furthermore, the study showed that Icelandic teachers were highly interested in health and health promotion (with focus on nutrition and physical activity) and that they had a demand for re-education in this field. Although not shown in the results in this paper, this was especially evident when compared to results from the other countries, where the role of teachers as Health Agents was not seen as highly relevant. There are some limitations to these findings, especially with regard to the scope of this paper since the group of teachers included teachers across disciplines instead of focusing on Home Economics teachers only. Even more so, these findings are of interest, since teachers in general seem to show high interest in integrating health promotion into their practice and teaching.

The faculty division work is in line with the findings from the e-Hap programme, with similar ideas merging around discussion about the future curricula and with a vision of health promotion not only being a study field for Home Economics teachers but also a topic of interest for general teacher training.

The main results of the pilot interviews stress that the scope of the subject is very broad and the links to health promotion are apparent. The respondents also mentioned the limited knowledge of Home Economics in broader society even though the obligations towards society are ample. They discussed the importance of the education of Home Economics teachers being able to promote healthy habits of pupils and encourage interaction with the home and parents. It is important to stress that these results are based on a pilot study with only two respondents. A larger study is planned, in relation to the faculty division work also described in this paper. The views of Home Economics teachers working in compulsory schools is essential in order to be able to articulate concrete goals for this university education, course descriptions and curriculum.

Bringing the subject closer to health promotion does not exclude the focus on cultural and social aspects. Kainulainen and colleagues (2012) have urged that those aspects should not be neglected when studying the determinants of eating habits. Health is not merely good nutrition and physical health, but also mental wellbeing and social interaction. The holistic view on health implies having the possibility to act according to one's goals, in the circumstances and environment in which we are living (Medin & Alexanderson, 2000). The views of the pupils themselves should not be neglected, and this might be a future research project—studying the children's experience and views on the subject of Home Economics.

Home Economics has possibilities in promoting pupils' health, with the subject being a natural home for health promotion, as the results of the pilot interviews suggest. This is reflected in previous studies as well, where Home Economics teachers value practical food handling but also learning about health and sustainability (Dixon, 2017). According to the results, and previous research (Oskarsdottir, 2014), the subject is popular in Iceland and has had the highest popularity score of all subjects but scored much lower in importance (Oskarsdottir, 2014). That aspect could reflect that Home Economics teachers' specialities and competencies may not be evident, as according to Turkki (2005). Slater (2013) has found that Home Economics was valued a less-important subject than math, and Clarke and colleagues (2015) concluded that there was unwillingness among head teachers in dedicating more time to health promoting activities because of academic goals and curricula. The respondents in the pilot interviews described that this support might be different between schools and teachers, even though the national curricula prescribes that Health and wellbeing should be visible in all subjects as one of the curriculum's main pillars (Ministry of Education, Science and Culture, 2014). The support for health promotion has also been recognised in approaches like Health Promoting Schools (World Health Organization, 1998), which addresses the relationship between health and education. To be able to fulfil the goals of these approaches, a driving agent is needed, a person with an education that brings together pedagogy and health promotion. This is the education proposed and described in this paper.

Among the strengths of this study are the different components feeding the results. The limitations are that the material is small but further studies are planned. It should be addressed that two of the authors of this paper took part in the working groups described in the component Faculty division work. This can be seen as both a limitation and strength, and with reflexivity the researchers acknowledge possible biases but at the same time the researchers can be seen as instruments who shape the research and are shaped by it (Lichtman, 2013).

By linking Home Economics to health promotion we enable the revitalisation of Home Economics. The Home Economics teacher can be seen as a driver of change in schools and this is an important part of the vision for the Health promotion program at the School of Education at the University of Iceland. We argue that the interests of Home Economics and health promotion are very much intertwined as everyday life, food policy, food environment, food education, consumer issues, environmental issues and health education are key in both.

## Conclusion

The many aspects of the interface between people and food will be addressed in the future curriculum: culture, social interactions, environment, health and wellbeing. Home Economics professionals might in the future be seen as educators with integrated understanding of everyday life and could be enabled to take leading roles inside schools and in other areas of society such as in community work and policymaking in line with the suggestions of Turkki et al. (2005). The current Educational Act and the value that has been set on health promotion in schools in Iceland, further sets the venue for making this extension to health promotion within the Home Economics teachers' education—and enabling them to be leading experts within schools as Health Agents.

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## Biographies

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## ***Part B Refereed Papers***



INTERNATIONAL FEDERATION  
FOR HOME ECONOMICS

REFEREED PAPER

## Used imported clothing and indigenous handcrafted textiles consumption in Nigeria

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### Abstract

*Indigenous handcrafted textiles such as adire, aso-oke, akwete, kassa, idoma, ukatt and akwa ocha were mostly used in Nigeria during the pre-colonial era. Today, the consumption of used imported clothing appears to be enjoying a high degree of acceptance as many consumers from all social strata are demanding the materials. The study assessed the consumption of used imported clothing and indigenous handcrafted textiles in Osun State where indigenous handcrafted textiles is known to be one of the major crafts of the people. Purposive sampling technique was used to select 54 producers/traders of indigenous handcrafted textiles, 54 traders of used imported clothing and 135 consumers from nine local government areas that trade predominantly in the two clothing items. Attitudinal statement of 5-point Likert scale questionnaire was used to elicit information from respondents. Data collected were analysed using frequency distributions, percentages and inferential statistics. Findings showed that indigenous handcrafted textiles did not survive the competitive challenges of used imported clothing despite its sophistication both in aesthetics and quality. The consumption of indigenous handcrafted textiles was low compared to used imported clothing. A reawakening effort of individuals, families and Communities to fashionably embrace local fabrics is suggested for economic buoyancy of the country.*

**KEYWORDS:** INDIGENOUS HANDCRAFTED TEXTILES, PRE-COLONIAL ERA, USED IMPORTED CLOTHING, CONSUMPTION, SOCIAL STRATA

### Introduction

Clothing is one of the basic needs and its production has also been an important part of Nigeria's economy for a very long time and for a number of reasons. Apart from providing employment opportunities, it has contributed significantly to the economic growth of the country. In Africa, the Nigerian textile industry was the third largest employer of labour after Egypt and South Africa with the indigenous handcrafted textiles sector contributing about 80% to the economic growth of the country (Amachree, 2010). However, in recent times the industry has been faced with a number of challenges which has brought about the closure of many textile industries in the country. This has led to increased unemployment and poverty rates (Amaefule, 2011). One phenomenon that coincided with the closure of textile industries is the trade liberalisation policy which exposed most of the firms to external competition and encouraged importation of used clothing to Africa (Nenadi, 2005). The Nigerian textile industries were not strong enough to withstand the competition from the foreign

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firms and ended up closing down. The closure of many of the industries has impacted negatively on the labour markets (Ekeng & Ewah 2010).

Indigenous handcrafted textiles were popular, highly prized and consumed during the pre-colonial era. These textiles have provided varieties of designs and patterns (both in colours and qualities) to meet the fashion taste and requirements by which certain ethnic groups are identified. Yoruba of the Southwest have gained worldwide recognitions through the production of *adire* (batik), prints and *aso-oke* (woven strip). The Fulanis are known for the production of woven cloth called *Kassa* while the Ibibio produce cultural *ukatt* cloth. The Hausas are also known for their *Danshiki* fabric. The Tiv tribe of Benue State produces *ange* and *idoma* cloths. The people of Asaba produce *akwete* cloth (woven fabric with fascinating designs and motifs) and *akwa ocha* (wrapper outfit worn with or without a blouse). All other tribes in Nigeria both minor and major have different types of locally produced cloths by the indigenes (Owoeye, 2010). The cultural values and status symbols, customised nature and the quality of the textiles which befit various occasions have been acknowledged by consumers. These textiles had been prestigious and served as reference points for crafts, not only in Nigeria, but also outside the shores of the country (Suleiman, 2012). Indigenous handcrafted textiles could also be enriched with thread embroidery and worn on important ceremonies connected with the life cycles. These cycles include weddings, title taking and funerals (Olaoye, 2005). One prominent and highly valued decorated indigenous textile is *adire eleko*. Intricate designs on the textile such as *Ibadan dun* (Ibadan is pleasant), *Olokun* (god of the sea), *sunbebe* (lift up the waist beads), *eyepe* (complete birds' assembled) assert cultural identity and aesthetic statement (Oyelola, 2010). Among the Yoruba of the Southwest, indigenous handcrafted textiles such as *adire* and *aso-oke* were highly recognised and considered a force to reckon with at all times. The consumption of used imported clothing was strange to the Yoruba culture and was considered as fabrics for the poor.

Used imported clothes were synonymous with poverty during the pre-colonial era; the rich and middle class sourced their clothes from boutiques and stores (Alexander & Reno 2012). But today, the trend has changed as both the rich and middle class have practically adjusted their budgets and buy the used clothing. The trade liberalisation policy has encouraged massive importation of used imported clothing into the country thereby placing Nigerian an entry point into an 'imagined world' of the West (Field, 2004). Imported clothing has since then become a better choice for many instead of the domestically produced apparel. *Okirika*, *Tokunbo* (imported) or *bend down select* are the popular nomenclature with which used imported clothing are being called in Nigeria (Nenadi, 2005). The vibrancy of the used clothing markets clearly describes the acceptance of the materials to the Nigerian populace and presently, used clothing markets have become the best way out of the present economic challenges (Dougherty, 2004; Oguntola, 2012; Slotterback, 2007). The consumption of indigenous handcrafted textiles in form of *aso-ebi* (uniform) during important occasions has also been acknowledged. However, dearth of scientifically deduced information on the extent of consumption of used imported clothing and indigenous handcrafted textiles makes the study imperative. Therefore, there is the need to assess the consumption of used imported clothing and indigenous handcrafted textiles to ascertain which of the clothing item is consumed more. The authors hypothesised that there is no significant difference between the respondents' consumption of used imported clothing and indigenous handcrafted textiles.

## Literature review

Textile art tradition remains the most decorative of all artistic traditions in Nigeria. Owoeye (2010) averred that Nigerians are renowned for the production of a number of traditional textiles. The Yoruba people of the Southwest are known for their traditional textiles such as *aso-oke*, the hand-woven prestige cloth, prints-*ankara*, and the pattern-dyed cloth, *adire* among others (Olaoye, 2005). These traditional textiles are a beautiful part of the country's rich cultural history. In pre-colonial times, indigenous handcrafted textiles were commonly used for traditional fashion styles. Individuals, families and communities wore their traditional garb all of the time (Olaoye, 2005). The Yoruba men traditionally wore *buba* and *sokoto*, sometimes with *agbada*, an oversized cloth worn like jacket and *fila*, traditional cap. Women on the other hand, wore *buba*, a low round neck top and *iro* with *gele* over their heads and *ipele* over the shoulders (Oyelola, 2010). There was little money then but no luxury. People weren't aware of fast fashion, because they had no access to television or fashion magazines. With the advancement in global-spanning television networks, increased exposure to foreign way of life, improved education and advancement in technology, there has been a change in tastes and preferences for a number of clothing around the world (Gary, 2006). Western clothes such

as skirts, dresses, pants and wigs are now preferred in most developing countries, Nigeria inclusive (Hansen, 2000). Saffu and Walker (2006) averred that the level of acculturation has motivated consumers in developing countries to demand the same style of clothing available to their counterparts in developed countries though in the form of used clothing. This change from anti-fashion to fashion resulting from the influence of western consumer-driven civilisation is evident in Nigeria today. Indigenous handcrafted textiles are nowadays worn for special occasions or for religious gatherings (Owoeye, 2010). However, the quality is not that important now as long as a piece of cloth is in fashion.

Claudio (2007) stated that high literacy level and trends of fashion have encouraged high consumption of used imported clothing. The well-educated group spends more on both trendy career wear and casual wear. Although youths are fashion-conscious, for literate women, interest in fashion does not decline with age. Fashion in the rural areas have also changed as those who want to dress like their urban counterparts resolved to buying used imported clothing. This trend in turn may impact negatively on the skill development of indigenous handcrafted textiles' producers. US Department of Commerce (2003) stated that as a result of vibrancy of used clothing markets in developing countries, used clothing has now become one of the top ten exports to African countries. Guiot and Roux (2010) opined that fair price, fashion and vintage uniqueness of second-hand clothing are other appealing characteristics of the items to today's consumers. This large influx of used clothing from developed countries has been a source of concern to African policymakers as this is harming their domestic garment industries. Garth (2008) opined that used-clothing imports in Africa contributed to about 40% of the decline in African apparel production and roughly 50% of the decline in apparel employment. What was once a vibrant employer of labour and significant contributor to the economic growth of the country is being challenged by cheap imports and is losing large segments on the home market' (Opoku & Akorli, 2009). Okeke (2005) stated that the remaining 25 functional mills are characterised by low capacity utilisation and this did not represent the global recognition of the textile subsector being a significant catalyst for economic growth. Although textiles and fashion are vehicles for propagating cultural heritage but Africans' preference for imported clothing have placed these countries on the bottom rung of the manufacturing sophistication ladder (Garth, 2008). As a result, high consumption of used imported clothing could cause a decline in indigenous handcrafted textile productions and impact negatively on local skill development of producers. Oyeniya (2009) asserted that to wade off the negative effects of used imported clothing, its importation should be reduced. The consumption of locally produced goods would promote economic growth, trade and human development. Bernard (2009) averred that African countries like Ghana and Cote D'Ivoire, have encouraged their citizens to patronise locally produced goods and had experienced economic buoyance. Nonetheless, used imported clothing is still commonly consumed in these countries. Slotterback (2007) averred that the emergence of used imported clothing has also been described as a blessing by individuals in the business. Apart from providing jobs in trading, distribution, repairing, restyling, and washing, used imported clothing provides affordability for people with low purchasing power. Marafa (2011) asserted that Nigerian handcrafted textiles have aesthetically pleasing forms, shapes and colours, with unique motifs abstracted from traditional objects that could be sewn into trendy styles required in fashion. This could make indigenous handcrafted textiles attain an enviable reputation both locally and internationally in the face of keen competition from imported ones. Hansen (2004) concluded that for African countries to achieve economic growth, there should be a strong policy towards the reduction of importation of used clothing.

### Research questions:

1. What is the extent of consumption of used imported clothing and indigenous handcrafted textiles?
2. Which age group and sex consume used imported clothing and indigenous handcrafted textiles most?
3. What are the perceived effects of used imported clothing consumption on the demand for indigenous handcrafted textiles?

## Methodology

### Area of the study

This study was carried out in Osun State Southwestern Nigeria, known to be a semi-urban state, having a fairly mixture of rural and urban towns with major occupation of the inhabitants being subsistence farming. However, most of the people combine such activities as trading, weaving, dying, carpentry, bricklaying among others with agricultural practice. There are also civil servants, artisans and traders in the State. There has been escalating level of poverty and unemployment in the State in recent times. The State enjoys fairly economic buoyancy in August, when the World Heritage Festival, Osun Osogbo is being celebrated. Tourists from different nationals coming in to the State with their purchasing power check in to hotels and procure *adire* as souvenirs. Osun state has three Senatorial Districts with 30 local government areas and her capital, Osogbo is one of the nine semi-urban local government areas of the State. The State has a population size of about 3,423,535 inhabitants representing 2.45% of Nigeria's total population (National Population Commission, 2006). The main ethnic group in the state is Yoruba. The state is known for expertise in a number of indigenous handcrafted textiles such as hand-woven textiles, tie and dye clothes, leather works, calabash, carving and mat-weaving. The farmers produce food and cash crops such as yam, maize, cassava, cocoa, palm produce among others. It borders Kwara State to the North, Oyo State to the West, Ondo State to the East and Ogun State to the South.

Three cities that trade predominantly in the two clothing items were selected from the three Senatorial Districts of the State using proportionate stratified random sampling. The cities were first stratified in terms of the availability of producers/traders of indigenous handcrafted textiles and traders of used imported clothing. The cities used in this study were drawn randomly from each stratum and the relative proportions of the strata in the resultant sample were the same as exist in the parent population. These cities included Osun East which comprised Ile-Ife, Irewole and Ilesa West, Osun West comprised Ede South, Iwo and Ejigbo while Osun Central comprised Osogbo, Odotin and Ifelodun local government areas. To select the respondents, purposive sampling was used to select producers/traders of indigenous handcrafted textiles and traders of used imported clothing. Consumers were selected using Cochran formula. Cochran equation yields a representative sample for proportions for populations that are large. Therefore,  $n$  is the sample size,  $N$  is the population size and  $n_0$  is calculated sample size for infinite population.

Overall, three categories of respondents namely producers/traders of indigenous handcrafted textiles, traders of used imported clothing and consumers were involved in the study. Respondents comprised 54 selected producers/traders of indigenous handcrafted textiles (six from each local government area), 54 traders of used imported clothing (six from every local government area) and 135 consumers (15 respondents from each local government area). Two hundred and forty three respondents formed the sample size of this study. Structured questionnaires designed for each category of respondent was used to elicit information from respondents. The instrument was divided into two sections: A and B. Section A comprised general information on the personal characteristics of respondents while Section B dealt with specific issues concerning the consumption of indigenous handcrafted textiles and used imported clothing. Five-point Likert scale was used to measure attitude. It was scored *strongly agree* (5), *agree* (4), *undecided* (3), *disagree* (2) and *strongly disagree* (1)

Data collected were analysed using SPSS (Statistical Package for the Social Sciences) package 20. Frequency distributions, percentages and mean were used to summarise the data and T-Test was used to establish any significant difference between the consumption of used imported clothing and indigenous handcrafted textiles.

## Results

Table 1 Respondents' personal characteristics

Variable		Producers/ Traders of indigenous handcrafted textiles (%)	Traders of used imported clothing (%)	Consumers (%)
Age(years)	<20	11.1	9.3	20.0
	21-30	18.5	40.7	42.2
	31-40	27.8	33.3	11.1
	>40	42.6	16.7	26.7
Sex	Male	35.2	48.1	49.6
	Female	64.8	51.9	50.4
Marital Status	Single	44.4	46.3	54.8
	Married	55.6	53.7	45.2
Educational level	None	48.1	46.3	17.0
	Primary	30.0	20.0	11.1
	Secondary	16.7	30.0	14.1
	Tertiary	5.6	3.7	57.8

Source: Field survey, 2014

The respondents' age revealed that six (11.1%) producers/traders of indigenous handcrafted textiles, five (9.3%) traders of used imported clothing and consumers 27 (20.0%) were below 20 years. Ten (18.5%) of producers/traders of indigenous handcrafted textiles, 22 (40.7%) traders of used imported clothing, and 57 (42.2%) of consumers' ages ranged from 21 to 30 years with a mean of 29.3 years. In addition, 23 (42.6%) producers/traders of indigenous handcrafted textiles, nine (16.7%) traders of used imported clothing and 36 (26.7%) of consumers were above 40 years. Thirty five (64.8%) producers/traders of indigenous handcrafted textiles, 28 (51.9%) traders of used imported and 68 (50.4%) of consumers were females. Thirty (55.6%) producers/traders of indigenous handcrafted textiles, 29 (53.7%) traders of used imported clothing and 61(45.2%) consumers were married. Twenty six (48.1%) of producers/traders of indigenous handcrafted textiles, 25 (46.3%) traders of used imported clothing, and consumer 23 (31.1%) were not educated however three (5.6%) of producers/traders of indigenous handcrafted textiles, two (3.7%) traders of used imported clothing and consumers 78 (57.8%) completed four years of tertiary level of education.

Table 2 Most preferred indigenous handcrafted textiles and used imported clothing

Variables	n = 135	%
<b>Indigenous handcrafted textiles</b>		
Batik- <i>adire</i>	37	27.4
Woven strip- <i>aso oke</i>	12	8.9
Prints	2	1.5
<b>Used Imported Clothing</b>		
Clothing	59	43.7
Footwear	21	15.6
Bedding	1	0.7
Underwear	1	0.7
Bags	2	1.5

Source: Field survey, 2014

Of the three commonly produced indigenous handcrafted textiles in the State, 37 (27.4%) of consumers preferred batik-*adire*, 12 (8.9%) woven strip *aso oke* and two (1.5%) prints. Woven strip *aso-oke* and prints were less preferred. Of the five used imported clothing referred to in the study, 59 (43.7%) preferred wears, 20 (14.8%) footwear, one (0.7%) preferred beddings and underwear and bags preferred by one (0.7%).

**Typical dyeing site and motifs on indigenous handcrafted textiles**



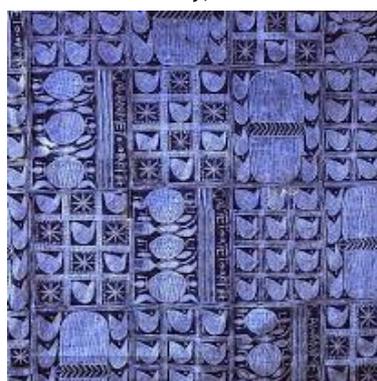
**Figure 1** Dyeing site in Osogbo, Osun State  
Source: Alchemy, 2010



**Figure 2** Traditional name: *Ibadan dun*  
English name: Ibadan is pleasant  
Source: Field Survey, 2014



**Figure 3** Traditional name: *Sunbebe*  
English name: Lift the waist bead  
Source: Field Survey, 2014

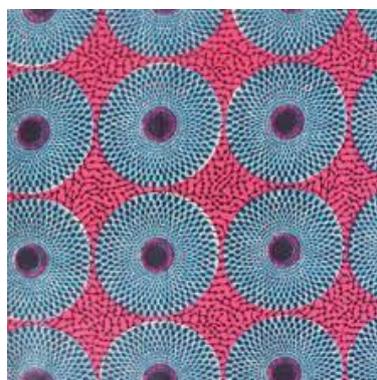


**Figure 4** Traditional name: *Eyepe*  
English name: Complete birds' assembled  
Source: Field survey, 2014

**The woven strip: aso-oke and prints-ankara**



**Figure 5** Traditional name: *Aso-oke*  
English name: Woven strip  
Source; Field survey, 2014



**Figure 6** Traditional name: *Ankara*  
English name: Printed wax  
Source: Field survey, 2014

Table 3 Extent of consumption of indigenous handcrafted textiles and used imported clothing

Local Government Areas	Indigenous Handcrafted Textiles				Used Imported Clothing			
	High		Low		High		Low	
	Freq	%	Freq	%	Freq	%	Freq	%
Irewole	14	93.3	0	0	0	0	1	6.7
EdeSouth	13	86.7	0	0	0	0	2	13.3
Ifelodun	0	0	4	26.7	11	73.3	0	0
Iwo	0	0	6	40	9	60	0	0
Osogbo	0	0	5	33.3	10	66.7	0	0
Odo-Otin	0	0	5	33.3	10	66.7	0	0
Ife-Central	0	0	2	13.3	13	73.3	0	0
Ilesa-West	0	0	6	40	9	60	0	0
Ejigbo	0	0	4	26.7	11	73.3	0	0

Source: Field survey, 2014

Table 3 revealed that the consumption of used imported clothing was high in all the local government areas except the two which were Irewole (93.3%) and Ede South 13 (86.7%) where the consumption of indigenous handcrafted textiles were scored high. Findings revealed that the consumption of used imported clothing was high 11(73.3%) in Ifelodun, nine (60.0%) in Iwo, 10 (66.7%) in Osogbo and 10 (66.7%) in Odo-Otin local government areas. In addition, the consumption of used imported clothing was high with 13 (73.3%) in Ife-central, nine (60.0%) in Ilesa West with 11 (73.3%) in Ejigbo.

#### Used imported clothing market in Osun State



Figure 7 Bales of used imported clothing at Obalufon market Ile-Ife  
Source: Pilot study, 2014



Figure 8 Typical used imported clothing market in Ilesa, Osun State  
Source: Field survey, 2014

Table 4 Age Group and sex of consumers that utilise indigenous handcrafted textiles and used imported clothing most

Age group	Youth (30 years and under)		Adults (31 years and older)					
	Freq	%	Freq	%				
Indigenous handcrafted textiles	3	2.2	49	36.3				
Used Imported Clothing	74	54.8	1	0.7				
Both	7	5.2	1	0.7				
Sex	Male		Female		Male		Female	
	Freq	%	Freq	%	Freq	%	Freq	%
Indigenous handcrafted textiles	2	1.5	1	0.7	38	28.2	11	8.1
Used Imported Clothing	26	19.3	55	40.7	1	0.7	1	0.7

Source: Field survey, 2014

Data in Table 4 show that youth within age range of 20 to 30 years did not consume indigenous handcrafted textiles as much as their adults' counterparts that participated in the study. Of the 67 males that participated in the study, 38 (28.2%) adults consumed indigenous handcrafted textiles most while 26 (19.3%) of youths consumed used imported clothing mainly. Furthermore, of the 68 females that participated in the study, 55 (40.7%) youths consumed used imported clothing. Findings revealed that more males consumed indigenous handcrafted textiles while more females consumed used imported clothing.

Table 5 Perceived effects of used imported clothing consumption on the demands for indigenous handcrafted textiles

Variables	Agree		Disagree	
	f	%	f	%
Use of imported clothing often reduce the consumption of indigenous handcrafted textiles	76	56.30	59	43.70
Used imported clothing consumptions is on the increase compared to indigenous handcrafted textiles	96	71.10	39	28.90
Indigenous handcrafted textiles are consumed more by foreigners	75	55.60	60	44.40
Used imported clothing consumption could cause a decline in the production of indigenous handcrafted textiles	102	75.60	33	24.40
Used imported clothing consumption could increase the rate of unemployment	60	44.40	75	55.60

N.B: *Strongly agree* and *Agree* = *Agree*; *Strongly disagree*, *disagree* and *undecided* = *Disagree* Source: Field survey, 2014

Data in Table 5 showed that 76 (56.3%) of the consumers agreed that the consumption of used imported clothing did reduce the consumption of indigenous handcrafted textiles. Of the 135 consumers 96 (71.1%) agreed that used imported clothing consumption was higher compared to the consumption of indigenous handcrafted textiles. Seventy five (55.6%) and 102 (75.6%) consumers' agreed that indigenous handcrafted textiles are consumed more by foreigners than the consumption of used imported clothing. Seventy five (55.60%) of consumers disagreed to an item of the questionnaire which stated that the consumption of used imported clothing could increase unemployment rate.

Table 6 Test for difference between the consumption of used imported clothing and indigenous handcrafted textiles

Variable	Mean	SD	T-tab	T-cal	Df	P	Remark
Used imported Clothing	39.3778	6.9404	1.96	18.237	3	0	Sig.
Indigenous handcrafted textiles	11.5704	3.2445					

Source: Field survey, 2014

The t-calculated ( $t=18.237$ ) is greater than the t-tabulated therefore t-test analysis showed significant difference in the consumption of used imported clothing and indigenous handcrafted textiles. The result indicated that the consumption of used imported clothing was higher compared to the consumption of indigenous handcrafted textiles.

## Discussion

The study was carried out to assess the consumption of used imported clothing and indigenous handcrafted textiles in nine most populous local government areas of Osun State. The study showed that the consumption of used imported clothing was high in more than half of the surveyed local government areas. This is consistent with result of the studies in countries such as Kenya, Zambia and Togo to mention a few (Hansen, 2004). Literacy level, accessibility to Internet facilities and acquaintance with the trend of fashion in these local government areas are predictive factors of high consumption of used imported clothing. This agrees with the findings documented in other previous studies (Gary, 2006; Claudio, 2007).

The study also showed that of the three indigenous handcrafted textiles produced in the State, *adire* was most preferred. Choice of batik-*adire* as most preferred indigenous handcrafted textiles may not be unconnected with its aesthetic appeal, intricate and symbolic designs which show the level of creativity as shown in Figures 2, 3 and 4 (Owoeye, 2010). Woven strip *aso-oke* and prints-*ankara* were less preferred. This may be due to the heavy nature of *aso-oke* fabric and the prints which crocks or bleeds easily as shown in (Figures 5 and 6). In spite of the pleasing colour and aesthetic appeal of the indigenous handcrafted textiles, these distinctive textiles were mostly consumed by adults and male members of the society. This agrees with other studies that adult members of the society are conscious of promoting Nigeria's cultural heritage (Owoeye, 2010). Women are more fashion-conscious compared to their male counterparts and at the same time, would want to keep abreast with the trend of fashion that is known with the use of imported clothing. The study showed further that majority of the consumers agreed that the consumption of used imported clothing reduced the demands for indigenous handcrafted textiles and this trend could increase unemployment rates. This is in agreement with the outcome of the research of Garth (2008). However, to wade off the negative effects of used imported clothing, its importation should be reduced (Oyeniya, 2009). It is hoped that with an increase in the consumption of indigenous handcrafted textiles, escalating level of poverty and unemployment could be checked. The t-test analysis showed a significant difference in the consumption of used imported clothing and indigenous handcrafted textiles. The result indicated that the consumption of used imported clothing was higher compared to the consumption of indigenous handcrafted textiles. This study suggests that low socio-economic status may be a predictive factor of used imported clothing consumption; hence fair price may be a major determining factor of high consumption of used imported clothing in the study area. Guiot and Roux (2010) asserted that fair price is one of the factors responsible for high consumption used imported clothing generally in developing countries. However, countries like Ghana and Cote D'Ivoire have encouraged their citizens to patronise their locally made goods, and had experienced economic buoyance (Bernard, 2009). Findings in this study suggest that the story appears to be different in Nigeria. Increased consumption of used imported clothing is also evident in Zambia (Hansen, 2000). It is therefore important to encourage the citizenry to consume indigenous handcrafted textiles so as to improve standard of living of producers and traders. This in turn would enhance skill development on the part of producers and economic buoyance to the country. In addition, sewing indigenous handcrafted textiles styles required in fashion could promote craft as well as showcasing the Nigeria's cultural the image to the outside world as shown in (Figures 7, 8, 9 and 10). Its use in home interiors would also promote its consumption.

### Trendy styles from indigenous fabrics



**Figure 9** Overall from Ankara  
Source: Field survey, 2017



**Figure 10** Ankara combined with imported material  
Source: Field survey, 2017



**Figure 11** Ankara top on jean  
Source: Field survey, 2017



**Figure 12** Imported top redesigned with ankara  
Source: Field survey, 2017

### Conclusion

The impact of fast fashion consumption is spreading at an alarming rate especially in developing countries. Fair price and trend of fashion endeared its consumers to these clothing items. Increased consumption of used imported clothing reduced the demands for indigenous handcrafted textiles and may lead to a decline in production and impact negatively on the skills of producers. This trend portends danger to the local manufacturing industries and the economy. For significant changes in the economy and improved standard of living for producers, use of indigenous handcrafted textiles should be reflective of modern and emerging paradigms in fashion to favourably compete with the Western style. Therefore, professionals should take an active role in addressing the influence of fast fashion within their home and in the lives of their youths because the negative effect of consumption of used imported clothing is worth avoiding. Developing countries should oppose dumping of textile waste in the form of used imported clothing. In addition, potential benefits of consuming locally produced goods generally should be communicated to stakeholders.

### Recommendations

The study found that the consumption of imported clothing was high compared to the consumption of indigenous handcrafted textiles. The study therefore recommends that re-awakening efforts of individuals, families and communities to embrace local fabrics as fashionable is pertinent. This could ensure increased production and sales as well as improving standard of living of producers. In addition, government officials could promote the use of indigenous handcrafted textiles in the form of western garments such as skirts, vests and blouses. This trend could be followed by the general populace. Thus indigenous handcrafted textiles could become fashion goods. In addition, there is the need for a complete policy aimed at industrial upgrading the potentials of local firms to make them competitive and beneficial in the wake of increasing competition from cheap imports. Grants could be given to the producers of indigenous handcrafted textiles to expand business and increase

production at cheaper rates. Indigenous handcrafted textiles could be used for making handbags, wallets and other accessories which could attract both international and domestic tourists that are eager to purchase traditionally-printed western goods. Also, the use of indigenous handcrafted textiles for decorating home interiors should be promoted. Lastly, government policy should be directed at encouraging the use of locally produced goods generally by placing ban on importation or impose high tariffs. This step could discourage importation and encourage cottage industries to thrive and increase economic buoyancy of the country.

## Biographies

Taiwo Adejoke Bamidele holds a Bachelor degree in Home Economics from Adeyemi College of Education in 1996 and two Masters Degrees, first in Clothing and Textiles from the Federal University of Agriculture Abeokuta in 2011, and second in Textile Design from the Federal University of Technology Akure in 2016. She has enrolled for a PhD programme in Textile Design in the Department of Industrial Design, Federal University of Technology, Akure. She is an assistant lecturer in the Department of Family, Nutrition and Consumer Sciences, Obafemi Awolowo University, Ile-Ife, Nigeria. Her teaching and research area of interest is clothing and textile training.

Professor Sunday Roberts Ogunduyile a doctorate in Industrial Design and art Education from Ahmadu Bello University Zaria, Nigeria between 1980 and 1996. He has been very active in teaching and research in higher institutions for more than three decades. His teaching and research areas of interest include designing, textile production, merchandising and printing. was appointed Professor of Industrial Design in 2002 at the Federal University of Technology, Akure. Before joining FUTA, Professor Ogunduyile worked at the Arts and Materials Development Division at Ahmadu Bello University Zaria for eight years. He is currently the Vice-Chancellor of the Ondo State University of Science and Technology, Okitipupa, Ondo State.

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## Fit evaluation of functional apparel product developed for female cosmetologists in Lagos, Nigeria

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### Abstract

*The practice of cosmetology demands that the professionals do not encounter problems with regular clothing. Hence the need for corporate identity in the usage of apparel for workers in this industrial sub-sector implies that apparel must be functional and compliant with user needs. The functionality indices of such clothing includes comfort, safety, facilitation of motion and activities, aesthetics and fit. The goal of this study was fit evaluation of functional apparel product developed for cosmetologists in Lagos, Nigeria. One research question and one hypothesis guided the study. The study was exploratory and descriptive. A non-probability sampling technique, specifically the criterion purposeful sampling technique, was used to select 24 cosmetologist models who were categorised into small, medium and large sizes to assess the fit of the functional apparel. The assessment was made on a 5-point semantic differential scale with reliability value  $>0.70$  for the three categories of cosmetologists. Data were analysed using mean and standard deviations for the research question, while analysis of variance (ANOVA) was used to test the null hypothesis at .05 level of significance. Results indicated high mean values of  $M = 4.67$ ;  $SD = .637$  for all categories of cosmetologists. There were no significant differences in the mean ratings of respondents on all items on the fit rating scale of the functional apparel while models were standing, sitting and in motion ( $p > .05$ ) ( $F = 2.130$ ,  $p = .144$ ). This result indicated good fit of the functional apparel at different parts of the body when participants fit-tested the functional apparel set. Implementation of these findings will create satisfaction of product in a wide variety of consumers in different figure types and ultimate wellbeing.*

**KEYWORDS:** FIT, USER EVALUATION, FUNCTIONAL APPAREL, WORK WEAR, COSMETOLOGISTS

### Introduction

The goal of this study was the evaluation of fit of functional apparel developed for cosmetologists in Lagos, Nigeria. This study was imminent since clothing is often overlooked in the work environment not minding its importance and proximity to the self. According to Thompson and Anyakoha (2012), cosmetologists' daily functions expose them to harmful chemicals and other occupational hazards which requires that protective clothing which ensures comfort and safety be worn. Although researchers have carried out studies in the area of developing functional apparel to address work or task-related needs, no specific effort has been made to develop functional apparel for the small,

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medium and large sized population of cosmetologists in Lagos, Nigeria with reference to fit evaluation. This gap needs adequate attention, hence this study.

Fit means the body/garment interface, and is further defined by Ashdown (2001) as the perceived relationship between body surface and the garment. Fit is determined by the interaction of the garment with body measurements, which must be accurate and precise. Clothing size and design features also affect fit. Good fit is essential for the wearer's comfort and satisfaction with the garment. According to LaBat and Sokolowski (1999), since the consumer determines on an individual basis what comprises good fit, an understanding of fit satisfaction from the consumer's perspective becomes an important and complex issue. According to Newcomb and Istook (2012), apparel fit influences the aesthetic, functional and expressive performance of a garment.

A garment that fits well will hang from the shoulder to the hemline without the appearance of strain, tightness, gaping or looseness. According to Armstrong (2010) and Ashdown (2001), the sleeve will be in perfect alignment with the arm. The garment will appear neither too short nor too long from neckline to waistline and from waistline to hemline. It will appear neither too tight nor too loose for comfort. The hemline and horizontal balance lines (HBL) will be parallel to the floor. The centre lines of the garment will be in perfect alignment with the figure regardless of body symmetry, proportions and stance. That is, the figure need not be perfectly symmetrical (Thompson & Anyakoha, 2012). The proportions and stance may be less than ideal, but the garment will still align properly when well fitting.

Aesthetic preferences play some role in individual judgements of fit. Perception of fit and aesthetic preferences can vary based on age and cultural background (Pisut & Connell, 2007). The result of these various influences makes Watkins (1995) opine that there can be a great deal of individual variation in what is perceived as a good fit. On the other hand, Armstrong (2010) believes that a garment with a poor fit is caused by the curves of the body displacing the natural hang of the garment. These manifests in the following identifiable conditions: sleeve out of alignment with the arm, garment too long or too short, strain lines, tightness and gaping or looseness appearing in the garment. Betzina (2007) concludes that choosing materials wisely, using some effective method of suspension and proper choice of fastening system, consideration of individual aesthetic preferences and perception of garment fit, are major factors in achieving fit and adjustability in clothing.

Judgments of fit are partially a subjective decision as some people prefer loose-fitting clothes while some people prefer tight-fitting ones. Ring (2001) therefore concludes that the person wearing the apparel, however becomes the ultimate judge of overall fit, even if they are fickle in their standards. This study therefore relied in part on self-reported or self-adjudged fit issues to assess the fit of functional apparel developed for users in the cosmetology trade in Lagos, Nigeria.

Ease, according to Huck, Maganga and Kim (1997) is defined as the difference between the size of the garment and the size of the wearer. Ease also refers to the additional fabric needed to cover the body at certain locations and directly influences mobility and comfort through fit ease and style ease (DeLong, Ashdown, Butterfield, & Turnbladh, 1993). It is an actual measurable distance, whereas fit is a relationship. Fit ease allows for body movement and allows the garment to sit slightly away from the body. Fit ease also prevents the garment from binding.

Appropriate ease amounts vary depending on the function of the garment, the body area covered and the fabric properties involved. Great amounts of ease may be required for movement and/or ventilation in some occupations but discouraged in others because of the danger of extra fabric catching in machinery (Watkins, 1995). Style ease is the amount added to create visual effect. For example, all female and male jackets have a small amount of garment ease to allow for raising the arms and bending the torso, while some have significant style ease to allow the garment to have its own tailored shape apart from the body. Sindicich (2008) reiterates that judgements of fit are often confused by style ease taking the place of garment ease when the wearer's body dimensions exceed those the design was intended for. For this reason, loose fitting styles are expected to have higher rates of accommodation. Four factors that affect the amount of ease needed in a garment have been identified by DeLong et al. (1993). These are garment fashion, fabric type, body movement and wearers' level of activity.

According to Ashdown, in Watkins (1995), once a set of graded patterns is developed, it is very important to conduct a full set of fit tests to check for problems and make final adjustments in the

patterns. One garment in each size is tested in a fit test. Subjects should be chosen that represent both the extremes of each size and the range of body types within each size. Garments are tested by assigning each subject the appropriate size, based on the key dimensions used to develop the sizing system. The garment is then donned along with any other clothing or equipment to be used with the outfit and a series of tests is conducted. These tests include examination by an expert while the subject is in both static and dynamic positions, comfort and fit ratings from the wearer, and a variety of physical tests (Yu, 2004). Each subject is also measured, so that any problems that are discovered can be correlated with the subjects' individual size and configuration.

According to Yu (2004), the expert rating of the garment is designed to identify areas of binding or inappropriate looseness, stress points, or areas where excessive wear may occur. Tools such as pressure gauge may be used to objectively measure stresses, but the expert also examines the appearance of the garment for wrinkle lines, seams hanging unevenly, or areas of excess fabric. Subject responses to questions of comfort and fit are extremely subjective; nonetheless this information is essential, as the subject wearing the garment is the only one who can actually feel what is happening. This information is generally gathered using a questionnaire in which the subject rates responses on a scale representing a range of feelings.

Physical tests can be conducted for a wide range of functions depending on the purpose of the garment. Some examples of physical testing include time of donning and doffing, range of motion, range of vision, grip strength and ability to manipulate objects (Watkins, 1995; Yu, 2004). A functional apparel product's quality and performance cannot be ascertained without fit-testing the product on user models. The literature on fit, ease and fit-testing guided the researcher on how the cosmetologist's functional apparel should be produced and tested for optimum performance on fit in designated areas of the body.

The purpose of this study therefore was to assess the fit of functional apparel developed for cosmetologists in Lagos, Nigeria. Specifically the study determined the mean ratings of cosmetologists (small, medium and large) on fit of the functional apparel product while standing, sitting and in motion. The small, medium and large sizes of the apparel products were selected based on standardised commercial sizing system obtained from a range of anthropometric data outlined by Ashdown (2007) and Decker (2007). The sizes are in these categories: (a) small (8-10), (b) medium (12-14) and (c) large (16-18).

## Methods

The study employed a descriptive and exploratory design and was conducted in Lagos, Nigeria. The population used for the study was 3,820 cosmetologists in Lagos (NDE, 2006). Only 200 out of the entire population attended a meeting convened by the research team (researcher/assistant). Out of the 200 participants, the criterion purposeful sampling technique was used to select 24 subjects based on certain important criteria (professional qualification, age, weight, years of experience, size and height), which were necessary to provide the relevant information needed for the study. Therefore, the 24 cosmetologists made up the fit models which were used for the prototype apparel fitting trials. The research instrument *Functional Apparel Design Assessment Instrument for Cosmetologists* (FADAC) adapted from Yu (2004) was tested for internal consistency using Cronbach alpha coefficient for the fit clusters of FADAC. The values were 0.70, 0.72, and 0.77 for the three size categories of small, medium and large consumers. The research question was answered using means and standard deviations, while the hypothesis was tested using Analysis of Variance (ANOVA) at .05 level of significance.

### Apparel product design and development

The product design and development as captured in Thompson and Anyakoha (2012) shows a functional apparel set made up of shirt, pant and apron (Figure 1). Design ideas were generated for the study based on responses given by subjects in a previous needs assessment study. The apparel items for the upper torso (Figures 2a and b) and lower torso (Figure 3) and their characteristics included the following:

1. Centre front button shirt with choice of long or short straight sleeves, straight shirt silhouette slightly curved at hemline, patch pockets with flaps, shirt collar and polyester/cotton blend with solid cool or warm colours to suit association's colour code.

2. Pants with a centre-front zipper and button closure, trouser style waistband, cargo pockets, straight leg silhouette, choice of ankle or below knee length in a wash and wear polyester/cotton blend; solid cool or warm colours
3. Centre front snap fasteners round neck sleeveless apron. Mid-thigh length and straight silhouette slightly curved at hem made of water repellent breathe-able cool coloured fabric. Design has big patch pockets at hip and chest with pen slot.

The researcher brainstormed over these design ideas to arrive at a final idea that could best capture the performance of cosmetologists regarding functional apparel for usage in their occupation.

After numerous ideas, a final design idea was selected and patterns were developed for the final idea based on the mean measurements obtained in phase 1 of the study in sizes: small, medium and large categories. The pattern-making principles of Armstrong (2010) were adopted and used to produce the final patterns for the prototype apparel. The apparel set was then constructed in the sizes specified—small, medium and large. Fit assessments and scoring of the functional apparel product was carried out after the presentation of the product to potential users.



**Figure 1** Designed functional apparel set made up of shirt, pant and apron



Figure 2a Shirt

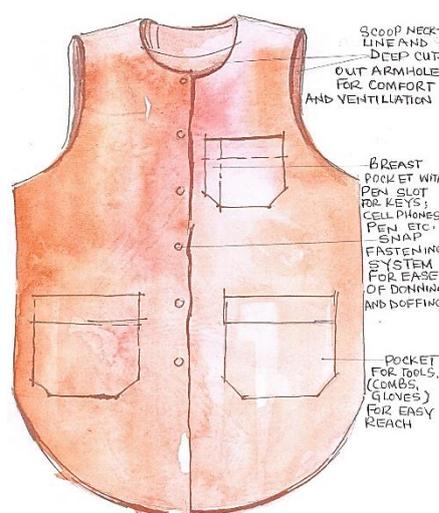


Figure 2b Apron



Figure 3a Pants (front view)

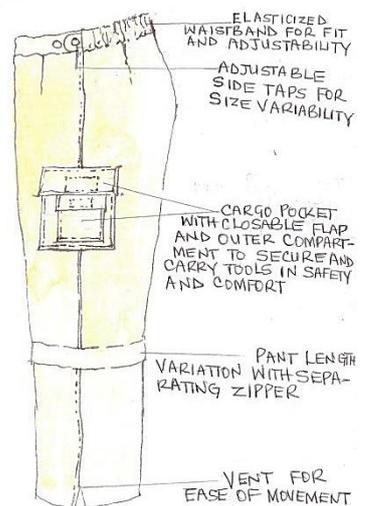


Figure 3b Pants (side view)

### Assessment/scoring of the functional apparel product

#### User models

The selected cosmetologists who served as fit models for the prototype apparel fitting trials were invited through the National Association of Hairdressers, Cosmetologists and Barbers (NASHCO), Lagos branch to a meeting convened by the researcher. Each of the 24 cosmetologist models was given the FADAC instrument to go through before completing it. After relevant instructions, subjects were allowed two hours to rate the functional apparel product on fit scale (Excellent Fit—5; Good fit—4; Satisfactory fit—3; Poor fit—2; Does not fit—1) while standing, sitting and in motion (Figure 4). The subjects were again given the apparel to wear and perform such tasks as hair styling, shampooing, pedicure, manicure, and storing away equipment and tools in a field setting and to rate the prototype apparel on the fit scale. All copies of the FADAC were given back to the researcher after the two rating sessions, thus attained 100% return. The responses from the cosmetologists were collated and the average score was used for the analysis.

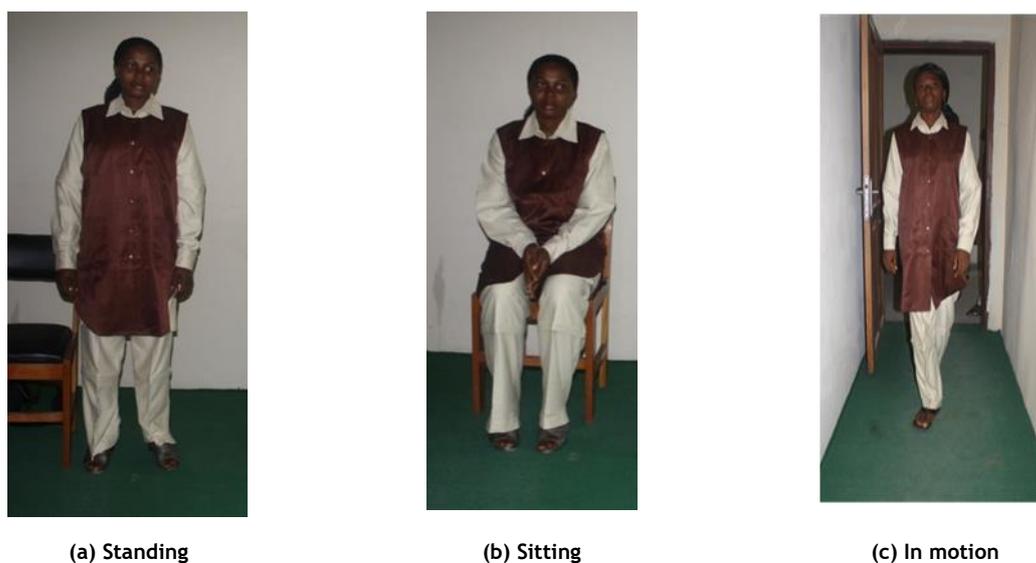


Figure 4 Fit model

## Data presentation/ analysis

### Research question

What are the ratings of the small, medium and large-size cosmetologists on fit of the functional apparel?

Table 1 shows the mean ratings of cosmetologists on the fit of functional apparel when standing, sitting and in motion on a 5-point Likert-type scale (5 = *Excellent fit*, 1 = *Does not fit*). As shown in the table, fit items included “tightness of neckline”, “armhole pinching”, “fit of shoulder area”, “fit of bust area”, “fit of waist area”, “fit of hip area”, “fit of thigh area”, “fit of leg area” and “overall length”. Cosmetologists reported high mean fit ratings when standing, sitting and in motion for all items in the fit scale. The mean values ranged from 3.58 to 4.67 indicating good fit of the functional apparel at different parts of the body when participants fit-tested the functional apparel set.

Table 1 Mean Ratings of Cosmetologists on Fit of Functional Apparel

S/n	Fit area	Standing		Sitting		Motion		Remarks
		M	SD	M	SD	M	SD	
1	Tightness of neckline	3.83	0.565	4.25	0.608	4.42	0.504	Good fit
2	Armhole pinching	4.08	0.776	4.33	0.637	4.58	0.504	Good fit
3	Fit of shoulder area	4.42	0.654	4.08	0.776	4.67	0.637	Good fit
4	Fit of bust area	4.33	0.637	4.33	0.868	3.92	0.974	Good fit
5	Fit of waist area	4.25	0.608	4.17	0.565	4.25	0.608	Good fit
6	Fit of hip area	4.25	0.737	3.58	0.654	4.08	0.654	Good fit
7	Fit of thigh area	4.25	0.608	3.83	0.816	4	0.59	Good fit
8	Fit of leg area	4.17	0.702	4.17	0.702	4.33	0.963	Good fit
9	Overall length	4.17	0.816	4.5	0.511	4.42	0.654	Good fit

Note: Fit descriptors were rated on a 5-point Likert-type scale where “5” = Excellent fit and “1” = Does not fit.

### Hypothesis

There is no significant difference in the mean ratings of small, medium and large size users on fit of functional apparel.

Data verifying this hypothesis are presented in Tables 2, 3 and 4.

**Table 2** Result of one-way ANOVA of Subjects' Rating on Fit of Functional Apparel while Standing

S/n	Source of variation		Sum of Squares(SS)	Df	Mean Square (MS)	f-cal	Sig. 0.05	Decision
1	Tightness of neckline	Between Groups	2.333	2	1.167	4.9	0.018	Reject
		Within Groups	5	21	0.238			
		Total	7.333	23				
2	Armhole pinching	Between Groups	2.333	2	1.167	2.13	0.144	Accept
		Within Groups	11.5	21	0.548			
		Total	13.833	23				
3	Fit of shoulder area	Between Groups	2.333	2	1.167	3.267	0.058	Accept
		Within Groups	7.5	21	0.357			
		Total	9.833	23				
4	Fit of bust area	Between Groups	2.333	2	1.167	3.5	0.049	Reject
		Within Groups	7	21	0.333			
		Total	9.333	23				
5	Fit of waist area	Between Groups	1	2	0.5	1.4	0.269	Accept
		Within Groups	7.5	21	0.357			
		Total	8.5	23				
6	Fit of hip area	Between Groups	1	2	0.5	0.913	0.417	Accept
		Within Groups	11.5	21	0.548			
		Total	12.5	23				
7	Fit of thigh area	Between Groups	3	2	1.5	5.727	0.01	Reject
		Within Groups	5.5	21	0.262			
		Total	8.5	23				
8	Fit of leg area	Between Groups	2.333	2	1.167	2.722	0.089	Accept
		Within Groups	9	21	0.429			
		Total	11.333	23				
9	Overall length	Between Groups	1.333	2	0.667	1	0.385	Accept
		Within Groups	14	21	0.667			
		Total	15.333	23				

This hypothesis sought to compare the mean ratings of small, medium and large size users on functional apparel fit while standing. The rating was done on a 5-point Likert-type scale. The scores were summed to create a total fit score. ANOVA was run to test whether there was a significant difference in the mean ratings of these three groups of subjects. As presented in Table 2, three out of the nine items in the table showed significant difference. These items include "tightness of neckline", "fit of bust area" and "fit of thigh area". The rest of the fit areas on the body showed no significant difference. Therefore the P-value on six variables are  $>.05$  and the null hypothesis accepted, while the P-values on the three variables are  $<.05$  and thus the null hypothesis rejected.

**Table 3** Result of one-way ANOVA of Subjects' Rating on Fit of Functional Apparel while Sitting

S/n	Source of variation		Sum of Squares(SS)	Df	Mean Square (MS)	f-cal	Sig. 0.05	Decision
1	Tightness of neckline	Between Groups	1	2	0.5	1.4	0.269	Accept
		Within Groups	7.5	21	0.357			
		Total	8.5	23				
2	Armhole pinching	Between Groups	4.333	2	2.167	9.1	0.001	Reject
		Within Groups	5	21	0.238			
		Total	9.333	23				
3	Fit of shoulder area	Between Groups	1.333	2	0.667	1.12	0.345	Accept
		Within Groups	12.5	21	0.595			
		Total	13.833	23				
4	Fit of bust area	Between Groups	6.333	2	3.167	6.045	0.008	Reject
		Within Groups	11	21	0.524			
		Total	17.333	23				
5	Fit of waist area	Between Groups	2.333	2	1.167	4.9	0.018	Reject
		Within Groups	5	21	0.238			
		Total	7.333	23				
6	Fit of hip area	Between Groups	0.333	2	0.167	0.368	0.696	Accept
		Within Groups	9.5	21	0.452			
		Total	9.833	23				
7	Fit of thigh area	Between Groups	1.083	2	0.542	0.798	0.463	Accept
		Within Groups	14.25	21	0.679			
		Total	15.333	23				
8	Fit of leg area	Between Groups	1.333	2	0.667	1.4	0.269	Accept
		Within Groups	10	21	0.476			
		Total	11.333	23				
9	Overall length	Between Groups	1	2	0.5	2.1	0.147	Accept
		Within Groups	5	21	0.238			
		Total	6	23				

The result of the one-way ANOVA of subjects mean ratings on fit while sitting (Table 3) shows that three different items including “armhole pinching”, “fit of bust area” and “fit of waist area” indicated significant differences in the mean ratings ( $P < .05$ ). The null hypothesis was rejected for these three variables. On the rest of the sources of variation—neckline, shoulder, hip, thigh and leg areas plus overall length—the table shows no significant differences ( $P \geq .05$ ). The null hypothesis was accepted for these six variables.

Table 4 Result of one-way ANOVA of Subjects' Rating on fit of Functional Apparel while in Motion

S/n	Source of variation		Sum of Squares(SS)	Df	Mean Square (MS)	f-cal	Sig. 0.05	Decision
1	Tightness of neckline	Between Groups	1.333	2	0.667	3.111	0.066	Accept
		Within Groups	4.5	21	0.214			
		Total	5.833	23				
2	Armhole pinching	Between Groups	4.333	2	2.167	30.333	0	Reject
		Within Groups	1.5	21	0.071			
		Total	5.833	23				
3	Fit of shoulder area	Between Groups	2.333	2	1.167	3.5	0.049	Reject
		Within Groups	7	21	0.333			
		Total	9.333	23				
4	Fit of bust area	Between Groups	17.333	2	8.667	40.444	0	Reject
		Within Groups	4.5	21	0.214			
		Total	21.833	23				
5	Fit of waist area	Between Groups	1	2	0.5	1.4	0.269	Accept
		Within Groups	7.5	21	0.357			
		Total	8.5	23				
6	Fit of hip area	Between Groups	2.333	2	1.167	3.267	0.058	Accept
		Within Groups	7.5	21	0.357			
		Total	9.833	23				
7	Fit of thigh area	Between Groups	1	2	0.5	1.5	0.246	Accept
		Within Groups	7	21	0.333			
		Total	8	23				
8	Fit of leg area	Between Groups	2.333	2	1.167	1.289	0.296	Accept
		Within Groups	19	21	0.905			
		Total	21.333	23				
9	Overall length	Between Groups	2.333	2	1.167	3.267	0.058	Accept
		Within Groups	7.5	21	0.357			
		Total	9.833	23				

As shown in Table 4, the P-value for six variables are  $>.05$  which implies that the hypothesis is accepted on these variables while three variables whose P-values are  $<.05$  indicate that there are significant differences and therefore the null hypothesis that there is no significant difference in the mean ratings of small, medium and large-size users on fit of functional apparel (while subjects were in motion) was rejected.

## Findings

Based on the data analysis, the following findings were made:

Mean fit ratings of cosmetologists show high values when subjects were standing, sitting and when in motion for all items in the fit scale. Although mean fit scores were higher when subjects were in motion than standing and sitting, all mean scores were  $> 3.50$  with mean scores ranging from 3.58–4.67, indicating very good fit of functional apparel.

The study hypothesis was tested using ANOVA to determine if there was any significant difference in the mean ratings of small, medium and large cosmetologists on fit of the apparel. The fit test was done while subjects were standing, sitting and in motion. Out of nine variables on the fit scale, the

p-value in six variables was found to be  $> .05$  while it was found to be  $< .05$  in three variables while subjects were standing. The null hypothesis was therefore accepted and rejected respectively. The items in which it was rejected include items 1, 4 and 7 (Table 2). While sitting (Table 3), items 2, 4 and 5 had the p-value  $< .05$ . The null hypothesis was rejected in those variables and accepted in the rest. The null hypothesis was again rejected in three items on the fit scale while subjects were in motion. These items include items 2, 3 and 4 (Table 4).

## Discussion of Findings

Based on the findings of the study, the discussion is organised around information and data presented by the purpose, research question and hypothesis of the study.

Several studies agree that men and women rank fit as the most important clothing evaluation criteria (Sindicich, 2008; Turk & Black, 2003). If apparel does not fit the wearers' standards, it will not be purchased and it will not be worn. As indicated in Table 1, small, medium and large size participants reported high mean fit ratings when standing, sitting and when in motion for all items on the fit scale. Mean values ranged from 3.58 to 4.67 indicating good fit. This result is surprising and actually not expected because it contradicts the findings of studies which have reported dissatisfaction with fit in large-sized figures for garments covering both upper and lower body (Ring, 2001; Pisut & Connell, 2007). Each person has different fit criteria; one may prefer easy-fitting, while the other may prefer tight-fitting garments. Although mean body measurements were used to produce the apparel with appropriate ease allowance which accounted for the good fit, informal discussion with participants disclosed a desire for fit that is more customised and form-fitting.

## Conclusion

In conclusion, good fit is essential for the wearer's comfort and satisfaction with the garment, which results in happiness and wellbeing. If a garment does not fit the wearer's standard, it will not be purchased and will not also be worn. When clothing fits, it means there is conformity to the body without causing discomfort or impeding movement. Each occupation or individuals require different fit criteria. An individual may wear his clothing baggy while another may prefer slim or tight fitting silhouette. Apparel fit influences the aesthetic, functional and expressive performance of a garment. Although the present study looked at physical fit perception of cosmetologists, it is apparent that other dimensions of fit that were not investigated could pose impending dissatisfaction in consumer apparel product. This means that fit perceptions and evaluation from the consumers perspective needs to be looked at in multiple dimensions.

## Recommendations

A comprehensive analysis of the functional apparel fit is required on each item of the functional apparel set to identify specific ways of improving apparel fit for increased comfort, performance and satisfaction on each item of apparel.

## Implication

The findings of this study implies that apparel manufacturers will benefit from developed patterns to facilitate large-scale production of occupational apparel meant to fit a wide variety of sizes and figure types of consumers. Orders could also be made for sizes not accommodated in this study by mass-customisation to ensure extra quality products at a cost lower than custom-made products. Patterns obtained could also be commercialised and they could serve as good substitutes for banned imported patterns in Nigeria.

## Biographies

Dorothy Thompson hails from Ibeno Local Government Area of Akwa Ibom State and holds Nigerian citizenship. She received a Master's degree from Michigan State University, East Lansing and a PhD from University of Nigeria, Nsukka in Home Economics Education, 2011. Her research interest and publications are generally in Home Economics as an interdisciplinary subject and specifically in Clothing, Textiles and Product Development. She belongs to many professional associations including International Federation for Home Economics (IFHE); South African Association of Family Ecology and Consumer Studies (SAAFECs) and Home Economics Research Association of Nigeria (HERAN).

Professor Elizabeth Anyakoha is a teacher and researcher in Home Economics discipline. She has published several articles in local and international journals. She is the editor of the Nigerian Journal of Home Economics Research and belongs to several other professional associations in Nigeria and abroad.

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