DIFFERENCES IN FORMAL EDUCATION AMONG NORWEGIAN HOME ECONOMICS TEACHERS

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Abstract

Many Norwegian teachers in Food and Health (Home Economics) do not have any formal subject-specific education. This study aims to explore potential differences between teachers with formal versus no formal Food and Health education. In 2018, Food and Health teachers in all primary and lower secondary schools in Norway were invited to answer a web-based questionnaire. In total, 1170 Food and Health teachers completed the questionnaire. We found several differences between the groups. Most importantly, 49% of the teachers at the secondary school level had formal Food and Health education despite national requirements. Also, a higher proportion of the formally educated group showed more contentment with teaching and reported to a greater extent mastering teaching ($p \leq 0.001$) compared to the non-educated group. With higher coverage of formally educated teachers in Food and Health, the subject can be strengthened towards fulfilling its potential of being influential for motivation, knowledge and life skills related to food and health.

Keywords: home economics, food and health, experiences, education level, teachers, questionnaire, Norway

Introduction

In Norway, compulsory school consists of 10 years for all students and Home Economics has been a part of the Norwegian school curriculum since 1890 (Askeland et al., 2017). The subject has undergone some changes during previous years, e.g. up until 1959 it was mandatory only for girls, but after that it became mandatory for both genders. In 2006, Home Economics was replaced with the school subject Food and Health (FH). The subject remained mandatory in primary and lower secondary school. FH aims to provide students with the ability to critically reflect on food choices and meals, and develop cooking skills to obtain a health- promoting lifestyle (The Norwegian Directorate for Education and Training, 2006). In 2015, the Ludvigsen

committee was appointed by the Norwegian government to address what students need to learn in school in a perspective of 20 to 30 years, i.e. which competences will be important in further education and working life, and how to be responsible members of society (Ludvigsen, 2015). Based on input from the Ludvigsen committee, one of three overarching interdisciplinary topics in the core curriculum (to be applied from 2020) will be *health and life skills* (The Norwegian Directorate for Education and Training, 2019a). Life skills refers to the ability to understand and influence factors that are important for mastering one's own life. The topic *health and life skills* aims to give the students competence which promotes sound physical and mental health and enables them to make good health choices that have great impact on health e.g. lifestyle habits (The Norwegian Directorate for Education and Training, 2019a).

A healthy diet is fundamental for good health. An unhealthy diet is an important preventable risk factor for non-communicable diseases (NCDs), such as cardiovascular diseases, diabetes type II and obesity. This is well documented by the Global Burden of Disease Study 2017 where Norway is included (Afshin & Collaborators, 2019). Norwegian children have a diet with low intakes of wholegrain, fish, fruits and vegetable (Hansen et al., 2015). According to the new curriculum of 2019 (The Norwegian Directorate for Education and Training, 2019b), the school subject FH in Norway is important in teaching the students how to plan, cook and experience a meal together with their peers according to the dietary guidelines. Further, the subject is important for students to establish an understanding of how food is related to their own health. In a public health perspective, large societal gains may be acquired in prevention of NCDs, if the population adhered to dietary guidelines (Sælensminde et al., 2016). Dietary habits develop early and track into adulthood (Craigie et al., 2011; Scaglioni et al., 2018). Since all children in Norway attend school, FH may contribute fundamentally to the attainment of dietary life skills.

In 2018 there were 2821 primary schools and lower secondary public schools in Norway (according to Statistics Norway), and FH were taught in almost all schools (except a few international schools). Statistics Norway published a report documenting teachers' formal qualification in the subjects they teach, including FH, in primary and lower secondary school. The report showed that FH has the lowest proportion of teachers with 60 ECTS (European Credit Transfer and Accumulation System) in FH from their teacher training and that 6 out of 10 teachers in FH across primary and lower secondary school do not have any formal education in FH at all (Perlic, 2018/19).

In a report from 2008, Falch and Naper studied how teachers' formal education affects students' achievements in final exams. They found that an increased formal teacher competence (i.e. university degree vs. a lower educational degree) was related to increased academic achievements among students, but found no association between the subject specific formal education and academic achievements (Falch & Naper, 2008). Mathematics and basic reading skills were used as examples of students' academic performance on national tests and final exams in the report (Falch & Naper, 2008) and FH was not a part of this study. International studies have also found that having completed a formal teacher training, is an important factor affecting student

achievement (Andersson et al., 2011; Darling-Hammond, 1999). Contrary to the findings of Falch and Naper (2008), other international studies have shown that certified teachers with subject-specific education are important for student achievement (Blank & de las Alas, 2009; Darling-Hammond, 1999; Darling-Hammond & Youngs, 2002; Kunter et al., 2013; Metzler & Woessmann, 2012), and that "student learning should be enhanced by the efforts of teachers who are more knowledgeable in their field and are skilful at teaching it to others" (Darling-Hammond, 1999)(page 33). The term "pedagogical content knowledge" (PCK), the combination of content knowledge and pedagogical knowledge (Shulman, 1987) is often mentioned in the literature (Fauth et al., 2019; Förtsch et al., 2016; Kunter et al., 2013). A large study on teacher's self-efficacy in 14 OECD (Organisation for Economic Co-operation and Development) countries found, amongst other, that teacher's self-efficacy was strongly linked to student achievement and that experienced teachers had higher self-efficacy (Fackler & Malmberg, 2016). Finally, in addition to self-efficacy, competencies, like showing enthusiasm and being a visible leader may have a positive impact on student achievement (Fauth et al., 2019; Kunter et al., 2013; Nordenbo et al., 2008).

Educating high-quality teachers with subject-specific competences has been an important political initiative in Norway in recent years (Ministry of Education and Research, 2014, 2015). As a result, in some subjects, 30 ECTS are now required to teach a subject at the primary school level and 60 ECTS are required at the lower secondary school level (The Norwegian Directorate for Education and Training, 2015). The requirements for teaching FH in lower secondary schools consist of at least 30 ECTS (i.e. formal FH education) as part of the teacher training (The Norwegian Directorate for Education and Training, 2015). These requirements only apply to teachers with a permanent position, hired after January 1st, 2014. In primary schools, there are no requirements for a subject- specific education in FH. Consequently, a newly published report assessing policy and efforts regarding healthy food environments in Norway suggests specifically to require teachers to have subject-specific education to teach FH as a means to strengthen nutrition work in the public sectors (Torheim et al., 2020). This acknowledges the importance of qualified teaches in order to serve as a health-promoting subject. Food and Health is a complex subject to teach and some teachers are not aware of their lack of subject specific competence themselves (Ask et al., 2020).

The ethical aspects in food and health are important to consider as it addresses the students' own health. Careful considerations are needed to avoid students feeling blame for an unhealthy diet or lack of food knowledge. The topic may give positive attention to the importance of food and health but may also lead to negative attention, e.g. eating disorders which are important to be aware of.

In order to understand how the subject FH can be strengthened to fulfil its potential of influence motivation, knowledge and skills related to food and health, more knowledge is needed concerning the educational level among teachers in FH; to which degree FH teachers feel that they master their work, whether and to which degree they are content with teaching FH, and how

satisfied they are with how the subject is taught in schools today.

The aim of this study was to explore potential differences between teachers with formal versus no formal subject-specific Food and Health education regarding school level, gender, age, length of experience in teaching, contentment and feeling of mastering teaching Food and Health, and whether they include basic skills, and seeing potential needs for a renewal of Food and Health in Norway.

Method

This present study is a part of a wider project called LifeLab Food and Health. The design was cross-sectional, and the data was collected between April and May in 2018. Prior to this, a short email containing an introduction to the project and a link to the project's home page (www.uia.no/lifelab) was distributed to the head teachers at all primary schools and lower secondary schools in Norway (n=2821). The web page contained an anonymous online questionnaire and the details about the study. The head teacher at each school was asked to redistribute the email to their FH teachers, being the target group for the study. An invitation to participate in the survey was also published on two Facebook pages relevant for teachers in FH, in addition to an advertisement in the journal published by The Norwegian Association for teachers in Food and Health. The anonymous, web-based questionnaire was made using SurveyXact 8.2 and contained some items from a previously used questionnaire (Bottolfs, 2020). The FH teachers gave their consent by answering the questionnaire. Two reminders were sent within five weeks after the initial email distribution. The questionnaire was closed for participants approximately two weeks after the last reminder. The LifeLab Food and Health project was approved by the Norwegian Centre for Research Data (ref.59097), and the Ethical committee of Faculty of Health and Sport Sciences at the University of Agder.

Measures

The questionnaire contained 25 items covering demographics, structure of the FH subject, contentment of teaching in FH and seeing potential needs for a renewal of FH. The items were developed in collaboration with colleagues at University of Agder. The survey was pilot tested among colleagues with experience working as FH teachers. Age were measured by "What is your age" and the response categories were: *18-21, 22-25, 26-30, 31-35, 36-40, 41-45, 46-50, 51-55, 56-60 and >60.* These were merged and recoded into the categories 18-30, 31-40, 41-50, 51-60 and >60 which represented the distribution of the data (table 1). Length of experience as a FH teacher was measured as "How many years have you worked as a FH teacher (including home-economics)?". The response categories were: *<1 year, 1-5 years, 6-10 years, 11-15 years, 16-20 years, 21-25 years and 26 years or longer.* These categories were merged into 0-5 years, 6-15 years and ≥15 years which represented the distribution of the data (table 1).

Formal subject specific education in FH were measured by "what is your educational level

in FH? The 11 response categories were "*1=general teacher without formal training in FH", "2=general teacher with 15 ECTS in FH", "3=general teacher with 30 ECTS in FH", "4=general teacher with 60 ECTS in FH", "5=30 ECTS in FH without general teacher education", "6=60 ECTS in FH without general teacher education", "7=Home Economics teacher (old title)", "8=chef", "9=restaurant and food processing (from upper secondary school)", "10=unskilled/assistant" and "11=other".* Some of the answers in the open-ended "other" alternative were manually moved into one of the other categories based on what was considered appropriate. For example, answers like chefs or bachelor's degree in nutrition who also holds a pedagogical degree were placed at general teacher without formal training in FH as both chef and bachelor's degree in nutrition do not qualify for teaching FH. The FH education variable was recoded into a dichotomized variable denoting teachers with formal FH education (response category 2,3,4,7; n=512) and teachers without formal FH education (response category 1,5,6,8,9,10,11; n=658). School levels of teaching were measured by "which level do you teach FH"? Response categories were from grade 1 to grade 10, and they were merged into two categories: teaching at primary school level (grades 1-7, n=615) and secondary school level (grades 8-10, n=555).

Contentment as a FH teacher and Extent of Mastering the Subject

Contentment as a FH teacher was measured by "How content do you feel with teaching FH?", and the response categories were: *Very content, content, neither content nor not content, little content and very little content.* They were merged into three categories: Very content/content, neither content nor not content, little content/very little content. Mastering the task of teaching FH were measured by "To what extent do you feel that you master teaching in FH?". The response categories were: *very large extent, large extent, to some extent, to little extent, very little extent.* Responses were merged into two categories: Very large/large extent and to some/little/very little extent. This was due limited number of responses in some categories, and therefore represented the distribution of the data.

Teachers Views on Content of Food and Health

Teachers were asked about how they include basic skills in in their teaching by: "To what extent do you include the five basic skills (oral, writing, reading, mathematics, use of digital skills) in your FH teaching?" Use of dietary guidelines in FH class were measured by "To what extent do you follow the dietary guidelines when deciding what food to make in FH class?" The response categories for both items were: *very large extent, large extent, to some extent, to little extent, very little extent.* Response categories were merged into 2 categories: Very large/large extent and to some extent/little/very little. This was due limited number of responses in some categories, and therefore represented the distribution of the data. Relevance to the society was measured by: "To what extent do you feel that food and health is viewed as relevant for the society?" Attitudes

regarding diet and health were measured by: "To what extent do you feel that teaching FH fosters positive attitudes towards diet and health?" Being a resource person for the students were measured by: "To what extent do you regard FH teachers as a resource in prevention and health promotion among students?" The response categories for these three items were: *very large extent, large extent, don't know, to little extent, not at all.* Response categories were merged into three categories: Very large/large extent, don't know, to little extent/not at all which represented the distribution of the data. Regarding a potential need for renewal of FH in Norwegian schools, the teachers were asked: "Do you feel a need for a renewal of FH?" The response alternatives were: *No, it works fine as it is* or *yes, it's time for a renewal.*

Statistics.

All data were analysed using the IBM SPSS statistical software package version 25.0. For all tests, P≤0.05 was considered significant. Descriptive statistics with frequencies in percentages were used. Cross tabulation (Chi-square tests) were used to test differences between groups.

Results

An overview of the proportions of different educational levels among FH teachers in Norway is presented in table 1 (Appendix). In total, 1170 FH teachers completed the questionnaire of whom 43.8% had formal FH education (EDU group) (n=512) and 56.2% had no formal FH education (no EDU group) (n=658) (table 2, Appendix). Among the teachers teaching at secondary school level (n=555), grade 8-10, 48.6% had a formal FH education (data not shown). A higher proportion of the EDU group taught at lower secondary school level compared to the no EDU group (p=≤0.001). There were more women than men (>85%) in the total sample, but there were no gender differences between the EDU group and the no EDU group (table 2).

In this data, a higher proportion of the EDU group was younger (p≤0.001) and had more years of experience teaching FH compared to the no EDU group (p≤0.001) (table 2). Likewise, a higher proportion of the EDU group showed contentment with teaching FH (p≤0.001) and reported to a larger extent to master the teaching of FH compared to the no EDU group (p≤0.001) (table 2). A higher proportion of the EDU group reported including the basic skill of writing in FH classes compared to the no EDU group (p=0.02) (table 3, Appendix). A higher proportion of the EDU group was in favour of a renewal of the subject while a higher proportion of the no EDU group reported that the subject works fine as it is (p=0.01) (table 3).

Discussion

According to our findings, 44% of the teachers in the total sample engaged in teaching FH had formal FH education. Further, when only looking at teachers teaching FH in lower secondary school, 49% of the teachers were formally qualified. Teachers with formal FH education were

younger and had longer experience teaching the subject than the no EDU group (teachers without formal FH education). In the EDU group, more teachers felt they mastered their job and felt more content with teaching FH than in the no EDU group. More teachers in the EDU group reported including writing as a basic skill compared to the no EDU group and more teachers in the EDU group were in favour of a renewal of the subject compared to the no EDU group. These results were for the total sample, regardless national requirements of formal education in Food and Health.

Given that the requirements for formal education (ECTS in FH) only apply to lower secondary school and for teachers hired after January 1st, 2014, it is not surprising that a higher proportion of teachers in the EDU group teaches at the lower secondary school level. The new requirements for formal education in FH from 2014 may explain why there were only half of the teachers that complied with 30 ECTS and why there were a higher proportion of younger teachers in the EDU group. This contrasts with the most recent report from Statistics Norway which found that a higher proportion of older teachers had formal education in FH compared to their younger colleagues (StatisticsNorway, 2019). FH has the largest proportion of teachers without subject-specific education across all subjects (StatisticsNorway, 2019). Because the practical aesthetical subjects like FH have no requirements to formal education in primary school and a lower requirement (30 ESCT) in lower secondary school compared to some other subjects, this may create a gap in the quality of teaching between these subjects, and maybe more importantly, the learning outcome among the students. FH aims to provide students with the ability to critically reflect on food choices and meals in order to adhere to a health-promoting lifestyle (The Norwegian Directorate for Education and Training, 2006). Given the importance of teachers' subject specific education on student achievement discussed initially e.g. (Blank & de las Alas, 2009; Kunter et al., 2013; Metzler & Woessmann, 2012) such in-depth and complex issues should be taught by well qualified teachers, as highlighted by (Darling-Hammond, 1999). From 2020, a master's specialization in FH as part of teacher training will be offered in Norway. This may contribute to a higher number of educated teachers in FH and further increase the status of the subject.

A higher proportion of teachers with formal FH education had longer experience teaching the subject than the no EDU group, indicating that the EDU group, to a greater extent, continue teaching FH when they first get assigned to teaching it. A higher proportion of teachers in the EDU group felt they mastered their job compared to the no EDU group in addition to feeling more content with teaching. The difference between the groups might be explained by the importance of having subject-specific competence in order to increase teacher self-efficacy (Nordenbo et al., 2008). As discussed initially, a higher level of self-efficacy might also support student achievement (Fackler & Malmberg, 2016).

Although there was a significant difference between the two groups, both groups reported high levels of contentment in teaching FH and to master their teaching in FH (around 90%). It is likely to assume that teaching a subject one has no specialization in, may make you feel more

insecure and less content. Similar findings are reported in the school subject survey conducted in 2013 (Espeland et al., 2013, p. 109). They also found both educated and non-educated FH teachers rating their competence as high, the majority lacking FH education. The authors therefore wonder if the teachers draw on their own experiences when evaluating their competence, as being an experienced cook at home equals being a qualified FH teacher.

A higher proportion of teachers in the EDU group included to a greater extent the basic skill of writing in their FH teaching compared to the no EDU group. Basic skills like reading and writing, being able to express yourself orally, mathematics and the use of digital skills are meant to be incorporated into the competence aims in all subjects in school. According to the curricula, examples of writing skills in FH can be to describe taste, smell and aesthetics, written work, or to write down own recipes and methods related to the practical work (The Norwegian Directorate for Education and Training, 2006). The other four basic skills (oral, reading, mathematics, digital skills) were all included to a large extent in FH teaching, but we did not find any differences between the two groups.

Although a fairly high number of teachers in both groups felt it is time that the FH subject need to be renewed, a higher proportion of FH teachers in the EDU group expressed this to a larger extent. Teachers who have studied FH in their teacher training might see challenges and opportunities to a greater extent, than the no EDU group.

Strengths and limitations

There are some limitations to be considered. This study was based on self- reported data relying on memory which can introduce response bias. Further, the results may be affected by social desirability bias and misinterpretations (Moy & Murphy, 2016). Also, a survey will not explore any phenomenon in depth, which may leave out interesting and valuable aspects. The questions and answers were to a large degree fixed, which may omit important information since the respondent cannot answer freely. Since the survey was anonymous, we do not know if the response rate reflects the number of schools approached in the recruitment process (n=2821) nor if it reflects the entire population of FH teachers in Norway. We also do not know if the spread of the data is associated with geography, and these represent limitations. As the email was sent to all schools in Norway, we think there are reasons to assume a fairly equal geographical spread of the data, but the results should be interpreted with caution. Concerning bias in the response rate and which teachers actually responded, it is likely that the teachers interested in the topics raised in the questionnaire responded, while the teachers that did not have any interest in these matters did not respond, introducing a bias that may influence the validity of our results. If this assumption holds, teachers with formal education in Food and Health may be overrepresented in the study,

and the "true" proportion of formally qualified FH teachers may be even lower than what we report. Finally, the research design is cross-sectional, and causal relations cannot be drawn.

There are also strengths to the present study. Given the large sample of participating teachers (n=1170), this is to our knowledge the largest nationwide survey among teachers in FH in Norway. This may be a sign that teachers find it important to contribute to research in this subject in general, as research on the subject is still limited. This survey is to date the only one which has explored the various aspects examined here, except qualification which Statistics Norway regularly assesses. The survey was also pilot tested among colleagues with work experience as FH teachers. The anonymous and self-administered nature of the survey may reduce the presence of social desirability bias (Bryman, 2016). Other advantages of web-based questionnaires compared to paper-based questionnaires include low cost of administering and, less time-consuming analysis process, as responses can be directly transferred into analysis software (Bryman, 2016). Finally, participants were able to answer at any electronic devise (smart phone, tablet, or computer), at any time which may suit them.

Conclusions

Our findings revealed that about half of the teachers in lower secondary school had formal FH education, despite national requirements of having at least 30 ECTS in FH.

We also found that teachers with formal education in FH were more content and reported to master their teaching to a larger extent than those with no formal FH education. FH is an important subject in school as it relates to both current health and future health of children and adolescents. A stronger emphasis on quality teaching from well-trained teachers should therefore be of interest, as the subject is important in a public health perspective.

With an ongoing focus on increasing teacher competence and a new master's degree in FH being offered at universities in Norway from 2020, the number of educated teachers in FH may increase in the future. With higher coverage of formally qualified teachers, the subject food and health can be strengthened and thus more likely be able to fulfil its potential of being an influential channel for motivation, knowledge and skills related to food and health among children and adolescents in Norway.

Based on the findings from this survey, we propose further research to explore teacher competence regarding FH in Norway. Special emphasis should be placed on their subject specific competence in FH and how this might affect student achievements and competency aims outlined in the curriculum.

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Appendices

Table 1

Food and Health teachers´ education level and level of teaching. In total: 1170 participants

	n	**%**
Teacher education without FH competence	409	35.0
Teacher education with FH competence, 30 ECTS in FH (1/2 year)	208	17.8
Teacher education with FH competence, 60 ECTS in FH (one year)	198	16.9
Teacher education with FH competence, 15 ECTS in FH (1/4 year)	90	7.7
Other	65	5.6
FH competence (60 ECTS) without general teacher education	56	4.8
Unskilled/Assistant	55	4.7
Chef	41	3.5
Restaurant and food processing (upper secondary school level)	23	2.0
Home economics teacher (old title)	16	1.4
Food and Health competence (30 ECTS) without general teacher education	9	0.8
Teaching primary school level (grade 1-7)	615	52.6
Teaching lower secondary school level (grade 8-10)	555	47.4

Notes. Descriptive statistics, frequencies. FH: Food and Health

Table 2

Food and Health teacher's school level, gender, age, experience in teaching, contentment and mastering the job according to formal education level. In total: 1170 participants

	Teachers with formal FH education (EDU group) n (%) n=512, 43.8%	Teachers without formal FH education (no EDU group) n (%) n=658, 56.2%	p-value
Teaching grade			
Primary school (grade 1-7)	242 (47.3)	373 (56.7)	
Lower secondary school (grade 8-10)	270 (52.7)	285 (43.3)	
			≤0.001
Age			
18-30	84 (16.4)	64 (9.7)	
31-40	119 (23.2)	142 (21.6)	
41-50	138 (27.0)	208 (31.6)	
51-60	131 (25.6)	162 (24.6)	
>60	40 (7.8)	82 (12.5)	
			≤0.001
Gender			
Women	452 (88.3)	571 (86.8)	
Men	60 (11.7)	87 (13.2)	
			0.44
Experience in teaching FH			
0-5 years	213 (41.6)	401 (60.9)	
6-15 years	181 (35.4)	171 (26.0)	
>15 years	118 (23.0)	86 (13.1)	
			≤0.001
Contentment with teaching FH			
Very content/content	498 (97.3)	602 (91.5)	
Neither content/ nor not content	12 (2.3)	42 (6.4)	
Little content/ very little content	2 (0.4)	14 (2.1)	
			≤0.001
Feeling of mastering teaching FH			
Very large/large extent	495 (96.9)	583 (89.3)	
To some extent/little/very little	16 (3.1)	70 (10.7)	
			≤0.001

Notes. *Chi-square test was used to test differences between the two educational groups. FH: Food and Health. Significant p-values in bold.

Table 3

Food and Health teacher's questionnaire responses according to having formal FH education or not. In total: 1170 participants

	Teachers with formal FH education n=512, 43.8% n (%)	Teachers without formal FH education n=658, 56.2% n (%)	p-value*
Use of dietary guidelines in teaching			
Very large/large extent	339 (66.2)	401 (60.9)	
To some extent/little/very little	173 (33.8)	257 (39.1)	
			0.06
Ability to positively influence students' attitude towards FH			
Very large/large extent	430 (84.0)	540 (82.1)	
Don't know	64 (12.5)	90 (13.7)	
To little extent/not at all	18 (3.5)	28 (4.3)	
			0.66
FH teachers being a resource person in health promotion among students			
Very large/large extent	451 (88.1)	551 (83.7)	
Don't know	46 (9.0)	82 (12.5)	
To little extent/not all al	15 (2.9)	25 (3.8)	
			0.11
Use of Skills, oral			
Very large/large/some extent	504 (98.4)	641 (97.4)	
little/to very little extent	8 (1.6)	17 (2.6)	
			0.23
Use of Skills, writing			
Very large/large/some extent	432 (84.4)	520 (79.0)	
little/to very little extent	80 (15.6)	138 (21.0)	
			0.02
Use of Skills, reading			
Very large/large/some extent	509 (99.4)	651 (98.9)	
little/to very little extent	3 (0.6)	7 (1.1)	
			0.38
Use of Skills, mathematics			
Very large/large/some extent	505 (98.6)	651 (98.9)	
little/to very little extent	7 (1.4)	7 (1.1)	
			0.64
Use of Skills, digital skills			
Very large/large/some extent	505 (98.6)	651 (98.9)	
little/to very little extent	7 (1.4)	7 (1.1)	
			0.64
Experience of the FH subject having relevance to the society			
Very large/large extent	338 (66.0)	466 (70.8)	
Don't know	47 (9.2)	60 (9.1)	
To little extent/not at all	127 (24.8)	132 (20.1)	
			0.14
Need for renewal of FH in schools			
No, it works fine as it is	265 (51.8)	390 (59.3)	
Yes, it's time for a renewal	247 (48.2)	268 (40.7)	
			0.01

Notes: *Chi-square test was used to test differences between the two educational groups. FH: Food and Health. Significant p-values in bold.

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