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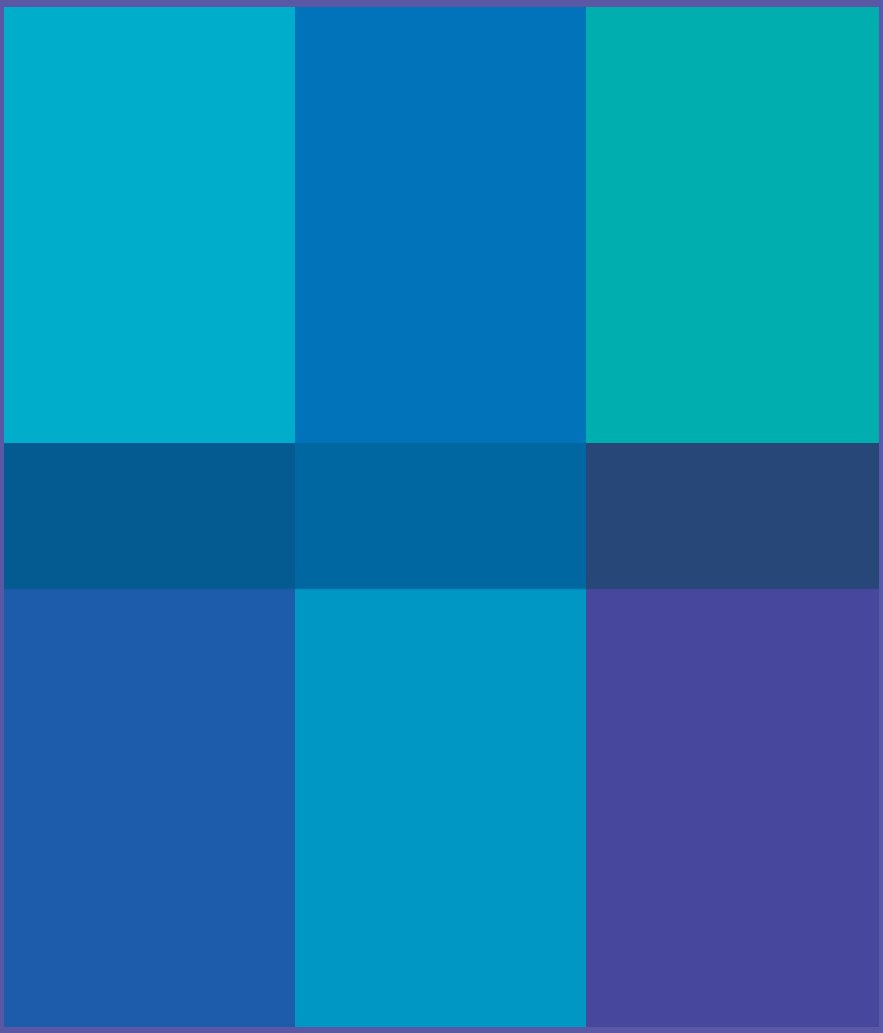

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C·E·P·S *Journal*

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The CEPS Journal is an open-access, peer-reviewed journal devoted to publishing research papers in different fields of education, including scientific.

Aims & Scope

The CEPS Journal is an international peer-reviewed journal with an international board. It publishes original empirical and theoretical studies from a wide variety of academic disciplines related to the field of Teacher Education and Educational Sciences; in particular, it will support comparative studies in the field. Regional context is stressed but the journal remains open to researchers and contributors across all European countries and worldwide. There are four issues per year. Issues are focused on specific areas but there is also space for non-focused articles and book reviews.

About the Publisher

The University of Ljubljana is one of the largest universities in the region (see www.uni-lj.si) and its Faculty of Education (see www.pef.uni-lj.si), established in 1947, has the leading role in teacher education and education sciences in Slovenia. It is well positioned in regional and European cooperation programmes in teaching and research. A publishing unit oversees the dissemination of research results and informs the interested public about new trends in the broad area of teacher education and education sciences; to date, numerous monographs and publications have been published, not just in Slovenian but also in English.

In 2001, the Centre for Educational Policy Studies (CEPS; see http://ceps.pef.uni-lj.si) was established within the Faculty of Education to build upon experience acquired in the broad reform of the national educational system during the period of social transition in the 1990s, to upgrade expertise and to strengthen international cooperation. CEPS has established a number of fruitful contacts, both in the region – particularly with similar institutions in the countries of the Western Balkans – and with interested partners in EU member states and worldwide.

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Revija Centra za študij edukacijskih strategij je mednarodno recenzirana revija z mednarodnim uredniškim odborom in s prostim dostopom. Namenjena je objavljanju člankov s področja izobraževanja učiteljev in edukacijskih ved.

Cilji in namen

Revija je namenjena obravnavanju naslednjih področij: poučevanje, učenje, vzgoja in izobraževanje, socialna pedagogika, specialna in rehabilitacijska pedagogika, predšolska pedagogika, edukacijske politike, supervizija, poučevanje slovenskega jezika in književnosti, poučevanje matematike, računalništva, naravoslovja in tehnike, poučevanje družboslovja in humanistike, poučevanje na področju umetnosti, visokošolsko izobraževanje in izobraževanje odraslih. Poseben poudarek bo namenjen izobraževanju učiteljev in spodbujanju njihovega profesionalnega razvoja.

V reviji so objavljeni znanstveni prispevki, in sicer teoretični prispevki in prispevki, v katerih so predstavljeni rezultati kvantitavnih in kvalitativnih empiričnih raziskav. Še posebej poudarjen je pomen komparativnih raziskav.

Revija izide štirikrat letno. Številke so tematsko opredeljene, v njih pa je prostor tudi za netematske prispevke in predstavitve ter recenzije novih publikacij.

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Editorial

Home Economics Education as Needed in the 21st Century

Changes in society constantly require individuals to assimilate new knowledge and skills to form a lifestyle that improves their quality of life. Lifestyle is at the centre of home economics, a multidisciplinary domain that is based on the needs of the individual and society in a given setting and time. According to the needs of particular societies, home economics includes priority areas such as food, eating habits, healthy lifestyle, textile and clothing, home, consumerism, and personal and family economics. This content is treated in connection with the sustainable supply of goods and the formation of a lifestyle that promotes the sustainable development of society. Home economics education has an important role in children, youth and adults obtaining appropriate home economics literacy, which in turn may positively impact the quality of life of individuals, families and society. The aim of quality home economics education is to encourage lifelong learning. This is also evident in the time of the Covid-19 pandemic, when individuals, families and society as a whole must change and adapt in many ways their patterns of behaviour and lifestyle habits that are part of home economics literacy.

This special issue of the CEPS Journal highlights different aspects of home economics. It discusses the importance of home economics in the 21st century and home economics education, especially the areas of nutrition, health and financial literacy.

The first paper, entitled *The Role of Home Economics Education in the 21st Century: The Covid-19 Pandemic as a Disruptor, Accelerator, and Future Shaper*, was written by the renowned professor and outstanding expert on home economics education worldwide Donna Pendergast and explores the role of home economics education in the 21st century. The author presents the five predicted future global megatrends – globalisation, urbanisation, digitisation cybersecurity and sustainability – as a consequence of the global pandemic. Using Voyant Tools, visualisations of the book *Creating Home Economics Futures: The Next 100 Years* are presented and compared to other key literary documents informing the field. The top ten words appearing most frequently in the book are: home economics, food, education, future, life, family, development, new, world and sustainable. Detailed analyses show that nutrition is one of the most important areas of home economics. The author continues by pointing out that education and learning have led to the repositioning of home economics as a field, and home economics literacy as the key strategy for ensuring that the field continues to remain relevant in the future.

The second paper, *Modern Aspects of Home Economics Education and Slovenia* by author Martina Erjavšek, defines the basic concepts and areas of home economics as an important part of everyday life. The paper highlights the multidisciplinarity and importance of home economics education and literacy for the quality of life of the individual, the family and society. The author suggests that the existing curriculum of the home economics subject in Slovenian primary school should undergo content updating. The curriculum should include content on healthy lifestyle, nutrition, health, textiles, consumption, economics, family, the environment and sustainable development. The author suggests that theoretical knowledge should be transferred to concrete life situations and students should be given opportunities to develop an appropriate attitude to home economics content, that the appropriateness of naming the school subject home economics should be discussed, and that content tailored to the needs of the individual, the family and society should be included in home economics education.

The third paper, entitled *Project LifeLab Food and Health – Innovative Teaching for the Future: Development of Student Active Learning Tasks for Home Economics Education in the 21st Century*, was written by Cecilie Beinert, Nina Cecilie Øverby and Frøydis Nordgård Vik from Norway. The authors describe the case of food and health education, which are important areas of home economics education and literacy, and refer to the renaming of the subject Home Economics as Food and Health, which is a mandatory school subject in Norway. The subject has the unique advantage of giving all students, regardless of their social background, practical skills and knowledge, life skills that are important for their future health. The paper presents the LifeLab Food and Health project as a research-based and innovative teaching programme, and the perception of the project in the school setting in Norway is evaluated. This teaching programme is intended for use in Food and Health teacher education, but also in the education of primary and lower secondary school students in the same subject. The learning tasks developed and evaluated in the project generally received positive feedback from both students and teachers, mainly because they were designed as practical learning tasks targeting more theoretical content. The authors stress the importance of nutrition education that promotes critical thinking and the development of the skills needed to choose healthy food and a sustainable orientation in nutrition.

The fourth paper, entitled *Evaluation of the Implemented and Adopted Curriculum in Health Education in the Czech Republic with an Emphasis on the Drinking Regimen*, focusing on the drinking regimen, was written by Michaela Hřivnová. The main objective of the paper is to present the partial results of two extensive educational research studies carried out by the Faculty of Education,

Palacký University Olomouc emphasising an analysis and evaluation of the implemented and adopted curriculum in health education in the Czech Republic, with a primary focus on nutrition and fluid intake. Nutrition was identified as the most dominant sub-theme across all thematic units of health education. The results of the subjective evaluation of the implemented curriculum in health education suggest that in the area "Healthy lifestyle and health care", the subtopic "Nutrition and health – healthy diet principles, drinking regimen, eating disorders" was most dominant. The testing of the level of adopted curriculum in the area of fluid intake revealed a problematic level of students' knowledge. The issue of adequate nutrition and an appropriate diet and drinking regime needs to be taught by professionally and didactically competent teachers of health education. It is desirable to shape not only the cognitive, but especially the affective and behavioural abilities of students. The study results are important not only for health education, but also for home economics education, since nutrition content is an important part of home economics literacy.

The fifth paper, entitled *Education in the Area of Human Protection in Emergency and Crisis Situations in the Context of Health Education in the Czech Republic*, was written by Jitka Slaná Reissmannová from the Czech Republic. The present time brings a number of emergency and crisis situations including floods, fires or Covid-19, the management of which requires the active involvement of citizens. People will have to adapt to the new situation by being properly educated and acquiring the knowledge and skills that children will have acquired during their compulsory education. The education of students in the area of lifestyle and health must be included in health education and home economics, depending on how these topics are included in the national curriculum. The objective of the paper is to present the concept of elementary education in human protection in emergency and crisis situations in the Czech Republic and the related concept of undergraduate teacher training. The paper presents the results of an analysis of the curricular document governing elementary education in the Czech Republic, as well as the results of an analysis of a health education textbook, an analysis of the study plans of selected faculties of education in terms of human protection in emergency and crisis situations, and a questionnaire survey focusing on the awareness of future teachers in the area of human protection in emergency situations. The author suggest that human protection in emergency situations should be strengthened both in the context of health education and as part of teachers' and future teachers' education. This is also part of the permanent education of teachers.

The sixth paper was written by Australian author Jay R. Deagon and is entitled *I Do, We Do, You Do Home Economics: Explicit Instruction Connecting*

Content with Ideology. The author starts the paper with a very popular sentence: "Public perceptions of home economics are stereotypically that students learn cooking and sewing at school." The paper advocates home economics as a holistic subject that contributes to complex issues through practical life skill education. The author explains the reasons for learning home economics in the 21st century and presents the ideology of home economics, focusing on the who, what, when, where and why of the disciplinary field. Deagon also discusses the name home economics and supports the view that it should be preserved, arguing that if the name is removed, in effect, the known and recognised ideology is also removed. She claims that the profession is working towards contributions of evidence-based home economics research to support our field and practices. The paper also addresses the importance of home economics literacy in the pandemic time. It turns out that the global pandemic has highlighted the prevalence of relevant home economics skills. It is important that education in the higher education programme also makes explicit the ideology of home economics, so that students become more confident in advocating their discipline

The last paper was written by Gregor Torkar from the Faculty of Education in Ljubljana and bears the title *The Sustainability of Pre-Service Teachers' Consumer Behaviour for the December Holidays*. The paper presents consumer education in Slovenia and changes in December holidays over the last decades in Slovenia, describing the connection between consumer behaviour and culture and religion. The aim was to explore pre-service teachers' consumer behaviour in the context of the December holidays in Slovenia, and to examine their views on sustainability issues in the context of December gifting by concentrating on themes derived from qualitative data. The results show that 95.4% of the respondents received gifts on Saint Nicholas Day, 60.0% at Christmas and 23.1% when celebrating the New Year during their childhood, whereas today Christmas is the most common gift-giving time in December. Students most often give their loved ones sweets, clothes and shoes, and cosmetics. The majority of the respondents spend less than 50% of their monthly income on gifts for the December holidays. The author emphasises the importance of education for sustainable development and notes that further studies of this kind are needed so that the findings can help improve consumer education.

The present issue of the CEPS Journal also includes three papers in the Varia section. The first Varia paper is by authors Jasminka Bobić, Adrijana Koscec Bjelajac, Marija Bakotić and Jelena Macan and has the title *Personality Traits and Changes in Depression Symptoms in Female University Students*. It examines the course of depressive symptoms in female students in a four-year study, and identifies predictive values of depression symptoms on four personality traits.

The results show that after the four-year period, the symptoms of depression increased both in intensity and frequency. The authors found that out of the four personality traits, only neuroticism was a significant predictor of total value of depression after four years, which means that students with higher scores on neuroticism would be more likely to react more strongly and with less emotional balance to a stressful period of study.

The second paper in the Varia section, entitled *The Role of Parental Self-Efficacy in Explaining Children's Academic Outcomes*, was written by Andreja Bubić, Antonela Tošić and Irena Mišetić. It investigates the contribution of parental self-efficacy and the perception of parental involvement to students' academic achievement, perceived academic control and achievement goals. The obtained results indicate parental self-efficacy as a predictor of perceived academic control and avoidance goals, whereas perception of parental involvement predicted perceived academic control, mastery approach and work avoidance goals.

The authors of the last Varia paper, entitled *Self-Concept in Immigrant School Children and the Impact of Length of Residence: Evidence from PISA 2015 for Current Educational Practice*, are Sandra Figueiredo, João Marôco, Margarida Alves Martins and Odete Nunes, who assessed the impact of the length of stay in the host country on the adjustment of immigrant children to school. The results show that students who have been in the country for a year or less have greater difficulties and increased significant differences compared to other migrant groups in the referred to indices of self-concept and inclusion. However, other groups, especially those with periods of long-term residence between four and five years, also face substantial levels of school maladjustment.

This issue of the journal also includes two book reviews. The first book was written by Danielle Dreilinger and has the title *The Secret History of Home Economics. How Trailblazing Women Harnessed the Power of Home and Changed the Way We Live*. Published in 2021, the book presents a historical overview of the development of home economics in the USA. It highlights the role of women in the household and the areas of home economics education that are integrated into the education process according to the needs of society. The second book, *The Routledge Handbook of the Philosophy of Childhood and Children* by authors Anca Gheaus, Gideon Calder and Jurgen De Wispelaere, was published in 2019. It presents various topics that address the areas of children's education, schooling and knowledge from the perspective of philosophical questions, and prompts the reader to reflect on how to deal with children in the present and future society.

Stojan Kostanjevec and Francka Lovšin Kozina

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The Role of Home Economics Education in the 21st Century: The Covid-19 Pandemic as a Disruptor, Accelerator, and Future Shaper

Donna Pendergast[1]

This paper explores the role of home economics education in the 21st century. It commences with an explanation of the disruption to the five predicted future global megatrends – globalisation, urbanisation, digitisation, cybersecurity, sustainability – as a consequence of the global Covid-19 pandemic. The place of megatrends framing home economics is explored by presenting a textual analysis of a literacy publication created as an acceleration point for framing the next one hundred years of home economics and underpinned by global megatrends, published prior to the pandemic. Using the Voyant Tool, visualisations of the book Creating Home Economics Futures: The Next 100 Years are presented and compared to other key literary documents informing the field. The paper then turns to the ways in which education and learning have led to the repositioning of home economics as a field and home economics literacy as the key strategy for ensuring the field continues to remain relevant into the future. Priority areas for education include food literacy; individual, family and community well-being; and the reconstitution of the place of the home.

Keywords: home economics literacy, Covid-19, global megatrends, food literacy, well-being

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Vloga gospodinjskega izobraževanja v 21. stoletju: pandemija covida-19 kot motnja, pospeševalka in oblikovalka prihodnosti

Donna Pendergast

Članek obravnava vlogo izobraževanja na področju gospodinjstva v 21. stoletju. Začne se s pojasnjevanjem motenj petih pričakovanih globalnih megatrendov, tj. globalizacije, urbanizacije, digitalizacije, kibernetske varnosti in trajnosti kot posledice globalne pandemije covida-19. Vloga megatrendov, ki uokvirjajo gospodinjstvo, je raziskana in predstavljena na podlagi rezultatov analize publikacije o pismenosti, ki je bila zasnovana kot pospeševalna točka za uokvirjanje področja gospodinjstva za prihodnjih sto let. Temelji na svetovnih megatrendih in je bila objavljena pred pandemijo. Umeščenost megatrendov v okviru gospodinjstva je raziskano s predstavitvijo besedilne analize publikacije o pismenosti, ki je bila ustvarjena kot pospeševalna točka za oblikovanje naslednjih sto let gospodinjstva in podprta s svetovnimi megatrendi ter objavljena pred pandemijo. Z orodjem Voyant Tool so vizualno prikazani rezultati analize knjige Ustvarjanje prihodnosti gospodinjstva: naslednjih sto let in primerjani z drugimi ključnimi dokumenti, ki oblikujejo to področje. Prispevek se nato posveti načinom, kako sta izobraževanje in učenje pripeljala do repozicioniranja gospodinjstva kot področja in gospodinjske pismenosti kot ključne strategije, ki bo zagotavljala, da bo področje ostalo relevantno tudi v prihodnosti. Prednostna področja izobraževanja vključujejo prehransko pismenost, blaginjo posameznika, družine in skupnosti ter rekonstrukcijo doma.

Ključne besede: gospodinjska pismenost, covid-19, globalni megatrendi, prehranska pismenost, blaginja

Introduction

On March 11 2020, the World Health Organization (WHO) (2020) officially declared a global pandemic. Since then, the Covid-19 pandemic has had a dramatic effect, not least of which is the clear demonstration of the fragility of human life, with more than 170 million infections and 3.5 million deaths in just over a year (Worldometer, 2021) and with no end in sight. The advent of this global pandemic is not without precedent, with many pandemics changing the course of human history over centuries, including leprosy; the Black Death, plagues, cholera, measles, the Russian, Spanish and Asian flus, HIV/AIDS and, in the 21st century, SARS (History.com, 2020). One of the key strategies for reducing the spread of the virus has been to maintain a safe distance from others to avoid transmission, and to that end, since the pandemic was declared, most people around the world have been directed to isolate at home for a period, alongside employing personal protective behaviours such as wearing masks, washing hands frequently, and avoiding crowds.

Global megatrends

When events like a global pandemic occur, they change the course of history, dismantling predictions by futurists and analysts (Godfrey Team, 2020). These predictions are known as global megatrends, defined as 'a long-term process of societal, economic, and political change with a significant impact on a larger number of areas of life, including the spheres of work, consumer and leisure behavior, health, education, cultural identity, and political participation' (Petersen & Bluth, 2020, p. 1). The Covid-19 pandemic is no exception, having a disruptive effect on the predicted megatrends, and will continue to do so until the future containment of the pandemic is better known.

The Godfrey Team (2020) points to the pandemic as a catalyst for the following megatrend shifts: a deceleration from globalisation towards anti-globalism, resulting from the need for local self-sufficiency; a change to urbanisation led by working from home and the need for better-designed living spaces; an even greater acceleration of digitisation to solve problems and remove manual processes; the need for more sophisticated cybersecurity, especially with working-from-home patterns; and a greater focus on sustainability inspired by the visibility of the benefits derived during lockdown periods and the possibility for achieving greater outcomes than expected. Much of this change has resulted from what has been coined 'pandenomics' (Petersen & Bluth, 2020, p. 1), which is the effect of the coronavirus pandemic on the global economy: a massive, wide-ranging global economic crisis, with economies expected to experience major collapse.

The importance of understanding global megatrends has been part of the home economics literature for more than a decade. It was a key feature of the International Federation for Home Economics (IFHE) *Position Statement – Home Economics in the 21st Century* (IFHE, 2008) launched to coincide with the centennial celebrations of the establishment of IFHE as a professional organisation, explicitly pointing to the need to future proof the profession, stating this as a clear objective for the decade ahead:

> [T]he focus on the decade ahead is on future proofing, which describes the elusive process of trying to anticipate future developments, so that action can be taken to minimise possible negative consequences and to seize opportunities. Future-proofing the home economics profession and the federation is a challenging task but one which is necessary to ensure a sustainable vision both for the profession and for individual members. The International Federation of Home Economics has commenced its future-proofing strategy by focussing on questions of sustainability, advocacy and the active creation of preferred futures for Home Economics, relevant disciplinary fields, and the profession itself, while critically reflecting upon and being informed by its historical roots. (IFHE, 2008, p. 2)

In response, the book *Creating Home Economics Futures: The Next 100 Years* (hereafter referred to as the Book) (Pendergast et al., 2012a) brought together key leaders in home economic to consider how to future proof the profession. More than a decade ago, the ten global megatrends formulated by the Copenhagen Institute for Futures Study were used as the basis for the publication. The trends predicted to shape society were: ageing, globalisation, technological development, prosperity, individualisation, commercialisation, health and environment, acceleration, network organising, and urbanisation. The editors framed the Book to examine the global megatrends as contributing to probable futures and highlighted these as the impetus for *future-proofing* the profession (Pendergast et al., 2012b).

The collection of published works in the Book included a deep dive into the 'intention' of home economics education, arguing that while home economics curricula differ around the world, they share a common philosophical base. Furthermore, the intention of engaging in home economics education is to provide the individual with 'the learning opportunity to develop capabilities to enhance personal empowerment to act in daily contexts' (Pendergast, 2012, p. 13). This educational intention is reiterated in the *IFHE Position Statement*

(IFHE, 2008) that as a curriculum area, Home Economics:

> […] facilitates students to discover and further develop their own resources and capabilities to be used in their personal life, by directing their professional decisions and actions or preparing them for life. (p. 1)

A decade has passed, and we are in the midst of a global pandemic that has disrupted the global megatrends. It is an opportune time to reflect on the role of home economics, and especially home economics education, looking to the future.

Convergent moment

It could be argued that this moment constitutes a new 'convergent moment' for the profession. More than a decade and a half ago, in 2006, Pendergast (2006) introduced the concept of the 'convergent moment' to the home economics profession as a way of 'highlighting the alignment of a range of key factors impacting on the profession which, taken together, provide a climate of opportunity for reflection and renewal, thereby ensuring the relevance and sustainability of the profession' (Pendergast, 2013, p. 57). The potential for these convergent factors to act as a catalyst for generative action was advocated. The convergent factors in 2006 were identified as:

(a) the past century of invention, development and changes in roles for men and women;
(b) consumption and globalisation patterns;
(c) generational characteristics and the emergence of the digital native as the Y generation;
(d) features of 'New Times' and the need to be 'expert novices' (good at learning new things); and,
(e) significant changes in individual and family structures impacting globally on demographic patterns and on the family's ability to fulfil its main functions as a fundamental social institution.

While these convergent factors remain largely relevant today and have been instrumental in the call for future-proofing the profession made public in the IFHE Position Paper (IFHE, 2008), the disruption to global megatrends by the pandemic means it is important to recast this thinking and to ensure home economics remains relevant in what has come to be known as the 'new normal' (Anderson et al., 2021).

Visualising home economics

The Book

In order to inform the future role of home economics education in the 21st century, an analysis of the Book launched at the 2012 World Congress of the IFHE with global megatrends as the framing serves as an important starting point. The foreword of the *Creating Home Economics Futures: The Next 100 Years* (Pendergast et al., 2012a) describes the Book as follows:

> This book offers an exciting opportunity to contribute to the thinking associated with the future of the Home Economics profession.
> Home Economists around the world, and those with an interest in Home Economics, were invited to contribute a chapter to the book. A stimulus chapter, by the same name as the book, was written by the editors for authors to use as a starting point from which to develop or stimulate their ideas on any aspect related to home economics in the next 100 years. A number of abstracts were submitted for consideration, and in this book, the final selection of chapters is presented. As editors of the book, we have been deeply impressed by the range and scope of chapters, presenting diverse and challenging ideas, and by the unexpected but welcomed synergy amongst ideas from practitioners all around the world; this synergy gives us hope for a powerful and sustainable future.
> This book will make an invaluable contribution to the profession of Home Economics, and will stimulate creative, deeply intellectual and philosophical thinking about possible and preferred futures. (p. iii)

The stimulus chapter explained the relevance of global megatrends and their key role in informing the predicted future. It then explained each of the global megatrends and set out the agenda for the need to future proof the profession as a way of taking an agentic role in creating a preferred future for the profession. Twenty chapters were published with 34 authors from 14 countries (Australia, Botswana, Brazil, Canada, China, Finland, Germany, Japan, Malta, Netherlands, Nigeria, South Africa, Sweden, United States of America). The Book is 258 pages and has 105,025 words.

The analysis

An innovative method to analyse the Book's contents and present the analysis's findings as visualisations of the text has been employed. Voyant Tools (available at: https://voyant-tools.org/) was selected because it is a free,

web-based text reading and analysis tool that has been used effectively by scholars and researchers for the digital scholarship of text mining since its first version was released in 2003 (Miller, 2018). The tool provides the opportunity to quantitatively explore qualitative data (text) with confidence and replicability; furthermore, it produces attractive visualisation outputs that are easy to analyse and interpret (Hetenyi et al., 2019). This approach also represented other published research (Pendergast, 2010, 2013) that investigated the textual properties of home economics materials, enabling comparison of the findings.

Findings

The word cloud presented in Figure 1 displays the terms scaled in proportionate size in the visualisation according to their frequency in the Book.

Figure 1

World cloud visualising the frequency of terms in Creating Home Economics Futures: The Next 100 Years

For this analysis, 'home' and 'economics' are aggregated as one term: 'home economics'. Hence, the top 10 words appearing most frequently in the Book are: home economics, food, education, future, life, family, development, new, world, and sustainable. The most frequently occurring one hundred words are presented in rank order, along with their frequency, in Table 1.

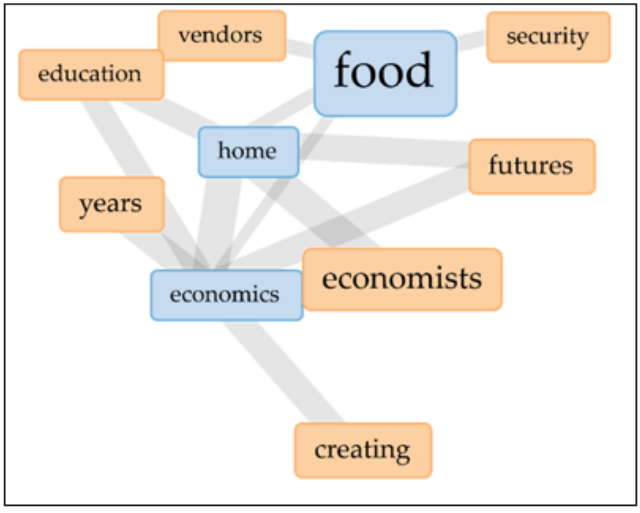
Table 1

Top 100 Words, Rank and Frequency, in the Book Creating Home Economics Futures: The Next 100 Years

Rank	Word	Frequency
1	Home	1405
2	Economics	1064
3	Food	448
4	Education	339
5	Future	318
6	Life	305
7	family	269
8	Development	256
9	New	248
10	World	236
11	Sustainable	229
12	Profession	214
13	Social	208
14	Futures	207
15	years	206
16	economists	201
17	research	186
18	global	185
19	families	177
20	Human	171
21	People	169
22	Everyday	151
23	Society	151
24	Work	150
25	Creating	144
26	learning	143
27	living	125
28	Need	121
29	Knowledge	120
30	Consumption	118
31	Consumer	112
32	Technology	112
33	Health	109
34	Change	108
35	Time	107
36	Chapter	103
37	Important	101
38	Curriculum	100
39	household	100
40	Practice	100
41	Megatrends	99
42	Different	95
43	Women	95
44	Use	93
45	Way	93
46	Countries	91
47	Century	90
48	China	90
49	Cultural	90
50	University	90
51	water	89
52	Energy	88
53	Needs	85
54	Resources	85
55	Figure	83
56	Individuals	83
57	Skills	83
58	Economic	82
59	Retrieved	82
60	IFHE	81
61	Order	81
62	school	81
63	Experience	80
64	International	79
65	Policy	79
66	Daily	78
67	Environment	78
68	Journal	78
69	make	78
70	Develop	77
71	Role	77
72	Example	74
73	process	74
74	culture	73
75	National	73
76	Public	72
77	Used	72
78	Clothing	71
79	Production	71
80	Professionals	71
81	Activity	69
82	approach	69
83	potential	69
84	Related	69
85	Training	69
86	Environmental	68
87	Professional	68
88	Way	68
89	Impact	67
90	Children	66
91	Economy	66
92	Focus	66
93	Issues	66
94	African	65
95	Community	65
96	Communities	64
97	Context	64
98	Study	63
99	Challenges	63
100	Members	62

In addition to frequency counts, the Voyant Tool used for this analysis enables a range of text-driven visualisations, including the visualisation of links between major terms. Figure 2 presents the most frequent links of terms appearing in the Book. These are: home economics and food; home economics and creating; home economics and futures; home economics and education; home economics and years; home economics and economists; food and security; food and vendors.

Figure 2
Links between Major Terms Used in Creating Home Economics Futures: The Next 100 Years



Discussion

These findings provide a means of quantifying the qualitative data in the form of the text in the Book. This research builds on previous work, which utilised the same analytic base, and presents similar data. However, the previous analyses were conducted manually, using Excel databases. The ten most frequently published words in these documents are presented in Table 2.

Table 2

Previous Studies Using Aligned Methods to Determine the Most Frequently Used Terms, Top 10 Presented

Reference	Text analyses using word frequency and Tag Cloud visualisations	Top 10 words
Pendergast, 2010	*IFHE Position Statement*	1. Home economics 2. Profession 3. Family 4. Develop 5. Individual 6. Social 7. Life 8. Future 9. Communities 10. Discipline
	IFHE Congress Proceedings	1. Profession 2. Home economics 3. Social 4. Food 5. Life 6. IFHE 7. Generation 8. Educate 9. Future 10. World
Pendergast, 2013	*IJHE Vol 1 to Vol 6*	1. Home economics 2. Food 3. Health 4. Education 5. Study 6. Profession 7. Students 8. Respondents 9. Human 10. Research
Pendergast, 2021	*Creating Home Economics Futures: The Next 100 Years*	1. Home economics 2. Food 3. Education 4. Future 5. Life 6. Family 7. Development 8. New 9. World 10. Sustainable

The first study conducted by Pendergast (2010) produced word clouds from two key artefacts related to the profession at that time: the *IFHE Position Statement* and the *IFHE Congress Proceedings, 2008.* A high degree of alignment of the five most frequently used words was reported in this study, these being: home economics (1st and 2nd, respectively), profession (2nd and 1st), social (6th and 3rd), life (7th and 5th), and future (8th and 9th). In a further study by Pendergast (2013) using the same methodology to analyse the *International Journal of*

Home Economics (IJHE), exploring all 11 issues of the journal published to that time, the word 'home economics' again emerges as the most frequently used word, with 'profession' (6th) also appearing in the top ten words used frequently throughout the journal. 'Food' is used frequently in the Congress Proceedings (4th) and the IJHE analysis (2nd). In this analysis of the Book, 'home economics' is again first and 'food' second. The words 'education' (3rd) and 'future' (4th) also reappear. When the ten most frequently occurring words from all four sources are entered into the Voyant Tool, the word map displayed in Figure 3 results.

Figure 3

World Cloud Visualising the Frequency of Terms in Four Sources

All four analyses have 'home economics' as the most common term, with three of the sources having 'food', 'future', 'profession' and 'life' in the top ten, with 'food' appearing at the highest rank following 'home economics'. 'Education', 'family', 'social' and 'world' also appear in two of the top ten lists.

The consistency of frequently used terms across these analyses creates a powerful visual representation of the formal discourse in the published literature in the field of home economics. There is a valid and reliable evidence base that the home economics literature is strongly focused on the profession, the future, food and life, along with education, family, social and the world. This finding also aligns with the global megatrends, especially the Book, which was framed around these trends. Food is very visible as a context for home

economics work and is clearly established as the most common context, according to this literature analysis.

The unique connection to food education is dominant not only in these analysed artefacts but is also in the way home economics is popularly viewed and understood. In the prestigious *Journal of the American Medical Association*, Lichtenstein & Ludwig (2010) called for the community to 'bring back home economics' in response to escalating rates of obesity. They argue that education about food is essential to address the knowledge gap leading to the obesity health crisis costing billions annually. Indeed, by 2016 Smith had located and analysed 40 articles that had the phrase 'bring back home economics' in the title. This call is part of a burgeoning focus on the need for better understanding education for food literacy, with a systematic literature review inclusive of 44 studies confirming adolescents with greater nutritional knowledge and food skills showed healthier dietary practices (Bailey et al., 2019). Of these, seven of the 44 papers were specifically reporting research about home economics and food literacy in schools (Dewhurst & Pendergast, 2008, 2011; Pendergast & Dewhurst, 2012; Ronto et al., 2016a; Ronto et al., 2016b; Ronto et al., 2016c; Ronto et al., 2017), indicative of the contribution of home economics to this field by building a firm evidentiary base.

Reconstituting the field

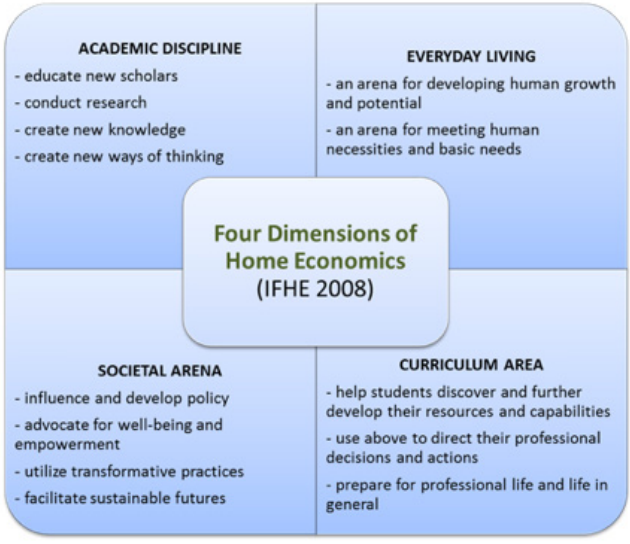
The IFHE Position Paper (2008) defines home economics as a '[…] field of study and a profession, situated in the human sciences that draws from a range of disciplines to achieve optimal and sustainable living for individuals, families and communities' (p. 1). The paper stipulates that the essential components that all home economics courses of study and professionals identifying as home economists must exhibit the following three essential dimensions:

- a focus on fundamental needs and practical concerns of individuals and family in everyday life and their importance both at the individual and near community levels, and also at societal and global levels so that well-being can be enhanced in an ever-changing and ever-challenging environment;
- the integration of knowledge, processes and practical skills from multiple disciplines synthesised through interdisciplinary and transdisciplinary inquiry and pertinent paradigms; and
- demonstrated capacity to take critical/ transformative/ emancipatory action to enhance well-being and to advocate for individuals, families and communities at all levels and sectors of society (IFHE, 2008, p. 2).

Further, it defined four dimensions of practice, as presented in Figure 4.

Figure 4

Four Dimensions of Home Economics Practice



Note. Adapted from Pendergast et al., 2012b, p. 13.

Drawing upon the literature analysis and connecting these four dimensions with the global megatrends that have now experienced disruption due to the pandemic, the role of home economics education in the 21st century can be considered. As explained at the outset of this in this paper, the pandemic has catalysed the following megatrend shifts:

- slowing down globalisation;
- changes to urbanisation;
- greater acceleration of digitisation;
- more sophisticated cybersecurity; and
- greater focus on sustainability (Godfrey Team, 2020).

The role of home economics, as defined by the four dimensions (IFHE, 2008), remains as pertinent as when they were conceived. In addition, the recognition of home economics as a key player in the food literacy agenda globally connects to a major aspect of the disruption to normal practices and the rapid response to the global pandemic. The need for greater food security (heightened by the memory of the empty grocery shelves and fights in aisles

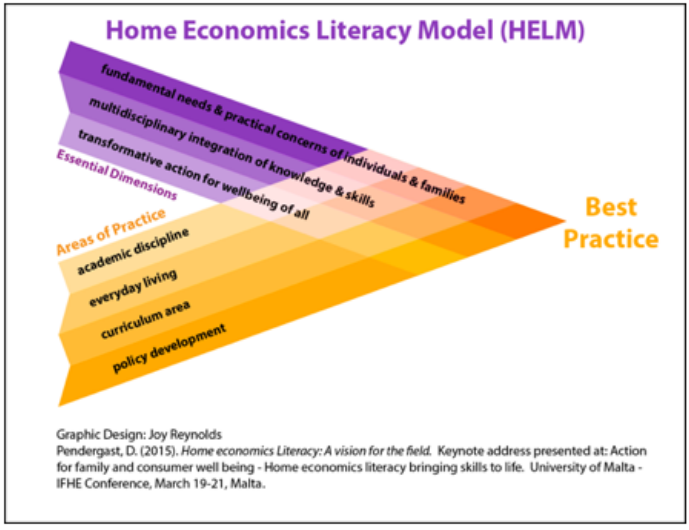
over disappearing stacks of pasta and rice); for food preparation skills (when restaurants and fast food outlets were closed and individuals and families had to prepare food at home more often than ever before with limited resources); for food safety and hygiene practices (when personal protection and practices became a key part of preventing the spread of the virus); for food production as a creative outlet (when people sought engaging activities with newfound time and re-discovered their joy of cooking), are just some of the aspects that have been reconstituted as a response to the crisis. Ironically, the pandemic is likely to have intensified interest in food literacy, creating the legacies of appreciating, activating and strengthening food safety and hygiene practices, food as a creative practice, and other aspects of food literacy (Pendergast, 2021).

Alongside this, the increasing importance of home economics to contribute to the emerging challenges associated with mental health and diminished individual, and family and societal well-being are predictable. Data are increasingly becoming available of the effect of the pandemic and the resulting economic recession and changed ways of living, school and workplace closures, the demands of home-schooling and working from home, isolation and deprivation, poor health outcomes and deaths of friends and relatives; negatively impacting mental health and well-being on a global scale. One study reveals that 4 in 10 adults report symptoms of anxiety or depressive disorder compared to 1 in 10 prior to the pandemic. Well-being is impacted with difficulty sleeping (36%) and eating (32%) and with substance abuse increase (12%) (Panchal et al., 2021). This picture is the tip of the iceberg, with evidence of the impact only just now emerging as the research is gathered. There is no question that home economics education has a crucial role in this space.

The home has become the new epicentre of survival for individuals and families as the world closed its doors in March 2020 and directed people to find shelter in their own homes as a public health imperative (Barnes & Sax, 2020). The home has been reconstituted as a safe space for the place of work, of schooling, of exercise and recreation, of creativity and entertainment. Homes are regarded as safe, secure and familiar, and hence having safe space status where social and personal experience and belongingness have evolved beyond viewing home as merely a domestic space to include this range of functions (Gezici Yalcin & Duzen, 2021). This has been a positive experience for many, so much so that anxiety and resistance to returning to workplaces have become an issue for some employers keen to repopulate office spaces safely (Barnes & Sax, 2020). The rapid response to the provision of digital solutions has seen the ascendancy of online learning and industry tools at a pace never before experienced or expected, paving the way to genuinely effective working from home possibilities.

The mechanism for ensuring 21st-century home economics continues to make a worthwhile contribution is underpinned by a commitment to what has been described elsewhere as the Home Economics Literacy Model (HELM) presented in Figure 5 (Pendergast, 2015). This highlights the need to intersect the areas of practice and the essential dimensions to ensure home economics practice meets the intention of home economic literacy, meaning to move beyond the 'what' and 'how' to achieve its transformative potential.

Figure 5
Home Economics Literacy Model (HELM)



Examples of how this model operates are presented by Pendergast and Deagon (2021). Table 3 is a further elaborated example demonstrating how this model can be operationalised, in this instance with a focus on promoting resilience in the context of unpredictable change, as is relevant to the pandemic situation. It is important to highlight the four dimensions of practice and the three essential elements forming the underpinning framework structuring this comprehensive home economics approach.

Table 3

Example of the Essential Dimensions and the Areas of Practice of Home Economics in the context of the COVID-19 Global Pandemic – A focus on Building Resilience

Goal – Building resilience during pandemic social isolation	Needs of individuals & families	Multidisciplinary integration	Transformative action
Academic Discipline	Incorporate an understanding of resilience and coping with unexpected change as a core of home economics academic learning	Identify a range of home economics disciplinary fields that contribute to building resilience and managing change – for example, food and nutrition, individual and family relationships, creativity	Provide virtual workshops to engage individuals and families in ways that enhance their resilience
Everyday Living	Utilise knowledge and skills to ensure there is a safe and comfortable home/work/school environment with adequate resources, including social networks, links to schooling, workplaces and other core activities in place	Utilise the range of multidisciplinary understandings to remain well informed and empowered to make changes as required to meet everyday living demands	Empower individuals to make decisions about their own and others resilience and ability to cope with change and to seek support and assistance when required
Curriculum Area	Develop curriculum that examines and develops an understanding of and strategies to enhance resilience and change management	Incorporate content from a range of knowledge bases (e.g., psychology, medical health experts) to ensure the development of a multifaceted understanding of resilience	Empower students to practice the implementation of resilience mechanisms
Society & Policy	Access information and policies relevant to resilience for individuals and families to inform practices	Consider the breadth of policies related to individual and family resilience and coping with change that are impacted by the pandemic	Advocate for and provide strategic advice to shape policy on relevant influential committees

Summary and Conclusion

As the 'new normal' continues to evolve in the coming years, the role of home economics education has never been more significant. The study shared in this paper utilised the Voyant Tool to quantitatively explore qualitative data in the book *Creating Home Economics Futures: The Next 100 Years* (Pendergast et al., 2012a). The tool enables analysis with confidence and replicability and produces visualisation outputs that are easy to analyse and interpret. The findings reveal a strong connection to the agenda of the Book – to shape the future informed by the global megatrends. The disruptive force of the Covid-19 pandemic on these predicted futures reveals a series of pivots and, in many cases, an acceleration combined with a redirection of future trends. In this space, the potential for home economics education to play a key role in reconstituting the future is abundantly clear. Spaces for intentional education focus include:

- the utilisation of the HELM model, which activates the areas of practice and the essential dimensions to ensure home economics education is inclusive of the knowledges, processes, and contexts for transformative action;
- food literacy action to mobilise the potential of education to achieve positive outcomes in increasingly challenging food-related health crises, especially those associated with obesity;
- enhancing the well-being of individuals, families and communities as a greater understanding of the effects of the pandemic emerge and point to a crisis of massive proportions globally;
- a reinvention of the place of the home with new functions likely to be embedded as cultural norms.

References

Anderson, J., Rainie, L., & Vogels, E. (2021, February 18). Experts say the 'new normal' in 2025 will be far more tech-driven, presenting more big challenges. *Pew Research Center*. https://www.pewresearch.org/internet/2021/02/18/experts-say-the-new-normal-in-2025-will-be-far-more-tech-driven-presenting-more-big-challenges/

Bailey, C., Drummond, M., & Ward, P. (2019). Food literacy programmes in secondary schools: A systematic literature review and narrative synthesis of quantitative and qualitative evidence. *Public Health Nutrition, 22*(15), 2891–2913. https://doi.org/10.1017/S1368980019001666

Barnes, M., & Sax, P. (2020). Challenges of "return to work" in an ongoing pandemic. *New England Journal of Medicine*, *383*, 779–786. https://doi.org/10.1056/NEJMsr2019953

Dewhurst, Y., & Pendergast, D. (2008). Home Economics in the 21st century: A cross-cultural

comparative study. *International Journal of Home Economics, 1*(1), 63–87. http://www.ifhe.org/47.html

Dewhurst, Y., & Pendergast, D. (2011). Teacher perceptions of the contribution of home economics to sustainable development education: A cross-cultural view. *International Journal of Consumer Studies, 35,* 569–577. https://doi.org/10.1111/j.1470-6431.2011.01029.x

Gezici Yalçın, M., & Düzen, N. E. (2021, January 27). Altered meanings of home before and during COVID-19 pandemic. *Human Arenas.* https://doi.org/10.1007/s42087-021-00185-3

Godfrey Team. (2020, July 17). Five megatrends impacted by COVID-19. *Insight.* https://www.godfrey.com/insights/insight/5-megatrends-impacted-by-covid19

Hetenyi, G., Lengyel, A., & Szilasi, M. (2019). Quantitative analysis of qualitative data: Using voyant tools to investigate the sales-marketing interface. *Journal of Industrial Engineering and Management*, *12*(3), 393–404. https://doi.org/10.3926/jiem.2929

History.com. (2020, December 20). *Pandemics that changed history*. https://www.history.com/topics/middle-ages/pandemics-timeline

IFHE (International Federation for Home Economics). (2008). *IFHE Position statement – Home economics in the 21st century*. IFHE. https://www.ifhe.org/fileadmin/user_upload/Publications/IFHE_Position_Paper_HE_21st_Century.pdf

Lichtenstein, A., & Ludwig, D. (2010). Bring back home economics education. *JAMA, 303*(18), 1857–1858. https://doi.org/10.1001/jama.2010.592

Miller, A. (2018). Text mining digital humanities projects: Assessing content analysis capabilities of voyant tools. *Journal of Web Librarianship, 12*(3), 169–197. https://doi.org/10.1080/19322909.2018.1479673

Panchal, N., Kamal, R., Cox, C., & Garfielf, R. (2021, February 10). The implications of COVID-19 for mental health and substance abuse. *KFF.* https://www.kff.org/coronavirus-covid-19/issue-brief/the-implications-of-covid-19-for-mental-health-and-substance-use/

Pendergast, D. (2006). Sustaining the home economics profession in new times – A convergent moment. In A. Rauma, S. Pollanen, & P. Seitamaa-Hakkarainen (Eds.), *Human perspectives on sustainable future* (pp. 3–32). University of Joensuu.

Pendergast, D. (2010). Connecting with millennials: Using tag clouds to build a folksonomy from key home economics documents. *Family and Consumer Sciences Research Journal*, *38*(2), 217–229. https://doi.org/10.1111/j.1552-3934.2009.00019.x

Pendergast, D. (2012). The intention of Home Economics education: A powerful enabler for future-proofing the profession. In D. Pendergast, S. McGregor, & K. Turkki (Eds.), *Creating home economics futures: The next 100 years* (pp. 12–23). Australian Academic Press.

Pendergast, D. (2015). HELM – Home economics literacy model – A vision for the field. *Victorian Journal of Home Economics*, *54*(1), 2–6.

Pendergast, D. (2021, in press). Food safety and hygiene. In J. Wilks, D. Pendergast, P. Leggat, & D. Morgan (Eds.), *Tourist health, safety and well-being in the new normal.* Springer.

Pendergast, D., & Dewhurst, Y. (2012). Home economics and food literacy: An international investigation. *International Journal of Home Economics, 5*, 245–263.

Pendergast, D., McGregor, S., & Turkki, K. (Eds.). (2012a). *Creating home economics futures: The next 100 years*. Australian Academic Press.

Pendergast, D., McGregor, S., & Turkki, K. (2012b). Creating home economics futures: The next 100 years. In D. Pendergast, D., S. McGregor, & K. Turkki (Eds.), *Creating home economics futures: The next 100 years* (pp. 1–11). Australian Academic Press.

Pendergast, D. (2013). An appetite for home economics literacy: Convergence, megatrends and big ideas. *The Journal of Asian Regional Association for Home Economics, 20*(2), 57–65. http://hdl.handle.net/10072/55653

Pendergast, D., & Deagon, J. (2021). Home economics, the COVID-19 global pandemic and beyond. *International Journal of Home Economics*, *14*(1), 2–15. https://search.informit.org/doi/10.3316/informit.990826897786834

Petersen, T., & Bluth, C. (2020). The coronavirus transformation: How the pandemic is slowing down globalisation and accelerating digitalisation. Megatrend Brief. http://aei.pitt.edu/103221/1/MT_Brief_Megatrendreport_2020_ENG.pdf

Ronto, R., Ball, L., Pendergast, D., & Harris, N.D. (2016a). Food literacy at secondary schools in Australia. *Journal of School Health, 86*(11), 823–831. https://doi.org/10.1111/josh.12440

Ronto, R., Ball, L., Pendergast, D., & Harris, N. D. (2016b). Environmental factors of food literacy in Australian high schools: Views of home economics teachers. *International Journal of Consumer Studies, 41*(1), 19–27. https://doi.org/10.1111/ijcs.12309

Ronto, R., Ball, L., Pendergast, D., & Harris, N. D. (2016c) Adolescents' perspectives on food literacy and its impact on their dietary behaviours. *Appetite,* 107, 549–557. https://doi.org/10.1016/j.appet.2016.09.006

Ronto, R., Ball, L., Pendergast, D., & Harris, N. (2017). What is the status of food literacy in Australian high schools? Perceptions of home economics teachers. *Appetite, 108*, 326–334. https://doi.org/10.1016/j.appet.2016.10.024

Smith, M. (2016). "Bring back home economics"? Challenging contested discourses on obesity. *Journal of Family and Consumer Sciences, 108*(4), 7–12. https://doi.org/10.14307/JFCS108.4.7

World Health Organization. (2020). *Listings of WHO's response to COVID-19*. https://www.who.int/news/item/29-06-2020-covidtimeline

Worldometer. (2021). *Corona virus updates*. https://www.worldometers.info/

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Modern Aspects of Home Economics Education and Slovenia

Martina Erjavšek[1]

Home economics operates in the academic, curriculum and social realms, as well as in everyday life. Due to its multidisciplinarity, it includes and interconnects the contents of different disciplines (e.g., healthy lifestyle, nutrition, dietetics, textiles, home, family, consumption, personal and family economics, design and technology), which are considered in terms of meeting the needs of the individual, family, and society. Home economics education and literacy play an important role in acquiring knowledge and skills that help raise the quality of life of the individual, family, and society. With the development of society, the needs of both the individual and the family are changing; therefore, changes are also needed in home economics education, which is reflected in the updating of the subject curricula. The goals and contents in the curriculum must reflect and meet the needs of the current society and take into account the cultural dependence and social determinism of the home economics field. To a certain extent, the current curriculum of the subject home economics in Slovene elementary schools already includes some content areas that have been recognised as important for meeting the needs of society. These relate to healthy lifestyle, nutrition, health, textiles, consumption, economics, family, environment and sustainable development. Given the perceived needs of society, the use of household appliances, home contents, and first aid should be additionally included in home economics education in Slovenia, and students should be encouraged to develop social and communication skills. It is also necessary to consider the appropriate placement of the subject in the curriculum, as it is necessary to implement home economics education in the entire elementary school education. Doing so will enable the acquisition of knowledge and skills needed in society and, therefore, the appropriate level of home economics literacy of the individual.

Keywords: home economics education, teaching home economics literacy, quality of life, needs of society, Slovenia

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Sodobni vidiki gospodinjskega izobraževanja v Sloveniji

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Gospodinjstvo deluje na akademskem, šolskem in na družbenem področju ter v vsakdanjem življenju. Zaradi svoje multidisciplinarnosti vključuje in med seboj povezuje vsebine različnih disciplin (npr. zdrav življenjski slog, prehrana, dietetika, tekstil, dom, družina, potrošnja, osebna in družinska ekonomika ter dizajn in tehnologija), ki se obravnavajo z vidika zadovoljevanja potreb posameznika, družine in družbe. Gospodinjsko izobraževanje in opismenjevanje imata pomembno vlogo pri usvajanju znanj in veščin, ki pripomorejo k dvigu kakovosti življenja posameznika, družin in družbe. Z razvojem družbe se spreminjajo potrebe posameznika in družin, zato so potrebne tudi spremembe na področju gospodinjskega izobraževanja, ki se kažejo v aktualizaciji učnih načrtov predmeta. Cilji in vsebine v učnem načrtu morajo odražati in zadovoljevati potrebe trenutne družbe ter upoštevati kulturno odvisnost in socialno determiniranost področja gospodinjstvo. V trenutni učni načrt predmeta gospodinjstvo v slovenski osnovni šoli so v določenem obsegu že vključena nekatera vsebinska področja, ki so bila prepoznana kot pomembna za zadovoljevanje potreb družbe. Ta se nanašajo na zdrav življenjski slog, prehrano, zdravje, tekstil, potrošnjo, ekonomiko, okolje in na trajnostni razvoj. Glede na zaznane potrebe družbe pa bi bilo treba v gospodinjsko izobraževanje v Sloveniji dodatno vključiti tudi vsebine o domu, uporabi gospodinjskih aparatov in prvi pomoči ter učence spodbujati k razvijanju socialnih in komunikacijskih veščin. Treba je razmisliti tudi o ustrezni umestitvi predmeta v predmetnik, saj se kaže potreba po izvajanju gospodinjskega izobraževanja v celotnem osnovnošolskem izobraževanju. Le takšno gospodinjsko izobraževanje bi omogočalo usvajanje znanj in veščin, potrebnih v družbi, in s tem ustrezno stopnjo gospodinjske pismenosti posameznika.

Ključne besede: gospodinjsko izobraževanje, gospodinjsko opismenjevanje, kakovost življenja, potrebe družbe, Slovenija

Introduction

Rapid social, political and economic changes impact the structure of society, which evolves with time. Changes in society considerably impact educational systems, which need to be reformed to be adaptable and compatible with the challenges and problems of modern times (Becirović & Akbarov, 2015). Education systems are currently responding to societal changes related to the Covid-19 pandemic, which has affected many aspects of everyday and social life. It has aggravated problems in health care, finance, consumption, family life and home, nutrition, and social inequalities (Neubauer et al., 2021; Rains et al., 2021; Scarborough et al., 2021). These areas are connected to the contents included in home economics education (IFHE, 2008). This fact demonstrates that home economics education and home economics literacy have an important role in maintaining and developing the quality of life in the social conditions of a crisis.

The present article aims to describe the home economics discipline, the areas of its activities, and the importance of home economics education and literacy. The needs of society for home economics education and literacy, as well as the challenges and problems of this discipline, are well-founded in Slovenia and throughout the world. The position of the subject of home economics in Slovene elementary school education and its integration into the syllabus are presented. The content areas included in the Slovene curriculum of home economics subject and changes suggested for updating its contents are identified. Guidelines for the actualisation of home economics education in Slovenia are given. The purpose of justifying the importance of home economics for society and the suggested guidelines is to encourage the Slovene society, science, and professions to discuss and research how to reform the existing home economics education. When preparing guidelines to actualise home economics education, it is necessary to consider the needs of society and the social and cultural determinism of the home economics discipline. Changes must meet people's needs to have high-quality active lives on the personal, family and social levels. The present article presents a scientific and professional justification of the importance of including home economics in the education system and developing home economics literacy for an individual and society.

A literature search for articles that deal with home economics, home economics education, and home economics literacy was performed. The databases DiKUL, Google Scholar, and PeFprints were searched. Many different search terms were used for literature review (e.g., home economics, home economics education, home economics literacy, home economics and the needs of society, etc.). Furthermore, the references of all retrieved articles were manually

searched for relevant cross-references. Articles in the English and Slovenian languages were accepted. All retrieved articles were then reviewed. Only articles that were relevant to the purpose of the research were used.

Theoretical Framework

Home economics and home economics literacy

In 2008, the International Federation for Home Economics (IFHE), in its basic IFHE Position Statement, defined the home economics discipline as the area which includes research and professional areas of various disciplines that deal with the lives of individuals, families, and communities in the perspective of reaching optimal and sustainable existence. Hira (2013) showed the operation of the home economics discipline from the point of view that home and family are the key building blocks of society, significant in a person's development of norms, values, and beliefs, reflected in their behaviour. In this way, the discipline acts to benefit a person, family, and society (Brown, 1980). Home economics deals with the quality of life in a family, sustainable living and the rational use of available resources (IFHE, 2008). Magee et al. (2010) discuss home economics as a discourse between the financial aspects of consumption and activities in a person's household, influenced by the cultural setting and changes inside their home and family. Home economics is a basic and essential building block of society and economy, for which the main goal is to meet a person's needs. Sproles and Sproles (2000) emphasise the importance of home economics as a multidisciplinary domain, as the contemporary problems and daily challenges have more than one aspect to consider; they require an individual to have varied knowledge and skills to solve them successfully. With its multidisciplinarity, home economics thus connects the contents of various disciplines and deals with them through an interdisciplinary and transdisciplinary approach. The content (disciplinary bases) from which studies of home economics draw is dependent upon the context but might include food, nutrition and health; textiles and clothing; shelter and housing; consumerism and consumer science; household management; design and technology; food science and hospitality; human development and family studies; education and community services, and much more (IFHE, 2008). Benn (2008) points out the diverse nature of home economics can be its shortcoming, since many of its research areas are dealt with by other disciplines that are better defined and established. Thus she emphasises that a relevant definition of the field and a critical solving of problems from individual, family, and community perspectives are necessary, as otherwise home economics can easily be lost among other

disciplines. Particular areas included in the home economics discipline are often stressed, but not home economics as an umbrella discipline (Hira, 2013); therefore, some authors (Magee et al., 2010) consider the division of home economics to particular areas to be meaningless.

Home economics operates in four different areas of practice, described by IFHE in its 2008 Position Statement. The first is the academic area that provides education for new researchers who will carry out new research and develop new knowledge. This interconnects and works together with the area of everyday living. It researches the lives of individuals, families, and communities and, based on research findings, identifies and emphasises problems and challenges met by these categories in society. The second is the area of everyday living that enables the needs of individuals and families to be met. It includes an individual's skills and capacity to perform various tasks in everyday life. It focuses on happy and high-quality living, a positive living environment, and the well-being of individuals and families. The third curriculum area enables discovering and developing pupils' capabilities to reach their full potential for meaningful and successful activities in life. It is connected to the area of everyday living, as the purpose of home economics education is in acquiring relevant knowledge and skills and their use in actual life situations. The fourth segment is the societal area, which provides the development of various strategies for the well-being of individuals, families, and society. Wahlen et al. (2009) point out that the areas of functioning of home economics complement each other, thus strengthening each other while still acting separately and independently. Hodelin (2008) asserts that the concept should include the fifth segment of the discipline, namely personal awareness, which enables the home economics discipline, its importance, and well-being to be promoted. Its key promoters should be home economics teachers.

The IFHE Position Statement (2008) describes the key dimensions of home economics that represent basic professional guidelines that must be included in every home economics education. The first dimension represents basic needs and practical everyday solutions for various life situations of an individual and family for their well-being and functioning in society. The second dimension represents a multidisciplinary inclusion of knowledge and skills of various disciplines included in home economics. The third key dimension presents critical and reforming measures or actions to increase the quality of life for individuals and families.

Based on areas and key dimensions of home economics, Pendergast (2015) has conceived a model of home economics literacy (i.e., the Home Economics Literacy Model (HELM)). HELM presents a touchpoint between areas

and key dimensions. Despite the design of the HELM model, there is still no evidence of a single definition for home economics literacy in the world (Pendergast, 2013). Pendergast (2015) states that the home economics discipline researches and endeavours to establish the concept of home economics literacy. IFHE (2015) points out that home economics literacy is a multidisciplinary expression of numerous literacies, including those of the nutrition, health, financial, consumer, and environmental realms. Gale Smith (2013) underscores that literacy is knowledge and the ability to decide and transfer knowledge into everyday living. Similar opinions are held by Sproles and Sproles (2000) as well as Hira (2015), who state that home economics literacy includes not only knowledge and skills, but also the understanding of values, relations, beliefs, habits, experiences, and cultural environment. Kieren et al. (1984) and Stage and Vincenti (1997) state that the main goal of any literacy is to shape a person's behaviour, which is also valid for home economics literacy.

Home economics education

Home economics education and literacy teaching are of key importance in acquiring the knowledge and skills necessary for quality everyday functioning and living (Dixon, 2017; Lind et al., 2009; Roldan, 2017; Tamm & Palojoki, 2012). Home economics education enables personal and professional development to individuals and the development of basic life skills that children cannot learn in their home environment, as some studies show (Slater, 2013; Turkki, 2005). According to similar conclusions by Alharbi and Renwick (2017), individuals should acquire unique lifelong skills indispensable for functioning at home and in their careers. Renold (2008) emphasises the purpose of home economics education and literacy teaching, which is to empower individuals and families for their well-being, adopt life-long learning attitudes, and enable future generations to manage global social challenges. Home economics education enables pupils not only to acquire knowledge but also to use and transfer it to theoretical and practical situations (Pendergast et al., 2013). Its importance is also in the development of appropriate attitudes towards various home economics contents (Volāne, 2014). Caraher and McCloat (2016) point out that it can act as a platform for solving everyday situations and meeting a person's needs. Education focuses on pupils acquiring home economics knowledge and skills and developing their personal and social skills (Lind et al., 2009). Dixon (2017) considers that it gives pupils the ability to perceive the world around them critically. At the same time, she stresses that pupils acquire knowledge and skills not studied in other subjects during home economics classes. Home economics education and literacy teaching are important for developing pupils'

skills related to economics, consumption, textiles, nutrition, healthy lifestyles, and health promotion (Lichtenstein & Ludwig, 2010; Pendergast, 2008).

Home economics is crucial for transmitting the basic nutrition knowledge and skills obtained with practice. Doing so can result in reduced rates of obesity and chronic non-infectious illnesses (Slater & Hinds, 2014). Pupils obtain knowledge of health promotion and sustainability problems, which contributes to their empowerment in terms of a healthy lifestyle and responsible, sustainable living. They also obtain knowledge and skills referring to financial literacy. They acquire social skills that enable their successful communication and high-quality cooperation, group work, acceptance of opinions and coordination with others, which leads to improved problem-solving. Home economics contributes to pupils' general level of knowledge and their positive self-perception, independence and self-confidence, and enable a higher quality of life (Dixon, 2017; Urek, 2018). They encourage creativity and logical thinking in pupils (Lind et al., 2009). It is evident that the home economics discipline truly functions in an individual's everyday life and makes it possible that the needs of the individual and the family are met. At the same time, this area is connected to the school domain: through home economics education and the literacy process, pupils acquire home economics knowledge and skills and use them in their everyday living. Dixon (2017) shows the importance of home economics education and literacy not only for an individual and family but for society; the importance of home economics education for the well-being and functioning of an individual in society is stressed. Kostanjevec et al. (2017) and Pendergast et al. (2013) state that society acquires independent and autonomous individuals who take care of their health and connect nutrition literacy with sustainable behaviour. A society with a healthier population has reduced healthcare expenditure. Erjavšek et al. (2019) state that appropriate home economics literacy facilitates persons' inclusion and acceptance in society. People with acquired home economics knowledge and skills contribute to society by fulfilling norms regarding hygiene and self-care. They also draw attention to the importance of critically assessing information to which modern society is exposed through media and advertising. Therefore, they stress the importance of informed consumer choices, which are more accessible to a person literate in home economics. In their opinion, home economics education and literacy teaching add to social well-being through financial literacy.

Home economics education differs around the globe. Differences appear in the way of teaching and organisation of work in the subject and even its name. Variety is also present in the contents of subject curricula (Lindblom et al., 2013; Olafsdottir et al., 2017). Pendergast (2012) emphasises that, at the global level, home economics education is based on uniform theoretical and philosophical

premises. The premises are published in the fundamental document, IFHE Position Statement (2008), which presents the basic content areas of the home economics discipline. These refer to food, nutrition, healthy lifestyle, dietetics, textiles and clothing, home, consumption, personal and family economics, the person's and family's progress, and design and technology. In its 2016 resolution, IFHE gave additional guidelines for home economics, focusing on developing strategies to promote happiness as an indicator of a person's health and well-being (IFHE, 2016). Gale Smith (2015) mentions that home economics education includes cooking, financial literacy, practical life skills, understanding nutrition systems and the impact of multinationals on nutrition, and environmental and sustainability education. In Harari's (2020) belief, modern education should be based on teaching critical thinking, communication, cooperativeness and creativity. This is also true for home economics education and literacy teaching, since these should prompt pupils to develop 21st-century skills, including communication, group work and problem-solving (Collins et al., 2008).

In many countries, education systems are engaged in changing and updating home economics curricula (Dixon, 2017; Lind et al., 2009; Ma & Pendergast, 2011; Pace et al., 2015; Pridāne, 2017; Tuomisto et al., 2017). Tamm and Palojoki (2012) point out that the actualisation of curricula focuses primarily on meeting the needs of modern society, from both content and didactic-methodical aspects. Moreover, Mølstad (2015) states that curriculum can be understood to reflect the current society. Some authors (Lind et al., 2009; Olafsdottir et al., 2017; Tamm & Palojoki, 2012;) present concrete cases for updating curricula of home economics or content areas and contents that should be included in curricula, according to their research. Updated curricula should emphasise knowledge and skills that enable children and adolescents to carry out everyday activities at home and to adopt decisions leading to responsible behaviour (Tamm & Palojoki, 2012). Olafsdottir et al. (2017) emphasise how important it is to include contents that enable health promotion in home economics education. Lind et al. (2009) point out the need of Estonian society to include the contents of financial and nutrition literacy, as well as home furnishing and maintenance, into home economics education. It should also include contents on the maintenance of clothes and basic sewing; however, in their research, these contents were perceived as less important for the successful independent functioning of an individual in everyday living.

Role of home economics education in solving social problems

Many problems in the areas included in the above-mentioned multidisciplinary concept of home economics are evident and observed in society.

The areas of this concept referring to the identified problems are emphasised for their importance a) nutrition, b) health, c) finance, d) environment, e) consumption, f) textiles, and g) home and family. Problems in various areas are intertwined and not unequivocal. However, in solving problems in society, home economics education holds an important role. Some contents included in home economics education are identical to areas in which problems in society are perceived. Acquiring knowledge and skills in the areas of nutrition, health, finance, environment, consumption, textiles and home and family enables individuals to become adequately literate in home economics. For example, Gale Smith (2013) alerts readers to the opportunity of the home economics discipline to 'profit' from the consequences of social problems that are reflected in various areas in the discipline and highlight them in the frame of subject curricula and home economics education.

The area of nutrition

A decrease in the nutrition knowledge and skills in various population groups, which leads to improper eating habits, is observed in society (Werner et al., 2020). A lack of time, improper nutrition knowledge and poor food preparation skills limit healthy nutrition. This is evident in increased consumption of prepared dishes, the consumption of meals in regular and fast-food restaurants, and increased consumption of snacks as a substitute for main meals. Inadequate nutrition knowledge and food preparation skills lead to the consumption of meals with high fat, salt, and sugar contents, which leads to unhealthy eating habits, increased body mass, and obesity (Gale Smith, 2015; Lang & Caraher, 2001). Therefore many health problems appear that are a consequence of unhealthy eating habits. Lai-Yeung (2011) considers the development and acquisition of proper nutrition skills and knowledge necessary for the long-term improvement of health and social well-being.

Moreover, Woodruff and Kirby (2013) emphasise that children and adolescents learning food preparation skills are an important health-promoting strategy. Nutrition contents are included in the home economics education and literacy process. Thus, home economics education includes nutrition education, enabling pupils to acquire nutrition knowledge and skills and appropriate nutrition literacy. Vidgen and Gallegos (2014) define nutrition literacy as a combination of knowledge, competences or skills and behaviours needed for planning, providing, selecting, preparing and consuming food to meet a person's nutritional needs. However, Pendergast et al. (2011) explain nutrition literacy as a person's ability to obtain, understand, and correctly interpret nutrition information that they use to impact the maintenance of their health positively.

Appropriate nutrition literacy and nutrition skills of the entire population may contribute to public health and well-being (Pendergast & Dewhurst, 2012).

The area of health

The World Health Organization (WHO) defines health literacy as the whole of cognitive and social skills that determine a person's motivation to access information, understand the obtained information and its critical use in ways that promote and maintain good health (Nutbeam, 1998). Home economics literacy also includes the area of health. Home economics education includes some health content referring to personal health, personal hygiene, sleeping behaviour, and a healthy lifestyle, emphasising healthy eating habits. Home economics literacy thus includes some segments of health literacy. Overweight and obesity are among the most serious public health challenges of the 21st century (Lobstein & Jackson-Leach, 2016). WHO (2021) data show that the spread of obesity between 1975 and 2016 almost tripled globally. In 2016, more than 340 million children and adolescents, aged from 5 to 19 years, were obese or overweight. A higher rate of obesity is evident among groups with lower social-economic status, which can be the consequence of improper lifestyle and environment in which they live.

Consequently, adequate formal nutrition education and informal education in the form of nutrition workshops and courses are important (WHO, 2014). Data from 2016 for Slovenia show that every second adult is eating predominantly unhealthily, while two thirds of adults face risk factors of unhealthy lifestyle, which are the cause of premature morbidity and mortality. Unhealthy eating seems to be particularly typical of males, young adults, less-educated and more socially and economically vulnerable people, to whom more attention will have to be given. The latter select predominantly lower quality food and have particularly unhealthy eating habits. Due to economic reasons or low awareness, they find it more difficult to follow healthy eating recommendations (Gregorič & Fajdiga Turk, 2018). A healthy lifestyle, which represents one of the indicators of quality life, is also important for people's health. A healthy lifestyle combines healthy behaviours, such as healthy eating habits, sufficient body activity, non-smoking, not taking risks in drinking alcohol, sufficient sleep, and less frequent use of electronic devices. While some people choose to stay healthy through their conscious choices, many carelessly behave unhealthily. For this reason, government policies and programmes for proactive health and wellness must be crafted and implemented (Mominova & Ibragimova, 2021).

The area of finance

The need for citizens to be financially literate is growing in importance, as consumers are tasked with making ever more complex financial decisions in the marketplace (Lusardi & Mitchell, 2014). The PISA 2012 Assessment and Analytical Framework (OECD, 2013) defines financial literacy as knowledge and understanding of financial concepts and risks, and the skills, motivation, and confidence to apply such knowledge and understanding in order to make effective decisions across a range of financial contexts to improve the financial well-being of individuals and society. Numerous studies (Gale Smith 2013, 2015; OECD, 2009; PISA, 2021; Renold, 2008) indicate the problems of financial illiteracy that lead people to adopt inappropriate financial decisions. This has negative consequences for an individual and society as a whole. Financial literacy is recognised worldwide as a basic life skill. Data from a study carried out in 2012 show that in the area of financial literacy, the achievements of Slovene pupils are below the average in the OECD (OECD, 2014). The highest scores were achieved by pupils in Shanghai, China, followed by above-average scorers in OECD countries (i.e., adolescents aged 15 from Belgium, Estonia, Australia, New Zealand, Czech Republic, and Poland). In addition to Slovenia, low achievement in financial literacy was seen in Russia, France, Spain, Croatia, Israel, Slovakia, Italy, and Columbia (OECD, 2014). Financial education is an important element of economic and financial stability and development (PISA, 2021); it is included in the home economics subject, and it is important that pupils encounter various financial contents and develop financial literacy through home economics education.

The area of the environment

Humanity is facing various environmental problems, such as climate changes, pollution, loss of biodiversity, and the destruction of living space. Environmental literacy is important in order for people to be able to identify and prevent environmental problems and adopt sustainable behaviours (Casalo & Escario, 2016). Many studies focus on measuring environmental literacy (i.e., the measuring of environment-related knowledge, attitudes, and behaviours) (Mifsud, 2012). In reference to environmental knowledge, various levels of knowledge are discernible. For instance, on the one hand, researchers in the Netherlands report weak knowledge (Maknun et al., 2016), while, on the other, some studies demonstrate good environmental knowledge of pupils and students in Madagascar, for example (Kaplowitz & Levine, 2005; Korhenen & Lappalainen, 2004).

An environmentally literate person should have appropriate environmental knowledge and attitude, environment-friendly behaviour and care for

environmental problems (Tuncer et al., 2009). Saribas et al. (2014) have established that environmental literacy is the key component of environmental education, with its goal of developing the appropriate level of such literacy in individuals (Casalo & Escario, 2016).

In home economics education, pupils acquire some environmental contents, referring to environmental pollution and proper waste handling. Pupils develop positive attitudes to the environment; in this way, environmental literacy is included in the concept of home economics literacy. Erjavšek et al. (2021) state that in their home economics lessons, Slovene teachers most often include sustainability topics, referring to nutrition and living space, and less often to finance and textiles. Addressing sustainable topics within the home economics curriculum appears to be necessary for society (IFHE, 2008).

The area of consumption

Consumption has become an important part of everyday life in modern society, which has prompted the need for consumer education and literate consumers. Consumer education aims to introduce knowledge and skills so that people act as informed, rational, and cautious consumers. Proper education reduces the risks of unwise consumer choices (Benn, 2004; Goldsmith & Piscopo, 2014; McGregor, 2016; Renold, 2008). Home economics education thus includes consumer education, as some consumer contents are part of the home economics subject. These contents refer to consumer rights and obligations, purchase forms, planning of purchases, advertising, production and consumption of products and services. Pupils develop critical and responsible attitudes to consumption.

The area of textiles

The textile and clothing industry represents one of the biggest industrial sectors in the world. Global demand for textile products is increasing together with the growth of population and economic development, and with this also its negative impact on the environment, as the textile industry is a major environmental polluter (Allwood et al., 2006). Morgan and Birtwistle (2009) point out the problem of fast fashion that offers consumers trendy low-cost clothes, leading to their impulsive purchase decisions (Joy et al., 2012). In the home economics subject, pupils acquire knowledge and skills referring to textiles. Contents are connected to consumption with the emphasis on responsible purchasing textile products.

The area of home and family

Changes in society are tightly connected with the way of life in households and families. A lack of basic, practical life skills related to home and family is evident (Gale Smith, 2015; Renold, 2008). In society, there is an increasing number of divorces, and the proportion of the ageing population is growing, accompanied by related problems of their care and financial vulnerability (Hira, 2015). Home economics education includes content on home and family. Pupils learn about the concept of family and understand that members have different roles within it. Moreover, the contents refer to mutual relations and domestic tasks and prevent accidents at home. Pupils thus acquire knowledge and skills referring to this area.

Problems and challenges of home economics education

Salter and Hinds (2014) draw attention to the gap between the current position of home economics education, mostly marginalised in many education systems and the evident problems at various levels of society. Moreover, Pendergast (2001) states that the position of the home economics discipline and thus the home economics subject in education systems and society has been uncertain for a long time. Home economics is often marked as a women's domain (Davis, 2008), which is supported by the fact that it is primarily women who have been active in the history and development of home economics. The functioning of the discipline has focused on home and private settings without interfering in the public sphere. The stigmatisation of this area has been influenced by the factor of unpaid work of women in their households (Pendergast, 2001; Pendergast et al., 2011). The subject has been intended to prepare women for their role in society: as a wife, mother and housekeeper (Caraher & McCloat, 2016).

Pendergast et al. (2011) state that society fails to recognise the potential and benefits of home economics. The current global trend shows that home economics holds no prioritised position in school syllabi and gains no special attention, which does not mean, however, that the subject contents lack importance or relevance (Pendergast, 2012). Home economics is often perceived and treated as a side subject with the status of an elective and not a mandatory subject (Pendergast, 2001). In many countries, it has been removed from the timetable or fragmented to separate content areas (IFHE, 2008). Current social demands focus on reading, mathematical and natural science literacy; therefore, pressure on pupils is much stronger in these subjects (Pendergast, 2012). In Slovenia, the pupils' knowledge of these subjects is verified at the national and international levels (e.g., the Programme for International Student Assessment

(PISA), Progress and International Reading Literacy Study (PIRLS), Trends and International Mathematics and Science Study (TIMSS)). In Slovenia, home economics is the only mandatory elementary school subject that is not verified at the national assessment of knowledge (RIC, 2021).

Nevertheless, the attitude that various stakeholders in the education process have towards home economics in Slovene elementary school is positive. Teachers perceive the contents of the subject as important and useful for pupils' further life and their future career orientation and development. In the light of their complexity, subject contents are perceived as less demanding by teachers than other subjects (Erjavšek & Lovšin Kozina, 2015). Lah (2015) came to a similar conclusion: teachers perceive home economics as an important educational subject. Parents are aware that it is important to teach their children home economics literacy in view of their learning and adopting essential life knowledge and skills (Matos, 2016). They consider it important for children to acquire knowledge of various specialised areas, but they attribute a higher value to the crucial subjects for secondary school enrolment (Urek, 2018). Home economics students share a positive attitude towards the subject, as they agree that it is important to transfer basic home economics knowledge and skills to the young and that home economics contents are important for the quality of life of an individual in society. However, they consider home economics to be less demanding than other subjects (Štirn, 2016). Foreign research shows similar results; Turkki (2005) concluded that students in Finland classify home economics among the less demanding subjects in terms of content. Canadian students have a positive attitude to home economics education, asserting that it must be included in primary school education (Slater & Hinds, 2014). Nanayakkara et al. (2018) emphasise that Australian adolescents and their parents have high expectations regarding home economics. Höijer et al. (2011) have established that Swedish pupils also have a positive attitude to the subject. They perceive skills acquired at home economics classes to be useful for further life, without, however, considering them to be necessary to meet their needs for a quality life. From that perspective, parents should be advised to encourage their children to use home economics knowledge and skills in home settings. Moreover, other studies (Olafsdottir et al., 2017; Street, 2006) refer to findings that the home economics subject is popular with pupils, since they have an opportunity to participate in both practical and theoretical activities. Despite that, Slater (2013) states that home economics, in comparison to maths, is perceived as less important.

Numerous studies emphasise the problems of inadequate competence of home economics teachers (Dewhurst & Pendergast, 2008; Håkansson, 2015;

Lindblom et al., 2013). Between 20% and 23% of Swedish teachers teach home economics contents without the corresponding formal education (Lindblom et al., 2013); according to some data (Håkansson, 2015), the percentage of such teachers in Sweden is even higher: about 70%. Lah (2015) estimates that there are about 37% of such teachers in Slovenia, which matches a similar conclusion (36%) by Kostanjevec et al. (2018).

Problems related to gender inequality are still discernible in literature (Ma & Pendergast, 2011; Pendergast et al., 2011; Street, 2006). In some private male schools, the belief persists that boys with wealthy parents need no nutrition knowledge and food-preparation skills for high-quality functioning and living. Home economics contents in Hong Kong are mainly intended for girls and not for boys. Due to numerous factors, such as the negative attitudes of teachers, parents, peers, and patriarchal community to home economics education, boys decide not to attend home economics classes. A similar situation is in Saudi Arabia, where home economics education is only intended for girls and not for boys (Alharbi & Renwick, 2017). Such stereotypes greatly reduce home economics' educational and informative value (Dewhurst & Pendergast, 2008).

Slovene studies (Matos, 2016; Murko, 2017; Štirn, 2016) show that gender inequality is not discernible in home economics education in Slovene schools. Urek (2018) notes that home economics education and literacy teaching is important and necessary for both genders. In a qualitative study, parents state that it would be sensible for home economics to be taught by more male teachers as female teachers are still predominant. A man can be a role model who demonstrates to pupils that an equal work division, regardless of gender, is important in families. Matos (2016) notes that parents emphasise that knowledge and skills related to basic household tasks must be presented to pupils from the point of view that both men and women carry out household tasks. Despite that, various authors (Collins et al., 2009; Jabs et al., 2007) realise that the division of household tasks within the family remain gender-determined, since women spend more time on housework than men. However, changes in the labour market and the employment of women lead to a necessary harmonisation of family and professional life.

Even the title of the subject is seen as problematic. In Slovenia, the term 'gospodinjstvo' (housekeeping) is used for *home economics,* the foreign name of the discipline. Historical documents indicate that such a denomination was questioned several decades ago; however, professionals support the idea of keeping the name as it is. In fact, IFHE endeavours to change the 'corporate image' of the discipline, but without changing the name (IFHE, 2008). Pendergast et al. (2013) point out that different terms for home economics cause further

fragmenting of the discipline, while Taar and Vant (2017) emphasise that the name influences a person's perception of the subject. An in-depth study on the name and terms of the home economics subject has not yet been carried out in Slovenia. Lah (2015) notes that the name in Slovene does not reflect the actual span of the discipline and refers mainly to housekeeping. The Dictionary of the Slovenian Standard Language (SSKJ) (2008) defines 'gospodinjstvo' as performing or managing domestic or house tasks. Lah (2015) considers that with such an explanation of the word, the name of the domain which deals with more than managing domestic tasks is outdated and unsuitable. Other Slovene research shows divided opinions of different stakeholders on changing the name. Parents are divided over or undecided about the change in the name of the home economics subject (Matos, 2016), while future home economics teachers would rename it (Štirn, 2017); the study, however, did not research what the new name would be. No research on the opinion of Slovene home economics teachers as experts in their domain was found regarding the subject name.

Home economics education in Slovenia and orientations for the future

In Slovene elementary school education, pupils are supposed to acquire knowledge about healthy lifestyles and sustainable forms of organising social and economic life, to develop responsibility for their health and abilities for functioning in society, life-long learning and continuous personal growth, and to develop capacities to preserve the natural environment (Kalin et al., 2011). The Slovene nine-year compulsory school curriculum includes the home economics subject, which is compulsory for 5th graders (children 10 years of age) and 6th graders (children 11 years of age) and represents the basis of home economics education. Within this subject, students acquire knowledge and skills pertaining to the natural and social sciences. The subject includes four teaching modules: 1) Economics, 2) Textile and Clothing, 3) Living and the Environment, and 4) Nutrition. In the 5th grade, the subject is taught for 35 hours. Students learn about the topics of the Economics and Textile and Clothing modules. In the 6th grade, 52.5 hours are dedicated to home economics education, in which students learn about Living and the Environment and Nutrition. Home economics education stimulates students to reflect on contemporary problems at the individual, family, or societal levels. Students acquire the knowledge and skills for sustainable natural and social resources necessary to meet basic living needs. The main goal of the Economics module is for pupils to learn to adopt and evaluate decisions on personal and family economics, their needs, desires, values, and resources available. They are trained to be thrifty when using material goods, time, and energy. Pupils get to know the concept of family and

understand that its members have different roles, understand the meaning of their name and surname, and learn how to prevent accidents at home. They develop a feeling of responsibility for meeting the needs and identifying the physical, emotional, intellectual and, social needs of children, adolescents, adults and aged people, and develop the feeling for helping people in distress and people with special needs. They learn about the forms of money and various payment methods, and they design financial plans for annual personal expenses.

In the Textile and Clothing module, pupils develop a sense for practical and aesthetically pleasing clothing. Pupils acquire basic knowledge of textile raw materials and textiles and use the acquired knowledge to choose, care for, and maintain their clothes. Together with aesthetic aspects and the suitability of clothes for various occasions, the economic and ecological aspects of clothes are underscored. The Textile and Clothing module has consumer education content about purchase planning and selecting and purchasing textile products. Pupils learn about advertisements, consumer protection, and various suppliers.

The Living and the Environment module includes contents on correct waste disposal, efficient energy consumption, and rational waste disposal, all strongly connected to environmentally-aware consumers. Contents cover the production of and information on products and services. Pupils learn about the impact of consumption on the environment and reflect on how they can contribute to improving it, thus developing a responsible attitude towards it. Consumer responsibilities are also covered.

In the Nutrition module, pupils become acquainted with, understand, use, and evaluate the importance of proper, safe, and protective diets. They develop the awareness of the impact of good and bad eating habits on their health; they are simultaneously accustomed to healthy and cultural eating habits and the correct and economical use of foods. They learn to plan daily meals by taking account of nutritional and energy values in a particular meal. Utensils and appliances for food processing and preparation are also covered. Pupils understand healthy eating recommendations and interpret their eating habits. They are taught to understand the information they read on food labels, the importance of correct food storage, and to respect hygiene standards when working with foods (Elementary school programme, Home Economics, 2011).

Characteristics of contemporary life require changes in home economics education. Society is changing, as are the social values on which it is based (Benn, 2009). Rosefsky Saavedra and Opfer (2012) emphasise how society is aware that knowledge and skills needed by pupils in today's world differ from those needed in the past. Problems that urgently require changing and updating home economics education and curricula of home economics subject are

also addressed by some studies in Slovenia (Banič & Koch, 2015; Erjavšek & Lovšin Kozina, 2015; Erjavšek & Kostanjevec, 2018; Erjavšek et al., 2018; Erjavšek et al., 2019; Erjavšek et al., 2021; Kostanjevec et al., 2018; Lah, 2015; Lovšin Kozina, 2015; Matos, 2016). The process of education and instruction involves various stakeholders. Kostanjevec et al. (2017) draw attention to the opinions of Slovene teachers, parents, and pupils regarding the content areas that they think should be included in the home economics curriculum to meet the needs of present-day Slovene society. The subject curriculum must include the knowledge and skills about sustainable development, consumption, textiles, financial literacy, healthy lifestyle, and healthy nutrition. To some extent, these contents are included in the currently applicable subject curriculum. According to the needs perceived, participants in the study think that home economics education should also include first aid, the living environment, technical tasks in a household, and that pupils should be enabled to develop social skills.

Erjavšek et al. (2018) note that the current subject curriculum includes some content areas identified by teachers as important for pupils to acquire by the end of primary education: economics, textiles, consumer education, sustainable consumption, nutrition and healthy lifestyle. Teachers state that, given the needs of society, home economics education should additionally cover health education, living environment, and the promotion of social skills development in pupils. In some studies (Matos, 2016; Urek, 2018), Slovene parents underline the importance of acquiring knowledge and skills in the area of sustainable development, with emphasis on sustainable behaviour and positive attitude towards the environment, consumption, textiles, financial literacy, nutrition, time management, quality functioning in the family and health literacy, and on proper handling accidents at home. To a certain extent, these contents are already included in the current curriculum of home economics subject. Parents find it important for pupils to acquire social skills, basic housekeeping skills, such as cleaning, tidying up, vacuum-cleaning the flat, and performing technical tasks in the household. This content is currently not included in the home economics curriculum.

Matos (2016) notes that the acquired home economics knowledge and skills, according to parents' opinions, should enable pupils to have high-quality, autonomous, responsible and independent lives and to maintain the home they will establish in future. At the same time, parents expect that home economics contents will focus on pupils' career orientations in terms of presenting professions in the domains where home economics discipline is active. Erjavšek et al. (2019) draw attention to the content areas which, in the opinions of pupils, should be acquired in home economics education before the completion of primary education. These are knowledge and skills in the areas of nutrition,

economics, textiles, health, healthy lifestyle, environment, consumer education, home, use of domestic appliances, as well as social skills and communication. Some contents are well presented in the current home economics curriculum, while others should be added to meet the perceived needs.

The home economics subject in the Slovene educational system is placed in the fifth and sixth grades of elementary school, which means that the pupils are aged 10 and 11 years. Certain nutrition contents are upgraded in two elective subjects: Ways of Eating and Modern Food Preparation, which pupils can select in the seventh, eighth, or ninth grades (Elementary school programme, Ways of eating, 2009; Elementary school programme, Home Economics, 2011). Criticism about placing the home economics subject in the fifth and sixth grades can be observed. Teachers believe that home economics should be carried out during the seventh, eighth, and ninth grades (Erjavšek et al., 2018; Lah, 2015). Their views match the views of pupils and parents (Erjavšek et al., 2019; Matos, 2016; Urek, 2018). As home economics subject teaching ends in the sixth grade and its contents are treated mostly as modules, there is no vertical upgrading of the subject until the completion of elementary school. Pupils can upgrade their knowledge of certain nutrition content if they choose the elective subjects Ways of Eating or Modern Food Preparation. However, such upgrading (elective subject) is only obtained by some pupils and only in reference to nutrition contents. Both elective subjects cannot substitute for a dedicated home economics subject in the last three years of primary school.

The quality of teaching home economics is influenced by several factors, a major one of which is the adequate competences and qualifications of teachers who teach home economics (Dewhurst & Pendergast, 2008; Håkansson, 2015). Legislation in Slovenia stipulates that a person can teach the home economics subject in the fifth grade with a completed study programme for a class teacher or a study programme for home economics. A person with a completed study programme of home economic can teach in the sixth grade. In the fifth and sixth grades, home economics teachers can also be those who fulfil the conditions to be biology or chemistry teachers in the elementary school education programme and have completed the relevant study programme of further training in home economics (Rules on education of teachers, 2015). Based on available elementary school data, Banič and Koch (2015) identified 170 class teachers who taught home economics to fifth-grade pupils in Slovenia in 2015. Lah (2015) notes many cases in which class teachers teach home economics in the sixth grade.

In Slovenia, future home economics teachers are educated at the Faculty of Education of the University in Ljubljana. Students who decide to study home economics acquire general subject-specific competences to teach the

subject. General competences are obtained by acquiring knowledge and skills in basic educational sciences, while subject-specific competences refer to home economics content modules (Information Booklet, 2020-21a). During the first cycle of the elementary school study programme, graduates who are permitted to teach home economics obtain general but not the subject-specific competences that are essential to conducting home economics education (Information Booklet, 2020-21b).

Kostanjevec et al. (2018) note that Slovene teachers with inadequate formal education assess their competence to teach home economics contents lower than teachers with adequate formal education. In Slovenia, home economics is taught only by teachers who have been educated for the teaching profession, but it is not mandatory for them to have completed home economics studies. Teachers who have completed their studies of home economics obtain subject-specific competences and competences related to the general education professions. However, class teachers who often teach home economics acquire no specialised knowledge to teach home economics contents during their studies, since the study programmes include no relevant specialised contents, which can influence their competence to teach the subject. Banič and Koch (2015) state that class teachers who teach home economics are properly trained to plan lessons, but there is a disadvantage in that their studies provided them with no proper subject-specific competences to teach specialised contents. Teachers think that in the case of a lack of subject-specific competences their acquisition and knowledge of specialised contents in home economics is predominantly influenced by their general state of knowledge and interest in a particular area. Lindblom et al. (2013) assess that an adequate formal education of teachers who teach home economics is a prerequisite to teach the contents of home economics at an appropriate level. Teachers with adequate formal education are supposed to know and act according to the principle of uniform philosophy of the discipline and according to its overall principles, and they should have a positive attitude to the subject or the home economics discipline in general. They are key actors and promoters of home economics (Wahlen et al., 2009).

Conclusions

This article presents an overview of the areas of home economics, home economics education, and literacy-building throughout the world and in Slovenia. The role of home economics education in solving social problems is justified and in the challenges and problems of home economics in educational and social activities.

When providing home economics education, the basic guidelines of the home economics discipline, defined in the 2008 IFHE Position Statement, should be taken into account. Due to the cultural and social determination in the field, the education process must be adapted to the time and space in which it takes place. Therefore, in updating home economics education, the needs of the current society must be respected. The following text gives some guidelines for the actualisation of home economics education in Slovenia. They aim to stimulate Slovene science and profession in the area of home economics to carry out discussions and future research towards reshaping the existing home economics education.

The existing curriculum of the home economics subject in Slovene elementary school should undergo content updating. It should cover healthy lifestyles, nutrition, health, textiles, consumption, economics, family, environment and sustainable development. To some extent, these contents are included in the currently applicable subject curriculum. In view of the perceived needs of various stakeholders included in the Slovene educational process (teachers, pupils and parents), the home economics curriculum should additionally include contents about home, and pupils should be prompted to develop their skills related to basic housekeeping tasks, such as cleaning, tidying up and vacuum-cleaning their home. Contents about the use of household appliances and health education with stress on first aid should be added, and pupils should be encouraged to develop social and communication skills. The existent and suggested contents encompass what is needed for the high-quality everyday functioning of a person. These are also reflected at family and society levels. Thus, the main goal of home economics education is fulfilled.

The contents of the subject should be treated theoretically and practically and, in this way, enable pupils to develop skills needed for quality and autonomous functioning and life. Theoretical knowledge should be transferred to concrete life situations, and pupils should be given opportunities to develop appropriate attitudes to home economics contents. Suitable material and staff conditions should be provided for the practical performance of these classes at schools. No research on problems and limitations influencing how home economics is taught in Slovenia could be found. This area should be researched and the discussion on concrete suggestions and solutions initiated.

In Slovenia's obligatory elementary school education, the home economics subject should also be placed in the third education period (from the seventh to the ninth grades). Currently, the subject is taught only in the fifth and sixth grades, and the contents are given in modules. Consequently, there is no vertical upgrading of home economics knowledge and skills in home

economics education until the conclusion of elementary school. In the third education period, if one of the two elective subjects referring to the nutrition area (Ways of Eating and Modern Food Preparation) is selected by pupils, they can upgrade certain nutrition contents. This option can not, and must not, replace the need to place the independent subject of home economics in the last education period. The curriculum designers must respect the level of cognitive development of pupils and adapt the difficulty of contents to the particular education period.

Professional and scientific discussion in the area of home economics should be initiated on the denomination of home economics subject since the Slovene name does not reflect the actual span of the discipline, as it refers mostly to housekeeping. As in-depth research on the denomination or renaming of the subject in Slovenia has not been done yet, it would be sensible to implement it.

The legislation referring to who can teach home economics should be modified. It should only be taught by those who completed the study programme of home economics or those who completed an appropriate training programme in the subject. According to this definition, class teachers who are allowed, in line with the current legislation, to teach home economics to fifth graders, but often in practice also sixth graders, are not appropriately competent to teach the subject. During their studies, these teachers acquire no subject-specific competences in the subject.

As part of permanent education both, future home economics teachers and teachers who already teach this subject should be, during their studies and at study meetings for home economics teachers which are organised by the National Education Institute of the Republic of Slovenia, encouraged to develop their awareness on the meaning of home economics education for an individual, family and society. Home economics teachers should be key promoters of this discipline and should have a positive attitude towards it. The promotion of home economics at school and social as well as everyday life should be ensured. Promotion-oriented activities must be based on professional and scientific premises.

With their contents and inclusion in the education programme, the home economics discipline takes account of social changes that impact the lives of individuals and society. Proper adaptation to these changes and a better quality of life require, among others, high-quality home economics education and literacy teaching.

References

Alharbi, M., & Renwick, K. (2017). Saudi Arabian home economics curriculum: Searching for deep learning. *International Journal of Home Economics, 10*(2), 109–120.

Allwood, J. M., Laursen, S. E., De Rodríguez, C. M., & Bocken, N. M. (2006). *Well dressed. The present and future sustainability of clothing and textiles in the United Kingdom.* University of Cambridge Institute for Manufacturing. https://www.ifm.eng.cam.ac.uk/uploads/Resources/Other_Reports/UK_textiles.pdf

Banič, M., & Koch, V. (2015). Izkušnje učiteljev razrednega pouka s poučevanjem gospodinjstva [Experiences of primary school teachers in Home Economics teaching]. In M. Orel (Ed.), *Sodobni pristopi poučevanja prihajajočih generacij* (pp. 752–767). EDUvision.

Becirovic, S., & Akbarov, A. (2015). Impact of social changes on teacher's role and responsibilities in the educational system. *The Journal of Linguistic and Intercultural Education, 8*, 21–34.

Benn, J. (2004). Consumer education between 'consumership' and citizenship: Experiences from studies of young people. *International Journal of Consumer Studies, 28*(2), 108–116.

Benn, J. (2008). Some Danish remarks. *International Journal of Home Economics, 1*(1), 8–9.

Benn, J. (2009). Practical wisdom, understanding of coherence and competencies for everyday life. *International Journal of Home Economics, 2*(1), 2–14.

Brown, M. M. (1980). *What is home economics?* Minnesota Research and Development Center for Vocational Education.

Caraher, M., & McCloat, A. (2016). Home economics as a food education intervention: Lessons from the Irish secondary education context. *Education and Health, 34*(4), 104–109.

Casaló, L. V., & Escario, J. (2016). Intergenerational association of environmental concern: Evidence of parents' and children's concern. *Journal of Environmental Psychology, 48*, 65–74.

Collins, C., Collins, E., & Mc Intosh, J. (2008). Home economics futures – possible scenarios and where they take us. Visionary insights into the future – 2028. In D. Pendregast (Ed.), *Home economics: Reflecting the past; creating the future* (pp. 115–131).

Collins, S. B., Neysmith, S., Porter, E., & Reitsma-Street, M. (2009). Women's provisioning work: counting the cost for women living on low income. *Community, Work & Family, 12*(1), 21–37.

Davis, M. L. (2008). On identifying our profession. A response to the IFHE position statement. Home economics in the 21st century. *International Journal of Home Economics, 1*(1), 10–17.

Dewhurst Y., & Pendergast D. (2008). Home economics in the 21st century: A cross-cultural comparative Study. *International Journal of Home Economics*, *1*(1), 63–83.

Dixon, R. (2017). Teachers' hopes for the future of home economics education in New Zealand. *International Journal of Home Economics*, *10*(1), 12–20.

Erjavšek, M., & Kostanjevec, S. (2018). Formal nutrition education and the inclusion of parents in promoting nutritional literacy of children. In M. Orel & S. Jurjevčič (Eds.), *Sodobni pristopi poučevanja prihajajočih generacij* (pp. 742–751). EDUvision.

Erjavšek, M., & Lovšin Kozina, F. (2015). Stališča učiteljev z ustrezno in neustrezno formalno

izobrazbo za poučevanje gospodinjstva do predmeta gospodinjstvo [The attitudes of teachers with adequate and inadequate formal education to teaching home economics on the home economics subject]. In M. Orel (Eds.), *Sodobni pristopi poučevanje prihajajočih generacij* (pp. 743–751). EDUvision.

Erjavšek, M., Lovšin Kozina, F., & Kostanjevec, S. (2021). In-service home economics teachers' attitudes to the integration of sustainable topics in the home economics subject. *Center for Educational Policy Studies Journal, 11*(1), 27–47.

Erjavšek, M., Zupančič, T., & Kostanjevec, S. (2018). Teachers' views on the importance of home economics education in elementary school. In M. Orel & S. Jurjevčič (Eds.), *Sodobni pristopi poučevanja prihajajočih generacij* (pp. 772–778). EDUvision.

Erjavšek, M., Žabkar, N., & Kostanjevec, S. (2019). Elementary school pupils' attitude to home economics literacy. In M. Orel & S. Jurjevčič (Eds.), *Sodobni pristopi poučevanja prihajajočih generacij* (pp. 1249–1258). EDUvision.

Gale Smith, M. (2013). Issues and directions for home economics/family studies/human ecology education: An epilogue. In M. de Zwart & M. Gale Smith (Eds.), *Proceedings of the Canadian Symposium XII Issues and Directions for Home Economics/Family Studies/Human Ecology Education* (pp. 22–24). British Columbia.

Gale Smith, M. (2015). What does "Bring Back Home Ec" mean for us? Challenging the discourses of obesity and cooking. In M. de Zwart & M. Gale Smith (Eds.), *Proceedings of the Canadian Symposium XIII Issues and Directions for Home Economics/Family Studies/Human Ecology Education* (pp. 129–150). Canada.

Goldsmith, E. B., & Piscopo, S. (2014). Advances in consumer education: European initiatives. *International Journal of Consumer Studies, 38*(1), 52–61.

Gregorič, M., & Fajdiga Turk, V. (2018). Prehranjevanje [Nutrition]. In M. Vinko, T. Kofol Bric, A. Korošec, S. Tomšič, & M. Vrdelja (Eds.), *Kako skrbimo za zdravje? Z zdravjem povezan vedenjski slog prebivalcev Slovenije 2016* (pp. 8–13). Inštitut za varovanje zdravja Republike Slovenije.

Hakansson, A. (2015). Indoctrination or education? Intention of unqualified teachers to transfer consumption norms in home economics teaching. *International Journal of Consumer Studies, 39*(6), 682–691.

Harari, Y. N. (2020). *21 nasvetov za 21. stoletje* [*21 Lessons for the 21st century*]. Mladinska knjiga.

Hira, T. K. (2013). Home economics literacy: Investing in our future. *Journal of ARAHE, 20*(3), 113–118.

Hira, T. K. (2015). *World home economics day 2015 and 2016: Home economics literacy*. https://he.ifhe.org/index.php?eID=tx_nawsecuredlinu=oing=oint=1537183713inhash=87fb2698b2c3c36ebf8f7bb9737c4438737001beinfile=fileadmin/user_upload/redaktion/IFHE_In_Focus/WHED/Article_HIRA_WHED_2015_Literacy.pdf

Hodelin, G. B. (2008). Recasting home economics for the 21st century. A response to the IFHE position statement home economics in the 21st century. *International Journal of Home Economics, 1*(1), 18–21.

Höijer, K., Hjälmeskog, K., & Fjellström, C. (2011). Food with a purpose? – Home economics teachers' construction of food and home. *International Journal of Consumer Studies, 35*(5), 514–519.

IFHE (International Federation for Home Economics). (2008). *IFHE position statement, home economics in the 21st century*. http://www.ifhe.org/index.php?eID=tx_nawsecuredlinu=0infile=fileadmin/user_upload/redaktion/Publications/IFHE_Position_Statement_2008.pdfint=1276950317inhash=0878b56fbd9ea1b52ab4858efac2927c

IFHE (International Federation for Home Economics). (2015). *Press release: World home economics day 21 March 2015. Home economics literacy: Skills for families and consumers.* IFHE.

IFHE (International Federation for Home Economics). (2016). *IFHE world congress 2016 resolution.* https://www.ifhe.org/fileadmin/user_upload/IFHE/IFHE_Resolutions/IFHE_Resolution_World_Congress_2016.pdf

Information Booklet. (2020-21a). *Predstavitveni zbornik. Univerzitetni študijski program prve stopnje. Dvopredmetni učitelj* [First Level University Study Programme. Two Subject Study Programmes] *https://www.pef.uni*-lj.si/fileadmin/Datoteke/Studijski_programi/Predstavitveni_zborniki/Zborniki_20-21/Dvopredmetni_u%C4%8Ditelj_4.pdf

Information Booklet. (2020-21b). *Predstavitveni zbornik. Univerzitetni študijski program prve stopnje. Razredni pouk* [First Level University Study Programme. First cycle of elementary school]. https://www.pef.uni-lj.si/fileadmin/Datoteke/Studijski_programi/Predstavitveni_zborniki/Zborniki_20-21/Razredni_pouk_3.pdf

Jabs, J., Devine, C. M., Bisogni, C. A., Farrell, T. J., Jastran, M., & Wethington, E. (2007). Trying to find the quickest way: Employed mothers' constructions of time for food. *Journal of Nutrition Education and Behavior, 39*(1), 18–25.

Joy, A., Sherry Jr, J. F., Venkatesh, A., Wang, J., & Chan, R. (2012). Fast fashion, sustainability, and the ethical appeal of luxury brands. *Fashion Theory, 16*(3), 273–295.

Kalin, J., Krek, J., Medveš, Z., Valenčič Zuljan, M., & Vogrinc, J. (2011). Osnovna šola [Elementary school]. In Krek, J., & Metljak, M. (Eds.), *Bela knjiga o vzgoji in izobraževanju v Republiki Sloveniji* (pp. 107–179). Zavod RS za šolstvo.

Kaplowitz, M. D., & Levine, R. (2005). How environmental knowledge measures up at a big ten university. *Environmental Education Research, 2*(11), 143–160.

Kieren, D., Vaines, E., & Badir, D. (1984). *The home economist as a helping professional*. Frye Publishing.

Korhenen, K., & Lappalainen, A. (2004). Examining the environmental awareness of children and adolescents in the Ranomafana region, Madagascar. *Environmental Education Research, 2*(10), 197–216.

Kostanjevec, S., Lovšin Kozina, F., & Erjavšek, M. (2017). Izzivi gospodinjskega opismenjevanja v osnovnošolskem izobraževanju [Challenges of teaching home economics literacy in primary education]. In M. Sardoč, I. Ž. Žagar, & A. Mlekuž (Eds.), *Raziskovanje v vzgoji in izobraževanju danes: zbornik povzetkov: 2nd nacionalna znanstvena konferenca* (pp. 72–73). Pedagoški inštitut.

Kostanjevec, S., Lovšin Kozina, F., & Erjavšek, M. (2018). The relationship between teachers'

education and their self-perceived competence for teaching home economics. *Problems of education in the 21st century, 76*(2), 175–187.

Lah, M. (2015). *Odnos osnovnošolskih učiteljev do poučevanja predmeta gospodinjstvo* [The attitude of primary school teachers towards teaching the home economics subject]. [Master's thesis, Univerza v Ljubljani, Pedagoška fakulteta].

Lai-Yeung, W. L. T. (2011). Nutrition education for adolescents: Principals' views. *Asia Pacific Journal of Clinical Nutrition, 20*(1), 87–94.

Lang, T., & Caraher, M. (2001). Is there a culinary skills transition? Data and debate from the UK about changes in cooking culture. *Journal of the HEIA, 8*(2), 2–14.

Lichtenstein, A. H., & Ludwig, D. S. (2010). Bring back home economics education. *JAMA, 303*(18), 1857–1858.

Lind, E., Pappel, K., & Paas, K. (2009). Handicaft and home economics as designers of citizens who are able to cope in society. *Citizenship, Social and Economics Education, 8*(1), 54–62.

Lindblom, C., Erixon Arreman, I., & Hörnell, A. (2013). Practical conditions for home and consumer studies in Swedish compulsory education: A survey study. *International Journal of Consumer Studies, 37*(5), 556–563.

Lobstein, T., & Jackson-Leach, R. (2016). Planning for the worst: Estimates of obesity and comorbidities in school-age children in 2025. *Pediatric Obesity, 11*, 321–325.

Lovšin Kozina, F. (2015). The primary school pupils' knowledge and attitudes on selected textile topics. *Tekstilec, 58*(4), 274–280.

Lusardi, A., & Mitchell, O. (2014). The Economic importance of financial literacy: Theory and evidence. *Journal of Economic Literature, 52*(1), 5–44.

Ma, A., & Pendergast, D. (2011). The past, the present and the preferred future for home economics education in Hong Kong. *International Journal of Consumer Studies, 35*(5), 589–594.

Magee, M., Yoo, T. M., Mok, C. F. J., & Washi, S. (2010). Collective empowerment of the home economics profession — Equipping the profession with advocacy, futures creation and leadership. *International Journal of Home Economics, 3*(1), 38–52.

Maknun, J., Syaom Barliana, M., Cahyani, D., & Mardiana, R. (2016). The level of environmental literacy toward vocational high school students in West Java Province. *Innovation of Vocational Technology Education, 2*, 66–70.

Matos, B. (2016). *Odnos staršev do gospodinjskega opismenjevanja otrok.* [*Parents' attitudes towards teaching children home economics literacy*]. (Diploma thesis). Univerza v Ljubljani, Pedagoška fakulteta.

McGregor, S. L. T. (2016). Framing consumer education conceptual innovations as consumer activism. *International Journal of Consumer Studies, 40*(1), 35–47.

Mifsud, M. C. (2012). A meta-analysis of global youth environmental knowledge, attitude and behavior Studies. *US-China Education Review B, 2*(3), 259–277.

Mølstad, C. E. (2015). State-based curriculum-making: approaches to local curriculum work in Norway and Finland. *Journal of Curriculum Studies, 47*(4), 441–461.

Mominova, R. N., & Ibragimova, D. (2021). A healthy lifestyle and its importance. *American Journal of Applied Sciences, 3*(3), 1–6.

Morgan, L. R., & Birtwistle, G. (2009). An investigation of young fashion consumers' disposal habits. *International Journal of Consumer Studies, 33*(2), 190–198.

Murko, A. (2017). *Didaktični pristopi pri poučevanju prehranskih vsebin, vključenih v predmet gospodinjstvo* [Didactic approaches in teaching nutrition content integrated in home economics subject]. [Master's thesis, Univerza v Ljubljani, Pedagoška fakulteta].

Nanayakkara, J., Burton, M., Margerison, C., & Worsley, A. (2018). Importance of home economics compared to other secondary school subjects: Australian parents' and young adults' views. *International Journal of Home Economics, 11*(1), 72–79.

Neubauer, A. B., Schmidt, A., Kramer, A. C., & Schmiedek, F. (2021). A little autonomy support goes a long way: Daily autonomy-supportive parenting, child well-being, parental need fulfillment, and change in child, family, and parent adjustment across the adaptation to the COVID-19 pandemic. *Child Development, 92*(5), 1679–1697.

Nutbeam, D. (1998). Health promotion glossary. *Health Promotion International, 13*(4), 349–64.

OECD. (2009). *Financial literacy and consumer protection: Overlooked aspects of the crisis.* http://www.oecd.org/finance/financial-markets/43138294.pdf

OECD. (2013). *PISA 2012. Assessment and analytical framework: Mathematics, reading, science, problem solving and financial literacy.* OECD Publishing. http://dx.doi.org/10.1787/9789264190511-en

OECD. (2014). *PISA 2012 results: Students and money: Financial literacy skills for the 21st century*. http://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-vi.pdf

Olafsdottir, S., Juniusdottir, R., & Olafsadotti, A. S. (2017). Health promotion and home economics belong together-progress towards extended curricula in teacher education. *International Journal of Home Economics, 10*(2), 180–190.

Pace, E. M., Aiello, P., & Sibilio, M. (2015). Applying the theory of simplexity in home economics education for the acquisition of transversal competencies to face complexity. *International Journal of Learning, Teaching and Educational Research, 11*(2), 71–87.

Pendergast, D. (2001). *Virginal mothers, groovy chicks and Bbokey blokes: Re-thinking home economics (and) teaching bodies*. Australian Academic Press.

Pendergast, D. (2008). Introducing the IFHE position statement. *International Journal of Home Economics, 1*(1), 3–7.

Pendergast, D. (2012). The intention of home economics education: A powerful enabler for future-proofing the profession. In D. Pendergast, S. L. T. McGregor, & K. Turkki (Eds.), *Creating home economics future: The next 100 years* (pp. 12–24). Australian Academic Press.

Pendergast, D. (2013). An appetite for home economics literacy: Convergence, megatrends and big ideas. *Journal of ARAHE, 20*(2), 57–65.

Pendergast, D. (2015). HELM - home economics literacy model - A vision for the field. *Victorian Journal of Home Economics, 54*(1), 2–6.

Pendergast, D., & Dewhurst, Y. (2012). Home economics and food literacy: An international

investigation. *International Journal of Home Economics, 5*(2), 245–263.

Pendergast, D., Garvis, S., & Kanasa, H. (2011). Insight from the public on home economics and formal food literacy. *Family and Consumer Sciences Research Journal*, *39*(4), 415–430.

Pendergast, D., Garvis, S., & Kanasa, H. (2013). The value of home economics to address the obesity challenge: An evaluation of comments in an online forum. *International Journal of Home Economics, 6*(2), 272–285.

PISA. (2021). *Financial literacy analytical and assessment framework.* https://www.oecd.org/pisa/sitedocument/PISA-2021-Financial-Literacy-Framework.pdf

Pravilnik o izobrazbi učiteljev in drugih strokovnih delavcev v izobraževalnem programu osnovne šole. (2015). [Rules on education of teachers and other expert workers in the elementary school education programme]. *Uradni list RS, št. 109/11, 10/12, 92/12, 49/13 in 75/15.* http://pisrs.si/Pis.web/pregledPredpisa?id=PRAV10943

Pridāne, A. (2017). *The study on competence-based curriculum implementation in the subject home economics and technologies.* http://llufb.llu.lv/conference/REEP/2017/Latvia-Univ-Agricult-REEP-2017_proceedings-376-384.pdf

Program osnovna šola. Gospodinjstvo. Učni načrt. *(2011). [Elementary school programme, Home Economics, Curriculum].* Ministrstvo za šolstvo in šport: Zavod RS za šolstvo. *http://www.mizs.gov.si/fileadmin/mizs.gov.si/pageuploads/podrocje/os/prenovljeni_UN/UN_gospodinjstvo.pdf*

Program osnovna šola. Načini prehranjevanja in Sodobna priprava hrane. Učni načrt. (2009). [*Ways of eating and Modern food preparation]*. Ministrstvo za šolstvo in šport: Zavod RS za šolstvo. http://www.mizs.gov.si/si/delovna_podrocja/direktorat_za_predsolsko_vzgojo_in_osnovno_solstvo/osnovno_solstvo/program/abecedni_seznam_izbirnih_predmetov_v_osnovni_soli/#c17860

Renold, U. (2008). The role of education in equipping individuals and families to be resilient and active participants in the global community. *International Journal of Home Economics, 1*(2), 69–74.

RIC. (2021). *Nacionalno preverjanje znanja* [National assessment of knowledge in 9-year period]. https://www.ric.si/preverjanje_znanja/predmeti/

Roldan, A. T. (2017). Home economics research: Instilling hope, re-directing source of happiness in individuals and families of contemporary society. *International Journal of Home Economics, 10*(1), 151–161.

Rosefsky Saavedra, A., & Darleen Opfer, V. (2012). *Teaching and learning 21st century skills.* https://asiasociety.org/sites/default/files/T/teaching-and-learning-21st-century-skills-rand.pdf

Saribas, D., Teksoz, G., & Ertepinar, H. (2014). The relationship between environmental literacy and self-efficacy beliefs toward environmental education. *Procedia - Social and Behavioral Sciences, 116*, 3664–3668.

Scarborough, W. J., Collins, C., Ruppanner, L., & Landivar, L. C. (2021). Head start and families' recovery from economic recession: Policy recommendations for COVID-19. *Family Relations, 70*(1), 26–42.

Sheridan Rains, L., Johnson, S., Barnett, P., Steare, T., Needle, J. J., Carr, S., Taylor, B. L., Bentivegna, F., Edbrooke-Childs, J., Scott, H. R., Rees, J., Shah, P., Lomani, J., Chipp, B., Barber, N., Dedat, Z.,

Oram, S., Morant, N., & Simpson, A. (2021). Early impacts of the COVID-19 pandemic on mental health care and on people with mental health conditions: Framework synthesis of international experiences and responses. *Social Psychiatry and Psychiatric Epidemiology, 56*, 13–24.

Slater, J. (2013). Is cooking dead? The state of home economics food and nutrition education in a Canadian province. *International Journal of Consumer Studies, 37*(6), 617–624.

Slater, J., & Hinds, A. (2014). University student perceptions of home economics: Food and nutrition education. *International Journal of Home Economics, 7*(2), 68–80.

Sproles, K. E., & Sproles, B. B. (2000). *Careers serving families and consumers.* Prentice Hall.

SSKJ - Slovar slovenskega knjižnega jezika. (2008). [Dictionary of Slovenian literary language]. SAZU.

Stage, S., & Vincenti, E. (1997). *Rethinking home economics, women and the history of the profession*. Cornell University Press.

Street, P. (2006). *Home economics education in New Zealand: A position statement.* http://nzcurriculum.tki.org.nz/Curriculum-resources/NZC-resource-bank/Health-and-physical-education/Supporting-materials

Štirn, P. (2016). *Odnos študentov do vsebin gospodinjstva* [*Students' attitude towards home economics contents*]. (Diploma thesis). Univerza v Ljubljani, Pedagoška fakulteta.

Taar, J., & Vant, T. (2017b). *The role of the school subjects' name on its content and image.* http://llufb.llu.lv/conference/REEP/2017/Latvia-Univ-Agricult-REEP-2017_proceedings-392-399.pdf

Tamm, J., & Palojoki, P. (2012). *New curriculum, new directions? Using socio-cultural perspective to develop home economics education in Estonia.* http://llufb.llu.lv/conference/REEP/2012/REEP-2012-proceedings-E-ISSN-2255-808X.pdf

Tuncer, G., Tekkaya, C., Sungur, S., Cakiroglu, J., Ertepinar, H., & Kaplowitz, M. (2009). Assessing pre-service teachers' environmental literacy in Turkey as a means to develop teacher education programs. *International Journal of Educational Development, 29*(4), 426–436.

Tuomisto, M., HaapaniemI, J., & Fooladi, E. (2017). Close neighbours, different interests? Comparing three Nordic home economics curricula. *International Journal of Home Economics, 10*(2), 121–131.

Turkki, K. (2005). Pre-professionals' perceptions of home economics in Finland. *International Journal of Consumer Studies, 29*(3), 273–282.

Urek, V. (2018). *Stališča staršev o pomenu usvajanja znanj in veščin pri gospodinjskem izobraževanju* [Parents' views on the importance of acquiring knowledge and skills in home economics education]. (Master's thesis). Univerza v Ljubljani, Pedagoška fakulteta.

Vidgen, H. A., & Gallegos, D. (2014). Defining food literacy and its components. *Appetite, 76*, 50–59.

Volāne, E. (2014). *The acquisition of primary school pupils' life activity skills in the aspect of teaching content of home economics and technologies.* http://llufb.llu.lv/conference/REEP/2014/Latvia-Univ-Agricult-REEP-2014proceedings-162-171.pdf

Wahlen, S., Posti-Ahokas, H., & Collins, E. (2009). Linking the loop: Voicing dimensions of home economics. *International Journal of Home Economics, 2*(2), 32–47.

Werner, E. N., Guadagni, A. J., & Pivarnik, J. M. (2020). Assessment of nutrition knowledge in

division I college athletes. *Journal of American College Health*, 2000, 1–8. https://doi-org.nukweb.nuk.uni-lj.si/10.1080/07448481.2020.1740234

WHO. (2014). *European food and nutrition action plan 2015–2020*. http://www.euro.who.int/__data/assets/pdf_file/0008/253727/64wd14e_FoodNutAP_140426.pdf

WHO. (2021). *Obesity and overweight*. https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight

Woodruff, S. J., & Kirby, A. R. (2013). The associations among family meal frequency, food preparation frequency, self-efficacy for cooking, and food preparation techniques in children and adolescents. *Journal of Nutrition Education and Behavior, 45*(4), 296–303.

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Project LifeLab Food and Health – Innovative Teaching for the Future: Development of Student Active Learning Tasks for Home Economics Education in the 21st Century

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Food and Health, previously referred to as Home Economics, is a mandatory school subject in Norway. It has the unique advantage of giving all students, regardless of their social background, practical skills and knowledge, life skills that are important for their future health. In the LifeLab Food and Health project, we have developed a research-based and innovative teaching programme and evaluated how it is perceived in a school setting in Norway. This teaching programme is for use in Food and Health teacher education, but also in the education of primary and lower secondary school students in the same subject. LifeLab Food and Health consists of learning tasks in which students in the sixth and ninth grades in school gain first-hand knowledge and an understanding of life skills that are important to manage everyday life. In this paper, we present the learning activities developed and how the students experienced them. Examples of such learning tasks are tasks revealing the science behind dietary guidelines and the promotion of a healthy diet through student active tasks. Our aim is to establish LifeLab Food and Health as a "best practice" within master's education in Home Economics at the University of Agder in Norway.

Keywords: home economics, food and health, active learning tasks, life skills, school

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Projekt LifeLab prehrana in zdravje – inovativno poučevanje za prihodnost: razvoj aktivnih učnih nalog za učence pri pouku gospodinjstva v 21. stoletju

Cecilie Beinert, Nina Cecilie Øverby in Frøydis Nordgård Vik

Predmet prehrana in zdravje, prej imenovan gospodinjstvo, je na Norveškem obvezni šolski predmet. Njegova edinstvena prednost je, da vsem učencem, ne glede na njihovo socialno ozadje, omogoča pridobivanje praktičnih spretnosti in znanja, življenjskih veščin, ki so pomembne za njihovo zdravje v prihodnosti. V okviru projekta LifeLab Food and Health (slov. LifeLab prehrana in zdravje) smo razvili na raziskavah temelječ in inovativen učni program ter ocenili, kako ga dojemajo v šolskem okolju na Norveškem. Učni program je namenjen uporabi pri izobraževanju učiteljev na področju prehrane in zdravja pa tudi pri izobraževanju osnovnošolcev in dijakov nižjih razredov srednjih šol pri istem predmetu. Projekt LifeLab prehrana in zdravje je sestavljen iz učnih nalog, pri katerih učenci v šestem in devetem razredu iz prve roke pridobivajo znanje in razumevanje življenjskih veščin, ki so pomembne za obvladovanje vsakdanjega življenja. V tem prispevku predstavljamo razvite učne naloge in kako so jih učenci doživljali. Primera takih učnih nalog sta nalogi, ki razkrivata znanstveno ozadje prehranskih smernic in spodbujanje zdrave prehrane z aktivnimi nalogami učencev. Naš cilj je vzpostaviti oblike dela, razvite v okviru projekta LifeLab prehrana in zdravje, kot »najboljšo prakso« v okviru magistrskega izobraževanja na področju gospodinjstva na Univerzi Agder na Norveškem.

Ključne besede: gospodinjstvo, prehrana in zdravje, aktivne učne naloge, življenjske veščine, šola

Introduction

Data from the Global Burden of Disease (GBD) study (Afshin et al., 2019) reveals the essential role food and nutrition play in human health. Globally, the intake of healthy foods and nutrients is suboptimal, while the intake of unhealthy foods and nutrients is higher than the desired amount. Most of the disease burden related to diet is a result of a too low intake of whole grains and fruit, and a high intake of sodium (Afshin et al., 2019).

Although the diet of children and adolescents in Norway is largely in accordance with the dietary guidelines set by the health authorities (Hansen Brooke et al., 2016), both groups still consume too little fruit, vegetables and fish, and too much saturated fat, salt and sugar (Hansen Brooke et al., 2016). Since dietary habits track into adulthood (Craigie et al., 2011; Cruz et al., 2018), establishing healthy habits early in life is important. Targeting children and adolescents has therefore been a political priority nationally (Ministry of Health and Care Services, 2017) and internationally (World Health Organization, 2006, 2015). A national action plan for a healthier diet was published in 2017 in Norway, presenting several dietary targets for change among children and adolescents by the year 2021 (Ministry of Health and Care Services, 2017). The World Health Organization (WHO) has provided recommendations on ways to target this age group. It advocates improving education on healthier food choices by educating children in nutrition and a healthy lifestyle (European Commission, 2014), as well as including awareness-raising activities and practical cooking lessons in school.

In Norway, the subject Food and Health (FH) (previously referred to as Home Economics) is mandatory in primary and lower secondary school (Directorate for Education and Training, 2019b). Although there are competency aims after the seventh and tenth grades, most of the teaching is clustered in the sixth and ninth grades. FH should promote public health, food enjoyment and interest in the diversity of foods and food habits in society. It is crucial for students to develop an understanding of how diet and health are intertwined. They should also develop critical thinking, ethical awareness and a sense of responsibility, so that they are able to choose foods that are both health promoting and sustainable (Directorate for Education and Training, 2019b). This ambitious curriculum reaches all students, regardless of their socioeconomic position, and is thus an important element in public health work. In Norway, 96% of all students attend public schools (Statistics Norway, 2020). Thus, public schools are considered a health-promoting arena of great importance. An example of the student competence aims in FH after the seventh grade is to "use

food labelling and diet models to put together a healthy, varied and sustainable diet and reflect on their choices", while after the tenth grade students should be able to "use their senses to assess the quality of food, explore and combine flavours in cooking, and improve recipes, menus and serving of food" (author's translation) (Directorate for Education and Training, 2019b).

Although the literature on how FH is taught in Norwegian schools is scarce, research suggests that there is a strong focus on developing students' practical cooking skills in FH education (Beinert et al., 2020; Espeland et al., 2013; Veka et al., 2018), which has been central since the introduction of the subject more than a hundred years ago, when it was called "school kitchen" (Askeland et al., 2017). The traditional teacher-led approach to FH education, whereby the students cook according to a set of recipes based on foods that the teachers have purchased in advance, still characterises todays teaching (Beinert et al., 2020; Espeland et al., 2013; Veka et al., 2018). Students' ability to follow recipes while cooking is highlighted as important according to FH teachers (Espeland et al., 2013). Consequently, the development of students' ability to think critically, be creative and understand how food impacts our health and environment may not be fully developed. Moreover, comprehensive approaches to food and nutrition education, including both theory and practical cooking, may have a stronger impact on students' dietary choices and thus on the health outcome (Burton et al., 2018; Grosso et al., 2013). Today, theory and practice do not seem to go fully hand-in-hand (Lassen, 2020) and the subject does not seem to enhance students' knowledge and attitudes, as foreseen by the curriculum (Øvrebø, 2014). Therefore, FH education needs to better integrate theory into practical learning activities (Øvrebø, 2014) and focus more on cognitive-oriented learning tasks that enable students to engage with theory in a meaningful and engaging way (Taar, 2017).

Based on the challenges of FH in Norway today, the LifeLab Food and Health (FH) project was initiated in 2017. We were inspired by LifeLab in the UK; specifically, by our colleagues at the University of Southampton, who have initiated a LifeLab to educate young people for lifelong health. LifeLab in Southampton is a unique, state-of-the art teaching laboratory dedicated to improving adolescent health by giving school students opportunities to learn first-hand the science behind health messages (Woods-Townsend et al., 2015). LifeLab in the UK was initiated in 2008 and is a collaboration between the University of Southampton, Southampton General Hospital and the city. Although LifeLab in the UK is centred around the school subject of science, we decided to focus our modified, Norwegian version of LifeLab on FH education. Named LifeLab FH, the project aimed to develop and evaluate a research-based and

innovative teaching programme, a LifeLab, to be used in the education of schoolteachers in FH and for school students in the same subject. We developed several state-of-the-art student active learning tasks in which students and future FH teachers can engage with research in an easy and specific way through practical assignments, enabling them to learn the science behind health messages in order to enhance lifelong health. This way, the connection between the intake of healthy foods and the students' own health is more evident, whereby LifeLab FH aims to present a modern approach to FH education both in schools and universities as an example of the Home Economics education needed for the 21st century. By including and linking relevant theory to practical work in FH lessons, we aim to provide students with a stronger basis for learning. The objective of the current paper is to present an overview of the LifeLab FH teaching programme, i.e., the different student active learning tasks that focus on the theoretical content of the FH curriculum in Norway, as well as to present experiences from the first evaluations of these tasks in schools.

Method

Development of the learning tasks

In order to develop learning tasks that are relevant and interesting for the users, we invited different relevant stakeholders to participate in the project.

First, Focus Group Discussions (FGDs) with FH teachers and students were conducted at three local schools to gain an insight into what kind of learning tasks they would value the most and would find most appropriate for FH. The feedback obtained was then used as a basis for the development of the learning tasks in the LifeLab FH project. The main feedback from both students and teachers was the importance of active learning tasks that engage the students, as they believe that this is important for their learning outcome (Beinert et al., 2020). Teachers also emphasised that it is important for the learning tasks to be easy to use and readily adaptable to their teaching. In addition to the findings from these FGDs, the FH curriculum and relevant white papers on future competencies to be developed in school were used as a basis for the development of the learning tasks.

After the FGDs were conducted, the learning tasks were developed through workshops with two teacher education students specialising in FH at the University of Agder (UiA), an FH teacher, a scientific assistant, a master's student, and the PhD student who had led the workshops and the developmental work. The learning tasks were aimed at students in primary and lower secondary

school, as well as students specialising in FH in their teacher education. By being introduced to these learning tasks during their university studies, the latter group can implement the ideas in schools when they start working as school teachers.

So far, six student active learning tasks have been developed, emphasising fruit and vegetable intake, food labelling, the nutritional value of foods and different nutritional claims. As dialogue, argumentation and collaboration are important in social learning and development (Directorate for Education and Training, 2019a), and given that oral skills are one of the four basic skills to be developed in all subjects in school (Directorate for Education and Training, 2019b), we adopted a sociocultural approach to learning (Vygotsky, 1978) when developing the learning tasks. This shares ideas with 21st century learning, which acknowledges the social nature of learning, whereby learning "is understood to be importantly shaped by the context in which it is situated and actively constructed through social negotiation with others" (Dumont et al., 2012, p. 3). Moreover, skills in problem solving, communication and collaboration are highlighted as important in 21st century learning (Kay, 2015). For more details on the development and the pedagogical basis of the learning tasks, please see Beinert (2021) and Beinert et al. (2021).

The learning tasks were tested at two of the three local schools included in the project. The test groups consisted of three groups of sixth graders and four groups of ninth graders (79 students in total) and the learning tasks were conducted in one of the students' scheduled FH classes (approximately two school hours). However, due to the extent of the project, we were only able to analyse grade six, consisting of one class of 13 students, and two other classes with 15 students in each class, i.e., 43 students in total (Beinert et al., 2021). Audio and video recordings were used to evaluate how the learning tasks worked. The students worked in groups of three or four, with one wide-angle camera placed at each group of students, which captured student talk and both verbal and non-verbal interaction throughout the class. One of the teacher students and two other participants in the initial workshop (one scientific assistant and one master's student in public health) conducted the teaching, while the researcher (the PhD student) passively observed the classroom. The FH teacher had received a description of the learning tasks and all of the necessary material in advance and was invited to participate as much as s/he wanted. The learning tasks were similar for both levels, with minor adjustments in difficulty. After the class, a short FGD was conducted to explore how both the students and the teachers experienced the class.

Results

Description and evaluation of the learning tasks

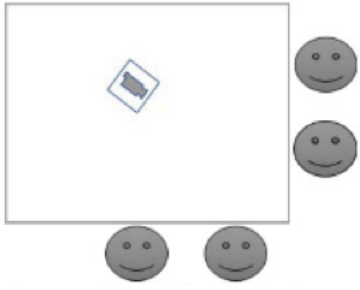
The overall theme of the LifeLab FH learning tasks was food choices, and the analysis and findings of the evaluation of three of the six tasks can be found elsewhere (Beinert et al., 2021).

Learning Task 1

In the first learning task, the students ranked pictures of different dishes or food items from the most to the least nutritious. They worked in groups of three or four to facilitate cooperation and collaboration in solving the different tasks. See Figure 1 for illustration.

Figure 1

Placement of students and camera (for evaluation purposes) during the class



Note. Adapted from Beinert et al., 2021.

Each group of students was given eight pictures of different food items. The items (Table 1) were common breakfast/lunch items assumed to be familiar to most students.

Table 1

Pictures included in the picture ranking activity

Orange juice	
Chocolate milk	
Yogurt with granola and berries	
Fruit yogurt	
Slice of bread with brown cheese and tomato	
Slice of bread with chocolate spread	
Chocolate cereal	
Whole grain cereal	

Note. Adapted from Beinert et al., 2021.

The students were encouraged to share their thoughts and knowledge within the group and collaboratively reach agreement on how to rank the different items. After all of the groups had agreed on an order, the teacher tried to arrange them on the whiteboard in plenary based on input from the students and additional facts provided by the teacher regarding which food groups the items belong to (e.g., berries, dairy products, etc.) and the nutrients they contain. At the sixth-grade level, the students were generally very active in this discussion and widely shared their thoughts. In the ninth grade, however, the students were not as active in participating in the exchange of thoughts and the teachers had to do most of the talking. Our experience was that only a few students in each class willingly spoke out.

When working on arranging the pictures, some of the students were very confident about the right answer and therefore solved the task quickly. Many of the students merely based their arrangement on sugar content. Prior to the task, some of the students had viewed a short video on sugar content in certain beverages and measured sugar content in products similar to those they were asked to arrange, which may explain why they used sugar as a premise when arranging the pictures.

In this task, the students were challenged in the skill of discussing and using each other's knowledge to come to an agreement. In some of the groups, one or two of the students were nevertheless more in charge and did most of the talking when arranging of the pictures, leaving the others more passive. In other groups, however, all of the students participated, shared their knowledge, and came to a shared agreement on an order. All of the groups managed to come to an agreement, but the groups ordered their pictures differently. Some struggled to arrange the pictures, while others found it easy and hence finished quickly. When the teachers tried to rank the items on the whiteboard, the challenge of ranking one item over another, with a right and wrong answer, was highlighted. Although the ranking of some of the items – such as determining that chocolate cereal is less nutritious than whole grain cereal – was fairly obvious, most of the other items were more difficult to arrange. The aim was for the students to understand that it is not a simple task to rank such different items, and for them to gain more knowledge of the nutritional value each individual item. This knowledge was then used as a basis by the teacher in ranking the pictures in plenary.

Learning Task 2

In Learning Task 2, two different loaves of bread with different whole grain content were presented to the students, both of which were cut in half so that the students could examine them on the inside and the outside. The students then identified the whole grain content of the two loaves of bread without seeing the packaging/food label. In Norway, a food labelling system is used called the Bread Scale (Figure 2), which illustrates the whole grain content of bread and other bakery products.

Figure 2

Bread Scale. Each section (red) presents the percentage of whole grain in the product

Note. Adapted from matportalen.no.

The teacher presented one loaf of bread at a time for the students to examine, after which the students placed them in a continuum, from extra whole grain to white bread with very little whole grain content. The teacher then showed the students the packaging with the correct icon of whole grain content. Finally, the teacher elaborated on whole grains, relating them to nutritional recommendations and about food labelling together with the students.

During the evaluation of this learning task, one loaf of bread qualified for the 0–25% icon and the other for the 76–100% icon. Moreover, the whole grain bread was pale in colour and had no visible grains, while the white bread was darker and had visible grains on top. This was to illustrate the purpose of food labelling, as it is not easy to judge the whole grain content of a type of bread merely by looking at it. During this task, the teacher asked the students if they knew which loaf of bread it was recommended to eat and why, thus enabling them to repeat the national dietary guidelines regarding such products.

The students were surprised to see the level of whole grain content in the two loaves of bread. Most of them used the colour or the number of visible grains of the loaf of bread to judge its whole grain content and thus guessed wrong. They then realised that one cannot know the whole grain content of a loaf of bread just by looking at it. Some bread that is light in colour could in fact have high whole grain content and vice versa. This way, the students saw the value of such food labels.

Learning Task 3

In this task, the students identified the sugar content of different items. They were given the packaging of different items (yoghurts and cereals with different sugar and fibre content, chocolate spread, and a Norwegian spread called "prim", a sweetened spread made of whey from cows' milk). After the teacher demonstrated how to find the sugar content of a given portion size, the students were encouraged to do so themselves within their groups. They could therefore use their mathematics skills to see how sugar content varied between the products, thus helping them see the connections between school subjects, in this case FH and mathematics. Although the students measured the sugar content for one portion (e.g., 125g of yogurt), some of them believed it was the content of the whole item, so this had to be specified for them. Furthermore, the fact that the portion size on the packaging is often small was illustrated to the students by showing them how much 15g of chocolate spread (which is equal to one standard portion) really is. The students were quite surprised to see the amount of sugar in one portion of chocolate spread.

Learning Task 4

This task aimed to illustrate and concretise the "five a day" recommendations for fruit and vegetables from health authorities. A selection of different fruit and vegetables, frozen and fresh, were placed on a tray. The students were then instructed to select the amount they believed equalled "five a day" and then weigh it on a scale. As the students often picked five different fruits and vegetables, they were surprised to see that they had selected more than 500 grams, which is the recommended amount. They were then asked to peal the fruit with thick peal (banana and orange), and then weigh the net, i.e., the amount consumed, which enabled them to see the amount and compare it to the recommendations. The students were also taught that one portion equals one handful, and the portions for children are therefore smaller than for adults.

Learning Task 5

The fifth task was a simple jigsaw, where the students read a text concerning either food and social media, food and sustainability, nutrition and health, or food choices. They read one text and then summarised the main points to their peers within the group, who had read one of the other texts. This way, the students became each other's teachers. However, some of the students found it challenging to summarise the main points and hence the learning outcome varied between the students.

Learning Task 6

At the end of the class, there was a quiz that summarised some of the topics discussed during class (tasks 1–5), making this the sixth LifeLab FH task. In this task, which was called the "50 game", 25 cards with questions on both sides (50 numbered questions) were distributed around in the classroom. The students first had to agree on a unique sound for their group. Then, one student in each group rolled a die. The groups had to spread out to quickly find the card with the number on the die. When a student found the number, s/he called for the other group members by using the agreed sound. After finding and answering the question, the group then gave the answer to the teacher. If the answer was correct, they rolled the die again and the number rolled was then added to the first number to determine the next card to be found, e.g., if they rolled three then six, they had to find card number nine. The first group to reach 50 won.

The learning tasks engaged the students to different degrees and will undergo further development and improvements. In the FGDs after the class, the students stated that they appreciated the opportunity to be active and solve the tasks themselves, which is in line with the students' expressed preferences from the initial FGDs conducted prior to development (Beinert et al., 2020).

During the class, the teacher only assisted when necessary when the students were working in their groups, as well as leading the discussion with the students in plenary. It was observed that the sixth-grade students were generally more active (raising their hands, sharing their thoughts, etc.) than the ninth-grade students. The "50 game" was especially popular among the sixth graders. The students in both grades nonetheless provided positive feedback about the class. The teachers found the tasks to be relevant and a useful way to work with the theoretical topics. Due to the practical approach to the theory, one teacher mentioned how she believed the students were learning a lot of theory without noticing that they were dealing with theory. The students were used to learning theory through homework or by working with written assignment or lectures if there was any time left at the end of the class (Beinert et al., 2020).

Discussion

The LifeLab FH project described aimed to develop different student active learning tasks for the Food and Health subject and evaluate how the tasks work in a school setting. The goal was to present a modern approach to FH education in both schools and universities, that is, an example of the Home Economics education needed for the 21st century.

Overall, both the FH teachers and the students had a positive experience

with the different learning tasks (Beinert et al., 2021). The students enjoyed having an active role, which was supported by the FH teachers. The teachers also mentioned how the tasks were relevant and could easily be adapted to different contexts.

In this project, the voices of both students and FH teachers were considered in the development of the learning tasks, thus making it more likely that the tasks could best meet their needs and increasing the chance of the tasks being adopted by the FH teachers themselves. However, as both teachers' and students' voices were considered, contradictory views regarding what kind of learning tasks are preferred must be considered. In the present study, both teachers and students emphasised that student active learning tasks are important for learning. "Fun" was a word frequently used by the students as an important factor for their motivation and learning (Beinert et al., 2020). The tasks were also described as something practical that they could do by themselves. The teachers also mentioned the importance of learning tasks being engaging and fun for the students in order for them to be successful.

The students in both grades provided positive feedback after performing the tasks. Engaging the ninth graders to the same degree as the sixth graders was nonetheless challenging, and how to adjust the learning tasks to better suit ninth graders should be explored further.

Some of the students lost focus when the teacher did most of the talking, e.g., during the arrangement of the pictures on the whiteboard. To accommodate this will require well-designed learning tasks, motivated students, and teachers who are skilled at facilitating active learning. When our tasks were evaluated in school classes, not all of the "teachers" (the assistants who participated in the development of the activities) were teacher educated, so they were not trained in class management. The practicalities of the learning tasks nonetheless worked well, probably because all of the teachers were familiar with the learning tasks and had time to prepare themselves ahead of the evaluation.

The second learning task with the two loaves of bread could, for example, be used in conjunction with baking bread. Another suggestion could be to include this learning task when the students learn about the nutritional guidelines. One competency aim for students in the sixth grade is (author translation): "to use food labelling and dietary models to compose a healthy, varied and sustainable diet and reflect on one's own choices" (Directorate for Education and Training, 2019b). The second learning task is a concrete example of how to use food labelling to choose healthy foods according to the dietary guidelines, which recommend that whole grain products are included in our diet every day (Norwegian Directorate of Health, 2011).

Since developing and evaluating these active learning tasks, FH teacher students at UiA have been introduced to them during their education, in order to inspire them to use such learning tasks in their future careers as FH teachers, as a "best practice" approach. As stated earlier, FH classes in schools today are mostly concerned with cooking, and students get the theoretical topics of the subject as homework or short lectures before, during or after cooking (Beinert et al., 2020). Thus, the FH subject is in need of alternative approaches to the theory if we want students to develop all of the competencies highlighted in the curriculum. By being given an opportunity to work more actively with theoretical aspects like food labelling or sustainability in FH classes, students are better equipped to develop the competencies highlighted in the curriculum and cultivate these important life skills. By including such learning tasks in the education of FH teachers, we believe this could be an example of "best practice" in FH education at universities, as well as in schools via the graduated teachers.

The older students get, the more responsibility they will have for their own diet. Being able to understand the importance of a healthy and varied diet, and being capable of identifying these products in a large food market, are therefore important competencies. Having the knowledge and skills to orient themselves in a complex food landscape, e.g., by understanding food labelling, could provide students with important life skills. We therefore believe that the student active learning tasks developed can complement today's teaching and serve as the kind of Home Economics education needed for the 21st century. As FH teachers in Norway are generally very content with teaching FH and feel they have mastered their teaching to a great extent (Vik et al., 2020), this is a valuable starting point for further development of the subject and for students' learning, as the teacher's self-efficacy can be important for student learning (Fackler & Malmberg, 2016). Moreover, students generally enjoy FH classes (Beinert et al., 2020; Øvrebø, 2014), which is another important advantage when it comes to promoting knowledge about the connections between food and students' health.

On his reflection after 30 years in the field of Home Economics, Caraher (2019) asks for stronger links to public health nutrition in future Home Economics education. He argues that "the links with public health nutrition need to be strengthened; developments such as food literacy and the emphasis on cooking skills need to be challenged and fitted within a broader scope of Home Economics" (Caraher, 2019, p. 4). Given the strong focus on cooking-related activities during FH classes (Beinert et al., 2020), we need to encourage teachers to think differently in their future teaching, so that all of the competencies highlighted in the curriculum are emphasised.

Since the first project period of LifeLab FH has ended, the aim is now to make all of the learning tasks available to all FH teachers in Norway. Therefore, the digitising of the different tasks has started, with the aim of making small instructional videos that will be published online free of charge. In the future, all FH teachers will therefore have access to the learning tasks, and they can thus be implemented nationally.

Conclusion

As previous research suggests that the traditional practice of FH education is evident in Norwegian schools, we argue that it is time for a renewal. By including active learning tasks such as those developed in the LifeLab FH project, we can strengthen current teaching practices so that they become the kind of Home Economics education needed in the 21st century. This way, students are given the opportunity to work more actively with theoretical topics of the curriculum, building important life skills. The LifeLab FH learning tasks may therefore complement current teaching practices and may be considered as "best practice" in FH education. By shifting the focus from a teacher-centred approach to learning to a more student-centred approach, teachers will facilitate a learning environment more in line with 21st century learning. Moreover, focusing more strongly on awareness-raising activities and food choices in teaching FH is more in line with the recommendations proposed by the European Commission. The learning tasks developed and evaluated in the present project received generally positive feedback from both students and teachers, mainly because they were designed as practical learning tasks targeting more theoretical content. However, only a limited number of students and teachers were included in the project, and the research concerning FH education is limited. Therefore, more research is needed on how we can develop FH as a future-oriented subject in which students develop critical thinking skills and are able to choose foods that are health promoting and sustainable. By doing so, we promote public health, as stated in the curriculum. In this way, we can develop FH education for the 21st century.

References

Afshin, A., John Sur, P., Fay, K. A., Cornaby, L., Ferrara, G., Salama, J. S., Mullany, E. C., Hassen Abate, K., Abbafati, C., Abebe, Z., Afarideh, M., Aggarwal, A., Agrawal, S., Akinyemiju, T., Alahdab, F., Bacha, U., Bachman, V. F., Badali, H., Badawi, A., … Murray, C. J. L. (2019). Health effects of dietary risks in 195 countries, 1990–2017: A systematic analysis for the Global Burden of Disease

Study 2017. *The Lancet*, *393*, 1958–1972. https://doi.org/10.1016/S0140-6736(19)30041-8

Askeland, N., Skjelbred, D., Aamotsbakken, B., & Maagerø, E. (2017). *Norsk lærebokhistorie* [Norwegian textbook history]. Scandinavian University Press.

Beinert, C. (2021). *"An unexploited potential" LifeLab Food and Health: Assessment and development of teaching and learning practices in the Norwegian school subject food and health* (Doctoral dissertation). University of Agder. https://uia.brage.unit.no/uia-xmlui/bitstream/handle/11250/2737880/Dissertation.pdf?sequence=4&isAllowed=y

Beinert, C., Palojoki, P., Åbacka, G., Hardy-Johnson, P., Engeset, D., Hillesund, E. R., Ask, A. M. S., Øverby, N. C., & Vik, F. N. (2020). The mismatch between teaching practices and curriculum goals in Norwegian Home Economics classes: A missed opportunity. *Education Inquiry, 12*(2), 183–201. https://doi.org/https://doi.org/10.1080/20004508.2020.1816677

Beinert, C., Palojoki, P., Åbacka, G. K., Øverby, N. C., & Vik, F. N. (2021). "Is there any sugar in bread?" A qualitative video analysis of student activating learning tasks in Home Economics. *Acta Didactica Norden*, *15*(1), 1–21. https://doi.org/10.5617/adno.8078

Burton, M., Riddell, L., & Worsley, A. (2018). Food consumers' views of essential food knowledge and skills for all consumers. *Health Education*, *118*(3), 277–288. https://doi.org/10.1108/HE-10-2017-0047

Caraher, M. (2019). Home economics - A personal reflection on 30 years of work, friendships and the future. *Journal of the Home Economics Institute of Australia*, *25*(2).

Craigie, A. M., Lake, A. A., Kelly, S. A., Adamson, A. J., & Mathers, J. C. (2011). Tracking of obesity-related behaviours from childhood to adulthood: A systematic review. In *Maturitas, 70*(3), 266–284) . https://doi.org/10.1016/j.maturitas.2011.08.005

Cruz, F., Ramos, E., Lopes, C., & Araújo, J. (2018). Tracking of food and nutrient intake from adolescence into early adulthood. *Nutrition*, *55–56*, 84–90. https://doi.org/10.1016/j.nut.2018.02.015

Directorate for Education and Training. (2019a). *Core curriculum – values and principles for primary and secondary education*. https://www.udir.no/Udir/PrintPageAsPdfService.ashx?pdfId=150459&lang=eng

Directorate for Education and Training. (2019b). *Læreplan i mat og helse* [Curriculum for food and health]. https://data.udir.no/klo6/v201906/laereplaner-lk20/MHE01-02.pdf

Dumont, H., Istance, D., & Benavides, F. (2012). *How can the learning sciences inform the design of 21 st century learning environments? The nature of learning using research to inspire practice - practitioner guide*. http://www.oecd.org/education/ceri/50300814.pdf

Espeland, M., Arnesen, T. E., Grønsdal, I. A., Holthe, A., Sømoe, K., Wergedahl, H., & Aadland, H. (2013). *Skolefagsundersøkelsen 2011* [School subject survey 2011]. https://hvlopen.brage.unit.no/hvlopen-xmlui/bitstream/handle/11250/152148/Rapport.pdf

European Commission. (2014). *EU Action Plan on Childhood Obesity 2014–2020*. https://ec.europa.eu/health/sites/health/files/nutrition_physical_activity/docs/childhoodobesity_actionplan_2014_2020_en.pdf

Fackler, S., & Malmberg, L. E. (2016). Teachers' self-efficacy in 14 OECD countries: Teacher, student group, school and leadership effects. *Teaching and Teacher Education*, *56*, 185–195. https://doi.

org/10.1016/j.tate.2016.03.002

Grosso, G., Mistretta, A., Turconi, G., Cena, H., Roggi, C., & Galvano, F. (2013). Nutrition knowledge and other determinants of food intake and lifestyle habits in children and young adolescents living in a rural area of Sicily, South Italy. *Public Health Nutrition*, *16*(10), 1827–1836. https://doi.org/10.1017/S1368980012003965

Hansen Brooke, L., Myhre Borch, J., Johannesen Wetting, A. M., Paulsen Mohn, M., & Andersen Frost, L. (2016). *UNGKOST 3 Landsomfattende kostholdsundersøkelse blant elever i 4. og 8. klasse i Norge, 2015* [UNGKOST 3 Nationwide dietary survey among pupils in the 4th and 8th grade in Norway, 2015]. https://www.fhi.no/globalassets/dokumenterfiler/rapporter/2017/ungkost-3-rapport-blant-9-og-13-aringer_endeligversjon-12-01-17.pdf

Kay, K. (2015). 21st century skills: Why they matter, what they are, and how we get there. In J. A. Bellanca & R. S. Brandt (Eds.), *21st century skills: Rethinking how students learn* (p. 375). Solution Tree Press. https://books.google.no/books?hl=no&lr=&id=aGYXBwAAQBAJ&oi=fnd&pg=PT7&dq=21+century+skills+rethinking+how+students+learn&ots=wbfZx--Z1Q&sig=7vGdksyeWdRpWG2p2XvZQDZGx5M&redir_esc=y#v=onepage&q&f=false

Lassen, K. (2020). *Skolekjøkkenets hemmeligheter: En kvalitativ studie om lærernes matlagingsundervisning på ungdomsskolekjøkkenet* [Secrets of the school kitchen: A qualitative study of teachers cooking education in the lower secondary school kitchen]. (Doctoral dissertation). University of South-Eastern Norway.

Ministry of Health and Care Services. (2017). *Norwegian National Action Plan for a Healthier Diet – an outline. Healthy diet, meal enjoyment and good health for everyone!* https://www.regjeringen.no/contentassets/fab53cd681b247bfa8c03a3767c75e66/norwegian_national_action_plan_for_a_healthier_diet_an_outline.pdf

Norwegian Directorate of Health. (2011). *Kostråd for å fremme folkehelsen og forebygge kroniske sykdommer* [Dietary advice to promote public health and prevent chronic diseases]. https://www.helsedirektoratet.no/rapporter/kostrad-for-a-fremme-folkehelsen-og-forebygge-kroniske-sykdommer-metodologi-og-vitenskapelig-kunnskapsgrunnlag

Øvrebø, E. M. (2014). Knowledge and attitudes of adolescents regarding home economics in Tromsø, Norway. *International Journal of Consumer Studies*, *38*(1), 2–11. https://doi.org/10.1111/ijcs.12043

Statistics Norway. (2020, December). *Pupils in primary and lower secondary school - annually - SSB*. https://www.ssb.no/en/utdanning/statistikker/utgrs

Taar, J. (2017). *Interthinking in Estonian home economics education.* (Doctoral dissertation). University of Helsinki. https://helda.helsinki.fi/bitstream/handle/10138/228138/Interthi.pdf?sequence=1

Veka, I., Wergedahl, H., & Holthe, A. (2018). Oppskriften – den skjulte læreplanen i mat og helse Sammendrag [The recipe – the hidden curriculum in the subject Food and Health]. *Acta Didactica Norge*, *12*(3), 1–21.

Vik, F. N., Beinert, C., Palojoki, P., Hillesund, Elisabet Rudjord Engeset, D., Ask, A. S., Åbacka, G., & Øverby, N. C. (2020). Differences in formal education among Norwegian Home Economics teachers.

Journal of the International Society for Teacher Education, *24*(2), 45–59.

Vygotsky, L. S. (1978). *Mind in society the development of higher psychological processes*. M. Cole, V. John-Steiner, S. Schribner, & E. Souberman (Eds.), Harvard University Press.

Woods-Townsend, K., Bagust, L., Barker, M., Christodoulou, A., Davey, H., Godfrey, K., Grace, M., Griffiths, J., Hanson, M., & Inskip, H. (2015). Engaging teenagers in improving their health behaviours and increasing their interest in science (Evaluation of LifeLab Southampton): Study protocol for a cluster randomized controlled trial. *Trials*, *16*(1). https://doi.org/10.1186/s13063-015-0890-z

World Health Organization. (2006). *Food and nutrition policy for schools - A tool for the development of school nutrition programmes in the European Region*. https://www.euro.who.int/__data/assets/pdf_file/0019/152218/E89501.pdf

World Health Organization. (2015). *European Food and Nutrition Action Plan 2015–2020*. https://www.euro.who.int/__data/assets/pdf_file/0003/294474/European-Food-Nutrition-Action-Plan-20152020-en.pdf

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Evaluation of the Implemented and Adopted Curriculum in Health Education in the Czech Republic with an Emphasis on the Drinking Regimen

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According to the Framework Education Programme for Elementary Education in the Czech Republic, part of Health Education is nutrition and food intake, including the drinking regimen. This paper's objective is to analyse that using the results of two extensive curricular studies performed at the Faculty of Education, Palacký University Olomouc. Both studies used data from representative samples of pupils in grade nine from elementary schools in the Czech Republic. The research instruments were designed according to applicable documents of the state-level implemented curriculum and showed good reliability. The results of the subjective evaluation of the implemented curriculum in health education suggest that in the area 'healthy lifestyle and health care', the subtopic 'nutrition and health – healthy diet principles, drinking regimen, eating disorders' was most dominant. The testing of the level of the adopted curriculum regarding fluid intake revealed a problematic level of pupils' knowledge (the average percentage of task achievement was around 46%). Conclusions and recommendations for practice: nutrition and food intake (including the drinking regimen) is a very important topic in health education in elementary education in the Czech Republic, which is consistent with other research studies. However, the cognitive dimension of the pupils' curriculum is inadequate. Qualitatively and quantitatively, the recommended drinking regimen may support natural health determinants, while an inappropriate or insufficient regimen may result in medical complications. The issue of adequate nutrition and diet and drinking regime must be taught by professionally and didactically competent teachers. Students should not only be taught cognitively, but their affective and behavioural abilities should also be formed.

Keywords: curriculum, drinking regimen, evaluation, health education, nutrition

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Vrednotenje izvedenega in sprejetega učnega načrta za zdravstveno vzgojo na Češkem s poudarkom na režimu pitja

Michaela Hřivnová

Skladno z Okvirnim izobraževalnim programom za osnovnošolsko izobraževanje na Češkem sta del zdravstvene vzgoje tudi prehrana in uživanje hrane, vključno z režimom pitja. Cilj prispevka je analizirati področje s pomočjo rezultatov dveh obsežnih kurikularnih študij, izvedenih na Pedagoški fakulteti Univerze Palacký v Olomoucu. V obeh raziskavah so bili uporabljeni podatki reprezentativnih vzorcev učencev devetega razreda osnovnih šol na Češkem. Raziskovalna instrumenta sta bila oblikovana skladno z veljavnimi dokumenti učnega načrta, ki se izvaja na državni ravni, in sta pokazala dobro zanesljivost. Rezultati subjektivnega vrednotenja izvedenega učnega načrta za zdravstveno vzgojo kažejo, da je na področju »zdravega življenjskega sloga in skrbi za zdravje« najbolj prevladovala podtema »prehrana in zdravje – načela zdrave prehrane, režim pitja in motnje hranjenja«. Preverjanje ravni usvojenega učnega načrta glede vnosa tekočin je pokazalo problematično raven znanja učencev (povprečni odstotek uspešnosti nalog je bil okoli 46 %). Zaključki in priporočila za prakso: prehrana in uživanje hrane (vključno z režimom pitja) sta zelo pomembni temi pri zdravstveni vzgoji v osnovnem izobraževanju na Češkem, kar je skladno z drugimi raziskavami, vendar je kognitivna komponenta učnega načrta za učence neustrezna. Kvalitativno in kvantitativno lahko priporočeni režim pitja podpira temeljne dejavnike zdravja, medtem ko lahko neustrezen ali nezadosten režim povzroči zdravstvene zaplete. Vprašanje ustreznega prehranjevanja in prehrane ter režima pitja morajo poučevati strokovno in didaktično usposobljeni učitelji. Pri tem je pomembno, da učitelj poleg kognitivnega področja razvija tudi čustvene in vedenjske spretnosti učencev. Učence ne smemo poučevati le kognitivno, ampak moramo oblikovati tudi njihove afektivne in vedenjske sposobnosti.

Ključne besede: učni načrt, režim pitja, evalvacija, zdravstvena vzgoja, prehrana

Introduction and theoretical background

In the context of the state-level intended curriculum in the Czech Republic (CR), health education is represented at all levels of the education system (ISCED 0–ISCED 3). Lower secondary education (ISCED 2) offers space for health education as a separate educational field under the educational area 'Man and Health'. This area also includes 'Physical Education' (Framework Education Programme for Elementary Education – FEP EE, 2013, 2021).

Health education as a separate educational field and subject is included in the state-level curriculum in 10 (38%) of 26 European countries, 16 (62%) of which integrate health education in other educational fields (subjects), mostly are physical education, health and safety, personality and social education, home economics, nutrition, citizenship education, biology, and similar. (*SHE Factsheet 1. State of the art: health-promoting schools in Europe,* 2013). For example, in Slovenia, selected health education themes are included in the subject home economics (Kostanjevec et al., 2018). In the context of the state-level intended curriculum and the educational reality of lower secondary education in the CR, health education as a separate subject is delivered by over 90% of schools. 80% of schools call it 'health education', 11% refer to it as 'family education' or a different title, and only about 8% of elementary schools have integrated the content of health education into different subjects (mostly natural history, citizenship education or physical education), as suggested by Hřivnová (2014a).

The primary objective of health education is to shape and develop health literacy (Nutbeam, 2000), yet the term 'health literacy' is not explicitly mentioned in the Czech curriculum (Hřivnová, 2018d). Health education also aims to strengthen an active approach to health, promote an adequate lifestyle with an emphasis on the prevention of chronic non-communicable epidemics and selected communicable diseases, as well as the prevention of risk behaviour in various areas, including particularly addictive behaviour and risky sexual behaviour. In the latest versions of the FEP EE (since 2013), health education also includes civil protection in emergency situations and traffic education (Kovaříková & Marádová, 2020; Slaná Reissmannová, 2021). Given the mission of health education in the context of formal education, this is clearly a multidisciplinary field (Fialová et al., 2014; Hřivnová, 2014a, 2016, 2017, 2018a; Liba, 2016; Marádová, 2011; Mužíková, 2010). Regarding the formulated expected outcomes of the intended curriculum in health education and the broad range of the learning content of the subject (see below), it is clear that the concept of the educational field exceeds the boundaries of a single discipline and is based

on (integrates the knowledge of) multiple scientific disciplines including medicine and its subdisciplines (i.e., paediatrics, sexology, preventive medicine, addictology, hygiene and epidemiology, psychology, sociology, demography, anthropology, kinanthropology, civil protection; traffic, etc.) (Fialová et al., 2014; Hřivnová, 2014a, 2016, 2017, 2018a; Marádová, 2011; Svoboda, 2015).

The content specifics are also expressed in the topicality of applicable information and knowledge as it evolves dynamically over time along with the current scientific knowledge of relevant disciplines. The content specifics are also based on the need to integrate the learning content in a comprehensive (holistic) approach that addresses the different themes from a bio-psycho-social perspective. This precondition is crucial as the thematic areas must not be limited to mere 'biologisation' (Hřivnová, 2018d; Leahy & Simovska, 2017). An important aspect is to target the content (also in combination with applicable didactic aspects) so that the educational content allows the formation of educational outcomes and long-term health education effects not only in the cognitive dimension but also in the affective and conative or psychomotor dimensions (at the level of practical skills and behaviour). Considering this, an important aspect is the high-quality didactic transformation of the learning content and the so-called didactic specifics (for details, see Hřivnová, 2018d), which should be based on the principle of the experiential use of activating teaching methods and project-based forms of education.

For this reason, health education teachers should be provided with a sufficient portfolio of appropriate methodological and didactic resources (for details, see the following). The most frequent objection, as reported by citizenship education and health education teachers, is the absence of methodological guidance for teaching the different themes. This *was reported by* the Czech School Inspectorate in the final report *Analysis of selected educational outcomes in grade 5 and 9 of elementary schools in the 2016/2017 school year* (2017, p. 130). At the same time, health education teachers emphasise that some outcomes are difficult to comprehend. In order to promote the effectiveness of health education, this subject must be taught by qualified teachers, and sufficient time must be ensured for the educational process (Hřivnová, 2018b, 2018d).

This is the only way for health education to fulfil its social role, especially in the development of health literacy and influencing the future health of the citizens of the Czech Republic as defined by the objectives of Health 21 (1999), Health 2020 (2013), Health 2030 (2020).

The inclusion of this educational field in the system of elementary education is recommended by research studies on children's and adolescents' lifestyle, morbidity and mortality prevalence of the citizens of the Czech Republic,

as well as studies examining the level of health literacy of the Czech population (Kučera et al., 2016; Madarasová-Gecková et al., 2016; Report on the health of the population of the Czech Republic, 2014).

The curricular document FEP EE has been mandatory in the Czech Republic since 2007; it has undergone several revisions. The major revision that affected health education took place in 2013. In the Czech Republic, the field of health education currently defines 16 expected outcomes (educational objectives) that should be achieved by the end of compulsory education (grade nine of elementary school) (Hřivnová, 2014a; FEP EE, 2013, 2021). Many of them are linked to the pupils' everyday life (present and future) in the bio-psycho-social aspects of their health. The learning content is divided into the following six thematic areas: (1) interpersonal relations and forms of coexistence; (2) life changes and what they involve; (3) healthy lifestyle and self-care for health; (4) health risks and their avoidance; (5) value and promotion of health; and 6) personality and social development. Each of these themes includes sub-themes that were significantly updated in 2013. In the latest revision of the FEP EE, valid since 2021, amendments relate to the promotion of digital literacy. The curricular documents also include the *Standards for elementary education – Health education* (2015) and *Methodological guidelines and tasks for the Standards for elementary education – Health education* (2016), which specify and extend the FEP EE (see below).

A significant health education theme is **adequate nutrition and food intake, including the drinking regimen**. According to Hřivnová (2014b), nutrition is integral to human life. Food and fluid intake saturates the basic (physiological) needs of the body and provides the basic nutrients (macronutrients) as well as secondary nutrients (micronutrients) and water. However, human nutrition and the development of nutrition habits also have a strong psychosocial and culturally conditioned overlap. During ontogenetic development, specific nutritional requirements are defined for individual population groups, both in terms of quantity and quality. At the same time, human nutrition is one of the most important lifestyle determinants and, in terms of health, can have a strong positive (promoting and protective) effect, provided that adequate dietary habits are in place (in terms of quantity, quality or frequency of food intake as well in terms of hygienic handling, culinary preparation, etc.) If adequate dietary habits are not observed, malnutrition may result in various diseases (in particular, chronic non-communicable epidemics, previously referred to as lifestyle diseases: obesity, atherosclerosis-based cardiovascular diseases, some types of cancer including colorectal cancer, type II diabetes mellitus, etc.) Non-observance of hygienic aspects in food handling may result in the so-called

alimentary diseases (e.g., salmonellosis). A proper dietary regimen can also be a preventive or therapeutic tool for many diseases (allergy, coeliac disease, diabetes, digestive tract disease, etc.).

Specific eating habits in the current Czech population of adolescents have been reported by the results of the international *Health Behaviour in School-Aged Children: WHO Collaborative Cross-National Study (HBSC)*, which has been carried out every four years since 1982; the Czech Republic joined the study in 1994 (Kalman et al., 2011). In the area of health, Czech girls showed worse self-evaluation compared with the HBSC average, and the percentage of girls with a negative evaluation of their health has been reported to increase with age (category of 11 years: 15% of Czech girls – HBSC average 10%; category of 13 years: 20% – HBSC average 16%; category of 15 years: 22% – HBSC average 21%). This trend is also evident in all age groups of Czech boys. Overweight and obesity was observed in 15% of 11-year-old girls and 12% of 13- and 15-year-old girls. In boys, the proportion was 29% in the age category of 11, 28% in the age category of 13 and 23% in the age category of 15 years. In assessing their own body, a positive response to 'a bit too fat or much too fat' was indicated by 27% of 11-year-old girls and 38% of 13- and 15-year-old girls. Among boys, the positive response was indicated by 21% and 29% of respondents; 37% of 15-year-old girls and 19% of boys were on a diet. The results concerning nutrition habits suggest that with increasing age, the proportion of pupils who consume their breakfast regularly decreases (in the age category of 11 years, only 66% of girls and boys have their breakfast regularly; in the category of 15 years, the proportion is only 53% of boys and 44% of girls). A similar trend was also observed in the case of daily consumption of fruit; in the category of 11-year-olds, only 49% of girls and 40% of boys consume fruit daily, while among 15-year-old adolescents, the proportion is only 34% of girls and 26% of boys (Madarasová-Gecková et al., 2016).

The dietary guidelines defined for the Czech Republic were updated in January 2021. They are intended for healthy persons to prevent chronic, non-communicable (lifestyle) diseases, which are significantly affected by proper nutrition. The preamble to these guidelines is the following slogan: *There is no unhealthy food – it is the amount that is unhealthy* (Dostálová & Tláskal, 2021, p. 25). The dietary guidelines are also specifically adapted for children. From these guidelines, we have selected a recommendation on the drinking regimen because the knowledge of qualitative and quantitative aspects of fluid intake is the subject of the present research study:

> Never forget about fluid intake; especially at an early age, it is important to provide children with a sufficient amount of drink. Children should

> also drink between meals at least six times a day. During breakfast and in the morning, regular drinks prevent hidden dehydration and promote attention and school achievement. Suitable drinks include drinking water, slightly mineralised and preferably non-carbonated mineral water, mild tea, fruit tea and juice, preferably unsweetened or diluted. Reduce the consumption of sweetened and flavoured drinks. Children should not drink coffee, energy drinks and, of course, alcohol (Tláskal, 2021, p. 37).

It should also be added that the drinking regimen is an integral part of developing adequate nutrition habits. In terms of both qualitative (type of drink) and quantitative (amount of drink) aspects, the recommended principles concerning the drinking regimen may support the natural health determinants, while an inappropriate or insufficient drinking regimen may result in health problems (Doležel, 2007; Fraňková et al., 2013; Hřivnová, 2014b; Kožíšek, 2005; Van Draanen et al., 2018). Tláskal (2021, p. 40) also emphasises that regular reminders about the drinking regimen is not useless as research has shown that if pupils (about 10 years old) fail to drink at least 250 ml of drink for breakfast and at least 400 ml of drink in the morning, the osmotic concentration of their urine corresponds to the state of body dehydration. This fact may also be associated with worse academic achievement.

Returning to **nutrition in education in the context of Health education** as defined by the Czech curriculum for lower secondary education, this theme is mostly included in expected outcome 7: *HE-9-1-07 The pupil shall put the composition of one's diet and eating habits in connection with the development of lifestyle diseases, and apply healthy eating habits within his/her possibilities* (FEP EE, 2013, p. 76; FEP EE, 2021, p. 91).

In an international comparison, the Slovenian curriculum includes the area of nutrition in the home economics domain, which is significantly associated with human health and sustainable development (Erjavšek et al., 2021; Kostanjevec et al., 2018).

Objectives

The main objective of the paper is to present the partial results, including their application possibilities of two extensive educational research studies carried out by the Faculty of Education, Palacký University Olomouc, with an emphasis on analysis and evaluation of the implemented and adopted curriculum in health education in the Czech Republic with a primary focus on nutrition and fluid intake. The sub-objectives can be defined as follows:

1. On the basis of pupils' subjective evaluation, determine whether the first sub-theme *Nutrition and health – healthy diet principles, drinking regimen, eating disorders* under the third thematic unit *healthy lifestyle and health care* of the educational field health education defined pursuant to the Framework Education Programme for Elementary Education (2013) is meaningfully represented in schools or not and to what degree this sub-theme is popular among pupils.
2. Evaluate the level of the pupils' adopted curriculum in health education through detection of the level of their academic achievement relating to the expected outcome HE-9-1-07 and using an indicator of a criterion-referenced achievement test designed in compliance with the illustrative tasks as defined in *Standards for elementary education – Health education* (2015).
3. Introduce the applicability of the research results in the development of an accompanying curricular document *Methodological guidelines and tasks for the Standards for elementary education – Health education*, which is the sought-after methodological platform for health education and which is considered a crucial document by teachers. Emphasise the existence of other appropriate methodological and didactic resources for nutrition-based education.

Method

To achieve the objectives defined above, the following two curricular research studies were performed: *Health education from the perspective of elementary school students and teachers* and *Research of the level of adopted curriculum by elementary school students in Health education*.

The study *Health education from the perspective of elementary school students and teachers* allows subjective evaluation of the implemented curriculum in HE and evaluation of the dominant, absent and preferred topics in the educational reality in line with the learning content defined by FEP EE. The research study involved a representative sample of 755 pupils (397 girls (52.58%); 358 boys (47.42%)) from grade nine from 23 elementary schools in five regions of the Czech Republic. The research tool was a questionnaire constructed by the authors and divided into two parts. The first block contained a set of items allowing the evaluation of pupils' perspective of the educational field and thus allowing the subjective evaluation of health education by pupils according to their own experience with the implementation of health education (for details, see Hřivnová, 2018c). The second block of the questionnaire, the assessment

of which is the subject of this paper, was designed on the basis of categorical systems of the learning content of health education pursuant to FEP EE, version 2013 (FEP EE, 2013, pp. 76–78). It contained a total of six core thematic areas, including sub-thematic units. In each area, pupils reflected on which thematic sub-units (sub-themes) were given the greatest attention (dominant themes), which themes were neglected (absent themes) and which sub-themes were the most popular (preferred themes). This paper includes an evaluation of the third learning thematic unit: 3. *Healthy lifestyle and health care*. This thematic unit includes five sub-areas, the first of which relates to 1. *Nutrition and health – fundamentals of a healthy diet, fluid intake, eating disorders* (FEP EE, 2013, p. 77; 2021, p. 92).

The second study, *Research of the level of adopted curriculum by elementary school students in health education*, considers the evaluation of the adopted curriculum at the end of compulsory education. The study involved a representative sample of 910 pupils (459 girls (50.44%) and 451 boys (49.56%)) from grade nine from 29 elementary schools in five regions of CR. The research tool used to achieve the research objectives was an evaluation instrument designed by the authors. This achievement test for health education may be defined as a criterion-referenced achievement test or an absolute performance test (pursuant to the requirements, as specified by Chráska, 2007). The success criterion represents the predetermined level of the learning content. The test items reflected the 16 defined expected outcomes of Health education pursuant to FEP EE 2013 (p. 76). Therefore, the achievement test contained 16 items, which were based on the illustrative tasks set out in the *Standards for elementary education – Health education* (most of them were identical). In the evaluation of the test in terms of its correct completion, the maximum point score was 16 (1 test item = 1 point). Using the so-called weighted points is based on correct answers to the test items: more specifically, the number of correct operations included in the 16 test (illustrative) tasks. Overall, provided that all of the achievement test items are correct, a total of 108 weighted points is obtained. This analysis allows for a 'more sensitive' evaluation of the achieved level of the learners' educational outcomes, meaning evaluation of the adopted curriculum by learners with respect to the expected outcomes of health education (FEP EE, 2013, p. 76) based on the correct completion of the test items, also with respect to the educational standards.

This paper provides a detailed evaluation of Test Item 7 related to the expected Outcome 7, pursuant to FEP EE (2013, p. 76); the illustrative task associated with this outcome included in the *Standards for elementary education – Health education*. The maximum number of weighted points in this item was 14.

In both studies, pupils (and directors of the elementary schools involved) were guaranteed anonymity in the processing, evaluation, interpretation and presentation of the data obtained. Data processing was carried out in compliance with standard practices and procedures (Gavora, 2010; Hendl, 2006). The data were analysed using the MS Excel software and the STATISTICA 10 CZ programme, which used tables of frequency, as well as traditional statistical methods, such as the Student t-test, chi-square test, and similar (Chráska, 2007). The level of significance was set at $p<.05$.

Prior to the evaluation, the reliability of the achievement test was determined with Cronbach's alpha and achieved .76. Cronbach's alpha calculation was performed using the STATISTICA Cz 10 package.

Results and discussion

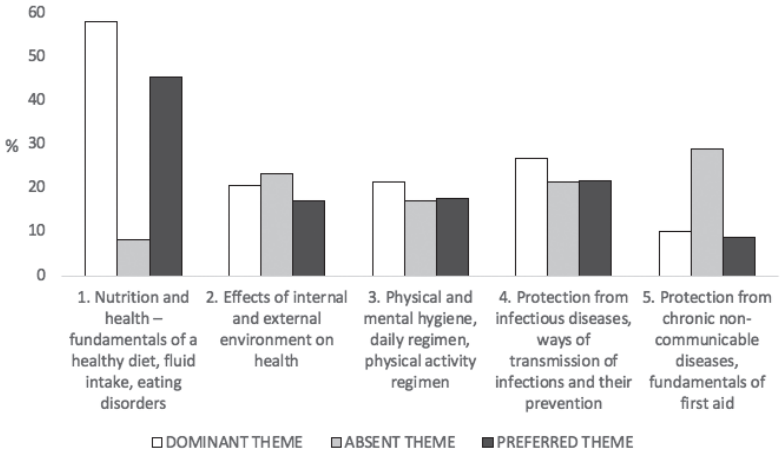
Evaluation of the implemented curriculum in Health education with an emphasis on nutrition

As mentioned above, in the Czech curriculum for lower secondary education, nutrition is mostly included in the third thematic unit of health education, which is *Healthy lifestyle and health care*. Specifically, this thematic unit includes the following five sub-units: (1) nutrition and health – healthy diet principles, drinking regimen, eating disorders, (2) effects of external and internal environment on health, (3) physical and mental hygiene, daily regimen, physical activity regimen, (4) protection from infectious diseases, ways of transmission of infections and their prevention, and (5) protection from chronic non-communicable diseases, fundamentals of first aid.

Based on the subjective evaluation of the implemented curriculum (Research I) in health education by 755 pupils from grade nine of elementary schools, it was observed that within the thematic unit *healthy lifestyle and health care* the most dominant sub-unit as identified by 58% of pupils was *nutrition and health – healthy diet principles, drinking regimen, eating disorders* (Figure 1).

Figure 1

Analysis of subjective evaluation of the dominant, absent and preferred themes in the thematic unit 'Healthy lifestyle and health care' in Health education by pupils from grade nine of elementary schools.



Nutrition was identified as the most dominant sub-theme across all six thematic units of health education (Hřivnová, 2018d), which is in long-term agreement with the results of research studies aimed at the implemented curriculum in Health education. According to teachers, the most dominant thematic health education unit is nutrition (Hřivnová, 2014a). A positive finding is pupils' relative interest in nutrition because it is a crucial lifestyle determinant (together with physical activity) that affects the prevention or potential manifestation of chronic non-communicable epidemics as confirmed by research studies and statistical analyses, for example, Müllerová (2003) or Rippe and Angelopoulos (2017). In the context of the learning content, the focus of this thematic unit (area) is in synergy with many expected outcomes of health education, including, for example, HE-9-1-07, HE-9-1-08, HE-9-1-10, etc. (cf. FEP EE, 2013, p. 76 or FEP EE, 2021, pp. 93–94). Purple et al. (2014, p. 139) claims that the thematic unit *healthy lifestyle and health care* is the second most frequently implemented theme in the school-level implemented curriculum (i.e., the School Education Programme (SEP)), which has been confirmed by an analysis of 160 SEPs conducted in 2008. The thematic unit *healthy lifestyle and health care* is closely linked with the development of pupils' health literacy, especially the dimensions of health promotion and disease prevention (according to the classification by Holčík et al., 2015).

A detailed analysis of the preference of nutrition by pupils' gender suggests that both boys and girls show identical levels of interest in health education without a statistical difference (see Table 1). In the context of health education, nutrition was preferred by about 45% of 755 pupils.

Table 1

Analysis of subjective evaluation of the dominant, absent and preferred theme of nutrition in the thematic unit 'Life changes and what they involve' in Health education by pupils from grade nine of elementary schools

HEALTHY LIFESTYLE AND SELF CARE FOR HEALTH	DOMINANT THEME			ABSENT THEME			PREFERRED THEME			p
	Girls %	Boys %	Total %	Girls %	Boys %	Total %	Girls %	Boys %	Total %	
Nutrition and health – fundamentals of a healthy diet, fluid intake, eating disorders	58.94	56.70	**57.88**	7.56	8.94	8.21	47.61	42.74	**45.30**	.18

According to the subjective evaluation of the implemented curriculum in health education, pupils consider the subject to be popular and especially appreciate the fact that they can use the knowledge, attitudes and skills acquired in lower secondary education in their personal lives, now or in the future (Hřivnová, 2018c). The analyses identified the effect or confirmed the positive trend of selected factors of the educational reality, such as HE teacher qualification, more HE lessons, implementation of health promotion projects on the subjective evaluation of the implemented curriculum in the subject by pupils from grade nine of elementary schools. Those pupils taught by a qualified teacher had more HE classes than prescribed by the curricular document FEP EE (2013), were involved in projects aimed at health promotion and reported greater popularity of the subject, as well as the fact that they looked forward to HE classes. They confirmed the use of activating teaching methods in HE classes and that these methods motivate them to learn and gain new knowledge. Those pupils who had more lessons and participated in projects confirmed a frequent use of textbooks and worksheets in the subject. The most important finding is that those pupils who are taught by a qualified teacher and those with a higher number of lessons significantly agree that they can use the knowledge, skills and attitudes gained in their personal lives (Hřivnová, 2018b).

Evaluation of the adopted curriculum in health education with an emphasis on nutrition and fluid intake

The evaluation of the adopted curriculum in health education (Research II) by 910 pupils from grade nine (i.e., the evaluation of the achieved level of educational outcomes) was performed by means of testing fully in compliance with the setting of the required level of the expected outcomes pursuant to FEP EE (2013, 2021) using the test/illustrative tasks adopted from the curricular document *Standards for elementary education – Health education* (2015). To assess the output level of pupils' knowledge in the area of nutrition, it is necessary to present the results of the test task relating to the expected outcome 7. The text of the expected outcome 7 and its elaboration into partial objectives in the form of indicators is shown in Figure 2.

Figure 2

HE Formulation of expected outcome 7 (HE-9-1-07) pursuant to FEP EE 2013 (2021) and the indicators defined in the Standards for elementary education – Health education

Educational field	Health education
Grade	9
Thematic unit	
Expected outcome as per FEP EE	**HE-9-1-07** The pupil shall put the composition of one's diet and eating habits in connection with the development of lifestyle diseases and apply healthy eating habits within his/her possibilities
Indicators	1. The pupil is able to explain the importance of the basic nutrients (proteins, fats, carbohydrates), by-nutrients (vitamins and minerals) and water for the body and to give examples of the sources of nutrients in food, 2. The pupil is able to recognise the proper diet and drinking regimen that promote health and minimise harm as well as to apply the principles of good diet at school, 3. The pupil is able to select foodstuffs and food groups based on the current nutritional recommendations (including restricted intake of simple sugars, inappropriate and hidden fats, and consumption of vegetables, fruit and cereals, etc. several times a day), 4. The pupil is able to determine which factors influence his/her nutrition (family, culture, media, including advertising, hunger, taste, time, etc.) and to be aware of the positive and negative impacts on eating habits, 5. The pupil is able to explain the effect of nutrition as one of the lifestyle factors on health and lifestyle (chronic non-communicable) diseases (type II diabetes, obesity, tooth decay, cardiovascular diseases, cancer, etc.), 6. The pupil is able to discuss eating disorders (anorexia nervosa and bulimia nervosa), including their onset and symptoms.

Note. Adapted from *Standards for elementary education – Health education,* 2015, p. 9.

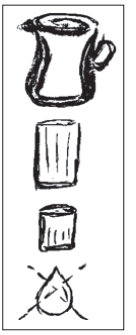
The test task (Figure 3) assigned to pupils is an identical transcription of the illustrative task specified in the standards for this particular expected outcome and is related to Indicator 2. The objective of the illustrative task is to support pupils in the selection of adequate drinks into their drinking regimen. In the educational process, pupils need to be able to justify their choice and to give arguments why some drinks are better than others.

Figure 3

Assignment of test task 7 of the criterion-referenced achievement test in Health education relating to the evaluation of expected outcome HE-9-1-07

7. Use the symbols to identify the drinks that are suitable for daily consumption (you can drink them safely all day, *the symbol is the pitcher*), drinks that can be consumed daily but in a limited amount (*the symbol is the larger glass, approx. 0.5 l*), drinks that should be consumed occasionally (*the symbol is the smaller glass, approx. 0.2 l*) and drinks that should not be consumed at all (*the symbol is the crossed drop*).

Drinking tap water
Black tea
Cola drink
Fruit juice
Energy drink
Beer and other alcoholic beverages
Coffee with caffeine
Mineral water, medium mineralised
Bottled non-carbonated spring water
Sweetened lemonade
Slightly mineralised water
Carbonated drink
Green tea
Lemonade sweetened with artificial sweetener



Correct solution of the test task:

- Pitcher: drinking tap water, bottled non-carbonated spring water, slightly mineralised water
- Large glass: black tea, fruit juice, mineral water medium mineralised, green tea
- Small glass: cola drink, sweetened lemonade, carbonated drink, lemonade sweetened with artificial sweetener
- Crossed drop: energy drink, beer and other alcoholic beverages, coffee with caffeine

Table 2 shows an analysis of the correct completion of the test task. The results suggest that only two out of 910 (.22%) pupils from grade nine of

elementary schools managed to complete the task correctly and matched all 14 drinks with the correct symbols indicating the recommended daily consumption. No statistically significant differences were observed between the results of girls and boys.

Table 2

Analysis of correct completion of the test task by gender

Correct completion of test task 7 / EO HE-9-1-07	Number of correct answers girls	Number of correct answers boys	Number of incorrect answers girls	Number of incorrect answers boys	p	Number of correct answers total	Number of incorrect answers total	Proportion of correct answers (%) total
Use the symbols to identify the drinks that are suitable for daily consumption, drinks that can be consumed daily but in a limited amount; drinks that should be consumed occasionally and drinks that should not be consumed at all. *HE-9-1-07*	0	2	459	449	.15	2	908	**.22**

The following evaluation stage awarded the so-called weighted points (1 point = 1 correctly identified drink). The completion of the test task on the basis of the average number of weighted points is shown in Table 3. In terms of weighted points, significantly better results in the test task were achieved by girls than boys. On average, girls managed to categorise almost seven drinks while boys only did six. In this test item, girls' achievement was about 49%, boys' achievement about 43%. The combined achievement of the whole sample was 46%.

Table 3

Average weighted points and average achievement in the test task by gender

Average number of correct sub-items in test item 7	Number N	Average	Converted to test achievement in %	p	Standard deviation	Minimum	Maximum
Girls	459	6.80	48.57	.00**	2.79	.00	13
Boys	451	5.99	42.79		2.93	.00	14
Total	910	6.40	45.71	-	2.89	.00	14

The text below includes a detailed analysis of the results of the test task in terms of content, meaning the correct categorisation of the drinks according to the recommended amount of daily consumption for older school-aged children. It should be noted that the standards for elementary education require a minimum achievement of 80% in this task. However, the correct categorisation of the drinks following this guideline (10 cases out of 14) was achieved by less than half of pupils from grade nine of elementary schools (Table 4). The 80% threshold was achieved only in one case (correct classification of 'drinking tap water'; 85.71% of pupils correctly indicated that drinking water can cover all-day fluid intake – the pitcher symbol). The most frequent mistake was the item 'coffee with caffeine', which elementary school pupils should not consume at all (therefore, it should be matched with the symbol of the crossed drop). In the majority of cases, this drink was matched with the small glass symbol.

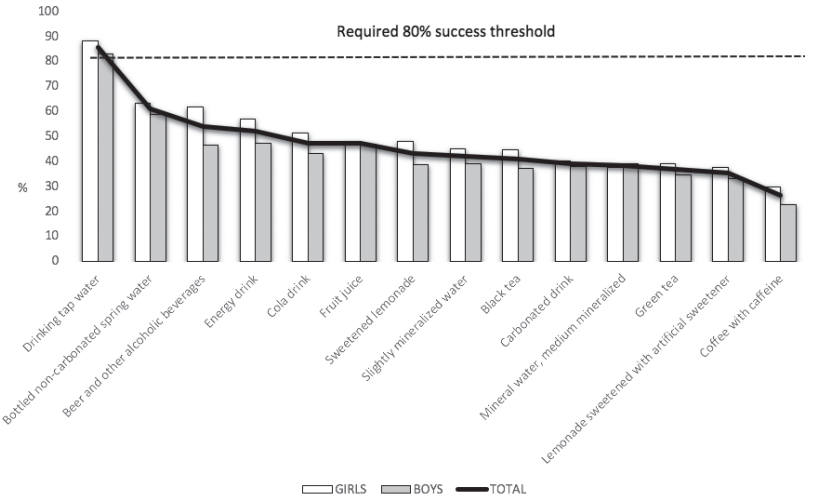
Table 4
Analysis of the correct responses in the categorisation of the types of drinks according to their recommended amount, test task 7, whole sample

Type of drink (as ordered in the test)		Pitcher		Large glass		Small glass		Crossed drop		No answer	
		n	%	n	%	n	%	n	%	n	%
1.	Drinking tap water	780	85.71	47	5.16	12	1.31	18	1.98	53	5.82
2.	Black tea	271	29.78	373	**40.99**	157	17.25	19	2.09	90	9.89
3.	Cola drink	26	2.86	208	22.86	431	**47.36**	154	16.92	91	10.00
4.	Fruit juice	298	32.75	431	**47.36**	80	8.79	10	1.10	91	10.00
5.	Energy drink	12	1.32	85	9.34	250	27.47	475	52.20	88	9.67
6.	Beer and other alcoholic beverages	28	3.08	81	8.90	218	23.96	493	54.17	90	9.89
7.	Coffee with caffeine	24	2.64	185	20.33	372	40.88	240	**26.37**	89	9.78
8.	Mineral water, medium mineralised	374	41.10	349	**38.35**	57	6.26	17	1.87	113	12.42
9.	Bottled non-carbonated spring water	555	60.99	179	19.67	31	3.41	19	2.09	126	13.85
10.	Sweetened lemonade	44	4.84	276	30.33	394	**43.30**	104	11.43	92	10.11
11.	Slightly mineralised water	384	**42.20**	315	34.62	74	8.13	20	2.20	117	12.86
12.	Carbonated drink	38	4.18	298	32.75	357	**39.23**	106	11.65	111	12.20
13.	Green tea	312	34.29	336	**36.92**	148	16.26	24	2.64	90	9.89
14.	Lemonade sweetened with artificial sweetener	28	3.08	114	12.53	322	**35.38**	350	38.46	96	10.55

Note: The grey boxes indicate the correct categorisation of the drinks in terms of their recommended amount of daily consumption. The results in bold indicate the correct results that did not achieve the 50% threshold.

The correct categorisation of the drinks in terms of their recommended amount by girls and boys is shown in Figure 4. A statistically significant difference in the frequency of the correct responses between girls and boys was observed in seven sub-items of the test task, always in favour of girls. Specifically, this applied to the following drinks: drinking tap water, black tea, cola drink, energy drink, beer and other alcoholic beverages, coffee with caffeine and sweetened lemonade.

Figure 4
Analysis of the correct categorisation of the drinks in terms of their recommended daily consumption by gender



The evaluation of pupils' educational outcomes at the end of compulsory education relating to the expected outcome 7 in health education suggests a problematic level of pupils' knowledge in the area of fluid intake. It is thus desirable to look for educational ways to improve this situation. One option is to use appropriate teaching methods and didactic resources to promote more effective education and better reinforcement of the knowledge learned. The text below presents possible didactic resources and the application of the research results in practice.

Application of the research results in the development of methodological resources and suggestions for suitable didactic resources for nutrition and health

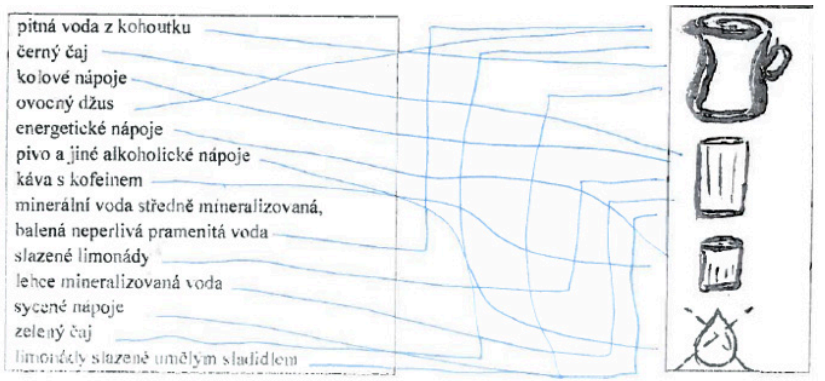
The research study *Research of the level of adopted curriculum by elementary school students in Health education* not only evaluated the educational outcomes of pupils from grade nine of elementary schools but at the same time the degree of difficulty of the illustrative tasks included in the *Standards for elementary education – Health education* (2015). In the development of the standards, the authors designed them so as to be achieved by 80% of pupils. At the same time, the individual tasks were designed so that the majority of pupils could

achieve at least 80%. The testing results of the tasks were subsequently used in the development of the document *Methodological guidelines and tasks for the Standards for elementary education – Health education* (2016), which is an accompanying curricular document to the educational standards. Compared with the educational standards, this document is more extensive in terms of content and methodology and includes illustrative tasks for each expected outcome pursuant to FEP EE at three levels of difficulty (minimal, optimal and excellent). The present research allowed the decision as to whether the original illustrative task from the *Standards for elementary education – Health education* (2015): (1) remains unchanged at a minimal level of difficulty, (2) with the same text has been transformed into an optimal or excellent level of difficulty, (3) has been modified for a minimal level of difficulty (simplified in terms of content or didactic aspects) while the original version has been transformed into an optimal level of difficulty, (4) has been simplified in terms of content and didactic aspects for a minimal level of difficulty and transformed for an optimal level of difficulty while the identical (or modified) version has been transformed into an excellent level. At the same time, the methodological guidelines include new illustrative tasks, which represent an alternative to the correct solution and provide an additional didactic procedure and possible alternatives for using the task.

The testing (see Figure 5 for an example of a pupil solution) and the results of the illustrative task relating to the expected outcome HE-9-1-07 which, concerning the required general level of achievement as well as individual task achievement of 80%, was ranked last of the sixteen test tasks (Hřivnová, 2018d) and indicated a need for a didactic transformation (simplification) and content correction for the minimum and optimal level of difficulty (for the excellent level of difficulty no content reduction was performed).

Figure 5

Pupil solution of test task 7



Note. Given that the test was in the Czech language and the figure reflects the identical pupil solution, the figure is in Czech; the order of the drinks in the list corresponds to the assignment of the test task described in English above. Illustrative tasks of HE-9-1-07 included in the Standards for elementary education – Health education (2015, p. 9).

From a didactic perspective, the testing of the tasks showed that matching the answers using a line was very problematic and could lead to an incorrect task assessment. Therefore, the symbols were identified by the letters A–D, which pupils could write next to the drinks. **The content reduction** in the number of drinks within the three levels of difficulty of the illustrative task was based on empirical data, meaning the numbers of the correct categorisations of the drinks by pupils from grade nine of elementary schools. At the same time, however, in designing the innovated version of the task, the logical framework of the task was maintained to allow the drinks' inclusion into all four categories of the daily consumption for the minimal and optimal level of difficulty.

An example is an adaptation of the illustrative task for HE-9-1-07 for the minimal level of difficulty (Figure 6) in the same version as in the *Methodological guidelines and tasks for the standards for elementary education – Health education* (Tupý et al., 2016, pp. 47–48). The full version of the task for the optimal and excellent levels is in the abovementioned document on pages 48–51.

Figure 6

Illustrative task relating to HE-9-1-07 modified for the minimal level of difficulty

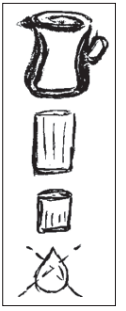
Illustrative task 9-1-07-01	**Difficulty**	**Minimal**	**Optimal**	**Excellent**

The following three tasks are related to Indicator 2.

Use the symbols to identify the drinks that are suitable for daily consumption (you can drink them safely all day, (*the correct symbol is the pitcher*), drinks that can be consumed daily but in a limited amount (*the bigger glass, approx. 0.5 l*), drinks that should be consumed occasionally (*the smaller glass, approx. 0.2 l*) and drinks that should not be consumed at all (*the crossed drop*).

Cola drink
Black tea
Beer and other alcoholic beverages
Drinking water

A
B
C
D



Possible solution with a methodological commentary

The pupil shall demonstrate knowledge of the classification of the drinks in their drinking regimen.

Solution:
Cola– C, small glass
Black tea – B, large glass
Beer and other alcoholic beverages – D, crossed drop
Drinking water – A, pitcher

Commentary:
The theme of fluid intake is built on pupil education at the primary level. Regarding the fact that the correct solution was achieved by a very low proportion of pupils in the survey, the task at the minimal level was reduced in a way that each symbol representing the suitability (amount) of consumption of specific drinks was matched with only one option. Also, the 'justification' part of the assignment was removed, so now the task only requires pupils to match the drinks and the symbols.
The objective of the illustrative task is to support pupils in the selection of adequate drinks into their drinking regimen. They should be able to provide at least a basic justification of their choice.

Note. Adapted from Tupý et al., 2016, pp. 47–48.

It can thus be concluded that the 'missing' methodological platform for health education teachers should be supported by the development and existence of the document *Methodological guidelines and tasks for the Standards for elementary education – Health education (2016)* which also contains the results of the project *Research of the level of adopted curriculum of elementary school pupils in Health education*.

However, many other methodological and didactic resources on health education, including the area of nutrition, but not all, as suggested by Slaná

Reissmanová and Smejkalová (2018), are built on appropriate professional theoretical content or optimal methodological and didactic elaboration. In the Czech Republic, textbooks certified by the Ministry of Education, Youth and Sports are provided directly for the area of nutrition under the field of health education. Marádová and Hrnčířová (2020) prepared a series of two textbooks separately for grades six and seven and for grades eight and nine (currently being prepared for publication) of elementary schools and corresponding grades of multi-year grammar schools entitled *Nutrition in Health Education.* The textbooks are also provided with workbooks. The textbooks and workbooks are available in an electronic form on the website of the Ministry of Agriculture, which was responsible for their publication. In an interactive way, they teach and develop nutrition literacy and encourage the application of appropriate eating habits. An appropriate didactic resource to promote health education that includes nutrition is the *We're Not Afraid of Cancer or Prevention as a Doorway to Health. Oncological Prevention Methodology for Lower Secondary Schools*, which the authors published both in Czech (Smejkalová & Slaná Reissmannová, 2018) and English (Slaná Reissmannová & Smejkalová, 2020). The same authors produced didactic suggestions for a series of 10 teaching units of health education in the publication *Decide! Or Lifestyle for Health* (Smejkalová & Slaná Reissmannová, 2019). All three methodological publications are available on the *Decide for Health* website. Finally, methodological recommendations in nutrition based on the Slovenian education system are available in the textbook *Gospodinjstvo 6 [Učbenik za gospodinjstvo v šestem razredu osnovne šole]* (Kostanjevec, 2019).

Ethical aspects and limitations of the research

All of the stages of Research I and II complied with the Ethical Code of Czech for science and research. The core attributes of the ethics of scientific work were taken into consideration.

Naturally, as in other research studies, the present research has limitations. The most important limitation relates to the common risks associated with the application of questionnaires. Also, a certain limitation is the polyfactorial effect on the development of the implemented and achieved curriculum of health education in the context of the fact that it is not realistic within a single research study to capture and contextualise all possible variables.

Conclusion and practical recommendations

The results of the two curricular research studies carried out by the Faculty of Education, Palacký University Olomouc suggest that nutrition is a dominant theme within health education in the Czech Republic. At the same time, the results point to a poor level of knowledge among pupils at the end of compulsory education related to quantitative and qualitative aspects of fluid intake compared to the state level of the implemented curriculum. The low level of nutrition literacy should become a stimulus for searching for appropriate didactic procedures to develop the interactive and critical level of pupils' health literacy. It would also be desirable to ensure that teachers teach health education with professional and didactic competence.

At the same time, further curricular research studies should be performed focusing on health education to improve the quality of education and to achieve the required educational outcomes. Health education also deserves a curricular research study at an international level to make a comparison between countries in terms of the intended, implemented, and adopted curricula. Currently, there is a significant shortage of these types of research studies.

References

Doležel, Z. (2007). Pitný režim u dětí [Fluid intake in children]. *Pediatrie pro praxi,,* 3, 136–138.

Dostálová, J., & Tláskal, P. (2021). Výživová doporučení pro obyvatelstvo [Dietary guidelines for the population]. *Výživa a potraviny*, *76*(1), 25.

Erjavšek, M., Lovšin Kozina, F., & Kostanjevec, S. (2021). In-service home economics teachers' attitudes to the integration of sustainable topics in the home economics subject. *Center for Educational Policy Studies Journal*, *11*(1), 27–47.

Fialová, L., Flemr, L., Marádová, E., & Mužík, V. (2014). *Vzdělávací oblast Člověk a zdraví v současné škole* [Educational area Man and health in the current school]. Karolinum.

Fraňková, S., Pařízková, J., & Malichová, E. (2013). *Jídlo v životě dítěte a adolescenta: teorie, výzkum, praxe* [Food in the life of the child and adolescent: Theory, research, practice]. Karolinum.

Gavora, P. (2010). Úvod do pedagogického výzkumu [Introduction to pedagogical research]. Paido.

Health 2020. A European policy framework and strategy for the 21st century. (2013). World Health Organization, Regional Office for Europe,

Health 21: the health for all policy framework for the WHO European region (1999). *European health for all series; No. 6.* World health organization, regional office for Europe.

Hendl, J. (2006). *Přehled statistických metod zpracování dat: analýza a metaanalýza dat* [Overview of statistical data processing methods: data analysis and meta-analysis]. Portál.

Holčík, J., Káňová, P., & Prudil, L. (2015). *Systém péče o zdraví a zdravotnictví: východiska, základní*

pojmy a perspektivy [Healthcare and public health: background, basic concepts and perspectives]. Národní centrum ošetřovatelství a nelékařských zdravotnických oborů.

Hrnčířová, D. (2018). *Výživa ve výchově ke zdraví: pracovní sešit pro žáky 6. a 7. tříd ZŠ* [Nutrition in health education: workbooks for 6th and 7th graders]. Ministerstvo zemědělství, Odbor bezpečnosti potravin. https://www.bezpecnostpotravin.cz/UserFiles/publikace/6-7_nahled_1.pdf

Hrnčířová, D., & Marádová, E. (2020). *Výživa ve výchově ke zdraví. Učebnice pro 6. a 7. ročník základních škol a odpovídající ročníky víceletých gymnázií* [Nutrition in health education. Textbook for the 6th and 7th grades of elementary schools and corresponding grades of multi-year grammar schools]. Ministerstvo zemědělství, Odbor bezpečnosti potravin. https://www.bezpecnostpotravin.cz/UserFiles/publikace/U%C4%8Debnice%20Web%20fin_dol.pdf

Hřivnová, M. (2014a). The conception of health education at primary schools in the Czech Republic. In *SGEM Conference on psychology & psychiatry, sociology & healthcare education* (pp. 899–912). International Multidisciplinary Scientific Conferences on Social Sciences and Arts. Albena. 10.5593/sgemsocial2014/B12/S2.115

Hřivnová, M. (2014b). *Základní aspekty výživy* [Basic aspects of nutrition]. Univerzita Palackého v Olomouci.

Hřivnová, M. (2016). Health literacy in pupils in the context of research of resulting curriculum of health education. *The Anthropologist – International Journal of Contemporary and Applied Studies of Man, 24*(1), 277–283.

Hřivnová, M. (2017). Analýza úrovně dosaženého kurikula žáky v kontextu standardu pro základní vzdělávání ve vzdělávacím oboru Výchova ke zdraví [Analysis of the level of the achieved curriculum in the context of the Standard for elementary education in the educational field of health education]. *Acta Humanica, 2*(1), 74–93.

Hřivnová, M. (2018a). *Standardy pro základní vzdělávání – Výchova ke zdraví a jejich evaluace v prostředí pedagogické reality* [Standards for elementary education – Health education and its evaluation in the context of pedagogical reality]. *E-Pedagogium, 2018*(1), 87–101.

Hřivnová, M. (2018b). Subjective evaluation of health education by Czech students. In *The European Proceedings of Social & Behavioural Sciences EpSBS* (pp. 575–584). Future Academy. Athens. https://doi.org/10.15405/epsbs.2019.01.55

Hřivnová, M. (2018c). Selected aspects of subjective evaluation of health education by elementary school students in the Czech Republic. In *5th International Multidisciplinary Scientific Conference on Social Sciences and Arts SGEM 2018* (pp. 631–638). International Multidisciplinary Scientific Conferences on Social Sciences and Arts. Albena. https://doi.org/10.5593/sgemsocial2018/3.4/S13.080

Hřivnová, M. (2018d). *Analýza a evaluace kurikula vzdělávacího oboru Výchova ke zdraví* [Analysis and evaluation of the health education curriculum]. *Habilitační práce*. Univerzita Palackého v Olomouci.

Chráska, M. (2007). *Metody pedagogického výzkumu* [Methods of pedagogical research]. Grada.

Kalman, M., Sigmund, E., Sigmundová, D., Hamřík, Z., Beneš, L., Benešová, D., & Csémy, L. (2011). *Národní zpráva o zdraví a životním stylu dětí a školáků na základě mezinárodního výzkumu*

uskutečněného v roce 2010 v rámci mezinárodního projektu "Health Behaviour in school-aged Children: WHO Collaborative Cross-national study (HBSC)" [National report on the health and lifestyle of children and schoolchildren on the basis of an international research study implemented in 2010 in the context of the international project "Health Behaviour in School-Aged Children: WHO Collaborative Cross-National Study (HBSC)"]. Univerzita Palackého v Olomouci.

Kostanjevec, S. (2019). *Gospodinjstvo 6: Učbenik za gospodinjstvo v šestem razredu osnovne šole* [Home economics 6. Textbook for home economics in the sixth grade of elementary school]. Rokus Klett.

Kostanjevec, S., Lovšin Kozina, F., & Erjavšek, M. (2018). The relationship between teachers' education and their self-perceived competence for teaching home economics. *Problems of education in the 21st century*, *76*(2), 175–187.

Kovaříková, M., & Marádová, E. (2020). *Didaktika výchovy ke zdraví a bezpečí v kontextu kurikulární reformy a učitelského vzdělávání* [Didactics of health education and safety in the context of the curricular reform and teacher training]. Pedagogická fakulta UK Praha.

Kožíšek, F. (2005). *Pitný režim* [Fluid intake]. http://www.szu.cz/tema/zivotni-prostredi/pitny-rezim

Kučera, Z., Pelikan, J., & Šteflová, A. (2016). Zdravotní gramotnost obyvatel ČR – výsledky komparativního reprezentativního šetření [Health literacy of the Czech population – Results of a comparative representative survey]. Časopis Lékařů českých, *155*(5), 233–241.

Leahy, D., & Simovska, V. (2017). Critical perspectives on health and wellbeing education in schools. *Health Education, 117*(5), 430–433. https://doi.org/10.1108/HE-06-2017-0034

Liba, J. (2016). *Výchova k zdraviu v školskej edukácii* [Health education in the system of education]. Prešovská univerzita v Prešově.

Madarasová Gecková, A., Dankulincová, Z., Sigmundová, D., & Kalman, M. (Eds.). 2016. *Mezinárodní zpráva o zdraví a životním stylu dětí a školáků na základě výzkumu studie Health Behaviour in School-Aged Children realizované v roce 2014, Česká republika, Slovenská republika, Maďarsko, Ukrajina a Polsko* [International report on the health and lifestyle of children and schoolchildren on the basis of the Health Behaviour in School-Aged Children implemented in 2014, Czech Republic, Slovakia, Hungary, Ukraine and Poland]. Univerzita Palackého v Olomouci.

Marádová, E. (2011). K aktuálním problémům výchovy ke zdraví v preprimárním a primárním vzdělávání [On the current problems of health education in pre-primary and primary education]. In S. Bendl & M. Zvírotský (Eds.), *Místo vzdělávání v současné společnosti: paradigmata – ideje – realizace*. (pp. 45–55). Tribun.

Müllerová, D. (2003). *Zdravá výživa a prevence civilizačních nemocí ve schématech* [Healthy nutrition and prevention of lifestyle diseases in schemes]. Triton.

Mužíková, L. (2010). Škola a zdraví pro 21. Století. Podněty pro implementaci výchovy ke zdraví do školních vzdělávacích programů [School and health for the 21st century. Ideas for the implementation of health education in school educational programmes]. Masarykova univerzita.

Nutbeam, D. (2000). Health literacy as a public health goal: a challenge for contemporary health education and communication strategies into the 21st century. *Health Promotion International*, *15*(3),

259–267. https://doi.org/10.1093/heapro/15.3.259

Rámcový vzdělávací program pro základní vzdělávání (verze platná od 1. 9. 2013) [Framework education programme for elementary education (version valid from 1st September 2013)]. (2013). http://www.msmt.cz/vzdelavani/zakladni-vzdelavani/upraveny-ramcovy-vzdelavaci-program-pro-zakladni-vzdelavani.

Rámcový vzdělávací program pro základní vzdělávání (verze platná od 1. 1. 2021) [Framework education programme for elementary education (version valid from 1st January 2013)]. (2021). http://www.nuv.cz/file/4983/

Rippe, J., M., & Angelopoulos, T., J. (2017). The role of nutrition and lifestyle in the prevention and treatment of cardiovascular disease. In *Nutrition in Lifestyle Medicine.* (137–150). Humana Press. https://doi.org/10.1007/978-3-319-43027-0_7

SHE FACTSHEET 1. State of the art: Health promoting schools in Europe. (2013). https://www.radix.ch/files/5O8NYKY/she_factsheet_1_2013.pdf

Smejkalová, Z., & Slaná Reissmannová, J. (2018). *My se raka nebojíme aneb prevencí ke zdraví. Metodický materiál onkologické prevence pro 2. stupeň základní školy* [We're not afraid of cancer or prevention as a doorway to health. Oncological prevention methodology for lower secondary schools]. Masarykova univerzita.

Smejkalová, Z., & Slaná Reissmannová, J. (2019). *Rozhodni se! aneb životním stylem ke zdraví. Metodický materiál k výuce prevence onkologických a dalších chronických neinfekčních chorob pro 2. stupeň ZŠ* [Decide! or lifestyle for health. Methodology for the prevention of oncological and other chronic non-communicable diseases for lower secondary schools]. Masarykova univerzita.

Slaná Reissmannová, J. (2021). *Mezinárodní doporučení v oblasti ochrany veřejného zdraví a jejich implementace v České republice s akcentem na oblast mimořádných událostí a krizových situací. Diplomová práce* [International recommendations in the area of public health protection and their implementation in the Czech Republic with an emphasis on emergency and crisis situations]. Lékařská fakulta Univerzity Palackého v Olomouci.

Slaná Reissmannová, J., & Smejkalová, Z. (2020). *We're not afraid of cancer or prevention as a doorway to health. Oncological prevention methodology for lower secondary schools.* Masaryk University Press.

Slaná Reissmannová, J., & Smejkalová, Z. (2018). Analysis of a health education textbook in the context of the Framework educational programme for elementary education and possibilities of implementation of the issue of chronic non-communicable diseases in the Czech Republic. In M. Holinková, & L. Adámková (Eds.), *Life in health 2019: Research and practice. Proceedings of the International Conference held on 5–6 September 2019* (pp. 128–136). Masarykova univerzita. https://doi.org/10.5817/CZ.MUNI.P210-9484-2019.

Rozhodni se pro zdraví [Decide for health]. (2020). https://www.rozhodniseprozdravi.cz/

Standardy pro základní vzdělávání – Výchova ke zdraví [Standards for elementary education – Health education]. (2015). http://digifolio.rvp.cz/artefact/file/download.php?file=67503&view= 9832

Svoboda, M. (2015). Přínos vzdělávacího oboru Výchova ke zdraví z pohledu žáků základních škol

[Benefits of the educational field health education from the perspective of elementary school pupils] In D. Šafránková, L. Podroužek, & J. Slowík, (Eds.), *Etické a sociální aspekty v oblasti vzdělávání a pedagogického výzkumu: sborník XXIII. konference České asociace pedagogického výzkumu* (pp. 371–380). ZČU v Plzni.

Tláskal, P. (2021). Zdravá třináctka pro děti v kontextu s realitou současných poznatků a studií [Healthy thirteen for children in the context of the current state of knowledge and studies]. *Výživa a potraviny*, *76*(2), 37–40.

Tupý, J., Hřivnová, M., & Marádová, E. (Ed.) (2016). *Metodické komentáře a úlohy ke standardům pro základní vzdělávání – Výchova ke zdraví* [Methodological guidelines and tasks for the Standards for elementary education – Health education]. NÚV.

Van Draanen, J., Prelip, M., & Upchurch, D. (2018). Consumption of fast food, sugar-sweetened beverages, artificially-sweetened beverages and allostatic load among young adults. *Preventive Medicine Reports,10*, 212–217. https://doi.org/10.1016/j.pmedr.2017.11.004.

Výběrové zjišťování výsledků žáků na úrovni 5. a 9. ročníků základních škol ve školním roce 2016/2017 [Sample survey of pupils in the 5th and 9th grades of elementary school in the school year 2016/2017]. (2017). Česká školní inspekce.

Zpráva o zdraví obyvatel České republiky [Report on the health of the citizens of the Czech Republic]. (2014). Ministerstvo zdravotnictví České republiky.

Zdraví 2030. Strategický rámec rozvoje péče o zdraví v České republice do roku 2030 [Strategic framework for the development of healthcare in the Czech Republic until 2030]. (2020). https://zdravi2030.mzcr.cz/

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Education in the Area of Human Protection in Emergency and Crisis Situations in the Context of Health Education in the Czech Republic

Jitka Slaná Reissmannová[1]

The present time brings a number of emergency and crisis situations, including floods, fires or Covid-19, the management of which requires the active involvement of citizens. Lower secondary education in the Czech Republic includes the subject of Health Education, in which this topic is addressed. Education of students in the area of lifestyle and health is included in Health Education and Home Economics, the latter being delivered in Slovenia. In terms of content, both courses are similar and can enrich each other by sharing valuable experience both in teaching students and in preparing future elementary school teachers. The objective of this paper is to present the concept of elementary education in human protection in emergency and crisis situations in the Czech Republic and the related concept of undergraduate teacher training. The research methods used were document review (of curricular documents and study plans) and questionnaire survey. The paper presents the results of an analysis of the curricular document governing elementary education in the Czech Republic (Framework Education Programme for Elementary Education), as well as the results of an analysis of a health education textbook focusing on the area of safety issues. The paper also presents the results of an analysis of the study plans of selected faculties of education in terms of human protection in emergency and crisis situations, as well as the results of a questionnaire survey focusing on the awareness of future teachers in the area of human protection in emergency situations. The results and main findings of the analysis of the curricular document suggest that the topics of the human protection in emergency situations should be strengthened in the context of Health Education (and throughout elementary education). The studies on teachers' and future teachers' awareness of human protection in emergency situations (including first aid) point to some shortcomings in undergraduate teacher training (for example, the optional course in first aid and human protection in emergency situations at

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the Faculty of Education, Masaryk University). Conclusions and recommendations for practice: the current revision of the Framework Education Programme for Elementary Education should allow the strengthening of emergency issues in Health Education. Based on the inquiry, the following is recommended: due attention should be paid to all emergency issues in the course of education; further teacher training in all emergency issues should be promoted; emergency issues in undergraduate teacher training should be integrated in the form of compulsory common base courses.

Keywords: curriculum, health education, human protection in emergency situations, crisis management, teacher education

Izobraževanje na področju zaščite ljudi v izrednih in kriznih razmerah v okviru zdravstvene vzgoje na Češkem

Jitka Slaná Reissmannová

Zdajšnji čas prinaša številne izredne in krizne razmere, vključno s poplavami, požari ali s covidom-19, katerih obvladovanje zahteva aktivno sodelovanje državljanov. Del osnovnošolskega izobraževanja na Češkem je tudi predmet zdravstvena vzgoja, pri katerem se obravnava navedena tema. Izobraževanje učencev na področju življenjskega sloga in zdravja je vključeno v zdravstveno vzgojo in gospodinjstvo, pri čemer se predmet pod tem imenom izvaja v Sloveniji. Vsebinsko sta si oba predmeta podobna in se lahko medsebojno povezujeta z izmenjavo dragocenih izkušenj pri poučevanju učencev in izobraževanju bodočih osnovnošolskih učiteljev. Namen tega prispevka je predstaviti koncept osnovnošolskega izobraževanja na področju varstva ljudi v izrednih in kriznih razmerah na Češkem in s tem povezan koncept dodiplomskega usposabljanja učiteljev. Uporabljeni raziskovalni metodi sta bili pregled dokumentov (kurikularnih dokumentov in študijskih načrtov) in anketni vprašalnik. V prispevku so predstavljeni rezultati analize kurikularnega dokumenta, ki ureja osnovnošolsko izobraževanje na Češkem (Okvirni izobraževalni program za osnovnošolsko izobraževanje), in rezultati analize učbenika zdravstvene vzgoje, ki se osredinja na področje varnostnih vprašanj. V prispevku so predstavljeni tudi rezultati analize študijskih načrtov izbranih pedagoških fakultet z vidika varstva ljudi v izrednih in kriznih razmerah ter rezultati anketnega vprašalnika, osredinjenega na ozaveščenost bodočih učiteljev na področju varstva ljudi v izrednih razmerah. Rezultati in glavne ugotovitve analize kurikularnega dokumenta kažejo, da bi bilo treba okrepiti temo zaščite ljudi v izrednih razmerah v okviru zdravstvene vzgoje (in v celotnem osnovnošolskem izobraževanju). Raziskave o ozaveščenosti učiteljev in bodočih učiteljev o temah zaščite ljudi v izrednih razmerah (vključno s prvo pomočjo) kažejo na nekatere pomanjkljivosti v dodiplomskem usposabljanju učiteljev (na primer izbirni predmet prve pomoči in zaščite ljudi v izrednih razmerah na Pedagoški fakulteti Masarykove univerze). Sklepi in priporočila za prakso: trenutne spremembe Okvirnega izobraževalnega

programa za osnovnošolsko izobraževanje (v angl. Framework Education Programme for Elementary Education) bi morale omogočiti okrepitev tematike izrednih razmer pri zdravstveni vzgoji. Na podlagi raziskave se priporoča naslednje: v okviru izobraževanja je treba ustrezno pozornost nameniti vsem vprašanjem izrednih razmer; spodbujati je treba nadaljnje usposabljanje učiteljev za vsa vprašanja izrednih razmer; vprašanja izrednih razmer je treba vključiti v dodiplomsko usposabljanje učiteljev v obliki obveznih skupnih temeljnih predmetov.

Ključne besede: učni načrt, zdravstvena vzgoja, zaščita ljudi v izrednih razmerah, krizno upravljanje, izobraževanje učiteljev

Introduction

The development of education in safety issues (human protection in normal as well as emergency situations, traffic education, civil preparation for the defence of the state, health training, crime prevention, the fight against terrorism and extremism) reflects the perception of safety threats within the Czech Republic and has a long tradition (Kovaříková & Marádová, 2020).

In 1999, the Ministry of Education, Youth and Sports issued a directive to include the issue of human protection in emergency situations in education programmes. In this context, the Ministry of the Interior – Directorate General of Fire Rescue Service of the Czech Republic issued a resource for teachers containing information and recommendations for the education of human protection in emergency situations. In 2003, an amendment to existing learning resources entitled Human Protection in Emergency Situations was issued. The defence of the state is based on the Concept of Civil Preparation for the Defence of the State approved by the Czech government in 2013, which is reflected in the framework education programmes for elementary as well as secondary education. The preparation of citizens for the defence of the state focuses especially on medical preparation, preparation for civil protection, preparation for self-defence, and mutual assistance in both military and non-military crisis situations. In 2018, the Ministry of Defence published a guide book entitled Civil Preparation for the Defence of the State – Guide for Elementary and Secondary School Teachers (Ministry of Defence, 2018).

The literacy (health/safety) of children (citizens of the Czech Republic) in the context of human protection in emergency situations (including first aid and prevention of infectious diseases) is defined by the Health Literacy Portal (2016), which determines the competences for each age category (children, young adults, adults and seniors).

Age group of children (7–15 years):

- In the area of ***Urgent First Aid and Safe Behaviour***, the following competences are defined. The student: reports any health problems to an adult (family member, teacher, other well-known adult); calls for an adult in helpless situations; is able to treat a minor injury of him/herself or another person under adult supervision; knows the phone number 112 and is able to call it from a mobile phone; knows that s/he can help in serious situations; knows his/her name and surname (and the surname of his/her parents, if different); knows his/her address; is aware of the fact that dangerous situations may occur in the surrounding

environment (at home, outside, in school); knows the basic principles of safe behaviour at home, in school and outside; and deliberately avoids dangerous locations.

A health-literate child of this age is capable of distinguishing between basic injury risk situations and is able to take appropriate action in health-threatening situations.

- In the area of ***Prevention of Infectious Diseases***, the student: knows that some diseases are caused by micro-organisms (understanding that these are organisms invisible to the eye, "bad animals"); knows how a disease develops; knows the different ways of infection (spoiled food or drink, sneezing and coughing, insects and ticks, animal transmission, direct contact with a sick person); knows that people can get vaccinated against some diseases; and knows why vaccination is good (because it hurts much less than the disease that a person could get if not vaccinated) (Health Literacy Portal, 2016).

A prerequisite for high-quality teaching in schools is to have **adequately trained teachers** (Tilcerová, 2010). Teachers' and future teachers' literacy (health/safety) in relation to human protection in emergency situations (including first aid and prevention of infectious diseases) can also be defined with reference to the Health Literacy Portal according to the age groups "young adults" (students of the Faculty of Education, Masaryk University, beginner teachers) and "adults" (teachers).

- In the area of human protection in emergency situations (including first aid and the prevention of infectious diseases), the following health literacy areas are relevant to young adults (those related to the topic of the present paper).
- In the area of ***Urgent First Aid and Safe Behaviour***, the young adult: is able to treat a minor injury of him/herself or another person and is able to determine in which cases professional assistance is needed; knows the contact details of his/her primary care physicians (general practitioner, dentist, gynaecologist) and other specialists, as well as the emergency medical service; if necessary, is able to call for professional assistance using emergency phone numbers and cooperates according to the instructions given by emergency specialists; in a health- or life-threatening situation, first strives to ensure the safety of him/herself and other unaffected persons; knows how to recognise life-threatening conditions; knows the typical symptoms of the most common serious diseases; is

able to check the basic life functions of the affected person, perform cardiac massage and stop severe bleeding; knows the main principles of the general first aid procedure; understands the importance of safe behaviour for health; and recognises and is able to avoid situations with excessive risk to life and health.

A health-literate young adult understands the real risks of injury in everyday life as well as in extraordinary activities and behaves responsibly. Moreover, s/he is able to act appropriately in the case that his/her own health or the health of others is at risk.

- In the area of ***Prevention of Infectious Diseases***, the young adult: informs an adult/parents or his/her physician in the case of a suspected infectious disease; knows which diseases are vaccinated against as part of regular vaccination; knows which diseases s/he is vaccinated against and knows where his/her vaccination card is; knows that infectious diseases are not of the same risk in all territories; and knows that before travelling abroad or before an exceptional event a physician should be consulted regarding prevention possibilities.
- In the area of human protection in emergency situations (including first aid and the prevention of infectious diseases), the following health literacy areas are relevant to adults (those that are related to the topic of the present paper).
- In the area of ***Urgent First Aid and Safe Behaviour***, the adult: is able to treat a minor injury of him/herself or another person and is able to determine in which cases professional assistance is needed; knows the contact details of his/her primary care physicians (registered general practitioner, dentist, gynaecologist) and other specialists; knows the contact details of the doctors of the persons in his/her care as well as the emergency medical service; if necessary, is able to call for professional assistance using emergency phone numbers; knows how to cooperate according to the instructions given by emergency specialists; in a health- or life-threatening situation, first strives to ensure the safety of him/herself and other unaffected persons; knows how to recognise life--threatening conditions; knows the typical symptoms of the most common serious diseases; is aware of the fact that in the case of old people, the symptoms of serious diseases may be difficult to recognise; knows the basic principles of general first aid and is able to check the basic life functions of the affected person, perform cardiac massage and stop

severe bleeding; in the context of childcare, knows what to do in the case of fever, fever convulsions, severe vomiting and diarrhoea; understands the importance of safe behaviour in order to protect his/her health and the health of people in his/her care; knows how to recognise and is able to avoid situations with excessive risk to life and health; is able to explain these principles to his/her children or people in his/her care; and is able to determine which risk situations a person is able to resolve him/herself and when direct supervision is necessary.

A health-literate adult understands the real risks of injury in everyday life as well as in extraordinary activities and behaves responsibly. Moreover, s/he brings up his/her children or other persons in his/her care in this sense and is able to act accordingly in the case that his/her own health or the health of others is at risk.

- In the area of ***Prevention of Infectious Diseases***, the adult: is aware of the danger of infectious diseases not only for him/herself, but also for other people in terms of the spreading of the infection in the family, in the workplace or in a group of people who are in contact, and is able to act accordingly; is aware of the danger of sexually transmitted diseases and knows how to behave and protect him/herself; assumes responsibility for explaining the basic hygiene habits and anti-infection measures to his/her children; has his/her children regularly vaccinated in compliance with the legal vaccination calendar and is able to decide responsibly on vaccinations recommended by physicians to him/herself or his/her children or people close to him/her (cocoon strategy) (Health Literacy Portal, 2016).

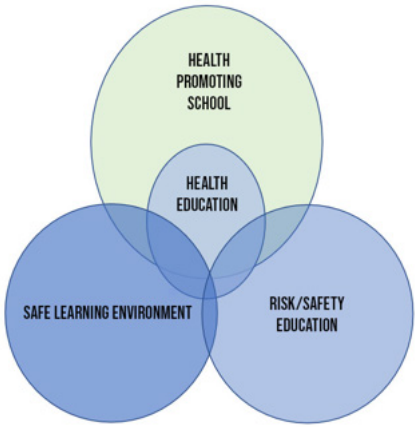
Safety literacy and teacher competences are further defined by Kovaříková and Marádová (2020), according to whom safety literacy is "a set of knowledge, skills and attitudes that allows safe movement in today's society". In relation to the teaching profession, it is "a set of knowledge, skills and ways of thinking required for safe movement in today's society and the competence to prevent and cope with crisis situations in a school setting". A prerequisite is the teacher's ability to effectively respond to normal risks and emergency situations related to the teaching profession and, in the case of an emergency, protect him/herself and his/her pupils (Kovaříková & Marádová, 2020, pp. 37–38).

Kovaříková (2018, p. 54) presented a modified **integrated model of teaching Health and Risk/Safety Education** (see Figure 1 below) of the European

Agency for Safety and Health at Work (OSHA, 2021), which reflects the health promotion and safety strategy in schools. In the long term, the agency has promoted the concept of a "risk prevention culture", a term that is based on the concepts of "safety culture" and "health culture". Increasing the level of safety and health literacy is becoming a natural part of lifelong learning (Kovaříková, 2018, p. 54; Kovaříková, Marádová, 2020, p. 47; OSHA, 2010).

Figure 1

Integrated model of teaching Health and Risk/Safety Education



Note. Adapted from Kovaříková, 2018.

The model shows how the themes in the formal curriculum (e.g., in Health Education) overlap and complement each, and how they are linked to the life of every school and pupils' personal experience.

It should not be forgotten that the issue of safety and a safe environment is not entirely new in schools. The World Health Organization is the co-author (together with the Council of Europe and the European Union) of the European Network of Health Promoting Schools (Havlínová et al., 1998, Nejedlá et al., 2015; SHE, 2021). In the Czech Republic, **the health promotion programme has been in place in schools** since 1992 (Reissmannová, 2005). As of 31 May 2020, the network of health-promoting schools included a total of 355 nursery, elementary and secondary schools.

A more recent programme focusing on the promotion of a safe environment in Czech schools and on crises situations is the **Safe School** programme (Safe School, 2016). The Safe School programme promotes activities that lead to a reduction in injuries and violence in schools and support children's and

young people's preventive behaviour, which they adopt for life. A school that wishes to join the network of schools involved in the programme must work with seven indicators and seven categories (Pokorná, Indicators and Criteria, 2009).

The Safe School programme is not very known in the Czech Republic; according to the Safe School website, only nine schools are involved.

The issue of safety in schools is also addressed by the European Commission in a document entitled Communication from the Commission to the European Parliament and the Council on Education in Emergencies and Protracted Crises (2018), which requires schools to ensure a safe, protected and high-quality learning environment. At the same time, the Communication emphasises the importance of teacher education and requires the promotion and implementation of the principles and guidelines of Conflict Sensitive Education – such as ensuring that teaching fosters respect for diversity, tolerance and active responsible citizenship – through teacher training, curriculum development and professional development of teachers (EU, 2018).

The Czech School Inspectorate recommends that further teacher training should be supported in all safety issues, and that safety issues should be included in undergraduate teacher training (Czech School Inspectorate, 2016).

This finding was presented by the Czech School Inspectorate in 2016, although the Government of the Czech Republic had already approved **the inclusion of Human Protection in Emergency Situations, Healthcare and Traffic Education in undergraduate study programmes** in 2011 by means of Resolution No. 734. The following three-level system of study domains was developed to be implemented in university programmes for future teachers:

- Study Domain I – intended for all future teachers across disciplines as a specific basis of knowledge (elementary skills and knowledge concerning the prevention of emergency situations and the protection of oneself and pupils in the event of emergency situations);
- Study Domain II – intended for students of Health Education (deeper knowledge and skills including the ability to pass on the acquired information to others);
- Study Domain III – intended for students of single- and double-major study programmes aimed at civil protection combined with another subject (deeper knowledge and skills including the ability to pass on the acquired information acquired to others) (Integration of Human Protection in Emergency Situations, Health Protection and Traffic Education, Fire Rescue Service of the Czech Republic, pp. 2–3).

The Study Domains were designed in 2011; in 2017, the Government of the Czech Republic approved the Concept of Education in Civil Protection and Crisis Management, which replaced the previous concept of 2004. The new concept defines the target groups that should be primarily addressed in the process of education, including academic staff who prepare future teachers (students of faculties of education), as well as teachers in nursery, elementary, secondary and higher vocational schools who teach safety issues (Education in the Area of Civil Protection and Crisis Management, 2017).

For the target group of teachers, **Module J – Civil Protection and Crisis Management for Teachers** was issued in 2019. The module covers the theory of human protection in emergency situations (Ministry of the Interior – Directorate General of Fire Rescue Service of the Czech Republic, 2019).

Method

In 2021, three research sub-studies were conducted with the aim of answering the following research questions:

1. How is the issue of education related to human protection in emergency situations implemented in the curricular documents for elementary education?
2. How is the issue of education related to human protection in emergency situations implemented in the curricular documents for undergraduate preparation of future teachers in selected faculties of education?
3. What is the degree of awareness of bachelor's students in the first years at the Faculty of Education, Masaryk University and the Faculty of Education, Palacký University in the area of human protection in emergency and crisis situations?

Document review. The following curricular documents for elementary education were analysed: Framework Education Programme for Elementary Education 2021 and publicly accessible study plans of the five faculties of education. The review of documents was performed in January (Slaná Reissmannová, 2021). Keywords: occupational safety and human protection in emergency situations, first aid, civil defence education, risk education, safety education.

Questionnaire survey. The purpose of the questionnaire survey was to investigate the degree of awareness about human protection in emergency situations. The data were obtained by means of a questionnaire survey carried out using Google technology. The data were converted into MS Excel (Slaná Reissmannová, 2021).

The research sample comprised 233 students of the Faculty of Education, Masaryk University (210 respondents/90%) and the Faculty of Education, Palacký University (23 respondents/10%). The following students of bachelor's degree programmes were involved: 197 respondents (84.5%) in year one of a double-major bachelor's degree (41 students of Health Education) and year one of the bachelor's degree Teacher Training for Nursery Schools, and 36 respondents (15.5%) in year one of the five-year master's degree Teacher Training for Primary Schools. Gender groups: 39 male (17%), 194 female (83%). Age groups: 19–51 years, the largest group was 19 years of age (44%).

The research part of the project was carried out between 5 October 2020 and 17 January 2021.

The first set of questions asked about the respondents' opinions about teaching the issue of human protection in emergency situations in the context of undergraduate teacher training.

The second set of questions evaluated the cognitive dimension and comprised 35 test items. Evaluation of the knowledge part of the questionnaire: cut-off score of 80%. The cut-off score of 80% is based on the traditional assessment algorithm used in the system of education (Hřivnová, 2018). A total of 27 questionnaire items were adopted from test questions intended for grade nine of elementary school (Teaching Resources, 2004).

Results

The implementation of the issue of human protection in emergency and crisis situations in elementary education: Analysis of the Framework Education Programme for Elementary Education and publicly accessible resources for elementary school teachers

The outcomes defined in the Framework Education Programme for Elementary Education (2021) in the educational area Man and Health and the educational field Health Education relating to human protection in emergency and crisis situations are as follows: respects the accepted rules for coexistence among peers and partners and contributes to the formation of good interpersonal relations in the community; assesses various ways of human behaviour in terms of responsibility for one's own health and the health of others and assumes personal responsibility in favour of active health promotion; endeavours within his/her abilities and experience to actively support health; manifests responsible behaviour in risk situations of road and railway transport; actively

prevents endangerment of health and personal safety; provides adequate first aid if necessary; applies adequate behaviour and protection in model risk situations, danger and emergency situations (Framework Education Programme for Elementary Education, 2021, pp. 99–100).

Each of the Framework Education Programmes for Elementary Education (FEP EE) issued so far (2005, 2013, 2017, 2021) mentions the issue of safety in Chapter 10, entitled Material, Personal, Sanitary, Organisational and Other Conditions for Implementing the FEP EE (e.g., FEP EE 2021): conditions for hygienic and safe education: life of the school, protection of pupils against injury, availability of first-aid resources, contact details of physicians or a different medical service, practical capacity of the teachers to provide first aid (FEP EE, 2021); organisational conditions: an optimal school regimen in accordance with safety standards (hygiene, emergency situation) (FEP EE, 2021); psychosocial conditions: education reasonably linked to everyday life; favourable social climate, strengthening mutual respect, […] empathy, cooperation and mutual help, solidarity with one's class and school; protection of pupils against violence, bullying and other antisocial phenomena; pupils' participation in education and activities of the school based on the model of a democratic community, building a community on the principles of freedom, responsibility, stability of common rules, justice and cooperation; timely provision of information concerning the different issues in school and outside school (FEP EE 21, 2021).

According to an analysis of the available resources for elementary school teachers, there is an abundance of resources that are clearly arranged on the website of the Fire Rescue Service of the Czech Republic: "Resources and Textbooks" (FRS CR, n.d.).

Most of the resources/textbooks date back to 2002–2006, which makes them slightly outdated and not responding to the needs and threats of current society and the world.

In the context of Health Education, which is an area that focuses mainly on the issue of human protection, only one textbook approved by the Ministry of Education, Youth and Sports is used: KREJČÍ et al. *Výchova ke zdravému životnímu stylu: pro 2. stupeň ZŠ a odpovídající ročníky víceletých gymnázií*, published by Fraus in 2018. In this textbook, the issue of human protection in emergency situations is addressed in Chapter 7 Human Protection in Emergency Situations on a total of seven pages (pp. 183–190). The chapter contains the following: Emergency Situation (p. 184), Integrated Rescue System (pp. 185–186), Civil Protection Service (pp. 187–188), Armed Forces of the Czech Republic (p. 189), and Revision of Lesson 7 (p. 190). The textbook does not focus in detail on the issue of first aid, which is also part of human protection in

emergency situations (half a page on p. 188).

The problematic aspect is the didactic transformation of the issue in order to be handled easily by elementary school teachers, including both qualified health education teachers, who should be more knowledgeable about the issue according to Study Domain II, and unqualified teachers. According to a survey carried out by the Czech School Inspectorate (2016), teachers would appreciate additional methodological resources, teaching aids and a broader offer of teacher training courses aimed at this issue (Teaching of Safety Issues, 2016).

It is important to mention that the current Covid-19 pandemic is identified according to the International Health Regulations as a biological threat.

Both the Resources document and the health education textbook fail to mention the issue of biological threats or infectious diseases.

Implementation of human protection in emergency and crisis situations in undergraduate teacher training: Analysis of the study plans of selected faculties of education that deliver the study programme Health Education – bachelor's and follow-up master's degree programmes

Regarding the concept of Study Domain I (common base courses for all students of faculties of education) and Study Domain II (for students of Health Education), the analysis of the study plans included those faculties of education that train future teachers of Health Education. This applies to the following faculties of education: Faculty of Education, Palacký University Olomouc; Faculty of Education, Masaryk University in Brno; Faculty of Education, University of West Bohemia in Pilsen; Faculty of Education, Charles University in Prague; Faculty of Education, University of Ostrava.

The analysis included the study plans (bachelor's and follow-up master's degree programmes) published on the faculties' websites.

The following study plans were analysed: 1) common base courses, 2) Health Education programme – bachelor's and master's degree programmes.

Faculty of Education, Masaryk University in Brno

The common base courses do not include a compulsory course concerning the issue of human protection in emergency situations. As a result, there is no compulsory or core elective course in the common base courses in the bachelor's or master's degree programmes focusing on the issue of human protection in emergency situations or first aid. Regarding the teachers' work, this situation is highly alarming. As far as optional courses are concerned, it is

possible to enrol in Occupational Safety and Human Protection in Emergency Situations, and First Aid with Elements of Experiential Education.

The bachelor's degree programme Health Education includes a compulsory course Human Protection in Emergency Situations. In terms of content, this course does not fulfil the requirements of Study Domain II or Module J. First aid is taught as a compulsory course. The master's degree programme Health Education does not include a course concerning the issue of human protection in emergency situations. First aid is included in the compulsory course First Aid in the School Setting (Faculty of Education Brno, 2021).

Faculty of Education, Palacký University Olomouc

There is no compulsory or core elective course in the common base courses in the bachelor's or master's degree programmes focusing on the issue of human protection in emergency situations or first aid. The bachelor's degree programme Health Education includes the compulsory course Civil Protection in Emergency Situations and First Aid in year two. The master's degree programme Health Education does not include a course focusing on human protection in emergency situations or first aid, but includes Hygiene and Epidemiology, which covers the topic of infectious diseases in the context of epidemics, pandemics and the vaccination system in the Czech Republic.

The Department of Adapted Physical Activities of the Faculty of Physical Culture offers the bachelor's degree programme Physical Education, with a focus on teaching and civil protection, and the follow-up master's programme Teacher Training in Physical Education for Lower Secondary Schools and Secondary Schools and Civil Protection (Faculty of Education Olomouc, 2021).

Faculty of Education, University of West Bohemia in Pilsen

The university's website does not provide the required information, but according to the university, the common base courses do not include human protection in emergency situations. The bachelor's degree programme Health Education includes the compulsory course Fundamentals of First Aid and Crisis Intervention in year two. The bachelor's degree programme does not include a course focusing on human protection in emergency situations. The Crisis Intervention course includes the following topics: a description of concepts relating to crisis intervention, crisis and crisis situations, emergencies and emergency situations. The master's degree programme Health Education includes Human Protection in Emergency Situations, but the content of the course does not fulfil the requirements of Study Domain II or Module J. Currently, an optional course Civil Defence Education and Survival in Nature is being prepared.

It should be noted that the Faculty of Education in Pilsen provides training of health education teachers and focuses on interactive psychosocial training and personality-social development (Svoboda, 2017; Svoboda & Gažáková, 2020), which is essential for emergency and crisis management (Faculty of Education Pilsen, 2021).

Faculty of Education, Charles University in Prague

The common base courses of the bachelor's and master's degree programmes do not include a compulsory or core elective course focusing on human protection in emergency situations or first aid. The bachelor's degree programme Health Education includes a compulsory course Protection in Emergency Situations in year two and the core elective course First Aid in year three. The master's degree programme Health Education does not include a course focusing on human protection in emergency situations, but there is a compulsory subject Prevention of Health Risks (topics: population health, risk factors influencing health; the effects of physical, chemical and biological factors on health; safety and health protection at work). In compulsory elective courses we find the topics: security issues in schools; and preparing citizens for state protection (Faculty of Education Prague, 2021).

Faculty of Education, University of Ostrava

There is no compulsory or core elective course in the common base courses in the bachelor's or master's degree programmes focusing on the issue of human protection in emergency situations or first aid. The bachelor's degree programme Health Education does not include a course focusing on human protection in emergency situations. There is the compulsory course Fundamentals of Hygiene and Epidemiology, which covers the following topics: spreading of infectious diseases, vaccination against infectious diseases, epidemiology of selected infectious diseases. The master's degree programme Health Education does not include a course focusing on human protection in emergency situations or first aid (Faculty of Education Ostrava, 2021).

The analysis of the study plans of selected faculties of education revealed the alarming finding that **the study plans of the common base courses** of the bachelor's and master's degree programmes **of all the faculties of education included in the study** did not have a compulsory or core elective course focusing on human protection in emergency situations pursuant to Study Domain I. As suggested by the analysis of the study plans of Health Education, none of the faculties meets the requirement of Study Domain II.

Awareness of future teachers: Questionnaire survey to identify the level of awareness among teacher training students in the area of human protection in emergency situations

Results of the questionnaire survey:

- As many as 97% of the respondents believe that the issue of human protection in emergency situations is important for future teachers, while 72% reported that it should be part of compulsory courses in undergraduate teacher training, and 85% believe that first aid should be compulsory in undergraduate teacher training.
- Concerning the level of awareness about human protection in emergency situations, 17% of the respondents did not achieve the required threshold of 80% of correct answers. The maximum number of points was 34 (80% equals 27 correct answers). The average number of points achieved was 27, the mode was 29. The lowest number of points (19) was achieved by only one respondent, while the maximum number of points (34) was also achieved by one respondent.

Questions for which the threshold of 80% of correct answers was not achieved:

- Desirable behaviour in the event of an earthquake (answered correctly by 39% of the respondents).
- Infectious diseases used for bioterrorism (answered correctly by 41% of the respondents).
- Desirable behaviour in the event of an accident involving the escape of a hazardous substance (answered correctly by 44% of the respondents).
- An epidemic cannot be described by a specific number (answered correctly only by 50% of the respondents).
- Desirable behaviour in the event of an avalanche (answered correctly by 59% of the respondents).
- Correct first aid procedure and use of an autotransfusion position (answered correctly by 61% of the respondents).

The main results of the survey are listed below.

The resources for elementary education do not include the area of biological threats (such as Covid-19) or, to be more specific, infectious diseases. The topic of human protection in emergency situations is not suitably transformed from a didactic perspective.

The analysis of the study plans of selected faculties of education revealed

the alarming finding that the study plans of the common base courses of the bachelor's and master's degree programmes did not have a compulsory or core elective course focusing on human protection in emergency situations pursuant to Study Domain I. As suggested by the analysis of the study plans of Health Education, none of the faculties meets the requirement of Study Domain II.

The students' awareness can be rated as sufficient (the required success rate of 80% was not achieved by 17% of the students).

Discussion

The results of partial studies often emphasise the insufficient inclusion of the issue of human protection in emergency situations in the curriculum of elementary and secondary education, as well as an inadequate level of health literacy of the citizens of the Czech Republic (Holčík, 2017; Kučera et al., 2016).

In 2009, the Ministry of the Interior – Directorate General of Fire Rescue Service of the Czech Republic performed a quick inquiry in 2,725 elementary and secondary schools and observed that human protection in emergency situations was covered by more than half of the schools involved in the survey. According to a thematic report (2016) of the Czech School Inspectorate entitled Education in Safety Issues, 91% of elementary schools (the total number of elementary schools was 107) addressed the issue of human protection against normal risks and emergency situations, while civil preparation for the defence of the state was included by significantly fewer schools (63.1%).

For all safety issues (traffic education, civil preparation for the defence of the state, human protection against normal risks and in emergency situations, health protection), the content is usually included in different subjects (most of the teachers in the schools included in the survey are comfortable with this situation). Teacher qualification concerning safety issues mostly corresponds with the subjects in which these issues are included. The methods and forms used in teaching safety issues are dominated by practical exercises, drills, project days, discussions and teacher presentations. In terms of educational events and practical exercises, the most frequent were first-aid drills, evacuation drills, traffic competitions and exercises in the event of a fire or flood.

In 2016/2017, the Czech School Inspectorate tested 6,174 pupils from grade nine of elementary schools (Selective Testing of Pupils' Performance in Grade Five and Nine of Elementary Schools, 2017). The test designed for pupils from grade nine focused on protection in risk situations and consisted of 35 tasks, some of which were further divided into sub-items.

In total, 63 test items were evaluated. The items of the test focusing on

protection in risk situations designed for pupils from grade nine included the following five thematic areas: (a) Road Traffic (15 test items), (b) Health Protection (8 test items), (c) Emergency Situations (11 test items), (d) Defence of the State (13 test items), and (e) Crime Prevention (16 test items).

The pupils' average achievement in Health Protection was 54.3%, Emergency Situations 53.3% and Defence of the State 50.5%. The worst achievement in the entire test was observed in the following items: Basic Safety Evacuation Procedures (3%) and Evacuation Pack Content (8%). The proportion of correct answers was below 10%.

In 2014, Hřivnová conducted a research study among pupils from grade nine of elementary schools, whose task was to subjectively identify the themes that are preferred, dominant and absent in Health Education. In the study, a total of ten absent themes were identified, among which human protection in emergency situations was seventh (Hřivnová, 2018).

Marádová (2007) conducted a questionnaire survey among the students of the Faculty of Education, Charles University in Prague, focusing on their knowledge of the issue of human protection in emergency situations. According to Marádová, the survey revealed significant shortcomings in the level of education among secondary school graduates (teacher training students) concerning the issue of human protection in emergency situations. The key approach to improve this condition is increasing the quality of teacher training in this area. This requires conceptual curricular changes of undergraduate teacher training in all relevant study programmes (Marádová, 2007). These conceptual changes were made in 2011, but similar studies do not bring satisfactory results.

A similar study was conducted in 2010 on the awareness of students of the Faculty of Education, Masaryk University in the area of first aid (first aid is also included in human protection in emergency situations). According to the results, the awareness of students concerning the issue of first aid is insufficient and it is desirable to strengthen the teaching of first aid in all study programmes (Prokopová & Reissmannová, 2008; Reissmannová, 2010).

Tilcerová (2010) states that the most important problems in teaching human protection in emergency situations in elementary schools include the insufficient number of qualified teachers, fragmentation of the teaching process, as well as insufficient control and feedback.

In her survey aimed at teacher training at the Faculty of Education, Masaryk University, Jašková (2020) observed that the interest of students in Occupational Safety and Human Protection in Emergency Situations had dropped dramatically. The author further observed that only 10.2% of the students (of a total of 68 respondents) in the survey believed that they were sufficiently

provided with practical skills in delivering first aid, while 86.4% of the respondents believed that it would be desirable to include a compulsory first aid course, as 79.7% (47) of the students had not taken a first aid course and would appreciate its introduction. Only 42.4% of the students responded adequately to the test items. From 2011 to 2015, first aid was included in the compulsory common base courses taught in the first grade. However, after the conceptual changes made to the common base courses, the Faculty of Education, Masaryk University has not had a compulsory course that includes first aid, healthcare or human protection in emergency situations.

In the 2016 survey carried out by the Czech School Inspectorate on education in safety issues, the focus was also on how (and whether at all) teachers had been trained during their undergraduate study in the areas of traffic education, human protection, health protection and civil preparation for the defence of the state, and whether schools believed that these issues should be part of teacher training courses.

Conclusions

Based on the analysis of the Framework Education Programme for Elementary Education (2021) and the study plans of selected faculties of education in the Czech Republic, the authors conclude that the issue of human protection is not sufficiently included in elementary education or undergraduate teacher training.

The current Covid-19 pandemic should lead to a cross-sectoral debate, revision and implementation of relevant issues, as well as the strengthening of the role of Health Education. A precondition is the definition of the terms health literacy/competence and safety literacy/competence in the curriculum of elementary education and in undergraduate training of future teachers – the teachers of the future generation.

For this reason, the authors have proposed a number of measures that could help strengthen the delivery of human protection in emergency situations at the Faculty of Education, Masaryk University in Brno, as well as other faculties. The authors have also proposed recommendations for educational practice in elementary schools and recommendations for a revision of the documents issued by the Ministry of the Interior – Directorate General of Fire Rescue Service of the Czech Republic.

Recommendations for educational practice in elementary schools

- Strengthening the delivery of human protection in emergency situations using suitable methods (especially simulation) throughout the whole period of compulsory education, and development of appropriate methodological resources for teachers of all qualifications.
- Strengthening the delivery of human protection in emergency situations in Health Education: development of appropriate methodological resources for health education teachers and of a new health education textbook.
- Implementation of the issue of infectious diseases and their prevention in Natural History and Health Education (general prevention recommendations, hand washing, awareness-raising of the importance of vaccination).
- In the revision of the Framework Education Programme for Elementary Education 2023, the following terms should be included: health literacy/health competence and safety literacy/safety competence.
- The issue of human protection in emergency situations should be included in all educational areas of the Framework Education Programme for Elementary Education.

Recommendations for educational practice in faculties of education

- Implementation of a compulsory course concerning the issue of human protection in emergency situations in the common base courses of all study programmes according to Study Domain I and Module J.
- Implementation of a compulsory course concerning the issue of human protection in emergency situations in the study programme Health Education pursuant to Study Domain II and Module J in full extent.
- Implementation of compulsory first aid in the common base courses.
- Strengthening cooperation with experts from practice (Integrated Rescue System).
- Development of thematic e-learning courses.
- Discussion of the results with representatives of other faculties of education and proposals for adequate measures in expert fora.
- Development of methodological resources for students and teachers in cooperation with experts from practice and elementary schools.
- Further research studies focusing on the educational reality at all school levels.

At present, experts from the Faculty of Education, Masaryk University are working on three methodological resources (team of authors: Mertová et

al., 2021) that will cover the entire area of human protection in emergency situations as defined by the materials of the Fire Rescue Service of the Czech Republic. Each of them will comprise ten lessons including theoretical training of teachers and didactic transformation of the learning content, as well as structured preparation and worksheets with a key. The methodological resource prepared by Mertová and Slaná Reissmannová is included in the 2021 publishing schedule of the Ministry of the Interior – Directorate General of Fire Rescue Service of the Czech Republic.

The European region is facing new threats and is still exposed to a considerable human health hazard. Fatal events such as the current Covid-19 pandemic, the severe acute respiratory syndrome (SARS) epidemic in 2003, the H1N1 global pandemic in 2009, natural disasters, war conflicts, climate changes with extreme weather fluctuations, urbanisation, and the development of international airports and mass gatherings are all the risks and threats of modern times that must be actively reflected in the education of the new generation to ensure that they are better prepared for these events. These events and situations must be taken seriously and should be given the importance that they deserve in the context of education.

References

Brzybohatá, A., & Mráčková, K. (2019). *Ve školách chybí branná výchova. Děti umí telefonní čísla, ve zbytku tápou* [Schools lack military education. Children know phone numbers, the rest are groping]. https://www.idnes.cz/zpravy/domaci/hasici-zachranari-policie-povodne-pozary-nehody-deti-uceni-branna-vychova.A190416_164959_domaci_brzy

Czech School Inspectorate. (2016). *Tematická zpráva Vzdělávání v bezpečnostních tématech* [Thematic report: Education in security topics]. https://www.csicr.cz/Csicr/media/Prilohy/PDF_el._publikace/Tematick%c3%a9%20zpr%c3%a1vy/2016_TZ_vzdelavani_v_bezpecnostnich_tematech.pdf

Czech School Inspectorate. (2017). *Výběrové zjišťování výsledků žáků na úrovni 5. a 9. ročníků základních škol ve školním roce 2016/2017 – závěrečná zpráva* [Sample survey of students' results at the level of the fifth and ninth grades of primary school in the 2016/2017 school year – final report]. https://www.csicr.cz/getattachment/17f8e265-b04f-4459-a106-3aecbf735ca0/Vyberove-zjistovani-vysledku-zaku-na-urovni-5-a-9-rocniku-ZS-zaverecna-zprava.pdf

European Union. (2018). *Sdělení komise Evropskému parlamentu a Radě o vzdělávání v mimořádných situacích a vleklých krizích* [Communication from the Commission to the European Parliament and the Council on emergency and protracted education]. https://eur-lex.europa.eu/legal-content/CS/ALL/?uri=COM%3A2018%3A0304%3AFIN

Faculty of Education, Masaryk University. (2021). *Studijní katalog* [Study catalogue]. https://www.ped.muni.cz/student/bc-a-mgr-studium/studijni-katalog

Faculty of Education, Palacký University Olomouc. (2021). *Studijní agenda UPOL* [Study catalogue Palacký University Olomouc]. https://stag.upol.cz/portal/

Faculty of Education Ostrava. (2021). *Nabízené programy a obory* [Offered programmes and fields]. https://pdf.osu.cz/kpe/nabizene-programy-a-obory/

Faculty of Education Pilsen. (2021). *Studijní agenda* [Study catalogue]. https://portal.zcu.cz/portal/

Faculty of Education Prague. (2021). *Studijní plány – Karolínka* [Study plans – Karolínka]. https://pedf.cuni.cz/PEDF-2171.html

Fire Rescue Service of the Czech Republic. (2021). *Výuka problematiky ochrany člověka za běžných rizik a mimořádných událostí na školách – od historie k současnému stavu* [Teaching the issue of human protection under common risks and emergencies in schools – from history to the current state]. https://www.hzscr.cz/clanek/vychova-a-vzdelavani-obyvatelstva-vychova-a-vzdelavani-obyvatelstva-podpora-vyuky-ze-strany-hasicskeho-zachranneho-sboru-cr.aspx?q=Y2hudW09NA%3D%3D

Fire Rescue Service of the Czech Republic. (2004). *Podklady a učebnice* [Materials and textbooks]. https://www.hzscr.cz/clanek/podklady-a-ucebnice.aspx

Framework Education Programme for Elementary Education (FEP EE) (2021) *Rámcový vzdělávací program pro základní vzdělávání*. http://www.nuv.cz/t/rvp-pro-zakladni-vzdelavani

Government of the Czech Republic. (2011). *Usnesení č. 734. Začlenění tématik Ochrana člověka za mimořádných událostí, péče o zdraví a dopravní výchova do studijních programů pedagogických fakult* [Resolution No. 734. Incorporation of the topics of Human Protection in Emergencies, Health Care and Traffic Education into the study programmes of pedagogical faculties]. https://www.hzscr.cz/clanek/material-zacleneni-tematik-ochrana-cloveka-za-mimoradnych-udalosti-pece-o-zdravi-a-dopravni-vychova-do-studijnich-programu-pedagogickych-fakult.aspx

Government of the Czech Republic. (2017*). Koncepce vzdělávání v oblasti ochrany obyvatelstva a krizového řízení* [Education in the Area of Civil Protection and Crisis Management]. https://www.hzscr.cz/clanek/vzdelavani-v-oblasti-ochrany-obyvatelstva-a-krizoveho-rizeni.aspx

Havlínová, M., & Vildová, Z. (2005). Úvod. *Průvodce výchovou ke zdraví. Učitelské listy. Příloha Ratolesti podpory zdraví ve školách* [Introduction. Guide to health education. Teacher's sheets. Annex Branches of health promotion in schools]. http://www.ceskaskola.cz/2001/09/bibliografie-ucitelskych-listu-19932008.html

Health Literacy Portal. (2016). *Zdravotní gramotnost.* http://zdravotnigramotnost.cz/

Holčík, J. (2017). *Zdravotní gramotnost a zdravotní politika* [Health literacy and health policy]. http://www.uzg.cz/doc/Kolokvium_Sbornik.pdf

Hřivnová, M. (2018). *Analýza a evaluace kurikula vzdělávacího oboru Výchova ke zdraví* [Analysis and evaluation of the curriculum of the educational field of health education].

Jašková, M. (2020). *Sonda do znalostí laické první pomoci u studentů Pedagogické fakulty Masarykovy university* [A probe into the knowledge of lay first aid for students of the Faculty of Education at Masaryk University]. https://is.muni.cz/th/ffkw1/

Kovaříková, M., & Marádová, E. (2020). *Didaktika výchovy ke zdraví a bezpečí v kontextu kurikulární*

a učitelského vzdělávání [Didactics of health and safety education in the context of curricular reform and teacher education]. Pedagogická fakulta UK Praha.

Kovaříková, M. (2018). European tendencies in education in the field of health and safety [online]. In B. Hošková & J. Slaná Reissmannová (Eds.), *Život ve zdraví 2018: teorie a praxe* (pp. 53–56). https://munispace.muni.cz/library/catalog/view/1146/3320/834-1/0#preview

Krejčí, M., Šulová, L., Rozum, & F. Havlíková, D. M. (2018). *Výchova ke zdravému životnímu stylu: pro 2. stupeň ZŠ a odpovídající ročníky víceletých gymnázií* [Education for a healthy lifestyle: For the second grade of primary school and the corresponding years of multi-year grammar schools]. Fraus.

Marádová, E. (2007). *Pilotní studie přípravy budoucích učitelů v oblasti ochrany člověka za mimořádných událostí* [Pilot study on the training of future teachers in the field of human emergency protection]. https://www.hzscr.cz/clanek/pilotni-projekt-priprava-budoucich-ucitelu-v-oblasti-ochrany-cloveka-za-mimoradnych-udalosti.aspx

Kučera, Z., Pelikan, J., & Šteflová, A. (2006). Zdravotní gramotnost obyvatel ČR-výsledky komparativního reprezentativního šetření [Health literacy of the population of the Czech Republic – results of a comparative representative survey]. *Časopis lékařů českých* č, 5/2016/155, 233–241. https://www.prelekara.sk/casopisy/casopis-lekaru-ceskych/2016-5/zdravotni-gramotnost-obyvatel-cr-vysledky-komparativniho-reprezentativniho-setreni-59024

Mertová, M., Lízalová, V., & Slaná Reissmannová, J. (2021). *Soubor metodických materiálů k výuce ochrany člověka za mimořádných událostí* [A set of methodological materials for teaching human protection in emergencies]. Masaryk University Brno.

Ministry of Defence of the Czech Republic. (2018). *Příprava občanů k obraně státu* [Preparing citizens to defend the state]. http://www.pokos.army.cz/pro-skoly-ucitele

Ministry of the Interior – Directorate General of Fire Rescue Service of the Czech Republic. (2013). *Koncepce ochrany obyvatelstva do roku 2020 s výhledem do roku 2030* [The concept of population protection until 2020 with a view to 2030]. https://www.hzscr.cz/clanek/ochrana-obyvatelstva-v-ceske-republice.aspx

Ministry of the Interior – Directorate General of Fire Rescue Service of the Czech Republic. (2019). *Modul J Ochrana obyvatelstva a krizové řízení pro pedagogické pracovníky* [Module J Population protection and crisis management for teachers]. https://www.hzscr.cz/clanek/moduly-dle-platne-koncepce-vzdelavani-v-oblasti-ochrany-obyvatelstva-a-krizoveho-rizeni-2017.aspx

Nejedlá, M. et al. (2015). *Program škola podporující zdraví* [Health promoting school program]. http://www.szu.cz/program-skola-podporujici-zdravi

OSHA (Occupational Safety and Health Administration European). (2010). *Mainstreaming occupational safety and health into university education.* https://osha.europa.eu/en/publications/mainstreaming-occupational-safety-and-health-university-education

OSHA (Occupational Safety and Health Administration). (2021). https://www.osha.gov/

Pokorná, M. (2009). *Indikátory a kritéria*. http://www.bezpecna-skola.cz/indikatory-a-kriteria

Prokopová, A., & Reissmannová, J. (2008). *Učitelé a první pomoc - cesty ke kompetenci* [Teachers and first aid – paths to competence]. *Škola a zdraví, 21*, 36, 34–85.

Reissmannová, J. (2005). *Zdravá škola: teorie a praxe (historie a současnost)* [Healthy school: Theory and practice (history and present)]. Faculty of Education Masaryk University.

Reissmannová, J. (2010). *Problematika první pomoci v kontextu rozvoje zdravotní gramotnosti ve školním prostředí* [First aid issues in the context of health literacy development in the school environment]. https://is.muni.cz/th/pug2p/

Safe School. (2016). *Bezpečná škola.* http://www.bezpecna-skola.cz/Home

SHE (Schools for Health in Europe). (2021). https://www.schoolsforhealth.org/

Slaná Reissmannová, J. (2021). *Mezinárodní doporučení v oblasti ochrany veřejného zdraví a jejich implementace v České republice s akcentem na oblast mimořádných událostí a krizových situací* [International recommendations in the area of public health protection and their implementation in the Czech Republic with an emphasis on emergency and crisis situations]. Faculty of Medicine Palacký University Olomouc.

Svoboda, M., & Gažáková, E. (2020). *Osobnostně sociální rozvoj studentů — budoucích učitelů* [Personal and social development of students – future teachers]. https://dspace5.zcu.cz/bitstream/11025/37192/1/FINAL_Osobnostne_socialni_rozvoj_studentu_budoucich_ucitelu.pdf

Svoboda, M. (2017). *Psychosociální interakční výcvik v pedagogické praxi* [Psychosocial interaction training in pedagogical practice]. Pedagogická fakulta Západočeské university Plzeň.

The Ministry of Education, Youth and Sports of the Czech Republic. (2003). *Pokyn MŠMT k začlenění tematiky ochrany člověka za mimořádných událostí do vzdělávacích programů a dodatek k učebním dokumentům pro základní školy, střední školy, speciální školy a vyšší odborné školy - ochrana člověka za mimořádných událostí* [Instruction of the Ministry of Education, Youth and Sports to include the topic of human protection in emergencies in educational programmes and a supplement to teaching documents for primary schools, secondary schools, special schools and higher vocational schools – human protection in emergencies]. https://www.msmt.cz/ministerstvo/pokyn-msmt-k-zacleneni-tematiky-ochrany-cloveka-za-mimoradnych-udalosti-do-vzdelavacich-programu-a-dodatek-k-ucebnim-dokumentum-pro-zakladni-skoly-stredni-skoly-specialni-skoly-a-vyssi-odborne-skoly-ochrana-cloveka-za-mimoradnych-udalosti-1

The Ministry of Education, Youth and Sports of the Czech Republic. (2019). *Konference Strategie vzdělávací politiky ČR 2030+ (Revize rámcových vzdělávacích programů* [Conference of the Education Policy Strategy of the Czech Republic 2030+ (Revision of the Framework Educational Programmes)]. https://www.youtube.com/watch?v=pHAg_LAMQ0E

Tilcerová, E. (2010). *Ochrana člověka za mimořádných událostí – nové trendy ve výuce* [Human protection in emergencies – new trends in teaching]. https://dk.upce.cz/bitstream/handle/10195/37999/Tilcerov%C3%A1E_Ochrana%C4%8Clov%C4%9Bka_2010.pdf?sequence=1&isAllowed=y

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I Do, We Do, You Do Home Economics: Explicit Instruction Connecting Content with Ideology

Jay R. Deagon[1]

Explicit instruction is a teaching model that demonstrates to students what to do and how to do it. One purpose of ideology is to focus the who, what, when, where, and why of a disciplinary field. Trained home economists make a sustained commitment to the core ideology of home economics. Mechanisms for identifying locally relevant challenges faced by individuals, families, and communities are embedded in the home economics knowledge base. To identify challenges and locate solutions (who, what, when, where, and how), home economics education programmes must actively teach or provide explicit instruction about the ideology that underpins the home economics disciplinary field. Neglecting ideology results in teaching unrelated subjects or compartmentalised content that may dilute connection to the core aims of the home economics' 'big picture'. This paper outlines how explicit instruction and embedded home economics ideology have positively impacted perceptions of the discipline amongst professionals who are new to the field. In teaching and learning environments, making home economics ideology visible and reinforced continuously across all content specialisation areas, the author observed that students acquired the words and concepts to explain the importance of home economics to others. Professionals who are new to the field became more confident and passionate advocates for home economics, because they had learnt and appreciated, through explicit instruction techniques, the what, the how to, and the why of home economics. Equipped with the discipline's core ideology, professionals who make visible the home economics 'big picture' (i.e., the why) to others are better equipped to enact real-world applications of home economics that can adapt continuously to meet ever-changing and complex societal needs.

Keywords: home economics, explicit instruction, ideology, professional practice

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Jaz gospodinjim, mi gospodinjimo, ti gospodinjiš: eksplicitno poučevanje, ki povezuje vsebino z ideologijo

Jay R. Deagon

Eksplicitno poučevanje je model poučevanja, ki učencem pokaže, kaj in kako naj nekaj naredijo. Eden izmed namenov ideologije je tudi, da se za posamezno disciplinarno področje osredotoči na iskanje odgovorov na vprašanja kdo, kaj, kdaj, kje in zakaj. Usposobljeni strokovnjaki gospodinjstva se tako trajno zavežejo temeljni ideologiji gospodinjstva. Mehanizmi za prepoznavanje lokalno pomembnih izzivov, s katerimi se soprijemajo posamezniki, družine in skupnosti, so vgrajeni v temeljno bazo znanja gospodinjstva. Za prepoznavanje izzivov in iskanje rešitev (kdo, kaj, kdaj, kje in kako) morajo izobraževalni programi gospodinjstva aktivno poučevati ali zagotavljati jasna navodila glede ideologije, ki predstavlja temelj disciplinarnega področja gospodinjstva. Zanemarjanje ideologije ima za posledico poučevanje nepovezanih tem predmetov ali razdrobljenih vsebin, kar lahko oslabi povezanost s temeljnimi cilji »širšega smisla« gospodinjstva. V tem prispevku je opisano, kako eksplicitno poučevanje in temeljna ideologija gospodinjstva pozitivno vplivata na dojemanje discipline med novimi strokovnjaki tega področja. Opazili smo lahko, da so študentje v učnih okoljih, v katerih je ideologija gospodinjstva izpostavljena in se nenehno krepi oziroma poudarja na vseh vsebinskih strokovnih področjih, usvojili besede in pojme, s katerimi lahko drugim razložijo pomen gospodinjstva. Strokovnjaki, ki so bili na tem področju novi, so postali samozavestnejši in bolj zavzeti zagovorniki gospodinjstva, saj so se s pomočjo eksplicitnega poučevanja naučili in spoznali pravo vrednost koncepta, kaj, kako in zakaj gospodinjstvo. Strokovnjaki, ki so opremljeni s temeljno ideologijo stroke in ki drugim približajo »širši smisel« gospodinjstva (tj. zakaj), so bolje opremljeni za uvajanje realnih, življenjskih zahtev/izzivov gospodinjstva, da se lahko vseskozi prilagajajo nenehno spreminjajočim se in kompleksnim družbenim potrebam.

Ključne besede: gospodinjstvo, eksplicitni pouk, ideologija, strokovna praksa

Introduction

Public perceptions of home economics are, stereotypically, that students learn cooking and sewing at school (Deagon, 2012), but home economics is more multifaceted than that simplistic idea. Formally trained home economists understand the complex and interwoven social, cultural, physical, mental, spiritual, and environmental health and wellbeing outcome ramifications that apply to learning beyond the action of learning how to cook and sew. The *what* and *how* of home economics may be 'cooking and sewing'; however, when teaching and learning in the field, the ideology of the professional must also explicitly include the *why* we are teaching and learning and pedagogy of *how* we teach it. This paper will advocate for home economics as a holistic subject that contributes to complex issues through practical life skill education. The context of this paper is within the training of home economics teachers in higher education.

Education Sector Context and Nomenclature

As professionals, home economists work in numerous fields, including teaching and academia, with industry, in service organisations and governments, as nutritionists, early childhood educators, in the textiles and fashion industries, hospitality and other health and community-related services (International Federation for Home Economics (IFHE), 2008). The work that home economists are best known for is within two education sectors: secondary schools (teaching) and higher education (academia). Contrary to a report from McCloat and Caraher (2020) that home economics undergraduate degrees are only available to Australians wishing to upskill into home economics via a graduate diploma in Victoria, the Queensland University, through which the author of the present paper is employed, offers several options. People from all over Australia can, and do, undertake a nationally accredited undergraduate Bachelor of Education degree specialising in home economics; tradespeople and post-graduates may gain a teaching qualification via multiple pathways, and registered teachers may undertake a Diploma to add Home Economics as a teaching specialisation. Additionally, Canada, Ireland, and Malta have recently introduced online Masters programmes, and PhD candidates who wish to study in the field of home economics can locate appropriately qualified home economics specialist supervisors in many universities around the world. Statistics regarding numbers and pathways of enrolments into these higher education programmes, nationally or internationally, were not available at the time of writing.

From the author's experience, undergraduates and qualified teachers training into the field of home economics are learning the same content and ideology together in the same classes. Therefore, there is a reluctance to name these students as pre-service teachers. In this paper, further reference to these combined cohorts of higher education students will be 'new-to-the-field professionals'.

Reasons for Learning Home Economics in the 21st Century

As previously suggested, cooking and sewing is a narrow view; however, to make the point explicit, I will use the cooking and sewing axiom of home economics to argue the next section of this paper. There are many practical and purposeful reasons to learn how to cook or sew. In addition, the attraction to teaching home economics is various. The contributions of home economics to the middle years of schooling (typically adolescents aged between 12 to 15 years) are multidimensional. The structure and content of home economics curricula around the world are derived from local and/or national curriculum priorities (Deagon, 2015a; McCloat & Caraher, 2020); however, they are influenced by comparatively similar ideologies.

At the international level, home economics has a clear and explicit focus 'to achieve optimal and sustainable health and wellbeing of individuals, families and communities' (IFHE, 2008). Home and family are the cornerstones of society. Everything that happens in a home and within a family radiates into the world. Home economists recognise complex transactions between home/family and 'the world' and provide individuals, families, and communities with mechanisms to make informed decisions that may improve their quality of life (Nickols & Kay, 2015). Home economics offers a 'kaleidoscope' of skills and knowledges (Nickols et al., 2009) that are complex and multifaceted, in which trained professionals recontextualise and reproduce interpreted content (Deagon, 2015a) for the location within which it is being taught and learnt.

Study within the home economics discipline takes holistic, systems, and/or ecological approaches to curricula in which topics can include the study of food and nutrition, textiles and fashion design, financial literacy, family relationships, childhood development, and community empowerment (Darling & Turkki, 2009; IFHE, 2008; McGregor, 2011; Nickols et al., 2010; Turkki, 2012). Each topic then has embedded aspects of technology use, ethics, environmental sustainability, design thinking, problem-solving, and service to the community (Dislere et al., 2020; Erjavšek et al., 2020; Gentzler, 2012; Ronto et al., 2017a). Home economics is a complexity-driven, authentic, and applied discipline that

connects 'real world' activities and actions with people's everyday lives, wherever they may live. When asked, most new-to-the-field professionals will relate that their reason for becoming a home economics teacher is their passion and desire (Sewell, 2008) to make a positive difference in the lives of children and their families and to teach important life skills.

Too many cooks, not enough teachers

'Teaching' people cooking has become ubiquitous. There are millions of 'how-to' videos on television, websites, and social media. A decade ago, Cunningham-Sabo and Simons (2012) recognised there was an issue with too many cooking shows and, despite this, too few people know how to cook. Cookery classes occur in a myriad of classrooms and kitchens around the world each day. Home economists do a portion of this work, but many of the cooking instructional videos are made by cooks, chefs, or self-confessed 'foodies'. The key difference between a cookery class conducted by a chef and a home economist is the teacher's underpinning *reason* for teaching cooking. A social media 'foodie' demonstrates a recipe. A home economist teaches a recipe and simultaneously includes explicit instruction of skills, nutrition information, hygiene, and safety. This means that a particular ideology directs a cooking teacher (personal or professionally informed), but not all skillsets are equal or adequate. The ideology informs *the why* or the purpose of teaching cooking to a target audience. Thinking critically, the instructor's skillset and pedagogical approach must be examined in relation to by what means (*how*) they are teaching cookery. Home economics education programmes combine ideology with skills, knowledge, and pedagogy: this is powerful and unique to the profession.

Correspondingly, a student seeking to learn cookery may either want a job in the hospitality industry or learn how to become independent when they leave home. These two reasons for wanting to learn how to cook are quite different. The content (knife skills, food safety, recipe interpretation, sensory evaluation) is the same; the *why* is different. Alternatively, a cooking teacher may want to inspire a new generation of chefs or, perhaps, influence healthy eating behaviours. Again, the content (knife skills, food safety, recipe interpretation, sensory evaluation) is the same; the *why* is different. This same process of teaching home economics-related content to people occurs across other content areas, such as financial literacy, textiles and fashion design, craft, early childhood, and so forth, where the difference in teaching hinges on the foundational *why* the subject is being taught or wanting to be learnt. For these reasons, the ideological and philosophical exchange between teacher and learner is an important transaction.

Higher education students of home economics need to acquire specific knowledge and skills to be considered proficient in certain knowledge areas and meet professional accreditation requirements. The role of the lecturer in explicit instruction is key. New-to-the-field professionals need to become acquainted with the core ideology of the profession to ensure that new-to-the-field professionals are empowered to enact the 'best practices' of the profession. Ideology focuses the who, what, when, where, and why of a disciplinary field. The ideology of the instructor and learner must complement pedagogy for a purposeful exchange of knowledge and skills to occur.

Explicit Instruction as a Teaching Tool

In this paper, *explicit instruction* means clearly stating, in detail, so as to leave no room for confusion or doubt, details about *how* a concept *should* be done. Explicit instruction is a teaching model that demonstrates to students what to do and how to do it. Historically, explicit instruction is employed with younger children (Kruit et al., 2018), with students learning to write and speak languages (Graham et al., 2013) or with students who live with learning disabilities (Hall-Mills & Marante, 2020). Interestingly, van de Kamp et al. (2015) conducted a small scale study with 147 secondary school students in visual arts education and found that explicit instruction was very useful to reinforce metacognitive divergent higher-order thinking skills and knowledge, while direct instruction impeded originality and creativity. Similarly, Ashman et al. (2020) reported that explicit instruction was useful for predicating problem-solving activities. Despite the typical uses for employing explicit instruction, the concept of explicitly demonstrating to students a particular concept is effective with any age group of learners. Explicit instruction can set the prerequisite declarative knowledge required to move toward procedural knowledge, creative, entrepreneurial, and original thinking and action.

In its simplest form, a teacher may use explicit instruction in an I Do – We Do – You Do structure to scaffold a learning activity. First, the teacher models the activity. Second, a structured learning activity is completed as a group learning activity. Third, individual students enact the activity without initial support and then receive peer and teacher feedback. A recent monograph by Dislere et al. (2020), Home Economics colleagues from Latvia, used didactic teaching tools and methods in a similar way to explicit instruction to make connections between Information Communication Technologies (ICTs) and quality of life. In their study, concrete concepts of home economics were the vehicle through which natural, economic, social, and political environments were linked with

wellbeing, happiness, and life satisfaction. The key factor for educators is to make explicit connections for students between concrete concepts (the *what* and *how* skills and knowledge) and ideology (the *why* we are learning this concept).

Suggestions for Explicit Instruction in Home Economics

This paper considers explicit instruction to be an empowering and transformative education tool and follows Pendergasts' Home Economics Literacy Model (HELM) (Pendergast & Deagon, 2021). HELM is useful for informing the parameters of transformative action and best practices in home economics. Table 1 gives examples of explicit instruction used by a home economics lecturer with new-to-the-field professionals and demonstrates the author's practical application of explicit instruction with her students. The suggestions offer desirable progression and outcomes for students to become independent, passionate and confident home economists. The author was similarly inspired by her contemporaries.

Table 1

Examples of explicit instruction used by a home economics lecturer with new-to-the-field professionals

I Do (Lecturer)	We Do (Lecturer and Students)	You Do (Students)
Role model active participation in local, national and international Home Economics association activities.	Facilitated practical residential schools that incorporate peer learning of ideology, skills and knowledge.	Implement learnt home economics ideology, pedagogy, assessment and strategies in classrooms.
Deliver professional development workshops external to unit content.	Learning materials and assessment explicitly use home economics ideology to scaffold learning activities.	Convey public expressions of home economics in action through their own developed pedagogical and ideological lens.
Participate in scholarship activities and advocacy beyond the profession.	Encourage student participation in association activities and events.	Participate independently in home economics associations and committees.
Remain active on social media and share positive home economics stories.	Facilitate student use of social media in ethical ways to advocate for home economics.	Advocate for home economics education in public and political arenas (schools, social media, awards, media, school newsletters, conference presentations).
Display visceral and authentic enthusiasm and passion for the discipline.	Showcase student work beyond the field at events and in the media.	Enrol in Research Higher Degree Programmes and study home economics explicit and specific projects.
Use positive language to champion home economics with new to field professionals, existing professionals and people external to the field.		

Explicit and frequent discussion with new-to-the-field professionals about the ideology of home economics reinforces connections between skills and knowledge learnt and broader health and wellbeing themes. To support lecturer actions, the provision of home economics literature has recently become more available, as gaps in research specific to home economics are being filled. Through concentrated efforts from home economics academics in numerous countries, research is becoming more available in university library databases and open access journals. Of note is the International Journal of Home Economics (IJHE), which is accessible through the IFHE website and Informit database. A simple university library database search engine was used to search the key term 'home economics', which revealed an increase in the publication of peer-reviewed journal articles for the decades 1990–2000 (364), 2001–2010 (657), and 2011–2020 (1,341). There is a long way to go to realising a saturation of literature in the field. Regardless, where new literature becomes available, it should be incorporated into curriculum and learning activities.

Home economics contributions to purpose and passion

Home economists can adjust their skills and knowledge to the requirements of their context by undertaking further study or upskilling professional development. Home economists are sometimes described as 'passionate' people (Nickols, 2001; Sewell, 2008). Formally trained home economists, because of their passion, generally, make a sustained commitment to the core ideology of home economics (Benn, 2010; Brown, 1993; Deagon, 2015b; Deagon & Pendergast, 2014; Dewhurst & Pendergast, 2011; Gentzler, 2012; Henry, 1995; Nickols-Richardson, 2001; Pendergast, 2013; Smith & de Zwart, 2010; Turkki, 2012; Wahlen et al., 2009). Mechanisms for identifying locally relevant challenges faced by individuals, families, and communities are an embedded aspect of the home economics knowledge base. To identify these challenges (who, what, when, where, how and why), home economics education programmes must actively teach (or provide explicit instruction) about the ideology that underpins the Home Economics profession.

Home economics education contributes to students learning about their home environments and contributing to preparations for future career paths. Pertinent examples of individuals locating their passions through home economics education are reported in newspapers and research articles (Deagon, 2012; Gagne-Collard, 2002; Nickols, 2001; Sewell, 2008). To illustrate, a home economics class was identified as the catalyst for a teenager training to be a swimming athlete to initially become interested in learning how to cook for

himself so he could ensure his energy and nutrition needs were suitable for his level of sporting activity. Once retired from his elite athlete status, he launched a restaurant (Deagon, 2012). Food and cooking became this individual's passion, and that passion was first realised in secondary school with the help of his home economics teacher.

The impact of a home economics teacher's passion can make a significant difference to a student's perceptions of home economics. To illustrate, persistent and consistent teaching that explicitly instructs the connections between content and ideology, one new-to-the-field professional commented in a recent media release:

> Home Economics plays a really important role in special education, and teaching inclusivity to the next generation – because it's all about understanding people's needs, and addressing those needs. Home Economics, psychology and special education all just fit so perfectly together, and in the classroom they mean that teachers can impart vital life knowledge and skills in a fun way, and also a really practical way, which is the basis of inclusion for any gender or learning ability, and for every age and every culture. [My home economics lecturer] gave me the confidence to express what I had previously had trouble expressing… I'm usually a really quiet person, and [my lecturer] gave me my teacher voice ('Brisbane chef using home economics education to serve up unique path to inclusion', 2021).

Mechanisms for identifying locally relevant challenges faced by individuals, families, and communities are an embedded aspect of the home economics knowledge base. However, this selection of content and learning materials is usually driven by the individual lecturer of a course. A lecturer's exposure to the most recent best practices will determine how much ideology new-to-the-field professionals are exposed to. Decisions are made each term to update, include or omit certain knowledge from a course of study. As a curriculum development activity, unit course renewal will also mean adjustments to research and literature in the field. As a real-time problem occurs, home economics content and ideology adapt to societal needs. Pendergast and Deagon (2021) presented 14 peer-reviewed papers that are examples of how quickly home economics education and home economists responded to the global pandemic. For example, basic sewing skills are central skills and knowledge – learning a new pattern is a natural action. To this end, at the start of the pandemic, home economics-related social media was quickly saturated with photographs of students and home economists making masks for their families, neighbours and neighbourhoods.

In effect, a problem was identified (urgent supply of face masks), and home economists quickly acted (made masks), which contributed to a locally relevant solution.

Respect the term 'home economics' and acknowledge the ideology

To identify the challenges of who, what, when, when, where and how, home economics education programmes must actively teach or provide explicit instruction about the ideology that underpins the Home Economics disciplinary field. As previously outlined, explicit instruction is a teaching model that demonstrates to students and new-to-the-field professionals what to do and how to do it. Ideology focuses the why, when, where and who of a discipline. Previous research revealed that without ideology or philosophy to underpin a disciplinary field, content is just content with no direction or purpose (Deagon, 2015a). Arguments for removing or changing the term 'home economics' are problematic in this regard (Stage, 2018). If the term is removed, in effect, the known and recognised ideology is also removed.

To illustrate the impact of removing the term 'home economics' from curricula, in Australia in 2019, the senior secondary schooling home economics syllabus was phased out and replaced with syllabi that separated discipline content knowledge. Senior secondary school students (typically aged between 15 and 18 years) can no longer study 'home economics' in its intended holistic form, which included an overarching rationale to 'achieve optimal and sustainable health and wellbeing for individuals, families and communities' (IFHE, 2008); rather, students now elect to study 'fashion design' or 'food and nutrition' in the senior phase of learning. The flow-on effect of discontinuing the Senior Syllabus is that study of home economics ideology was also removed from the Senior Curriculum and therefore not prioritised by some universities that now offer 'food and nutrition' or 'food technology' as separate teaching specialisations. This separation of the content may have destructive effects on the profession in the longer term.

As Christensen (2019) highlights, the home economics profession is not without internal and external struggles, and it is unrealistic to 'glorify' the home economics profession and not leave the significant challenges we face unacknowledged. Indeed, almost all disciplines joust for position in the curriculum (Luke et al., 2008). In Australia, mathematics and English are the two compulsory subjects that all students must take in some form where national testing data is collected. Every other subject beneath that hierarchy is in contestation in

which varied importance is placed on each subject offered for study. The position of curriculum importance is often driven according to academic, societal, and industry needs of the time (Deagon, 2015a).

It seems that only when a discipline is acknowledged from *outside* of that discipline does it get noticed. Since the renowned (in home economics circles, at least) 'Bring Back Home Economics' article (Lichtenstein & Ludwig, 2010), there has been a rise in public discourse that supports an elevated position of the subject in school curricula (Pendergast & Deagon, 2021; Pendergast et al., 2013; Smith, 2016). In addition, there is an emerging trend of peer-reviewed studies that support home economics as relevant and useful in modern society (Cunningham-Sabo & Simons, 2012) but mostly in relation to food literacy (Ronto et al., 2017b; Worsley et al., 2016). The profession is working toward contributions of evidence-based home economics research to support the field and practices. The profession requires funding support and acknowledgement to achieve this goal.

In summary, this section of the paper has highlighted the danger of neglecting ideology results in teaching unrelated subjects or compartmentalised content that have no connection to the core aims or the home economics 'big picture'. Respecting and understanding the term 'home economics' acknowledges the importance of the discipline's underpinning ideology and core aims and the profession's contribution to society.

Visible and reinforced home economics ideology: the author's experience

This paper has argued that equipped with the core ideology of the discipline, professionals that make visible to others the Home Economics 'big picture', or the why, are better equipped to enact real-world applications of home economics that can adapt continuously to meet ever-changing societal needs. To respond to this statement, this final section relates a more personal narrative about how I believe we need to make home economics ideology 'visible' and reinforced continuously across all content specialisation areas. This section draws from my experience and observations that by making home economics ideology 'visible' to my students, they acquired the words and concepts to explain to others the importance of the subject.

I identify as a home economist. The discontinuation of the Australian Home Economics senior syllabus was disappointing. Since entering academia in 2014, I have maintained my commitment to teaching new-to-the-field professionals about the history, ideology and philosophy of the home economics

discipline. As stated above, home economics ideology has a clear and explicit focus of study – to achieve optimal and sustainable health and wellbeing of individuals, families and communities – and is embedded in the core discipline units that I am responsible for: food and textile technology; individuals, families and communities health and wellbeing; fashion design, and culinary science for teachers.

The university in which these events are occurring is the only university in that state that still explicitly names 'home economics' as a teaching specialisation. Through informal conversations, I have ascertained that new-to-the-field professionals were drawn to seek home economics as a teaching discipline either because they remembered it from their schooling and loved it or have experienced one of the many secondary schools in Australia with vibrant home economics departments. Australian home economics associations actively promote the subject on social media, through industry participation, professional development activities, and conferences. Therefore, the term 'home economics' is present and known, the content is present, but in the school curriculum, the discipline with its overarching ideology needs acknowledgement, funding, and revitalisation.

Despite changes to the curriculum, this paper has demonstrated that explicit instruction and embedded home economics ideology in a teacher education programme has had a positive impact on perceptions of the discipline across five years of cohorts of new-to-the-field professionals. As my peers did for me, my passion, knowledge, and expertise in the area have empowered the students to become stronger advocates for home economics. I make sure that my students are exposed to the latest literature in our field and hold frequent discussions about bigger concepts in the field. I ensure students are participating in learning activities that are authentic and genuine learning experiences and advocate for their active participation in the profession.

On a final note, I add my voice for people in positions of power to reorient the importance of home economics because the individuals, families, and communities of the world need to know vital life skills through the ideological, proactive and ever-changing home economics lens.

Conclusion

Home economics is forever changing and forever relevant (Gentzler, 2012). The global Covid-19 pandemic has highlighted the prevalence of relevant home economics skills, such as home cooking, face mask making, information and financial literacy, and strengthening family and community relationships (Pendergast & Deagon, 2021). The core focus of home economics has not

changed since its inception: optimal and sustainable living to support the health and wellbeing of individuals, families, and communities. When a higher education programme makes explicit the ideology of home economics, students become more confident in advocating for their discipline. Instilling in the new generation of home economics teachers the importance and relevance of their subject radiates into their communities where authorities who make decisions about budgets and contact teaching time also see the value in the discipline. We can position home economics to a higher priority through our words and actions (Deagon, 2012). Without the ideology to underpin all that we do and say, it is an unstable position from which to justify our contributions to education and society. Equipped with the explicit core ideology of the discipline, trained professionals make the home economics 'big picture' visible and, with more confidence, can enact real-world applications that adapt continuously to meet societal needs.

References

Ashman, G., Kalyuga, S., & Sweller, J. (2020). Problem-solving or Explicit Instruction: Which should go first when element interactivity is high? *Educational psychology review*, *32*(1), 229–247. https://doi.org/10.1007/s10648-019-09500-5

Benn, J. (2010). Home economics in development through action research. *International Journal of Home Economics*, *3*(1), 2–19.

Brisbane chef using home economics education to serve up unique path to inclusion. (2021). *CQUNINEWS*. https://www.cqu.edu.au/cquninews/stories/general-category/2021-general/brisbane-chef-using-home-economics-education-to-serve-up-unique-path-to-inclusion

Brown, M. M. (1993). *Philosophical studies of home economics in the United States: Basic ideas by which home economists understand themselves* (Volume 3). Michigan State University.

Christensen, J. H. (2019). Blind spots of the self-glorification in home economics. *International Journal of Home Economics*, *12*(2), 76–80. https://doi.org/https://search.informit.org/doi/10.3316/informit.871935594378394

Cunningham-Sabo, L., & Simons, A. (2012). Home economics: An old-fashioned answer to a modern-day dilemma? *Nutrition Today (Annapolis)*, *47*(3), 128–132. https://doi.org/10.1097/NT.0b013e3182574a5

Darling, C. A., & Turkki, K. (2009). Global family concerns and the role of family life education: An ecosystemic analysis. *Family Relations*, *58*(1), 14–27. http://search.proquest.com.libraryproxy.griffith.edu.au/docview/213932701?accountid=14543

Deagon, J. R. (2012). Deaths, disasters and tasty treats: challenging public perceptions of home economics. In D. Pendergast, S. McGregor, & K. Turkki (Eds.), *The next 100 years – creating home economics futures* (pp. 75–87). Australia Academic Press.

Deagon, J. R. (2015a). Spiritual knowledges in Queensland curriculum documents: A framework for analysis. *Curriculum Perspectives*, *35*(2), 16–29.

Deagon, J. R. (2015b). "Through the eyes of a satin bowerbird": A bricolage metaphor as an organising principle for a self-reflective process to explore spirituality in home economics contexts. *Victorian Journal of Home Economics*, *54*(1), 7–21.

Deagon, J. R., & Pendergast, D. (2014). Home economists' views and perceptions of spiritual health and wellbeing: A collective affirmation statement. *Journal of the HEIA*, *21*(2), 2–12.

Dewhurst, Y., & Pendergast, D. (2011). Teacher perceptions of the contribution of home economics to sustainable development education: a cross-cultural view. *International Journal of Consumer Studies*, *35*(5), 569–577. https://doi.org/10.1111/j.1470-6431.2011.01029.x

Dislere, V., Pridane, A., Vronska, N., & Lice-Zikmane, I. (2020). Development of home economics and technologies education in life quality in Latvia Latvia University of Life Sciences and Technologies, Faculty of Engineering, Institute of Education and Home Economics.

Erjavšek, M., Lovšin Kozina, F., & Kostanjevec, S. (2020). In-service home economics teachers' attitudes to the integration of sustainable topics in the home economics subject. *CEPS journal*, *11*(1), 27–47. https://doi.org/10.26529/cepsj.614

Gagne-Collard, A. (2002). Celine Mathieu: A career based on reason and passion (Focus on people and programs / Regard sur les gens et les programmes). *Canadian Home Economics Journal*, *52*(1), 41.

Gentzler, Y. S. (2012). Home economics: Ever timely and forever complex. *Phi Kappa Phi Forum*, *92*(2), 4–7. http://search.proquest.com.libraryproxy.griffith.edu.au/docview/1020414791?accountid=14543

Graham, S., Graham, S., Gillespie, A., Gillespie, A., McKeown, D., & McKeown, D. (2013). Writing: importance, development, and instruction. *Reading & Writing*, *26*(1), 1–15. https://doi.org/10.1007/s11145-012-9395-2

Hall-Mills, S. S., & Marante, L. M. (2020). Explicit text structure instruction supports expository text comprehension for adolescents with learning disabilities: A systematic review. *Learning Disability Quarterly*, 73194872090649. https://doi.org/10.1177/0731948720906490

Henry, M. (1995). *Well-being, the focus of home economics: An Australian perspective* [Doctoral dissertation]. University of New England.

IFHE (International Federation for Home Economics). (2008). Home Economics in the 21st century: position statement. http://www.ifhe.org/

Kruit, P. M., Oostdam, R. J., van den Berg, E., & Schuitema, J. A. (2018). Effects of explicit instruction on the acquisition of students' science inquiry skills in grades 5 and 6 of primary education. *International Journal of Science Education*, *40*(4), 421–441. https://doi.org/10.1080/09500693.2018.1428777

Lichtenstein, A. H., & Ludwig, D. S. (2010). Bring back home economics education. *JAMA*, *303*(18), 1857–1858. https://doi.org/10.1001/jama.2010.592

Luke, A., Weir, K., & Woods, A. (2008). Development of a set of principles to guide a P-12 syllabus

framework. http://www.qsa.qld.edu.au

McCloat, A., & Caraher, M. (2020). An international review of second-level food education curriculum policy. *Cambridge Journal of Education*, *50*(3), 303–324. https://doi.org/10.1080/0305764X.2019.1694641

McGregor, S. L. T. (2011). Home economics as an integrated, holistic system: Revisiting Bubolz and Sontag's 1988 human ecology approach. *International Journal of Consumer Studies*, *35*(1), 26–34. https://doi.org/10.1111/j.1470-6431.2010.00920.x

Nickols-Richardson, S. M. (2001). Our collective soul. *Journal of Family and Consumer Sciences*, *93*(3), 32–32. http://search.proquest.com.libraryproxy.griffith.edu.au/docview/218161910?accountid=14543

Nickols, S. Y. (2001). Keeping the Betty lamp burning. *Journal of Family and Consumer Sciences*, *93*(3), 35–44. http://search.proquest.com.libraryproxy.griffith.edu.au/docview/218169914?accountid=14543

Nickols, S. Y., & Kay, G. (2015). *Remaking home economics: Resourcefulness and Innovation in changing times*. University of Georgia Press.

Nickols, S. Y., Ralson, P. A., Anderson, C., Browne, L., Schroeder, G., Thomas, S., & Wild, P. (2009). The family and consumer sciences body of knowledge and the cultural kaleidoscope: Research opportunities and challenges. *Family and Consumer Sciences Research Journal*, *37*(3), 266–283. https://doi.org/10.1177/1077727X08329561

Nickols, S. Y., Turkki, K., Pichler, G., Kirjavainen, L., Atiles, J. H., & Firebaugh, F. M. (2010). A Global perspective for FCS: Sustaining families, natural environments social capital. *Journal of Family and Consumer Sciences*, *102*(4), 10–16.

Pendergast, D. (2013). An appetite for home economics literacy: Convergence, megatrends and big ideas. *Journal of Asian Regional Association for Home Economics*, *20*(2), 57–65.

Pendergast, D., & Deagon, J. (2021). Home economics, the COVID-19 global pandemic and beyond. *International Journal of Home Economics*, *14*(1), 2–15.

Pendergast, D., Garvis, S., & Kanasa, H. (2013). The value of home economics to address the obesity challenge: An evaluation of comments in an online forum. *International Journal of Home Economics*, *6*(2), 272–285.

Ronto, R., Ball, L., Pendergast, D., & Harris, N. (2017a). Environmental factors of food literacy in Australian high schools: views of home economics teachers. *International Journal of Consumer Studies*, *41*(1), 19–27. https://doi.org/10.1111/ijcs.12309

Ronto, R., Ball, L., Pendergast, D., & Harris, N. (2017b). What is the status of food literacy in Australian high schools? Perceptions of home economics teachers. *Appetite*, *108*, 326–334. https://doi.org/10.1016/j.appet.2016.10.024

Sewell, D. T. (2008). Passion: A narrative journey to family and consumer sciences education (Order No. 3307064). Available from ProQuest One Academic. (230700160). https://ezproxy.cqu.edu.au/login?url=https://www.proquest.com/dissertations-theses/passion-narrative-journey-family-consumer/docview/230700160/se-2?accountid=10016

Smith, G., & de Zwart, M. (2010). *Home Economics: A contextual study of the subject and home economics teacher education*. http://www.thesa.ca/wordpress/wp-content/uploads/2016/01/inquiry_contextual.pdf

Smith, M. G. (2016). "Bring back home economics"? challenging contested discourses on obesity. *Journal of Family and Consumer Sciences*, *108*(4), 7–12. https://doi.org/10.14307/JFCS108.4.7

Stage, S. (2018). Rethinking home economics: Women and the history of a profession. In S. Sarah & B. V. Virginia (Eds.), *Introduction home economics, what's in a name?* (pp. 1–14). Cornell University Press. https://doi.org/doi:10.7591/9781501729942-003

Turkki, K. (2012). Home economics - a forum for global learning and responsible living. In D. Pendergast, S. McGregor, & K. Turkki (Eds.), *The next 100 years – creating home economics futures* (pp. 38–51). Australia Academic Press.

van de Kamp, M. T., Admiraal, W., van e, J., & Rijlaarsdam, G. (2015). Enhancing divergent thinking in visual arts education: Effects of explicit instruction of meta-cognition. *British Journal of Educational Psychology*, *85*(1), 47–58. https://doi.org/10.1111/bjep.12061

Wahlen, S., Posti-Ahokas, H., & Collins, E. (2009). Linking the loop: Voicing dimensions of home economics. *International Journal of Home Economics*, *2*(2), 32–47. http://search.informit.com.au/documentSummary;dn=721941138737452;res=IELHSS

Worsley, A., Wang, W. C., Yeatman, H., Byrne, S., & Wijayaratne, P. (2016). Does school health and home economics education influence adults' food knowledge? *Health Promotion International*, *31*(4), 925–935. https://doi.org/10.1093/heapro/dav078

Biographical note

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The Sustainability of Pre-Service Teachers' Consumer Behaviour for the December Holidays

Gregor Torkar[1]

The consumer behaviour of Slovenian pre-service teachers for the December holidays and their personal views about sustainable consumption were studied. A total of 130 students of the University of Ljubljana's Faculty of Education took part in the study. The sample consisted of 11 male and 116 female students, while 3 students did not report their gender. The survey was conducted in January 2020. The results show that 95.4% of the respondents received gifts during their childhood on Saint Nicholas Day, 60.0% at Christmas and 23.1% when celebrating the New Year. Almost 13% of the respondents received gifts three times in December during their childhood. In December 2019, 54.6% of them gave gifts for Saint Nicholas Day, 65.2% at Christmas and 10.8% for the New Year. Christmas has therefore become the most common gift-giving time in December. Students most often give their loved ones sweets, clothes and shoes, and cosmetics. The majority of the respondents spend less than 50% of their monthly income on gifts for the December holidays. In terms of sustainability, the respondents described their consumer behaviour as follows: (1) giving or receiving things they really need, (2) giving or receiving gifts and wrappings made of recyclable material, (3) giving or receiving nonmaterial gifts, (4) reducing the number of gifts, (5) giving for charity, or (6) not giving gifts at all.

Keywords: consumer behaviour, university students, gifts, education, sustainability

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Potrošniška vedenja bodočih učiteljev v obdobju decembrskih praznikov z vidikov trajnosti

Gregor Torkar

Preučevali smo potrošniško vedenje bodočih slovenskih učiteljev v obdobju decembrskih praznikov in njihove poglede na trajnostno potrošnjo. V raziskavi je sodelovalo 130 študentov Pedagoške fakultete Univerze v Ljubljani. Vzorec je sestavljalo 11 študentov in 116 študentk, trije študentje pa niso navedli spola. Anketa je bila izvedena januarja 2020. Izsledki raziskave kažejo, da je kar 95,4 % anketirancev prejelo darila v otroštvu na dan svetega Miklavža, 60,0 % ob božiču in 23,1 % ob praznovanju novega leta. Skoraj 13 % vprašanih je decembra v otroštvu prejelo darila trikrat. V decembru 2019 jih je 54,6 % obdarilo za svetega Miklavža, 65,2 % za božič in 10,8 % za novo leto. Božič je torej postal najpogostejši čas obdarovanja v decembru. Študentje najpogosteje podarijo svojim najdražjim sladkarije, oblačila in obutev ter kozmetiko. Večina vprašanih za darila za decembrske praznike nameni manj kot 50 % svojih mesečnih prihodkov. Z vidikov trajnosti so anketiranci svoja obdarovanja ocenili kot: 1) dajanje stvari, ki jih resnično potrebujejo; 2) dajanje daril in darilnih ovojev iz recikliranega materiala; 3) dajanje nematerialnih daril; 4) zmanjšanje števila daril; 5) dajanje v dobrodelne namene; 6) brez obdarovanja.

Ključne besede: vedenje potrošnikov, študentje, darila, vzgoja in izobraževanje, trajnost

Introduction

There is growing recognition of the importance of consumption within debates on sustainable development. Concern about the consumption and overconsumption of natural resources (natural capital) is one of the most important global challenges and is also defined in Sustainable Development Goal 12, which envisages the achievement of sustainable consumption and production patterns (United Nations, 2015). Promoting education for sustainable consumption is part of education for sustainable development (ESD), which is to be integrated into education programmes is a pertinent strategy (Erjavšek et al., 2021; Thoresen, 2010).

The terminology of sustainable consumption can be traced back to Chapter 4 of Agenda 21, which is the main policy document of the United Nations Conference on Environment and Development held in Rio de Janeiro in 1992. It was later also highlighted at the World Summit on Sustainable Development held in Johannesburg in 2002, when the concept of 'sustainable consumption' became one of the overarching objectives for sustainable development (Jackson, 2014). Definitions of sustainable consumption concentrate on more efficient production of more sustainable products, consumption of more sustainable products, or simply on consuming less (Jackson, 2014; Schrader & Thøgersen, 2011; Quoquab & Mohammad, 2020). The vitally important factors of sustainable consumption are consumer behaviour, lifestyle and the culture of consumption, which determine the overall scale of resource consumption (Jackson, 2014).

For several decades, researchers in many scientific fields have been interested in consumer behaviour and its drivers. Consumer behaviour for the December holidays is particularly interesting and worthy of study because it represents religious and cultural rituals that contribute to consumption (e.g., Agarwala et al., 2019; Kimura & Belk, 2005; Sandikci & Omeraki, 2007) and affect our common endeavours to achieve sustainable consumption and production (Orellano et al., 2020).

In the present paper, we consider consumer behaviour for the December holidays in the case of Slovenian pre-service teachers attending the Faculty of Education of the University of Ljubljana. Lovšin Kozina and Ponikvar (2015) surveyed the monthly incomes of first-year students at the Faculty of Economics and the Faculty of Education at the University of Ljubljana. Since all of the surveyed students had their own monthly income, this allows us to investigate their consumer behaviour. The paper is organised as follows. In the first section, the relevant literature on consumer behaviour is reviewed, followed

by an overview of the holiday landscape and consumer education in Slovenia. The second section outlines the research questions. Methodological issues and information about the sample are described in the third section. The fourth section presents the results of the survey with a presentation of quantitative and qualitative data. The last section contains the discussion with conclusions and educational implications.

Consumer behaviour, culture and religion

Research shows that religious and cultural rituals can contribute to sustainable or unsustainable consumption (Agarwala et al., 2019). Religion can influence consumers and society directly, e.g., fasting and clothing, as well as indirectly, e.g., influences on the values in society (Agarwala et al., 2019). The religious affiliation and religiosity of a person impact different aspects of consumer behaviour, such as materialism, acceptance of new brands, status-seeking, product pricing, etc. (e.g., Delener, 1990; Hirschman, 1981; Essoo & Dibb, 2004; Islam & Chandrasekaran, 2020; Sood & Nasu, 1995; White et al., 2018). For an overview of religiosity and consumer behaviour, see Agarwala et al. (2019).

Marshall (2014) argues that in the past few decades Christmas has become a consumer holiday highly influenced by the mass media and advertising, which are both major influences on the increase of consumerism. It is now believed that it is the norm to spend a lot of money on family and friends at this time of year. In their study of Christmas celebrations in Japan, Kimura and Belk (2005) argue that Christmas, which is traditional in Western societies, is supported by cultural ideologies that can either substitute traditional local holidays or, as Sandikci and Omeraki (2007) argue, revive and modify existing local rituals. They also argue that commercial logic and consumerist ideology, as represented by Christmas, hybridise Western and non-Western traditions and practices, creating new expressions of existing rituals. Trommsdorff (2012) points out that the relation between culture and religiosity is symbiotic. Therefore, it is essential to take into account intra-cultural and cross-cultural differences while analysing universal religious processes (Agarwala et al., 2019) and their impact on consumer behaviour.

Transformations of holidays in the recent history of Slovenia

Holidays are a tool to draw attention to certain collective themes, ideals and values of the past, present and future (Jezernik, 2013). Over the course of the last century, and especially after the Second World War, the holiday landscape in Slovenia underwent radical changes due to political upheavals and the

restructuring of society and the economy (Slavec Gradišnik, 2015). Church and state were formally separated and former religious holidays became working days. The Committees of the Communist Party introduced new holidays and celebrations (Slavec Gradišnik, 2013); for example, Christmas trees were renamed "New Year's trees", on New Year's Day gifts were brought by Father Frost, who was imported from the Soviet Union and replaced Saint Nicholas (Slavec Gradišnik, 2015). Until 1991, Slovenia was part of socialist Yugoslavia. Later, it became an independent country and part of the European Union. In the post-socialist decades, there was a mix of new state holidays, reintroduced religious holidays, revived folk or traditional holidays, "imported" holidays, and traces of socialist holidays (Slavec Gradišnik, 2013, 2015). These intersections of holiday landscapes and identities in Slovenia are still present in different families, generations, regions, etc. (Slavec Gradišnik, 2013, 2015) and therefore represent an interesting framework in which to study consumer behaviour.

The school system and consumer education in Slovenia

In Slovenia, children can be enrolled in preschool education as early as at the age of 11 months and attend it until they start compulsory school. Nine-year compulsory school is divided into three three-year cycles (for students six to fourteen years old). The first six years can be recognised as the primary (ISCED 1) level, while grades 7–9 are internationally recognised as the lower secondary school (ISCED 2). Upon completion of compulsory basic education, students – typically aged 15 – may choose to continue their education at the upper secondary level at a school and a programme of their own choice (ISCED 3) (taking from two to five years to complete). Upper secondary education programmes are either general or vocational. The upper secondary educational qualification is awarded only after passing the final examination (matura, leaving examination), which also grants the right to enrol in higher levels of education.

Šmid Božičevič and Kostanjevec (2006) note that there is very little systematic consumer education of children and adolescents in the Slovenian school system. Children form their needs, desires and habits mainly under the influence of peers and role models, which is exploited by advertising. Parents are in an unenviable position because children cannot resist certain desires or are not reasonable. This is one of the reasons why consumer education is necessary for children and adults. Sedmak and Erčulj (2009) state that topics related to consumer education are most comprehensively and concretely covered in the subject Home Economics in the fifth and sixth grades. In the subjects of civic education and ethics, there are slightly fewer consumer topics, but they

are still comprehensively covered. Moreover, in subjects like biology, geography, history, etc. there are some learning objectives related to consumer behaviour or consumption (Sedmak & Erčulj, 2009). In upper secondary education programmes, the situation regarding consumer education is worse. In general, formal consumer education (as in Home Economics) does not appear in secondary education programmes (Šmid Božičevič & Kostanjevec, 2006); only some learning objectives related to consumer behaviour or consumption are addressed in subjects such as psychology, geography, sociology, etc. This is somewhat surprising, as upper secondary school students are quite active consumers; they are also already entering the labour market and consequently have their own money at their disposal (Sedmak & Erčulj, 2009).

Consumer behaviour is closely related to consumer financial behaviour and financial literacy. The OECD (2005, p. 26) defines financial education as "the process by which financial consumers/investors improve their understanding of financial products and concepts and, through information, instruction and/or objective advice, develop the skills and confidence to become more aware of financial risks and opportunities, to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well-being". Lovšin Kozina and Ponikvar (2015) found that first-year university students in Slovenia have low financial literacy and are vulnerable when they have to make financial decisions. The authors recommend that they are given the opportunity to choose subjects in which they receive basic knowledge in order to be prudent consumers.

Aim and research questions

The aim of the present study was to explore pre-service teachers' consumer behaviour in the context of the December holidays in Slovenia, as well as to explore their views on sustainability issues in the context of December gifting by concentrating on themes derived from qualitative data. The research questions are as follows:

1. What are pre-service teachers' childhood experiences with receiving gifts on the December holidays?
2. What are their current practices of consumer behaviour for the December holidays?
3. How much of their monthly income is spent on gifts for the December holidays?
4. How do pre-service teachers perceive the sustainability of their consumer behaviour for the December holidays?

Method

Quantitative and qualitative research approaches were integrated on the level of research questions, methods and data analysis.

Questionnaire and procedure

Students completed an online questionnaire designed for this study. Prior to use, the questionnaire was reviewed by two experts on the topic to verify its validity. In a pilot test, eight students completed the questionnaire and filled out a short report about their understanding of the questions and the operation of the online questionnaire. No major difficulties were reported, so no changes to the wording were made, just some minor formatting changes.

The questionnaire was then sent to the students by email with an introductory letter and a link to the questionnaire. After fourteen days, the students were reminded again to complete the questionnaire. The questionnaire was completed between 7 January and 2 February 2020. In addition to questions about consumer behaviour for the December holidays, the survey gathered data on the respondents' age, year of study and religious affiliation. The participants answered closed and open-ended questions about their experiences in giving and receiving gifts for Saint Nicholas Day, Christmas (Santa Claus or Christkind) and the New Year (Father Frost). They reported the types of gifts they give and the proportion of their monthly income (ranks: 0–5, 6–10, 11–20, 21–30, 31–40, etc.) spent on gifting. There was also an open question asking respondents to explain whether and how sustainability issues affect their December gift giving. Finally, they were asked to share an interesting experience or a story related to gifting in December.

Respondents

Based on a knowledge of the population and the purpose of the study, a purposive sampling technique was used. In purposive sampling, researchers select the cases to be included based on their assessment of the typicality or presence of the characteristics they are looking for, thus creating a sample that meets their specific requirements. This kind of sampling can be used to access those who have in-depth knowledge on specific topics (Cohen et al., 2017). The questionnaire was sent to pre-service preschool, primary school and two-subject teachers of the University of Ljubljana's Faculty of Education. None of the respondents had taken consumer education courses at the tertiary level of

education prior to the study. Education staff at preschool and school level have to hold relevant educational qualifications (ISCED 6 for preschool teachers, ISCED 7 for primary school and other teachers) and must pass the state professional examination for education staff (Eurydice, 2019).

A total of 300 students were reached by email, and 130 students took part in the study (43.3% of all of the invited students). The respondents were in their first or second year of undergraduate studies. The sample comprised 11 male and 116 female students, while 3 students did not report their gender. The gender proportions in the sample are normal for Slovenian schools.

The vast majority of the respondents described themselves as Catholic (73.2%), while 20.5% were atheists or nonreligious (henceforth described as atheists), 4.7% refused to answer the question regarding their religious affiliation, and 1.6% were members of other faiths (Jews). More than half of the Slovenian population actively practises religion, mostly Roman Catholicism (57.8%), Islam (2.4%), Eastern Orthodoxy (2.3%) and Lutheranism (0.8%). Some (2.3%) are believers who adhere to no religion. The information is unknown for 7.3% of the population, while 25.9% of the population are non-religious or refused to answer (Črnič et al., 2013). According to the results of the latest study (Naterer et al., 2019), in the age group between 16 and 27 years old, 52% declared themselves as Catholics, 10% as members of other religious groups, and 38% as non-believers. Among the latter group, 44% declared that they had never participated in organised religious activities.

Data analysis

The Statistical Package for the Social Sciences (IBM SPSS Statistics, Version 22) was used for quantitative data analysis. According to the research questions, descriptive procedures (absolute and relative frequency) were applied.

The qualitative data were analysed using structured content analysis. Deductive and inductive methods were combined to develop the coding scheme. Deductive categories were derived directly from the research questions. Inductive categories were added during the coding process using in vivo coding to account for unexpected effects. Two independent coders coded the open-ended questions and then compared the assigned categories. Deviant and ambiguous coding was then discussed. The coding rules allowed for multiple categories to be assigned to a respondent's response. The coded text passages were then paraphrased and summarised for each category and each respondent. To clarify whether the effects were individual phenomena or applied to a larger portion of the group, the number of statements about specific effects in the sample was also recorded.

Results

The results are structured according to the main research questions of the study by consolidating the results of qualitative and quantitative data. The results presented in Table 1 show that 95.4% of the respondents received gifts in childhood on Saint Nicholas Day (Saint Nicholas), 60.0% at Christmas (Santa Claus, in three cases by Christkind) and 23.1% when celebrating the New Year (Father Frost). More than half of the students (55.4%) received gifts on Saint Nicholas and Christmas. Almost 13% of the respondents received gifts on all three occasions in December and one received no gifts.

Table 1
Respondents receiving gifts as children on the December holidays

	Saint Nicholas	Christmas	New Year
Saint Nicholas	95.4%	55.4%	21.5%
Christmas	55.4%	60.0%	14.6%
New Year	21.5%	14.6%	23.1%

The respondents shared some very interesting stories and experiences about gifting in December, which illuminate the results presented in Table 1.

> "When I was younger, I got little things for all three good men [Saint Nicholas, Santa Claus, Father Frost]" R4
> "[...] when my brother and I were younger, we were gifted by Saint Nicholas and Father Frost." R8
> "At my boyfriend's home, they have a custom of gifting one another only for Saint Nicholas, and at my house only for Santa Claus, so I bring him a gift for Christmas and he brings me one for Saint Nicholas, even though we both go to church, etc." R31

Their pattern of giving gifts is different from the pattern they experienced in childhood (Table 2). Most of them (65.2%) gave gifts in December 2019 at Christmas, while 54.6% gave gifts on Saint Nicholas Day and 10.8% at the turn of the year. The majority of the students gave gifts once (61.4%) and the rest two times. Almost one third of the students (30.9%) gave gifts on Saint Nicholas Day and Christmas.

Table 2
Respondents giving gifts on the December holidays

	Saint Nicholas	Christmas	New Year
Saint Nicholas	54.6%	30.9%	6.3%
Christmas	30.9%	65.2%	6.1%
New Year	6.3%	6.1%	10.8%

This transition to gifting on Christmas is also captured in the description of an experience by one of the respondents.

> "[...] when I was a child, it was not a custom at all in our homes to give presents for Christmas. This has infiltrated to us in the last few years – perhaps because of globalisation?" R33

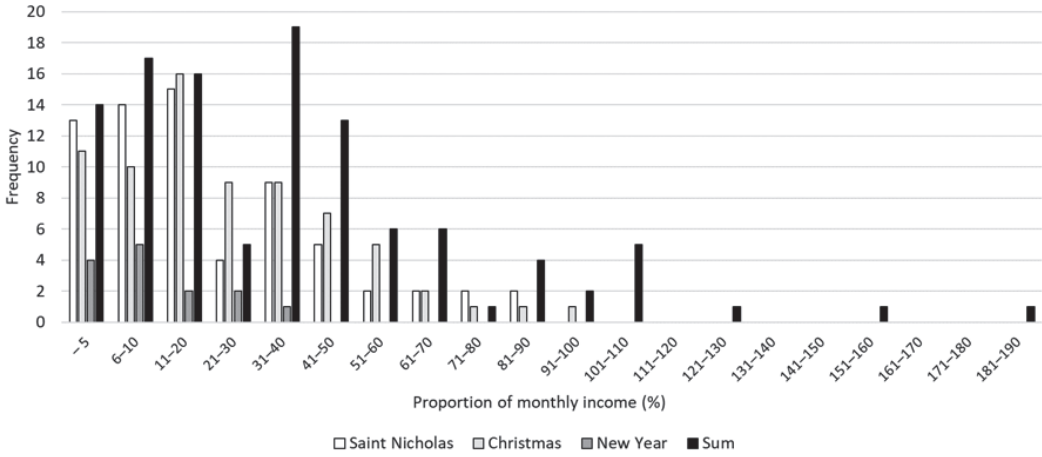
The students were also asked to select three types of gifts they usually give. The most frequently given groups of gifts (>30%) are presented in Table 3. The students most often give their loved one's sweets, clothes and shoes, and cosmetics.

Table 3
Most frequently given groups of gifts (>30%)

Saint Nicholas	Christmas	New Year
Sweets (80.9%)	Sweets (69.9%)	Sweets (78.6%)
Clothes and shoes (60.3%)	Clothes and shoes (57.5%)	Cosmetics (50.0%)
Cosmetics (38.2%)	Cosmetics (50.7%)	Clothes and shoes (42.9%)
Fruit and nuts (35.3%)	Home equipment (30.1%)	

Figure 1 shows the proportion of monthly income used on gifts for the December holidays. A proportion of monthly income spent on gifts for Saint Nicholas Day, Christmas and the New Year was calculated. Three quarters (75.4%) of the students spent less than 50% of their monthly income on gifts for the December holidays, with the spending most frequently being within the range 31–40%.

Figure 1
Monthly income spent on gifts for the December holidays



Views on sustainability issues in the context of December gifting were explored with an open-ended question asking the respondents to describe whether and how sustainability issues affect their December gifting. The students' answers were coded into multiple categories and then analysed in the context of sustainable consumption definitions. It was not obligatory to answer the question. A total of 28 (21.5%) of the students responded. In five responses, the respondents reported not thinking about sustainability issues in consumer behaviour for the December holidays. We assume that among the respondents who did not answer the question, many do not think about sustainability or do not have a suitable understanding of sustainability and therefore did not answer. Different effects were described by the respondents. Several of them (R) stated that they give or receive only things they really need, practical things, such as shoes, socks or underwear.

> "[...] I receive from my parents the things I need, for example, winter boots, a jacket, underwear, and this is considered as a gift for Saint Nicholas or Santa Claus." R1
> "[...] Mum gives everyone socks and underwear, and we prepare different types of surprises for her, e.g., we bake cookies." R8
> "I stick to buying what I think a person really needs and not some pointless things." R25

One respondent also mentioned the intention of this kind of behaviour.

> "[...] to buy what they really need and won't throw away". R17

The next most frequently mentioned category of responses was sustainability of the gifts in terms of the produced materials.

> "I try to buy as few plastic things as possible, such as books or wooden toys." R15
> "[...] I also always wrap gifts in paper and try to use and buy as few packaged products as possible." R21

Two of the respondents emphasised nonmaterial presents, such as family trips and playing board games during the December holidays.

> "[...] we don't gift each other traditionally, we prefer to go on a trip, ski, have lunch together..." R8
> "[...] instead of material goods, it means more to me to spend time with my loved ones, to talk, play board games and go on a trip." R23

Two of the respondents mentioned that their families had reduced the number of gifts. They consume less for gifts for the December holidays.

> "We buy just one gift for each and then draw who will receive it." R12
> "[...] each draws one, who then buys him or her a gift, which we exchange around Christmas." R3
> "[...] each buy only one [gift]. A draw determines who gives to whom. The rest are not supposed to know whom you are gifting. We determine the value of gifts in advance (€20– 30). We think this is better than giving everyone a little something, as this is usually not very useful and everyone is only piled with sweets [...]." R27

Two of the respondents highlighted the category of charity towards others as an aspect of sustainability.

> "[...] instead of gifts for loved ones, I bought a picture and donated a voluntary contribution of €30 for it, which was entirely intended for a shelter for abandoned animals in Ljubljana." R16
> "I participated as a 'Santa for a Day' [advertising initiative in the media]

> gifting children from more socially disadvantaged families. I find it a great opportunity to show charity." R27

A single respondent pointed out that in her family they do not give each other gifts for the December holidays anymore.

> "When I was younger, I got little things for all three good men [Saint Nicholas, Santa Claus, Father Frost], now that I'm older we don't do that anymore, because we don't agree with the material and usually useless gifts we give just to give someone a gift." R4

Discussion

Sustainable consumption is an area of global interest, given the Earth's increasing human population and indications of negative impacts on the environment (United Nations, 2015). The main aims of the present research were to explore consumer behaviour in the context of the December holidays.

The presented findings from a sample of Slovenian pre-service teachers reveal that the radical political changes over the course of the last century (Slavec Gradišnik, 2013, 2015) influenced students' experiences with regard to receiving gifts in childhood in the December holidays. They received gifts on Saint Nicholas Day (Saint Nicholas), Christmas Day (Santa Claus or Christkind) and/or New Year's Day (Father Frost), and not infrequently on all three occasions.

One interesting finding is that the pattern of consumer behaviour for the December holidays is changing. The present consumer behaviour (in December 2019) of the respondents no longer reflects the family rituals from their childhood. Whereas, in the past, the main gift-giving holiday was Saint Nicholas Day, today Christmas is given priority. We share the opinion of other authors who have pointed out the growing globalisation and commercialisation of Christmas, which goes beyond religious and cultural traditions (Kimura & Belk, 2005; Marshall, 2014; Sandikci & Omeraki 2007). Christmas is becoming a global holiday of high material consumption that can be compared to Valentine's Day or Halloween.

The average percentage of monthly income spent by the surveyed students on gifts for the December holidays (31–40%) is not negligible. Therefore, considering the low financial literacy of university students in Slovenia (Lovšin Kozina & Ponikvar, 2015), it is worth studying their consumer behaviour for the December holidays, as it represents a significant expense for students.

The second part of the discussion is devoted to the influences of sustainable thinking on consumer behaviour itself. It is noticeable that some of the respondents justify consumer behaviour or gifting by limiting purchases to useful and practical products, and/or products made of natural materials. The practicality and usability of the products is also evident from the groups of gifts they frequently choose to give, such as clothing and cosmetics. The respondents' answers could be classified into three types of more sustainable consumer behaviours (types 1, 2 and 3 are arranged from lower to higher personal sacrifice):

Replacing traditional gifts with more "efficient" gifts (i.e., limiting gifting to useful and practical products, or to gifts made of natural materials).

Alternative consumer behaviours (i.e., giving nonmaterial gifts).

Reducing consumption (i.e., reducing the number of gifts, giving for charity, or not giving gifts at all).

Only one respondent reported not giving gifts at all for the December holidays, which could also be considered a sustainable consumer behaviour. Stern (2000) distinguishes between public and private environmental actions. The three types of behaviour listed above are private environmental actions, whereby individuals consume fewer resources by using technological innovations (e.g., energy efficient appliances) and alternative behaviours (e.g., using public transport) or by reducing consumption of resources (e.g., reduction in purchasing) (Clayton & Myers, 2015).

Conclusions

The present study can help teachers consider how to further design consumer education. It is important to start from students' consumption patterns, which are a reflection of the time and place in which they live. However, the question of the quality of consumer education remains open, and studies like this reveal that students are certainly active consumers, influenced by different drivers that contribute to their consumption patterns.

The qualitative part of the research provided a basic insight into the students' mindset, which can be a valuable source of vignettes that students can easily identify with. Vignettes can be useful educational material to learn from and discuss, enabling us to evaluate sustainable consumer behaviours. From the definitions of sustainable consumption highlighted in the introduction, we can conclude that pre-service teachers focus on more sustainable products or simply on consuming less. Due to the fairly low response rate to this particular question, there is still room for future studies to further explore perceptions of sustainable consumption.

References

Agarwala, R., Mishra, P., & Singh, R. (2019). Religiosity and consumer behavior: A summarizing review. *Journal of Management, Spirituality & Religion*, *16*(1), 32–54.

Clayton, S., & Myers, G. (2015). *Conservation psychology: Understanding and promoting human care for nature*. John Wiley & Sons.

Cohen, L., Manion, L., & Morrison, K. (2017). *Research methods in education.* Routledge.

Črnič, A., Komel, M., Smrke, M., Šabec, K., & Vovk, T. (2013). Religious pluralisation in Slovenia. *Teorija in praksa, 50*(1), 205–232.

Delener, N. (1990), The effects of religious factors on perceived risk in durable goods purchase decisions. *Journal of Consumer Marketing, 7*(3), 27–38.

Erjavšek, M., Lovšin Kozina, F., & Kostanjevec, S. (2021). In-service home economics teachers' attitudes to the integration of sustainable topics in the home economics subject. *Center for Educational Policy Studies Journal, 11*(1), 27–47.

Essoo, N., & Dibb, S. (2004). Religious influences on shopping behaviour: An exploratory study. *Journal of Marketing Management*, *20*(7–8), 683–712.

Hirschman, E. C. (1981). American Jewish ethnicity: Its relationship to some selected aspects of consumer behavior. *Journal of Marketing*, *45*(3), 102–110.

Islam, T., & Chandrasekaran, U. (2020). Religiosity and consumer decision making styles of young Indian Muslim consumers. *Journal of Global Scholars of Marketing Science, 30*(2), 147–169.

Jackson, T. (2014). Sustainable consumption. In G. Atkinson, S. Dietz, E. Neumayer, & M. Agarwala (Eds.). *Handbook of sustainable development* (pp. 279–290). Edward Elgar Publishing. https://doi.org/10.4337/9781782544708.00029

Jezernik, B. (2013). Politika praznovanja [The politics of celebration.] In B. Jezernik (Ed.), *Politika praznovanja: Prazniki in oblikovanje skupnosti na Slovenskem* (pp. 7–16). Znanstvena založba Filozofske fakultete.

Kimura, J., & Belk, R. (2005). Christmas in Japan: Globalization versus localization. *Consumption Markets & Culture, 8*(3), 325–338.

Lovšin Kozina, F., & Ponikvar, N. (2015). Financial literacy of first-year university students: The role of education. *International Journal of Management, Knowledge and Learning*, *4*(2), 241–255.

Marshall, A. (2014). The holidays are coming!: Consumerism and post-Fordist society. *Critical Reflections: A Student Journal on Contemporary Sociological Issues, 2*, 38–41.

Moschis, G. P., & Ong, F. S. (2011). Religiosity and consumer behavior of older adults: A study of subcultural influences in Malaysia. *Journal of Consumer Behaviour, 10*(1), 8–17.

Naterer, A., Lavrič, M., Klanjšek, R., Flere, S., Rutar, T., Lahe, D., Kuhar, M., Hlebec, V., Cupar, T., & Kobše, Ž. (2019). *Slovenska mladina 2018/2019* [Slovenian youth 2018/2019]. Friedrich-Ebert-Stiftung.

OECD. (2005). *Improving financial literacy: Analysis of issues and policies.* OECD.

Orellano, A., Valor, C., & Chuvieco, E. (2020). The influence of religion on sustainable consumption: A systematic review and future research agenda. *Sustainability, 12*(19), 7901.

Quoquab, F., & Mohammad, J. (2020). A review of sustainable consumption (2000 to 2020): What we know and what we need to know. *Journal of Global Marketing, 33*(5), 305–334.

Sandikci, Ö., & Omeraki, S. (2007). Globalization and rituals: Does Ramadan turn into Christmas? *Advances in Consumer Research, 34,* 610–615.

Schrader, U., & Thøgersen, J. (2011). Putting sustainable consumption into practice. *Journal of Consumer Policy*, *34*(1), 3–8.

Sedmak, S., & Erčulj, J. (2009). Pojem trajnostnega razvoja v učnih načrtih [The concept of sustainable development in curricula]. In S. Sedmak (Ed.), *Danes za jutri: Razmišljanja o vzgoji in izobraževanju za trajnostni razvoj* (pp. 57–76). Univerza na Primorskem, Fakulteta za management.

Sedmak, S. (2009). Trajnostna potrošnja in izobraževanje [Sustainable consumption and education.] In S. Sedmak (Ed.), *Danes za jutri: Razmišljanja o vzgoji in izobraževanju za trajnostni razvoj* (pp. 113–124). Univerza na Primorskem, Fakulteta za management.

Slavec Gradišnik, I. (2013). Ubrani in razglašeni decembrski čas [Harmonious and dissonant December time.] In I. Slavec Gradišnik (Ed.), *Praznična večglasja: Prazniki in oblikovanje skupnosti na Slovenskem* (pp. 133–163). Znanstvena založba Filozofske fakultete.

Slavec Gradišnik, I. (2015). A festive bricolage: The holiday calendar in Slovenia over the last century. *Folklore: Electronic Journal of Folklore, 60*, 29–50.

Sood, J., & Nasu, Y. (1995). Religiosity and nationality: An exploratory study of their effect on consumer behavior in Japan and the United States. *Journal of Business Research*, *34*(1), 1–9.

Stern, P. (2000). Toward a coherent theory of environmentally significant behavior. *Journal of Social Issues, 56*(3), 407–424.

Šmid Božičevič, U., & Kostanjevec, S. (2006). *Smernice potrošniškega izobraževanja odraslih v Sloveniji, stanje in priporočila* [Guidelines for adult consumer education in Slovenia, current situation and recommendations]. Zveza potrošnikov Slovenije, Strokovno združenje nutricionistov in dietetikov.

Thoresen, V. (2010). *Here and now! Education for sustainable consumption: Recommendations and guidelines.* United Nations Environmental Programme. https://www.unenvironment.org/resources/report/here-and-now-education-sustainable-consumption-recommendations-and-guidelines

Trommsdorff, G. (2012). Cultural perspectives on values and religion in adolescent development: A conceptual overview and synthesis. In G. Trommsdorff & X. Chen, (Eds.), *Values, religion, and culture in adolescent development* (pp. 3–45). Cambridge University Press.

United nations. (2015). *Transforming our world: The 2030 agenda for sustainable development.* United Nations, Department of Economic and Social Affairs. https://sdgs.un.org/2030agenda

White, G. R. T., Samuel, A., Zhou, P., Razak, A. A., & Thomas, S. (2018). Religious heterogeneity of food consumers: The impact of global markets upon methods of production. *Journal of Consumer Behaviour*, *17*(1), 3–12.

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Personality Traits and Changes in Depression Symptoms in Female University Students

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The present study aimed to investigate the course of symptoms of depression in female university students over a four-year period, while also exploring the predictive value of four personality traits with regard to symptoms of depression. The sample comprised 74 female first-year university students. Symptoms of depression were assessed using the Zung Self-Rating Depression Scale and were collected twice over a four-year interval, while the personality traits of extraversion, neuroticism, psychoticism and lie tendencies were assessed by the Eysenck Personality Questionnaire only at the baseline. The results revealed that after a four-year period the depression symptoms increased in intensity/frequency on 10 out of 20 items as well as in the summary score, and decreased only in diurnal variations, which was a favourable outcome. Multiple regression analysis indicated that out of the four personality traits only neuroticism was a significant predictor of the summary depression score four years later. This means that young female students with higher scores in neuroticism, although still in the normal or average range, would very probably have a more pronounced and less well-regulated emotional response to a stressful period of their university education.

Keywords: depression symptoms, Eysenck Personality Questionnaire, female students, neuroticism, Zung Self-Rating Depression Scale

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Osebnostne lastnosti in spremembe simptomov depresije pri študentkah

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Cilja raziskave sta bila preučitev poteka simptomov depresije pri študentkah v štiriletnem obdobju in določitev napovedne vrednosti simptomov depresije pri štirih osebnostnih lastnostih. V raziskavo je bilo vključenih 74 študentk prvega letnika. Simptome depresije smo zajeli dvakrat v štiriletnem obdobju in jih ocenjevali z Zungovo lestvico za samooceno depresije; samo na začetku raziskave smo z Eysenckovim osebnostnim vprašalnikom ocenili osebnostne lastnosti ekstraverzije, nevroticizma, psihoticizma in nagnjenosti k laganju. Rezultati so pokazali, da so po štiriletnem obdobju simptomi depresije narasli glede intenzivnosti/pogostosti pri 10 od 20 postavk in v skupni vrednosti, zmanjšali pa so se le pri dnevnih nihanjih, kar je bil ugoden izid. Multipla regresijska analiza je pokazala, da je izmed štirih osebnostnih lastnosti samo nevroticizem pomemben napovednik skupne vrednosti depresije po štirih letih. Navedeno pomeni, da bi se mlade študentke z višje doseženimi vrednostmi pri nevroticizmu, čeprav še vedno v običajnem ali povprečnem razponu, zelo verjetno izraziteje in manj čustveno uravnovešeno odzivale na stresno študijsko obdobje.

Ključne besede: simptomi depresije, Eysenckov osebnostni vprašalnik, študentke, nevroticizem, Zungova lestvica za samooceno depresije

Introduction

Everyone experiences some unhappiness, sadness or anxiety during their lifetime, often as a result of unexpected, unwanted or just very important life changes. The transition from secondary school to university is usually a major challenge in one's life. Many students leave home for the first time, start living on their own and face the demands of adapting to a new cultural and social context. Many engage in various paid or unpaid jobs (e.g., voluntary work) for additional professional development and/or to meet existential needs. Furthermore, many have to cope with partnership issues, which is one of the vital tasks in this developmental period. Finally, all students have to deal with increased academic demands that require high levels of self-regulated behaviour. These circumstances may elicit a negative emotional response to challenges and stress, especially in persons with a high level of neuroticism (Fanous et al., 2002; Hutchinson & Williams, 2007). A recent study performed on a large sample of 697 high school students aged 14–19 years in Zagreb (Croatia) analysed the frequency of depression and auto-aggression. The results revealed that as many as 26.5% of the participants had depressive disorders of some degree, ranging from mild to very severe (Tripković et al., 2014).

It is well known that the personality dimension of neuroticism, i.e., emotional instability, is a good predictor of anxiety and depressive symptomatology (Gershuny & Sher, 1998; Kotov et al., 2010; Nolan et al., 1998) as well as of wellbeing (Butković et al., 2012; Diener & Lucas, 2009). Barnhofer et al. (2011) applied the well-known Eysenck Personality Questionnaire (EPQ – Eysenck & Eysenck, 1975) on a sample of 144 individuals at the first point of measurement and the Beck Depression Inventory (BDI-II – Beck et al., 1996) six years later. They found that scores on Neuroticism assessed six years earlier were positively correlated with the severity of symptoms of depression assessed by the BDI-II. In their recent study, Shi et al. (2015) also indicated that the trait of neuroticism was positively related to depression in a large sample of 2000 Chinese undergraduate medical students. The psychological and sociocultural adjustment of first-year international students in the USA was the focus of a study performed by Hirai et al. (2015), who concluded that the most consistent predictors of the process of adjustment were perceived control over academic stress and neuroticism. Longitudinal studies by Hirschfeld et al. (1989) and Krueger et al. (1996) also suggest that a high premorbid level of neuroticism is positively associated with the development of depression. The same was found by Roberts and Kendler (1999), who performed a study on a large sample of female subjects using the EPQ. In his

paper on the relevance of neuroticism to public health, Lahey (2009) stated that neuroticism was "a robust correlate and predictor of many different mental and physical disorders, comorbidity among them, and the frequency of mental and general health service use" (p. 241). As such, neuroticism has long been a topic of interest to many researchers in the broad fields of psychology, psychiatry and public health (Ormel et al., 2013).

Our previous research results have shown that women with a higher degree of neuroticism perceive the quality of their lives in the domain of environment as lower (Radošević-Vidaček et al., 2009), and that more emotionally stable adults perceive their life as better in quality and are in general more satisfied with their work environment (Bobić, 2012).

In addition to devoting attention to stable personality traits that may shape students' coping strategies in their new demanding environment, the awareness and management of subtle depression symptoms that do not exceed the boundaries of "normality" is also important. It is well known that besides difficulties in social adaptive processes depression symptoms can reduce intellectual performance crucial to learning abilities. Klein et al. (2011) stressed the importance of personality research in the prevention of depressive disorders, stating that "personality is at least somewhat malleable, especially in youth, but may forecast the onset of depression years in advance, which makes traits a potentially attractive means of identifying individuals at risk and informing selection of interventions" (p. 287).

In order to examine the relationship between personality traits, symptoms of depression and self-perceived health-related wellbeing among university students, we performed a study with 430 healthy students of both male and female gender in the first year of their university studies (Bobić et al., 2015). This study was a part of a larger cross-sectional study aimed at defining relationships between various genetic, environmental and life-style factors in the development of the atopic diseases rhinitis, asthma and dermatitis (Babić et al., 2016; Sabolić Pipinić et al., 2013; Sabolić Pipinić, 2015). We found that the trait of neuroticism (EPQ N) predicted the summary score on the Zung Self-Rating Depression Scale (SDS) and on health-related wellbeing better than any other personality trait assessed by the EPQ, and that neuroticism significantly contributed to increased scores on the SDS only in women. These results for the EPQ and the SDS were obtained at the same point of measurement. Approximately four years later, we approached the same participants to test the assumption that higher initial levels of neuroticism, although within the average range, would also be prospectively associated with more frequent or more pronounced depressive symptoms at follow-up. Additionally, we wanted

to assess the possible changes of depression symptoms over the course of university studies. Findings on differences in the mental health status of university students depending on the year of study are inconclusive, varying from more distress at the entry years to more distress before leaving the relative security of student life (Liu et al., 2019). In order to gain a more comprehensive insight into the areas of functioning in which vulnerabilities are most likely to develop, we wanted to examine the changes in each of the 20 symptoms that comprise the SDS separately.

Therefore, the aims of the present study were to explore how symptoms of depression fluctuate over time from the beginning to the end of university studies, and to estimate the tentative predictive value of four EPQ personality variables measured at the beginning of studies for the level of summary depression score after a period of approximately four years.

Method

Participants and procedure

We initially assessed 430 healthy first-year university students (males and females) from seven different public faculties of the University of Zagreb, with the goal of determining how personality traits may predict symptoms of depression and wellbeing assessed at the same time point. These results of the baseline study were published elsewhere (Bobić et al., 2015).

The second part of the study was performed approximately four years (47 months) after the first assessment, when we called all of the students from the first pool once again. All of the procedures were carried out in our institution. A total of 93 participants of both genders responded and we were able to assess their mood in relation to depression symptoms as measured by the SDS for a second time. Due to the very small number of male students who responded to our second invitation, we limited our analyses to female students. A detailed description of the number of students at each stage of the study and the reasons for their exclusion from the analyses is presented in Figure 1.

The mean age of the 74 female students who participated in the retest was 18.9 years, with a range of 18–29 years at the first point of measurement. At the second point of measurement, their mean age was 22.9 years with a range of 22–33 years.

Each participant was fully informed about the aims of the study and the study protocol, and a consent form was signed during the first phase of the study. The study was conducted in accordance with the Declaration of Helsinki

of 1997 (revised in Edinburgh in 2000) and was approved by the Ethics Committee of the Institute for Medical Research and Occupational Health.

Instruments

Zung Self-Rating Depression Scale (SDS)

The Zung Depression Scale (Zung, 1965) is a self-rating scale that comprises 20 questions on different depressive symptoms (affective, psychological and somatic). Each answer is scored on a Likert-type scale from 1 to 4, indicating the level of agreement to the respective statement, from minimal "None or a little of the time", to severe "Most or all of the time". Positively phrased items are reverse scored. The total score represents the sum of scores on all twenty items. It can range from 20 to 80, with higher scores indicating an increased number of depressive symptoms or more intensive symptoms. In the present study, raw scores were used for the statistical analysis. In addition to a number of studies including different patients groups, the SDS has proven itself as a useful instrument in young healthy adults (Gotestam et al., 2008; Kitamura et al., 2004), primary healthcare patients without any psychiatric disorder (Milanović et al., 2015) and healthy workers (Ikenouchi-Sugita et al., 2013). Furthermore, Shumway et al. (2004) found it to be one of the least complex measures of depression, being very easy to comprehend. The reliability ($\alpha = .81$) and validity of the SDS have been reported to be adequate to excellent (Overholser et al., 1993; Tate et al., 1993).

Eysenck Personality Questionnaire (EPQ)

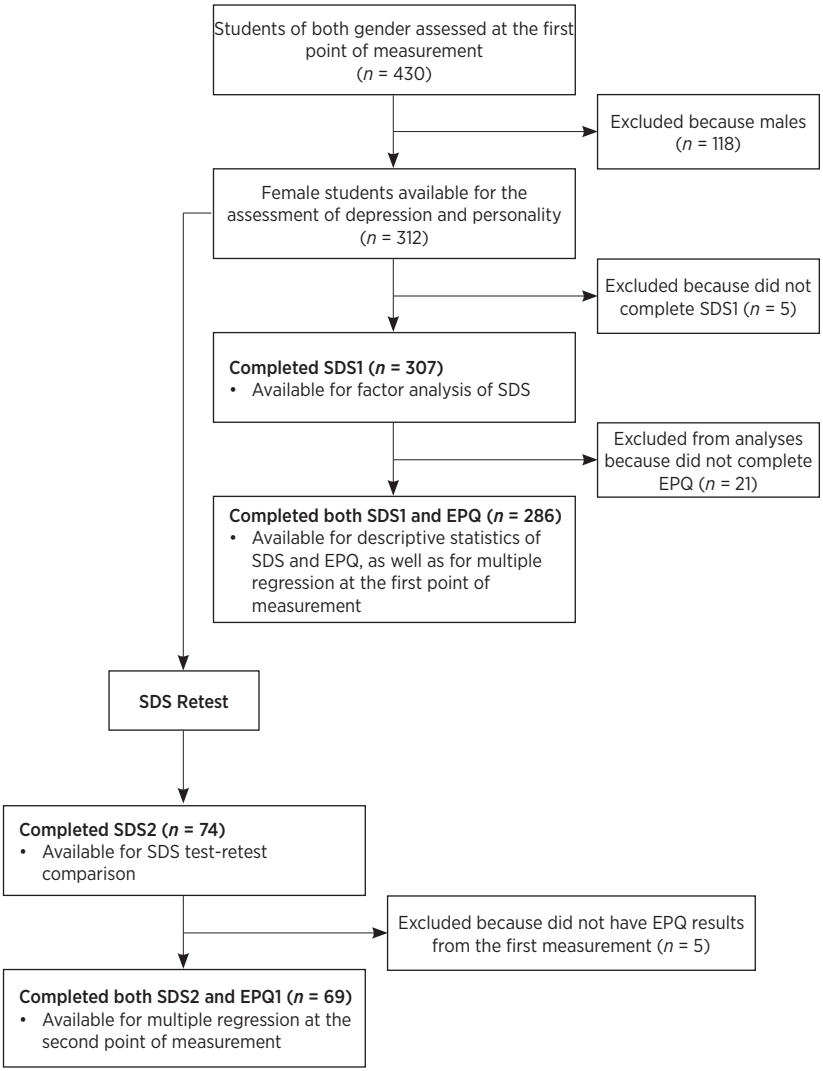
The Eysenck Personality Questionnaire is one of the most often used questionnaires for assessment of personality traits. The questionnaire was developed by Hans and Sybil Eysenck in 1975 (Lojk, 1984) and has demonstrated its validity and reliability as a standardised instrument in many countries. Lojk et al. (1979) reported a comparison between results obtained from ex-Yugoslavian subjects and English subjects and concluded that the organisation of personality was sufficiently similar to make national comparisons feasible. Its internal consistency ranges from 0.68 to 0.91 depending on scale and gender (Lojk, 1984). The EPQ was originally conceived to measure stable personality traits. It consists of 90 items to which participants respond in "yes" or "no" form. The scores are calculated separately for each of the four scales: Psychoticism (EPQ-P), which denotes aggressiveness, assertiveness, egocentrism, unhelpfulness, tough-mindedness and inclination toward manipulation comprises 25 items; Extraversion (EPQ-E), which denotes social dimensions of

personality: sociability, liveliness, domination, impulsiveness, irresponsibility, risk-taking, outgoing and talkative characteristics, comprises 21 items; Neuroticism (EPQ-N), which denotes emotional instability and anxiousness, irritability, feelings of guilt, depressed mood and low self-esteem, comprises 23 items; and Lie scale (EPQ-L), which denotes dissimulation, social naïveté, social conformity or social desirability, comprises 21 items.

Before running the statistical analyses, we tested whether there were any significant differences in the arithmetic means of the four EPQ personality variables and the sum result on the SDS at the first point of measurement (EPQ P, EPQ E, EPQ N, EPQ L, SDS 1) between those who later came to retest and those who did not. The means of those who did not come to retest were: SDS $1_{n=233}$ = 25.72; EPQ $P_{n=222}$ = 4.33; EPQ $E_{n=222}$ = 15.14; EPQ $N_{n=222}$ = 10.94; EPQ $L_{n=222}$ = 8.34. The means of those who did come to retest were: SDS $1_{n=74}$ = 25.85; EPQ $P_{n=69}$ = 3.62; EPQ $E_{n=69}$ = 14.14; EPQ $N_{n=69}$ = 10.65; EPQ $L_{n=69}$ = 8.38. We employed the t-test for independent samples and found only that those who came to retest had lower EPQ P values at the first point of measurement than those who did not retest, at a level of significance of $p = .046$.

Figure 1

Number of participants at each stage of the study



Note. ZDS1 = Zung Self-Rating Depression Scale at measurement point 1; ZDS2 = Zung Self-Rating Depression Scale at measurement point 2; EPQ1 = Eysenck Personality Questionnaire at measurement point 1.

Results and discussion

Changes in depression symptoms

The first aim of our study was to evaluate the course of 20 SDS items/symptoms after a four-year period. The mean values of all 20 SDS items for baseline and repeated measurements for the 74 female students who came for retest approximately four years later are presented in Table 1. The nonparametric statistical method Wilcoxon Matched Pairs Test was used for dependent groups in order to test differences between the mean raw scores on each item and the summary SDS raw score.

Statistically significant differences were found for 11 out of 20 items, as well as for the summary SDS score. The results show that the female students reported less diurnal variations of mood (item 2) on the retest, which may also be an indicator of the adaptation process to the academic schedule and of an age-related phase shift towards more pronounced morningness (Roenneberg et al., 2004), since it is the only symptom that showed improvement over time. At the second point of measurement, the students reported more sleeping disturbances (item 4); changed appetite – eating more or less than they used to eat (item 5); decreased sexual interest/libido (item 6); weight loss (item 7); more troubles with constipation (item 8); increased confusion/clouded reasoning (item 11); more frequent task difficulties (item 12); more emphasised personal devaluation/diminished self-esteem (item 17); more pronounced feeling of emptiness (item 18); and a more frequent feeling of dissatisfaction/anhedonia (item 20). Overall, our results are in accordance with the findings of Bostanci et al. (2005), who found an increase in the prevalence of depressive symptoms among older students (using Beck Depression Inventory) ranging from 25% to as much as 32%, i.e., a positive association between being a senior in school and the level of depressive symptoms. This somewhat unexpected result may be explained by the strain that emerges at the end of the schooling period, accentuated by expectations associated with the problem of finding proper employment. Students are aware of the high unemployment rate of young people in our society and are therefore put in a position of high uncertainty. Galanaki and Leontopoulou (2017) investigated the transition to adulthood on a large sample of university students in Greece and reported that more than two-thirds (71.4%) of young people exhibited ambivalence with regard to their perceived adult status.

Table 1

Differences between test and retest results for Zung Self-Rating Depression Scale raw scores

SDS Item (Content)		*M1*	*M2*	*p*
1.	Depressed mood/affect	1.46	1.46	-
2.	Diurnal variation	2.81	2.42	.012
3.	Crying	1.27	1.34	.402
4.	Sleep disturbance/insomnia	1.26	1.49	.014
5.	Appetite	1.12	1.39	.004
6.	Decreased libido/sexual interest	1.01	1.64	.001
7.	Weight loss	1.03	1.22	.001
8.	Constipation	1.12	1.24	.038
9.	Palpitation	1.11	1.12	.798
10.	Fatigue	1.31	1.24	.470
11.	Confusion/clouded reasoning	1.04	1.16	.012
12.	Task difficulties	1.04	1.16	.012
13.	Restlessness	1.34	1.47	.167
14.	Hopelessness/lack of hope	1.18	1.27	.196
15.	Irritability	1.37	1.38	.874
16.	Indecisiveness	1.95	1.93	.913
17.	Diminished self-esteem/personal devaluation	1.19	1.42	.012
18.	Emptiness	1.15	1.37	.004
19.	Suicidal ideation	1.08	1.04	.181
20.	Dissatisfaction/anhedonia	1.03	1.22	.002
Σ SDS		25.85	27.97	.001

Note. N = 74 female students; SDS = Zung Self-Rating Depression Scale; Σ SDS – Sum SDS result; *M1* = means at the first measurement point; *M2* = means at the retest.

We also explored the structure of the SDS scores obtained on female participants at the first measurement point (N = 308) in order to determine whether the items of the SDS would group around theoretical categories and consequently whether we could expect changes across time in a specific category. The internal consistency coefficient for this subsample of female students was α = 0.71. Item 2 (*Morning is when I feel the best*) was excluded from the analysis, as this was the only item that significantly decreased in mean value on the second time point, as mentioned above. We assumed that for the majority of participants in this age group the answer on this item would be related more to the concept of morningness-eveningness and sleep quality than to depression

(Bakotić et al., 2017). Furthermore, the participants often stated that they were forced by circumstances to get up earlier than they would otherwise like, as they tended to go to sleep later. It seems that later in the study period they adjusted to the requirements of the university regime and simply acquired new habits and went to bed earlier. Removing this item from the scale yielded a better internal consistency of the scale ($\alpha = 0.77$), which was not the case with other items.

We performed a principal-component analysis on 19 items. The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.778, which is above the usual acceptable level of 0.5, and Bartlett's test of sphericity was significant (Chi-square = 1258.23; *d. f.* = 171; $p < 0.001$). Based on the Kaiser's criterion only (eigenvalues above 1), the initial unrotated solution yielded six components. The eigenvalues of the first two components were 4.36 and 1.78, explaining 23% and 9.3% of the variance, respectively. The following four components had eigenvalues of 1.3, 1.2, 1.2 and 1.1., and explained 6.6%, 6.3%, 6.2% and 5.9% of the variance, respectively. As the average communality for this solution was under the recommended 0.6 and a solution with so many components was difficult to interpret, we decided to use the scree test in conjunction with the eigenvalues to determine the number of components to be retained. The curve on the scree plot clearly began to tail off after three components, which together explained 39% of the variance. We performed both varimax and promax rotations with three extracted components, which yielded similar solutions. We kept the solution obtained by the promax rotation because it was somewhat simpler for interpretation (Table 2). An item was selected in the final solution if its primary component loading was at least .40 and it had no cross-loading of .40 or above (presented in Table 2 in bold script). Three items (7, 9 and 16) did not load at least .40 on any component and were therefore eliminated from the final solution. In the end, three components were identified: Component 1: cognitive symptoms (items: 8, 14, 17, 18, 19, 20); Component 2: affective symptoms (items: 1, 3, 4, 6, 10, 13, 15); and Component 3: somatic symptoms (items: 5, 11, 12).

Table 2

Component loadings based on principal component analysis with promax rotation for 19 Zung Self-Rating Depression Scale items

Content	Full item	Component 1 Cognitive	Component 2 Affective	Component 3 Somatic
18. Emptiness	My life is pretty full	**.80**	-.05	-.12
14. Hopelessness	I feel hopeful about the future	**.76**	-.01	-.17
17. Self-esteem	I feel that I am useful and needed	**.66**	.11	-.07
8. Constipation	I have trouble with constipation	**.62**	-.02	-.12
19. Suicidality	I feel that others would be better off if I were dead	**.59**	.17	.08
20. Dissatisfaction	I still enjoy the things I used to do	**.54**	-.07	.39
9. Palpitation	My heart beats faster than usual	.38	.19	-.01
6. Sexual interest	I enjoy looking at, talking to and being with attractive women/men	-.37	**.73**	-.19
13. Restlessness	I am restless and can't keep still	.29	**.58**	-.02
1. Depressed mood	I feel downhearted and blue	.20	**.52**	.10
4. Sleep disturbance	I have trouble sleeping at night	.07	**.51**	-.03
3. Crying	I have crying spells or feel like it	.03	**.48**	-.01
10. Fatigue	I get tired for no reason	.06	**.45**	.07
15. Irritability	I am more irritable than usual	.03	**.44**	.26
16. Indecisiveness	I find it easy to make decisions	.16	.19	.06
12. Task difficulties	I find it easy to do the things I used to	-.12	.06	**.74**
11. Confusion	My mind is as clear as it used to be	-.08	.09	**.72**
5. Appetite	I eat as much as I used to	-.16	-.06	**.64**
7. Weight loss	I notice that I am losing weight	.25	-.13	.27

Note. N = 308 female students.

Kitamura et al. (2004) performed a factor analysis on SDS results on a large sample of first-year university students of male and female gender and also found three factors: affective (7 items: 1, 3, 9, 10, 13, 15, and 19), cognitive (4 items: 14, 16, 17, 18) and somatic (3 items: 5, 6, 12). There are both similarities and differences between the particular items constituting each SDS factor in first-year students in Japan and Croatia. However, the huge difference in sample size and composition does not allow for detailed comparisons between the two studies. What is interesting to note is that some of the factors that constituted the affective factor in both studies, namely Depressed mood (1), Crying (3),

Fatigue (10), Restlessness (13) and Irritability (15), did not show a significant change during the four-year period and progression through the educational stages in our study.

A recent study by Romera et al. (2008) revealed that items 11 (confusion/clouded reasoning) and 12 (task difficulties) were the most frequent symptoms and the symptoms with the highest mean scores ($M_{11} = 3.28$; $M_{12} = 3.29$) observed in a sample of patients with major depression. Both of these items/symptoms showed a statistically significant increase in frequency over the four-year period in our sample. It seems that our students experience and express more cognitive and somatic disturbances over the course of time, spending more time studying and coping with different stressors and less time socialising, which makes them vulnerable to the development of depressive symptoms.

Personality traits as predictors of depression symptoms

In order to examine the predictive value of the EPQ personality variables (P, E, N and L) measured at the beginning of university studies for the total depression score after a four-year period (SDS2), we conducted multiple regression analyses. Descriptive statistics and the main results of the regression analyses are shown in Table 3.

Table 3

Correlation matrix, descriptive statistics (mean and standard deviation) and main results of multiple regression analysis with SDS2 as criterion variable

Variables	Zero-order correlations					Multiple regression weights	
	EPQ E	EPQ N	EPQ P	EPQ L	SDS2	*b*	*ß*
EPQ E	-	-.224	.043	-.331**	-.118	-.055	-.048
EPQ N		-	.387**	-.188	.463**	.402**	.441**
EPQ P			-	-.353**	.186	-.031	-.015
EPQ L				-	-.153	-.110	-.091
M	14.14	10.65	3.62	8.38	28.01		
SD	4.32	5.37	2.35	4.06	4.89		

Note. $N = 69$; ** $p < .001$; * $p < .005$; SDS2 = Zung Self-Rating Depression Scale at the second point of measurement; EPQ = Eysenck Personality Questionnaire at the first point of measurement; E = extraversion; N = neuroticism; P = psychoticism; L = lie scale.

Neuroticism was the only dimension that was significantly correlated

to the SDS summary score (SDS 2) in the subsample that came for retesting after a four-year period. Four personality variables together explained (only) 22.1% of the variance in the SDS 2 score ($F(4.64) = 4.546$; $p = .003$; $R = .470$; R square = .221; adjusted R square = .173), and in this model only the N scale was a significant predictor of the summary depression symptoms score (ß = .441, $p = .001$). In other words, female students with a higher degree of neuroticism would very probably report more depression symptoms as a reaction to specific circumstances and challenges and an overall stressful period of study at university, even if the symptoms do not exceed the boundaries of "normality" or average scores on any of the observed trait variables. This is why it is important to ensure the availability of adequate professional support and counselling in the institutional education system.

Conclusion

Our results showed that the mean result for the SDS summary score remained within expected boundaries. The course of depression symptoms after a four-year period measured by the SDS showed an increase in intensity/frequency on 10 items (sleep disturbance, appetite changes, weight loss, constipation, insomnia, decreased libido, confusion, task difficulties, personal devaluation, emptiness and dissatisfaction) as well as in the summary score, with the only decrease being in diurnal variations, which is a more favourable option. We also confirmed the three-factor structure of the SDS items.

Multiple regression analysis indicated that out of the four personality variables measured by the EPQ (Psychoticism, Extraversion, Neuroticism and Lie tendencies) only Neuroticism was a significant predictor of the summary depression score at the second time point (SDS2). This means that young female students with higher neuroticism scores, although in normal or average range, would very probably have a more pronounced and less well-regulated emotional response to a stressful study period. We can speculate that this prolonged response mechanism would most likely reflect itself in a lower overall quality of life.

As many reports show that the number of students seeking advice in relation to depression symptoms is rising, it would be helpful to take into account the personality characteristics of these students when designing and developing the best intervention procedures to be included in public health strategies. Young students navigate between being a freshmen and being a finalist a few years later and are inevitably faced with different stressors, which in turn may elicit a depressed mood. It might be beneficial for individuals with lower

emotional stability who are faced with stress to learn how to effectively manage stress and subsequently reduce the quantity and/or intensity of depressive symptoms.

The limitations of the present study are primarily in the small number of subjects who came to retest, which resulted in limiting the sample to females only. We can speculate that the differences between the test and retest results on the SDS, as well as the SDS factor profile, may have been different in the male student population. Another limitation is that we disregard socioeconomic status as an important factor, although our same-gender sample is homogenous in terms of age and education. Furthermore, the fact that assessments of personality traits and depression symptoms are based on self-reports may present a problem, as such reports can be influenced by current mood state.

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References

Babić, Ž., Sabolić Pipinić, I., Varnai, V. M., Kežić, S., & Macan, J. (2016). Associations of TNFα -308G>A, TNFα -238G>A, IL-1α -889C>T and IL-10 -1082G>A Genetic Polymorphisms with Atopic Diseases: Asthma, Rhinitis and Dermatitis. *International Archives of Allergy and Immunology, 16*(4), 231–240. https://doi.org/10.1159/000445434

Bakotić, M., Radošević-Vidaček, B., & Košćec Bjelajac, A. (2017). Morningness–eveningness and daytime functioning in university students: The mediating role of sleep characteristics. *Journal of Sleep Research, 26*(2), 210–218. https://doi.org/10.1111/jsr.12467

Barnhofer, T., Duggan, D. S., & Griffith, J. W. (2011). Dispositional mindfulness moderates the relation between neuroticism and depressive symptoms. *Personality and Individual Differences, 51*(8), 958–962. https://doi.org/10.1016/j.paid.2011.07.032

Beck, A. T., Steer, R. A., & Brown, G. K. (1996). *Manual for the Beck Depression Inventory BDI-II*. Psychological Corporation.

Bobić, J. (2012). Subjective estimation of the quality of life in relation to neuroticism, *Arhiv za Higijenu Rada i Toksikologiju*, *63*(Suppl 1), 17–22. https://doi.org/10.2478/10004-1254-63-2012-2141

Bobić, J., Cvijetić, S., & Macan, J. (2015). Personality and self-perception of physical and emotional health among first-year university students. *Društvena istraživanja*, *24*(2), 219–237. https://doi.org/10.5559/di.24.2.03

Bostanci, M., Ozdel, O., Oguzhanoglu, N. K., Ozdel, L., Ergin, A., Ergin, N., Atesci, F., & Karadag, F.

(2005). Depressive symptomatology among university students in Denizli, Turkey: Prevalence and Sociodemographic Correlates. *Croatian Medical Journal, 46*(1), 96–100.

Butković, A., Brković, I., & Bratko, D. (2012). Predicting well-being from personality in adolescents and older adults. *Journal of Happiness Studies*, *13*(3), 455–467. https://doi.org/10.1007/s10902-011-9273-7

Diener, E., & Lucas, R. E. (2009). Personality and subjective well-being. In E. Diener, *The science of well-being* (pp. 795–814). Springer.

Eysenck, H. J., & Eysenck, S. B. G. (1975). *Manual of the Eysenck Personality Questionnaire*. Hodder & Stoughton.

Fanous, A., Gardner, C. O., Prescott, C. A., Cancro, R., & Kendler, K. S. (2002). Neuroticism, major depression and gender: A population-based twin study. *Psychological Medicine*, *32*(4), 719–728. PMID:12102386

Galanaki, E., & Leontopoulou, S. (2017). Criteria for the Transition to Adulthood, developmental features of emerging adulthood, and views of the future among Greek studying youth. *Europe's Journal of Psychology*, *13*(3), 417–440. https://doi.org/10.5964/ejop.v13i3.1327

Gershuny, B. S., & Sher, K. J. (1998). The relation between personality and anxiety: Findings from a 3-year prospective study. *Journal of Abnormal Psychology*, *107*(2), 252–262. https://doi.org/10.1037/0021-843X.107.2.252

Glavić, Ž., Galić, S., & Krip, M. (2014). Quality of life and personality traits in patients with colorectal cancer. *Psychiatria Danubina, 26*(2), 172–180. PMID:24909255

Gotestam, K. G., Svebak, S., & Jensen, E. N. (2008). The role of personality, mood, subjective health, and stress in depressive symptoms among high school students. *European Journal of Psychiatry, 22*(3), 121–129. https://doi.org/10.4321/S0213-61632008000300001

Hirai, R., Frazier, P., & Syed, M. (2015). Psychological and sociocultural adjustment of first-year international students: Trajectories and predictors. *Journal of Counselling Psychology*, *62*(3), 438–452. https://doi.org/10.1037/cou0000085

Hirschfeld, R. M. A., Klerman, G. L., Lavori, P., Keller, M. B., Griffith, P., & Coryell, W. (1989). Premorbid personality assessments of first onset of major depression. *Archives of General Psychiatry*, *46*(4), 345–350. PMID:2649038

Hutchinson, J. G., & Williams, P. G. (2007). Neuroticism, daily hassles, and depressive symptoms: An examination of moderating and mediating effects. *Personality and Individual Differences*, *42*(7), 1367–1378. https://doi.org/10.1016/j.paid.2006.10.014

Ikenouchi-Sugita, A., Yoshimura, R., Sugita, K., Hori, H., Yamada, K., Sakaue, M., & Nakamura, J. (2013). The effects of a walking intervention on depressive feelings and social adaptation in healthy workers. *Journal of UOEH*, *35*(1), 1–8. https://doi.org/10.7888/juoeh.35.1

Kitamura, T., Hirano, H., Zi, C., & Hirata, M. (2004). Factor structure of the Zung Self-rating Depression Scale in first-year university students in Japan. *Psychiatry Research, 128*(3), 281–287. https://doi.org/10.1016/j.psychres.2004.06.003

Klein, D. N., Kotov, R., & Bufferd, S. J. (2011). Personality and depression: Explanatory models and

review of the evidence. *Annual Review of Clinical Psychology, 7*, 269–295. https://doi.org/10.1146/annurev-clinpsy-032210-104540.

Kotov, R., Gamez, W., Schmidt, F., & Watson, D. (2010). Linking "Big" personality traits to anxiety, depressive, and substance use disorders: A meta-analysis. *Psychological Bulletin, 136*(5), 768–821. https://doi.org/10.1037/a0020327

Krueger, R. F., Caspi, A., Moffitt, T. E., Silva, P. A., & McGee, R. (1996). Personality traits are differentially linked to mental disorders: A multitrait-multidiagnosis study of an adolescent birth cohort. *Journal of Abnormal Psychology*, *105*(3), 299–312. https://doi.org/10.1037/0021-843X.105.3.299

Lahey, B. B. (2009). Public health significance of neuroticism. *American Psychologist, 64*(4), 241–256. https://doi.org/10.1037/a0015309

Liu, X., Ping, S., & Gao, W. (2019). Changes in Undergraduate Students' Psychological Well-Being as They Experience University Life. *International Journal of Environmental Research and Public Health, 16*(16), 2864. https://doi.org/10.3390/ijerph16162864

Lojk, L., Eysenck, S. B. G., & Eysenck, H. J. (1979). National differences in personality: Yugoslavia and England. *British Journal of Psychology*, *70*(Aug), 381–387. https://doi.org/10.1111/j.2044-8295.1979.tb01707.x

Lojk, L. (1984). *Eysenckov upitnik ličnosti – EPQ, Priručnik* [Eysenck Personality Questionnaire – EPQ, Manual]. Zavod SR Slovenije za produktivnost dela.

Milanović, S. M., Erjavec, K., Poljičanin, T., Vrabec, B., & Brečić, P. (2015). Prevalence of depression symptoms and associated socio-demographic factors in primary health care patients. *Psychiatria Danubina*, *27*(1), 31–37. PMID:25751429

Nolan, S. A., Roberts, J. E., & Gotlib, I. H. (1998). Neuroticism and ruminative response style as predictors of change in depressive symptomatology. *Cognitive Therapy and Research, 22*(5), 445–455. https://doi.org/10.1023/A:1018769531641

Ormel, J., Jeronimus, B. F., Kotov, R., Riese, H., Bos, E. H., Hankin, B., Rosmalen, J. G. M., & Oldehinkel, A. J. (2013). Neuroticism and common mental disorders: Meaning and utility of a complex relationship. *Clinical Psychology Review*, *33*(5), 686–697. https://doi.org/10.1016/j.cpr.2013.04.003.

Overholser, J. C., Shubert, D. S., Foliart, R., & Frost, F. (1993). Assessment of emotional distress following a spinal cord injury. *Rehabilitation Psychology*, *38*(3), 187–198.

Radošević-Vidaček, B., Košćec, A., Bakotić, M., Macan, J., & Bobić, J. (2009). Is atopy related to neuroticism, stress and subjective quality of life? *Arhiv za Higijenu Rada i Toksikologiju*, *60*(1), 99–107. https://doi.org/10.2478/10004-1254-60-2009-1899

Roberts, S. B., & Kendler, K. S. (1999). Neuroticism and self-esteem as indices of the vulnerability to major depression in women. *Psychological Medicine*, *29*(5), 1101–1109. PMID:10576302

Roenneberg, T., Kuehnle, T., Pramstaller, P. P., Ricken, J., Havel, M., Guth, A., Merrow, M. (2004). A marker for the end of adolescence, *Current Biology. 14*(24), R1038–R1039. https://doi.org/10.1016/j.cub.2004.11.039

Romera, I., Delgado-Cohen, H., Perez, T., Caballero, L., & Gilaberte, I. (2008). Factor analysis of

the Zung self-rating depression scale in a large sample of patients with major depressive disorder in primary care. *BMC Psychiatry*, *8*(1), 4. http://doi.org/10.1186/1471-244X-8-4

Sabolić Pipinić, I., Varnai, V. M., Turk, R., Breljak, D., Kežić, S., & Macan, J. (2013). Low frequency of filaggrin null mutations in Croatia and their relation with allergic diseases. *International Journal of Immunogenetics, 40*(3), 192–198. https://doi.org/10.1111/iji.12006

Sabolić Pipinić, I. (2015). *Interaction of filaggrin gene polymorphisms and environmental factors with atopic diseases in young adult population* (Doctoral Thesis). University of Zagreb, School of Medicine.

Shumway, M., Sentell, T., Unick, G., & Bamberg, W. (2004). Cognitive complexity of self-administered depression measures. *Journal of Affective Disorders*, *83*(2-3), 191–198. https://doi.org/10.1016/j.jad.2004.08.007

Shi, M., Liu, L., Yang, Y. L., & Wang, L. (2015). The mediating role of self-esteem in the relationship between big five personality traits and depressive symptoms among Chinese undergraduate medical students. *Personality and Individual Differences*, *83*, 55–59. https://doi.org/10.1016/j.paid.2015.03.050

Tate, D. G., Forchheimer, M., Maynard, F., Davidoff, G., & Dijkers, M. (1993). Comparing two measures of depression in spinal cord injury. *Rehabilitation Psychology, 38*(1), 53–61. https://doi.org/10.1037/h0080287

Tripković, M., Vuković, I. S., Frančišković, T., Pisk, S. V., & Krnić, S. (2014). Depression and auto-aggressiveness in adolescents in Zagreb. *Psychiatria Danubina*, *26*(Suppl. 3), 422–427.

Zung, W. W. K. (1965). A Self-Rating Depression Scale. *Archives of General Psychiatry*, *12*(1), 63–70. https://doi.org/10.1001/archpsyc.1965.01720310065008

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The Role of Parental Self-Efficacy in Explaining Children's Academic Outcomes

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Students' educational outcomes are influenced by several factors that are not directly related to their personal characteristics, among which parental beliefs and behaviours are of special relevance. The present study was conducted on a sample of 301 primary school students and their parents, who completed a set of prepared questionnaires used for investigating the contribution of parental self-efficacy and the perception of parental involvement to students' academic achievement, perceived academic control and achievement goals. The obtained results indicated parental self-efficacy as a predictor of perceived academic control and avoidance goals, whereas perception of parental involvement predicted perceived academic control, mastery approach and work avoidance goals. These findings confirm and extend previous knowledge regarding the relevance of parents' engagement to children's educational outcomes.

Keywords: academic outcomes, achievement goals, motivation, parental self-efficacy, perception of parental involvement

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Vloga samoučinkovitosti staršev pri pojasnjevanju učnih dosežkov otrok

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Na učne dosežke učencev vplivajo številni dejavniki, ki niso neposredno povezani z osebnostnimi značilnostmi učencev; tako imajo na primer pomemben vpliv prepričanja staršev in njihovi vzorci vedenja. Raziskava je bila izvedena na vzorcu 301 osnovnošolca in njihovih staršev. Udeleženci so izpolnili vprašalnike, s katerimi smo ugotavljali vlogo zaznane samoučinkovitosti staršev in pri učencih zaznane vključenosti staršev v šolsko delo pri učnih dosežkih otrok, zaznanega nadzora nad učenjem in doseganja učnih ciljev. Zaznana samoučinkovitost staršev se je izkazala za pomemben napovednik zaznanega nadzora nad učenjem s strani učencev in ciljev izogibanja, zaznana vključenost staršev v šolsko delo otrok pa je bila pomemben napovednik zaznanega nadzora nad učenjem in ciljev obvladovanja ter ciljev izogibanja delu. Ugotovitve raziskave potrjujejo in dopolnjujejo izsledke o pomenu vključenosti staršev v šolsko delo pri učnih dosežkih otrok.

Ključne besede: učni dosežki, učni cilji, motivacija, samoučinkovitost staršev, zaznana vključenost staršev

Introduction

When we consider students' academic accomplishments, we typically believe that the students' own characteristics, such as cognitive abilities and styles, beliefs, emotional processes or personality traits, govern their success and behaviours in school. However, other people, such as family members, also contribute to children's academic development in many ways, e.g., by preparing them for school, helping them learn and establish learning habits, or participating in their school life (Desforges & Abouchaar, 2003; Epstein, 1990). Generally, parental involvement may be conceptualised in different ways, typically including various activities occurring at home or at school, such as talking with children about school activities or supervising their homework, communication with school, as well as participating in school boards and activities (Bakker et al., 2007; Pomerantz et al., 2007). Such involvement is important for various child outcomes (c.f. Fan & Chen, 2001; Patall et al., 2008). However, although previous research has demonstrated the general relevance of parental characteristics and behaviours for children's academic lives, results pertaining to the impact of parents' and children's beliefs suggest somewhat more equivocal findings, in the sense that their contribution depends on the context of parental involvement and the nature of the investigated academic outcomes (Barger et al., 2019; Boonk et al., 2018; Deslandes & Bertrand, 2005; Silinskas et al., 2015; Wilder, 2014). Given this inconsistency, the present study aimed to study the differential contributions of parents' and students' beliefs regarding parental involvement to several important educational outcomes.

Children's understanding of their own school involvement and parents' support

In addition to academic achievement, which is often considered a key educational outcome of students, children's beliefs regarding their own academic abilities represent an important element of their approach to school, significantly affecting their academic success. In this context, perceived academic control is regarded as a construct associated with academic self-efficacy. It reflects students' beliefs regarding their ability to successfully accomplish relevant academic outcomes (Perry, 1991; Perry et al., 2001) and has previously been associated with academic adjustment, motivation, the use of efficient learning strategies and achievement among university, as well as primary and secondary students (Perry et al., 2005; Perry et al., 2001). Furthermore, perceived academic control positively affects children's emotional experiences: higher levels

are associated with experiencing more pride and satisfaction, and less anxiety or boredom in school (Perry et al., 2005; Perry et al., 2001). Therefore, the way children view their own capacities can be considered as one of crucial educational outcomes, strongly influencing their school success as well as other behaviours, both academic and non-academic.

Another construct that is highly relevant to understanding children's approach to school and academic success is learning motivation. It has previously been indicated that one of the crucial components of students' motivation is achievement goals, which reflect the purpose of the individual's engagement in a certain activity (Eccles, 2005; Wigfield & Eccles, 2000). According to the 2 x 2 achievement goal framework, these goals may be differentiated based on their valence and standards used for judging the outcomes of one's engagement (Elliot & McGregor, 2001). We typically distinguish between positive goals directed towards achieving success and more negative ones directed towards avoiding failure (approach vs. avoidance goals), as well as between goals directed towards mastering a task and those aimed at showing one's superior performance (mastery vs. performance goals) (Elliot & McGregor, 2001). This framework therefore differentiates between four different goals: mastery approach, mastery avoidance, performance approach and performance avoidance. Among these, the mastery approach goal refers to the individual's tendency to become proficient with respect to the presented materials as best as possible, whereas the mastery avoidance goal refers to their inclination to avoid situations in which these materials are not learned as well as they should be. The performance approach goal refers to a person's tendency to achieve more than others, in contrast to the performance avoidance goal, which is related to their propensity to avoid situations in which they are outperformed by others. In addition to these goals, it has been suggested that work avoidance should also be viewed as a separate achievement goal, reflecting the individual's proclivity for achieving the desired results by investing the least amount of effort (Kaliski et al., 2006). The relevance of achievement goals has been demonstrated repeatedly, with previous studies indicating their associations with academic achievement, emotions experienced in school and other educational outcomes (Church et al., 2001; Elliot & Thrash, 2001; Harackiewicz et al., 2000; Pekrun et al., 2006, 2009).

Whereas children's views about their own abilities and motives for learning may be seen as relevant learning outcomes, these are influenced by other types of students' beliefs, primarily those regarding parents' involvement in their education. Previous studies have indicated that children's perceptions of events often determine how external influences will in fact influence their behaviours (Dornbusch et al., 1987; Grolnick et al., 1991; Silinskas & Kikas, 2019),

suggesting that parental involvement should be explicitly perceived as present, benevolent and helpful by children in order to positively influence their behaviours. In accordance with this, it has been demonstrated that student reports of parents' involvement are associated with their academic self-efficacy, learning motivation and self-regulatory strategy use (Gonzalez-DeHass et al., 2005; Grolnick & Slowiaczek, 1994; Marchant et al., 2001). However, parental help that is perceived as intrusive or misunderstanding may also have detrimental effects, suggesting that the way children conceptualise parental interest in their schooling may be crucial in determining its later impact (Moroni et al., 2015).

Parents' views of their own involvement in children's school lives

Similar to the effects of students' beliefs regarding their own abilities and those of their parents, beliefs held by parents may also profoundly impact their own behaviours as well as students' school behaviours. Although parental involvement in children's schooling depends on numerous factors, such as their demographic status, including race, gender or educational and socioeconomic status (Davis-Kean, 2005; Desimone, 1999; Haveman & Wolfe, 1995; Klebanov et al., 1994), their abilities and knowledge, and own beliefs regarding the nature of the school system (Hoover-Dempsey & Sandler, 1997; Hoover-Dempsey et al., 2005; Walker et al., 2005), it is also highly associated with their views regarding their ability to influence children's educational abilities through their own involvement, i.e., parental self-efficacy (Bandura, 1977; Hoover-Dempsey & Sandler, 1995; Hoover-Dempsey et al., 2005). Such cognitions represent a context-specific type of self-efficacy beliefs that, according to the social cognitive theory, should be viewed as one of main determinants of successful goal accomplishment (Bandura, 1986, 2006). In accordance with this, parental self-efficacy is relevant to successful parenthood, as parents who feel more competent in their parental role typically use more constructive and adaptive parental methods and are more satisfied with their parenting than parents who perceive themselves as less competent (Bugental et al., 1989; Coleman & Karraker, 2000; Keresteš et al., 2011). Furthermore, it has been suggested that higher parental self-efficacy is related to more pronounced parental involvement in children's school life, often associated with students' better academic achievements (Grolnick et al., 1997; Seefeldt et al., 1998; Shumow & Lomax, 2002). However, other studies have failed to establish such influences (Anderson & Minke, 2007; Deslandes & Bertrand, 2005; Reed et al., 2000), and it is this discrepancy that provided the motivation for investigating the impact of parental self-efficacy on a range of educational outcomes addressed in the present study.

The present study

The present study investigated the relevance of parents' self-beliefs and students' perception of their parents' engagement for a set of important academic criteria among a group of Croatian primary school students and their parents. We focused on primary students because, in Croatia, these students typically get the most parental help with learning and can benefit most from understanding the impact of such help. In doing so, we wanted to investigate the relevance of parental self-efficacy and children's perception of parental involvement to students' academic achievement, self-efficacy beliefs and postulated achievement goals. In order to achieve these goals, we asked students to report their views of their parents' involvement and hypothesised that more positive perceptions would be associated with higher academic achievement, higher perceived academic control and more pronounced mastery and approach achievement goals. Similarly, we hypothesised that parental perception of their own efficacy would be associated with students' more favourable educational outcomes; namely, higher academic achievement, higher perceived academic control, and more pronounced mastery and approach achievement goals.

Finally, in exploring the relationships between parents and children's understanding of parental involvement, on the one hand, and children's educational outcomes, on the other, we controlled for demographical characteristics of both parents and children that may be of relevance in this context. In doing so, we hypothesised that girls would show somewhat higher academic achievement and lower performance goals than boys (Anderman & Anderman, 1999; Patrick et al., 1999; Pomerantz et al., 2002). Furthermore, we expected that children of better-educated parents would show more positive educational effects, as previous studies have shown that such parents often display more interest in children's learning and choose behaviours aimed at motivating children towards engaging in school-related activities (Alexander et al., 1994; Dauber et al., 1996; Davis-Kean, 2005; Grolnick & Slowiaczek, 1994; Hoff, 2003; Lee & Croninger, 1994).

Methods

A total of 301 students of final primary school grades participated in the present study. All of the participants were familiarised with the purpose of the study prior to its commencement and signed an informed consent before entering the study. The sample of 301 students included 134 (45.5%) boys and 167 girls (55.5%), who were attending the seventh (167; 55.5%) and eighth (134; 45.5%) grade in three Croatian primary schools.

In addition, 301 parents – one from each interviewed student (mother or father) – also participated in the study, forming a sample comprising 60 (19.9%) fathers and 241 (80.1%) mothers. Among the mothers, 12 (5.0%) had only completed primary school, 166 (68.9%) had completed secondary school, and 63 (26.1%) had finished university or postgraduate studies. Among the fathers, 2 (3.3%) had only completed primary school, 38 (63.3%) had completed secondary school, and 20 (33.3%) had finished university or postgraduate studies.

Procedure

Prior to conducting the study, permission was obtained from the institution's ethical board and from each school included, and informed consent was obtained from all of the participants.

The students were approached at the school premises, where they completed the prepared questionnaires including the *Perceived Academic Control Scale* (Perry et al., 2001), the *Achievement Goals Scale* (Rovan, 2011) and the *Perception of Parental Involvement Scale* (which was developed for the purpose of the present study). The students also reported their gender, grade and academic achievement (grade point average; GPA). The students' average self-reported GPA was 3.98 (*SD* = .73).

In addition to completing the prepared questionnaires themselves, the students were also asked to inform their parents about the study. After presenting parents with the relevant study information, those who agreed to participate in the study completed the *Parental Self-Efficacy for Helping the Child Succeed in School Scale* (Hoover-Dempsey et al., 1992; Walker et al., 2005), either on the school premises or at home. They also reported their gender and education status.

Instruments

The *Perceived Academic Control Scale* (Perry et al., 2001) is an instrument designed to measure students' perceived academic control, that is, their beliefs regarding their capacity to influence their own academic outcomes. The scale comprises 8 items, which the participants rated on a 5-point Likert type scale (1 – strongly disagree; 5 – strongly agree).

The *Achievement Goals Scale* (Rovan, 2011) is an instrument for assessing students' achievement goals. It includes five subscales designed to measure five achievement goals: Mastery Approach, Mastery Avoidance, Performance Approach, Performance Avoidance and Work Avoidance. This scale comprises 15 items, with each achievement goal being measured using 3 items. The

participants' task was to rate their agreement which each item using a 5-point Likert type scale (1 – strongly disagree; 5 – strongly agree).

The *Perception of Parental Involvement Scale* was developed for the purpose of the present study and was used to assess children's perception of parental involvement in their school activities. Three of its items were adapted from the *Parent Report of Home-Based Involvement Activities Scale* and the *Parent Report of School-Based Involvement Activities Scale* (Walker et al., 2005), instruments designed to assess different types of involvement activities of family members with respect to children's schoolwork, which can take place either at home or at school. In addition, four new items were added regarding parents' familiarity with their children's school activities, friends and problems. Overall, this scale comprised 7 items and the participants' task was to rate their agreement with each item using a 4-point Likert type scale (1 – strongly disagree; 4 – strongly agree).

The *Parental Self-Efficacy for Helping the Child Succeed in School Scale* (Hoover-Dempsey et al., 1992; Walker et al., 2005) is an instrument used for assessing parents' perception of their own efficacy in helping their children successfully accomplish school obligations. It comprises 7 items and the participants' task was to rate their agreement with each item using a 4-point Likert type scale (1 – strongly disagree; 4 – strongly agree). Due to unsatisfactory factor loading, one item was eliminated from the analysis and the participants' score was calculated based on the remaining 6 items.

The scores on all of the instruments were calculated as a sum of all of the items in the respective scales. The demographic data and psychometric properties of all of the instruments are listed in Table 1.

Table 1

Psychometric Properties of the Administered Instruments

Measure	M	SD	Min	Max	Cronbach α
Perceived academic control	31.93	5.69	11	40	.73
Mastery approach goal	12.42	2.79	3	15	.79
Mastery avoidance goal	8.73	3.18	3	15	.65
Performance approach goal	8.74	3.46	3	15	.73
Performance avoidance goal	7.92	3.84	3	15	.84
Work avoidance goal	7.29	3.16	3	15	.63
Perception of parental involvement	22.96	3.63	7	28	.69
Parental self-efficacy	19.19	3.39	9	24	.75

Statistical analysis

The analysis of quantitative data was conducted using the Statistica 11 (StatSoft, Inc.) statistical package. After the basic descriptive and reliability analyses, hierarchical regression analyses were conducted in order to investigate the relative contributions of parental self-efficacy, students' perception of parental involvement and participants' demographic characteristics to students' GPA, perceived academic control and achievement goals. This analysis was chosen because it provides an estimation of the individual predictor variables' unique contribution to the criterion by testing the significance of the change in the explained variance at each regression step (Cohen & Cohen, 1975). Specifically, seven different analyses were conducted using students' GPA, perceived academic control and five different achievement goals as criteria. Prior to conducting the analyses, we tested whether our data meets the relevant requirements and found that no significant issues emerged (e.g., the number of participants with respect to the number of predictor variables was satisfactory, scatter plots showed no major disruption regarding linearity, normality or homoscedasticity, the variables did not indicate multi-collinearity or singularity, and the errors were independent). The participants' demographic characteristics – students' gender and grade, as well as parents' education status – were then entered in all of the analyses in the first step as control variables, which are customarily entered at the start of hierarchical regression analyses. Next, the students' perception of parental involvement was entered in the second step, and parental self-efficacy was entered in the final, third step of the analysis. We wanted to enter two types of beliefs in two separate regression steps because these represent the beliefs of two separate participant groups and consequently do not have the same causal priority (Petrocelli, 2019): the children's views have a more direct impact on their behaviours than the views of their parents and were therefore entered first.

Results

The results obtained in the hierarchical regression analyses revealed parental self-efficacy, mothers' education status and students' gender as significant predictors of students' academic achievement, together explaining 27% of criterion variance (Table 2). Specifically, higher academic achievement was identified among girls, as well as among children with better-educated mothers and parents characterised by higher parental self-efficacy. Furthermore, students' more positive perception of parental involvement in their school life and higher parental self-efficacy were revealed as significant predictors of perceived

academic control (Table 2). These explained a smaller degree of variance (17%) than academic achievement.

Table 2

Results of the Hierarchical Regression Analyses using Academic Achievement and Perceived Academic Control as Criteria

Step	Predictors	Criteria	
		Academic achievement	Perceived academic control
1.	Student's gender	.27**	.13*
	Student's grade	.03	-.04
	Father's education status	.10	.06
	Mother's education status	.29**	.08
	R	.43	.19
	R^2	.19	.04
	F (df)	16.23** (4,280)	2.63* (4,280)
2.	Student's gender	.26**	.09
	Student's grade	.03	-.04
	Father's education status	.10	.05
	Mother's education status	.29**	.08
	Perception of parental involvement	.06	.31**
	R	.44	.36
	R^2	.19	.13
	ΔR^2	.00	.09**
	F (df)	13.20** (5, 279)	8.29** (5, 279)
3.	Student's gender	.23**	.07
	Student's grade	.03	-.05
	Father's education status	.12	.07
	Mother's education status	.23**	.03
	Perception of parental involvement	.00	.27**
	Parental self-efficacy	.30**	.21**
	R	.52	.41
	R^2	.27	.17
	ΔR^2	.08**	.04**
	F (df)	17.44** (6, 278)	9.48** (6, 278)

Note. *$p < .05$; **$p < .01$; β – standardised regression coefficient; R - multiple correlation coefficient; R^2 – variance explained by the predictors; ΔR^2 – change in variance explained by the predictors; F – F-ratio; p – level of significance.

With respect to achievement goals, whereas parental self-efficacy was identified as a significant predictor of all avoidance goals, perception of parental involvement was revealed as a significant predictor of students' mastery approach and work avoidance goals (Table 3). Specifically, lower parental

self-efficacy was associated with higher levels of avoidance goals, whereas a more positive perception of parental involvement was associated with a more pronounced mastery approach and less pronounced work avoidance goals. Furthermore, gender was identified as a significant predictor of students' performance approach goals, with girls having lower levels of these goals, and grade was identified as a predictor of students' work avoidance goals, with these goals being more prominent among older students. The identified predictors explained the highest amount of variance of mastery approach and work avoidance goals (14%), followed by performance approach goals (11%). The degree of explained variance for mastery and performance avoidance goals was very modest, amounting to only 5%.

Table 3

Results of the Hierarchical Regression Analyses using Achievement Goals as Criteria

Steps	Predictors	Criteria				
		Mastery approach	Mastery avoidance	Perform. approach	Perform. avoidance	Work avoidance
1.	Student's gender	.11	-.07	-.31**	-.08	-.13*
	Student's grade	-.07	-.01	-.01	-.10	.18**
	Father's education status	.10	.04	.12	.06	-.08
	Mother's education status	-.10	-.12	-.09	-.13	-.03
	R	.17	.12	.33	.16	.26
	R^2	.03	.02	.11	.03	.07
	F (df)	2.11 (4,280)	1.06 (4,280)	8.26** (4,280)	1.80 (4,280)	5.18** (4,280)
2.	Student's gender	.07	-.06	-.32**	-.08	-.10
	Student's grade	-.08	-.01	-.01	-.10	.18**
	Father's education status	.09	.04	.12	.06	-.08
	Mother's education status	-.10	-.12	-.09	-.13	-.02
	Perception of parental involvement	.33**	-.02	.05	.02	-.22**
	R	.37	.12	.33	.16	.34
	R^2	.14	.02	.11	.03	.12
	ΔR^2	.11**	.00	.00	.00	.05**
	F (df)	8.75** (5, 279)	.86 (5, 279)	6.79** (5, 279)	1.45 (5, 279)	7.34** (5, 279)

Steps	Predictors	Criteria				
		Mastery approach	Mastery avoidance	Perform. approach	Perform. avoidance	Work avoidance
3.	Student's gender	.06	-.04	-.32**	-.06	-.09
	Student's grade	-.08	.00	-.01	-.10	.19**
	Father's education status	.09	.03	.12	.05	-.09
	Mother's education status	-.11	-.08	-.08	-.10	.01
	Perception of parental involvement	.32**	.02	.06	.04	-.19**
	Parental self-efficacy	.03	-.20**	-.02	-.16*	-.16**
	R	.37	.23	.33	.22	.37
	R^2	.14	.05	.11	.05	.14
	ΔR^2	.00	.04**	.00	.02*	.02**
	F (df)	7.31** (6, 278)	2.50* (6, 278)	5.66** (6, 278)	2.33* (6, 278)	7.52** (6, 278)

Note. *$p < .05$; **$p < .01$; β – standardised regression coefficient; R - multiple correlation coefficient; R^2 – variance explained by the predictors; ΔR^2 – change in variance explained by the predictors; F – F-ratio; p – level of significance.

Discussion

The present study investigated the relevance of parental self-efficacy and students' perception of parental involvement to several educational outcomes, including students' GPA, perceived academic control and achievement goals, among a group of primary school students in Croatia. The obtained results indicated parental self-efficacy as a significant predictor of children's GPA, perceived academic control and the three assessed avoidance goals. Furthermore, students' perception of parental involvement was revealed as a significant predictor of their perceived academic control, mastery approach and work avoidance goals. With respect to students' demographic variables included in the analysis, gender was identified as a significant predictor of their GPA and performance approach goals, and grade was identified as a predictor of work avoidance goals. Furthermore, mothers' education status was identified as a significant predictor of students' GPA.

The differential impact of parental self-efficacy on students' various educational outcomes

Within the present study, the main focus was on parental self-efficacy, which reflects parents' view of their ability to influence children's school achievement and other relevant outcomes (Bandura, 1977; Bugental et al., 1989;

Coleman & Karraker, 2000; Hoover-Dempsey et al., 1992; Hoover-Dempsey & Sandler, 1995, 1997). The relevance of this factor was explored because previous studies had yielded inconsistent results regarding its role in the present context (Anderson & Minke, 2007; Deslandes & Bertrand, 2005; Reed et al., 2000). In accordance with the postulated hypothesis, the obtained results indicated that parental self-efficacy predicted children's GPA, perceived academic control and the three assessed avoidance goals. This general finding agrees with previous results indicating associations between parental self-efficacy, parental involvement in children's school life, and children's educational outcomes (Grolnick et al., 1997; Seefeldt et al., 1998; Shumow & Lomax, 2002). Such associations are understandable, as self-efficacy in general has been associated with successful goal accomplishment and persistence in the face of challenges (Bandura, 2006). In the parenting domain, this indicates that parents' beliefs regarding their efficacy in providing children with the needed help influences not only their own behaviours (Hoover-Dempsey et al., 2005), but also their children's outcomes. Furthermore, it confirms previous findings indicating close associations between parents' beliefs and behaviours, on the one hand, and children's life outcomes, on the other (Murphey, 1992; Sigel et al., 2014).

It is important to note that parental self-efficacy did not influence all of the explored outcomes in the same manner: although it had a positive influence on GPA and perceived academic control, it did not affect students' mastery approach and performance approach goals. Lower parental self-efficacy was, however, associated with more pronounced mastery avoidance, performance avoidance and work avoidance goals. This relevance of parental self-efficacy may be related to the fact that parents with stronger self-efficacy tend to support children's interests in school as well as encouraging the development of their self-management skills (Bandura et al., 1996). Such parents also show more confidence in their children's ability to succeed (Wentzel, 1998), which influences children's views of their own abilities and their chances of success, as reflected in higher perceived academic control and school success. Thus, parents' behaviours and attitudes become reflected in students' own views of themselves, and may even be assimilated through involuntary modelling, given that children learn in part by observing others, especially parents (Bandura, 1997; Schunk, 1989).

In addition, parents' views of themselves are also reflected in students' achievement goals, especially in their mastery avoidance, performance avoidance and work avoidance goals. This indicates that low levels of parental self-efficacy may provide a model for children who not only develop lower academic self-efficacy, but also acquire achievement goals that are motivated by the

fear of failure and associated with the use of self-regulatory strategies aimed at avoiding negative outcomes (Bandura, 1997; Elliot & McGregor, 2001; Elliot & Sheldon, 1997). Sadly, such avoidance regulation is associated not only with lower academic achievement, but also with detrimental personal adjustment and wellbeing (Elliot & Sheldon, 1997).

The relevance of students' perception of parental involvement to educational outcomes

Within the present study, we next considered the relevance of students' perception of parental involvement to their educational outcomes. The obtained results indicated that this factor predicted students' perceived academic control, mastery approach and work avoidance goals. Generally, the relevance of students' perception of parents' involvement to their educational outcomes was expected, and is in accordance with previous findings indicating the relevance of such perceptions to students' perceived academic competence, motivation and efforts (Dornbusch et al., 1987; Gonzalez-DeHass et al., 2005; Grolnick et al., 1991; Grolnick & Slowiaczek, 1994; Marchant et al., 2001; Wilder, 2014). Thus, children who view their parents as more caring and involved, at least in the context of their school involvement, also view themselves as academically more able and are inclined to pursue mastery goals associated with more efficient learning strategies, deeper information processing and higher self-regulation during learning (Anderman & Wolters, 2006; Elliot & McGregor, 2001; Greene et al., 2004). On the other hand, the results of the present study indicating an association between a more negative perception of parental involvement and work avoidance goals extend previous findings. Specifically, they demonstrate that perceiving parents as not involved in one's school life, and potentially not caring about one's education, leads children to engage in behaviours that demonstrate their general lack of interest and engagement in learning activities.

Confirmed relevance of demographic variables to students' educational outcomes

Although the focus of the present study was on parents' and students' views of their own activities, we also aimed to control for and further explore the relevance of several demographic factors in this context. First, with respect to parental characteristics, mothers' education status was identified as a significant predictor of students' GPA, which is in accordance with findings indicating that better-educated parents tend to value education more, collaborate more with the

school and provide their children with better opportunities for pursuing higher education when compared to less-educated parents (Alexander et al., 1994; Davis-Kean, 2005; Hoff, 2003; Noack, 2004). This is especially relevant to mothers, who generally tend to participate in their children's education more than fathers (Cone et al., 1985; Grolnick et al., 1997; Grolnick & Slowiaczek, 1994). Consequently, the identified relevance of mothers' education status within the present study was not surprising, as it confirms some previous findings (Dearing et al., 2004; Magnuson, 2007).

With respect to the students' demographic variables considered within the study, gender was identified as a significant predictor of students' GPA and performance approach goals, and grade was identified as a predictor of work avoidance goals. The reported relevance of students' gender is in accordance with previous studies indicating its associations with academic achievement (Baharudin & Zulkefly, 2009; Bodill & Roberts, 2013; Pomerantz et al., 2002). Specifically, it has been demonstrated that girls tend to show better school achievement measured using school grades, which is in agreement with the findings of the present study. With respect to achievement goals, previous studies have indicated that boys often show more pronounced performance goal orientations than girls (Anderman & Anderman, 1999; Midgley & Urdan, 1995; Patrick et al., 1999), a finding that resonates with the results of the present study.

Although previous studies have indicated the influence of age on academic behaviours, including, for instance, decreased motivation among older students (Eccles, 1993; Eccles et al., 1989), within the present context a substantial contribution from children's attended grade to educational outcomes was not expected, as all of the students were of very similar age. However, the revealed relevance of this factor to students' work avoidance goals may be associated with the specific status of the eighth grade in Croatia, representing the final grade of primary school before the transition to secondary school. Consequently, students may display less typical learning behaviours at this time and focus more on their preparation for secondary school. As this represents a very specific and potentially stressful period for students (Akos & Galassi, 2004; Blyth et al., 1983; Hirsch & Rapkin, 1987; Wigfield et al., 1991), it is not surprising that they may be less committed to schoolwork during this time.

Limitations of the present study and directions for future research

The present study aimed to explore differential effects of parents' and students' views of parental involvement in several learning outcomes. In doing

so, it demonstrated that both factors influenced the investigated outcomes, albeit in different ways. In addition, it replicated some previous findings and reports, primarily those related to the general relevance of individuals' beliefs on educational outcomes and the role of gender and parents' education status in learning success. When interpreting the results from the present study, it is important to consider several limitations that may influence the generalisability of the obtained findings. First, some of the instruments utilised in the present study were associated with limited reliability and need to be complemented by additional measures of addressed constructs in future studies. Next, the present investigation represents a correlational study based on self-report data that do not provide clear insights into the potential causal relationships between variables and may be burdened with a number of additional biases (McDonald, 2008; Paulhus & Vazire, 2007). In addition, the study was conducted on primary students, who typically get the greatest amount of parental help with schoolwork in Croatia. This suggests that the obtained findings should be generalised to other student groups with caution, as parental support, although present across all student ages, tends to change in nature among older students (Boonk et al., 2018).

Given these limitations, in future studies it will be important to study differential effects of parental involvement on girls and boys, as well as their relevance to different student groups, as previous studies have indicated an important role of age and gender with respect to students' academic achievement and other outcomes (Eccles et al., 1993; Jokić & Ristić Dedić, 2010; Midgley & Urdan, 1995; Wigfield & Eccles, 2000). Next, it will be important to validate the cross-cultural stability of the described results by focusing on children from different education systems. Furthermore, it will be important to complement subjective self-ratings with more objective measures of parental involvement and to implement longitudinal research designs that may provide deeper insights into the explored issues. Moreover, future studies should expand the obtained results by relating them to other factors, e.g., specific types of parental behaviours, for different educational outcomes. In doing so, it will be possible to address many related questions regarding the mechanisms underlying the influence of parental involvement on their children's educational outcomes.

Conclusions

The present study investigated the relevance of parental self-efficacy and children's perception of parental involvement for a set of primary school students' learning outcomes, including their academic achievement (GPA),

perceived academic control and achievement goals. The obtained results indicated an important impact of parental self-efficacy on students' educational outcomes, albeit different with respect to specific explored outcomes. Furthermore, students' perception of parental involvement was identified as a significant predictor of perceived academic control and two types of achievement goals. Finally, the previously identified relevance of students' gender, grade and mothers' education status in this context was also confirmed. Overall, these findings confirm and extend previous results regarding the role of parents' engagement in primary school children's educational outcomes by indicating the differential contributions of the explored predictors to various educational outcomes.

References

Akos, P., & Galassi, J. P. (2004). Middle and high school transitions as viewed by students, parents, and teachers. *Professional School Counseling*, *7*(4), 212–221.

Alexander, K. L., Entwisle, D. R., & Bedinger, S. D. (1994). When expectations work: Race and socioeconomic differences in school performance. *Social Psychology Quarterly*, *57*(4), 283–299. https://doi.org/10.2307/2787156

Anderman, E. M., & Wolters, C. A. (2006). Goals, values, and affect: Influences on student motivation. In P. A. Alexander & P. H. Winne (Eds.), *Handbook of educational psychology* (pp. 369–389). Lawrence Erlbaum Publishers.

Anderman, L. H., & Anderman, E. M. (1999). Social predictors of changes in students' achievement goal orientations. *Contemporary Educational Psychology*, *24*(1), 21–37. https://doi.org/10.1006/ceps.1998.0978

Anderson, K. J., & Minke, K. M. (2007). Parent involvement in education: Toward an understanding of parents' decision making. *The Journal of Educational Research*, *100*(5), 311–323. https://doi.org/10.3200/JOER.100.5.311-323

Baharudin, R., & Zulkefly, N. (2009). Relationships with father and mother, self-esteem and academic achievement among college students. *American Journal of Scientific Research*, *6*, 86–94.

Bakker, J., Denessen, E., & Brus-Laeven, M. (2007). Socio-economic background, parental involvement and teacher perceptions of these in relation to pupil achievement. *Educational Studies*, *33*(2), 177–192. https://doi.org/10.1080/03055690601068345

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, *84*(2), 191–215. https://doi.org/10.1037/0033-295X.84.2.191

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. EngPrentice Hall.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. W. H. Freeman.

Bandura, A. (2006). Toward a psychology of human agency. *Perspectives on Psychological Science*, *1*(2), 164–180. https://doi.org/10.1111/j.1745-6916.2006.00011.x

Bandura, A., Barbaranelli, C., Caprara, G. V., & Pastorelli, C. (1996). Multifaceted impact of self-efficacy beliefs on academic functioning. *Child Development*, *67*(3), 1206–1222. https://doi.org/10.2307/1131888

Barger, M. M., Kim, E. M., Kuncel, N. R., & Pomerantz, E. M. (2019). The relation between parents' involvement in children's schooling and children's adjustment: A meta-analysis. *Psychological Bulletin, 145*(9), 855–890. https://doi.org/10.1037/bul0000201

Blyth, D. A., Simmons, R. G., & Carlton-Ford, S. (1983). The adjustment of early adolescents to school transitions. *The Journal of Early Adolescence*, *3*(1–2), 105–120. https://doi.org/10.1177/027243168331008

Bodill, K., & Roberts, L. D. (2013). Implicit theories of intelligence and academic locus of control as predictors of studying behaviour. *Learning and Individual Differences*, *27*, 163–166.

Boonk, L., Gijselaers, H. J., Ritzen, H., & Brand-Gruwel, S. (2018). A review of the relationship between parental involvement indicators and academic achievement. *Educational Research Review, 24*, 10–30. https://doi.org/10.1016/j.edurev.2018.02.001

Bugental, D. B., Blue, J., & Cruzcosa, M. (1989). Perceived control over caregiving outcomes: Implications for child abuse. *Developmental Psychology*, *25*(4), 532–539. https://doi.org/10.1037/0012-1649.25.4.532

Church, M. A., Elliot, A. J., & Gable, S. L. (2001). Perceptions of classroom environment, achievement goals, and achievement outcomes. *Journal of Educational Psychology*, *93*(1), 43–54. https://doi.org/10.1037/0022-0663.93.1.43

Cohen, I., & Cohen, P. (1975). *Applied multiple regression/correlation analysis for the behavioral sciences*. Hillsdale, Lawrence Erlbum Associates.

Coleman, P. K., & Karraker, K. H. (2000). Parenting self-efficacy among mothers of school-age children: Conceptualization, measurement, and correlates. *Family Relations*, *49*(1), 13–24. https://doi.org/10.1111/j.1741-3729.2000.00013.x

Cone, J. D., Delawyer, D. D., & Wolfe, V. V. (1985). Assessing parent participation: The parent/family involvement index. *Exceptional Children*, *51*(5), 417–424. https://doi.org/10.1177/001440298505100508

Dauber, S. L., Alexander, K. L., & Entwisle, D. R. (1996). Tracking and transitions through the middle grades: Channeling educational trajectories. *Sociology of Education*, *69*, 290–307. https://doi.org/10.2307/2112716

Davis-Kean, P. E. (2005). The influence of parent education and family income on child achievement: The indirect role of parental expectations and the home environment. *Journal of Family Psychology*, *19*(2), 294–304. https://doi.org/10.1037/0893-3200.19.2.294

Dearing, E., McCartney, K., Weiss, H. B., Kreider, H., & Simpkins, S. (2004). The promotive effects of family educational involvement for low-income children's literacy. *Journal of School Psychology*, *42*(6), 445–460. https://doi.org/10.1016/j.jsp.2004.07.002

Desforges, C., & Abouchaar, A. (2003). *The impact of parental involvement, parental support and family education on pupil achievement and adjustment: A review of literature*. DfES Publications London.

Desimone, L. (1999). Linking parent involvement with student achievement: Do race and income

matter? *The Journal of Educational Research*, *93*(1), 11–30. https://doi.org/10.1080/00220679909597625

Deslandes, R., & Bertrand, R. (2005). Motivation of parent involvement in secondary-level schooling. *The Journal of Educational Research*, *98*(3), 164–175. https://doi.org/10.3200/JOER.98.3.164-175

Dornbusch, S. M., Ritter, P. L., Leiderman, P. H., Roberts, D. F., & Fraleigh, M. J. (1987). The relation of parenting style to adolescent school performance. *Child Development*, *58*, 1244–1257. https://doi.org/10.2307/1130618

Eccles, J. S. (1993). School and family effects on the ontogeny of children's interests, self-perceptions, and activity choices. In J. Jacobs (Ed.), *Developmental perspectives on motivation* (Vol. 40, pp. 145–208). University of Nebraska Press.

Eccles, J. S. (2005). Subjective task value and the Eccles et al. model of achievement-related choices. In A. J. Elliot & C. S. Dweck (Eds.), *Handbook of competence and motivation* (pp. 105–121). Guilford Publication.

Eccles, J. S., Wigfield, A., Flanagan, C. A., Miller, C., Reuman, D. A., & Yee, D. (1989). Self-concepts, domain values, and self-esteem: Relations and changes at early adolescence. *Journal of Personality*, *57*(2), 283–310. https://doi.org/10.1111/j.1467-6494.1989.tb00484.x

Eccles, J. S., Wigfield, A., Harold, R. D., & Blumenfeld, P. (1993). Age and gender differences in children's self-and task perceptions during elementary school. *Child Development*, *64*(3), 830–847. https://doi.org/10.1111/j.1467-8624.1993.tb02946.x

Elliot, A. J., & McGregor, H. A. (2001). A 2 x 2 achievement goal framework. *Journal of Personality and Social Psychology*, *80*(3), 501–519. https://doi.org/10.1037/0022-3514.80.3.501

Elliot, A. J., & Sheldon, K. M. (1997). Avoidance achievement motivation: A personal goals analysis. *Journal of Personality and Social Psychology*, *73*(1), 171–185. https://doi.org/10.1037/0022-3514.73.1.171

Elliot, A. J., & Thrash, T. M. (2001). Achievement goals and the hierarchical model of achievement motivation. *Educational Psychology Review*, *13*(2), 139–156. https://doi.org/10.1023/A:1009057102306

Epstein, J. L. (1990). School and family connections: Theory, research, and implications for integrating sociologies of education and family. *Marriage & Family Review*, *15*(1–2), 99–126. https://doi.org/10.1300/J002v15n01_06

Fan, X., & Chen, M. (2001). Parental involvement and students' academic achievement: A meta-analysis. *Educational Psychology Review*, *13*(1), 1–22. https://doi.org/10.1023/A:1009048817385

Gonzalez-DeHass, A. R., Willems, P. P., & Holbein, M. F. D. (2005). Examining the relationship between parental involvement and student motivation. *Educational Psychology Review*, *17*(2), 99–123. https://doi.org/10.1007/s10648-005-3949-7

Greene, B. A., Miller, R. B., Crowson, H. M., Duke, B. L., & Akey, K. L. (2004). Predicting high school students' cognitive engagement and achievement: Contributions of classroom perceptions and motivation. *Contemporary Educational Psychology*, *29*(4), 462–482. https://doi.org/10.1016/j.cedpsych.2004.01.006

Grolnick, W. S., Benjet, C., Kurowski, C. O., & Apostoleris, N. H. (1997). Predictors of parent involvement in children's schooling. *Journal of Educational Psychology*, *89*(3), 538–548. https://doi.org/10.1037/0022-0663.89.3.538

Grolnick, W. S., Ryan, R. M., & Deci, E. L. (1991). Inner resources for school achievement: Motivational mediators of children's perceptions of their parents. *Journal of Educational Psychology*, *83*(4), 508–517. https://doi.org/10.1037/0022-0663.83.4.508

Grolnick, W. S., & Slowiaczek, M. L. (1994). Parents' involvement in children's schooling: A multidimensional conceptualization and motivational model. *Child Development*, *65*(1), 237–252. https://doi.org/10.2307/1131378

Harackiewicz, J. M., Barron, K. E., Tauer, J. M., Carter, S. M., & Elliot, A. J. (2000). Short-term and long-term consequences of achievement goals: Predicting interest and performance over time. *Journal of Educational Psychology*, *92*(2), 316–330.https://doi.org/10.1037/0022-0663.92.2.316

Haveman, R., & Wolfe, B. (1995). The determinants of children's attainments: A review of methods and findings. *Journal of Economic Literature*, *33*, 1829–1878.

Hirsch, B. J., & Rapkin, B. D. (1987). The transition to junior high school: A longitudinal study of self-esteem, psychological symptomatology, school life, and social support. *Child Development*, *58*(5), 1235–1243.https://doi.org/10.2307/1130617

Hoff, E. (2003). The specificity of environmental influence: Socioeconomic status affects early vocabulary development via maternal speech. *Child Development*, *74*(5), 1368–1378.https://doi.org/10.1111/1467-8624.00612

Hoover-Dempsey, K. V., Bassler, O. C., & Brissie, J. S. (1992). Explorations in parent-school relations. *The Journal of Educational Research*, *85*(5), 287–294. https://doi.org/10.1080/00220671.1992.9941128

Hoover-Dempsey, K. V., & Sandler, H. M. (1995). Parental involvement in children's education: Why does it make a difference. *The Teachers College Record*, *97*(2), 310–331.

Hoover-Dempsey, K. V., & Sandler, H. M. (1997). Why do parents become involved in their children's education? *Review of Educational Research*, *67*(1), 3–42. https://doi.org/10.3102/00346543067001003

Hoover-Dempsey, K. V., Walker, J. M., Sandler, H. M., Whetsel, D., Green, C. L., Wilkins, A. S., & Closson, K. (2005). Why do parents become involved? Research findings and implications. *The Elementary School Journal*, *106*(2), 105–130. https://doi.org/10.1086/499194

Jokić, B., & Ristić Dedić, Z. (2010). Razlike u školskom uspjehu učenika trećih i sedmih razreda osnovnih škola u Republici Hrvatskoj s obzirom na spol učenika i obrazovanje roditelja: Populacijska perspektiva [Differences in the academic accomplishments of students of the third and seventh grades of primary school in Croatia according to students' gender and parents' education: A population perspective]. *Revija Za Socijalnu Politiku*, *17*(3), 345–362. https://doi.org/10.3935/rsp.v17i3.954

Kaliski, P. K., Finney, S. J., & Horst, S. J. (2006). *Does socioeconomic status influence achievement goal adoption? An investigation of group difference using structured means modeling*. Presented at the Meeting of the American Educational Research Association.

Keresteš, G., Brković, I., & Kuterovac Jagodić, G. (2011). Doživljaj kompetentnosti u roditeljskoj ulozi i sukobi između roditelja i adolescenata [Parental competence and adolescent-parent conflict]. *Suvremena Psihologija*, *14*(1), 17–34.

Klebanov, P. K., Brooks-Gunn, J., & Duncan, G. J. (1994). Does neighborhood and family poverty

affect mothers' parenting, mental health, and social support? *Journal of Marriage and the Family*, *56*, 441–455. https://doi.org/10.2307/353111

Lee, V. E., & Croninger, R. G. (1994). The relative importance of home and school in the development of literacy skills for middle-grade students. *American Journal of Education*, *102*, 286–329. https://doi.org/10.1086/444071

Magnuson, K. (2007). Maternal education and children's academic achievement during middle childhood. *Developmental Psychology*, *43*(6), 1497–1512. https://doi.org/10.1037/0012-1649.43.6.1497

Marchant, G. J., Paulson, S. E., & Rothlisberg, B. A. (2001). Relations of middle school students' perceptions of family and school contexts with academic achievement. *Psychology in the Schools*, *38*(6), 505–519. https://doi.org/10.1002/pits.1039

McDonald, J. D. (2008). Measuring personality constructs: The advantages and disadvantages of self-reports, informant reports and behavioural assessments. *Enquire*, *1*(1), 1–18.

Midgley, C., & Urdan, T. (1995). Predictors of middle school students' use of self-handicapping strategies. *The Journal of Early Adolescence*, *15*(4), 389–411. https://doi.org/10.1177/0272431695015004001

Moè, A., Katz, I., & Alesi, M. (2018). Scaffolding for motivation by parents, and child homework motivations and emotions: Effects of a training programme. B*ritish Journal of Educational Psychology*, *88*(2), 323–344. https://doi.org/10.1111/bjep.12216

Moroni, S., Dumont, H., Trautwein, U., Niggli, A., & Baeriswyl, F. (2015). The need to distinguish between quantity and quality in research on parental involvement: The example of parental help with homework. *The Journal of Educational Research, 108*(5), 417–431. https://doi.org/10.1080/00220671.2014.901283

Murphey, D. A. (1992). Constructing the child: Relations between parents' beliefs and child outcomes. *Developmental Review*, *12*(2), 199–232. https://doi.org/10.1016/0273-2297(92)90009-Q

Noack, P. (2004). The family context of preadolescents' orientations toward education: Effects of maternal orientations and behavior. *Journal of Educational Psychology*, *96*(4), 714–722. https://doi.org/10.1037/0022-0663.96.4.714

Patall, E. A., Cooper, H., & Robinson, J. C. (2008). Parent involvement in homework: A research synthesis. *Review of Educational Research*, *78*(4), 1039–1101. https://doi.org/10.3102/0034654308325185

Patrick, H., Ryan, A. M., & Pintrich, P. R. (1999). The differential impact of extrinsic and mastery goal orientations on males' and females' self-regulated learning. *Learning and Individual Differences*, *11*(2), 153–171. https://doi.org/10.1016/S1041-6080(00)80003-5

Paulhus, D. L., & Vazire, S. (2007). The self-report method. In R. W. Robins, R. C. Fraley, & R. F. Krueger (Eds.), *Handbook of research methods in personality psychology* (pp. 224–239). Guilford Press.

Pekrun, R., Elliot, A. J., & Maier, M. A. (2006). Achievement goals and discrete achievement emotions: A theoretical model and prospective test. *Journal of Educational Psychology*, *98*(3), 583–597. https://doi.org/10.1037/0022-0663.98.3.583

Pekrun, R., Elliot, A. J., & Maier, M. A. (2009). Achievement goals and achievement emotions: Testing a model of their joint relations with academic performance. *Journal of Educational*

Psychology, *101*(1), 115–135. https://doi.org/10.1037/a0013383

Perry, R. P. (1991). Perceived control in college students: Implications for instruction in higher education. In J. C. Smart (Ed.), *Higher education: Handbook of theory and research* (Vol. 7, pp. 1–56). Agathon.

Perry, R. P., Hall, N. C., & Ruthig, J. C. (2005). Perceived (academic) control and scholastic attainment in higher education. In J. C. Smart (Ed.), *Higher education: Handbook of theory and research* (Vol. 20, pp. 363–436). Springer.

Perry, R. P., Hladkyj, S., Pekrun, R. H., Clifton, R. A., & Chipperfield, J. G. (2005). Perceived academic control and failure in college students: A three-year study of scholastic attainment. *Research in Higher Education*, *46*(5), 535–569. https://doi.org/10.1007/s11162-005-3364-4

Perry, R. P., Hladkyj, S., Pekrun, R. H., & Pelletier, S. T. (2001). Academic control and action control in the achievement of college students: A longitudinal field study. *Journal of Educational Psychology*, *93*(4), 776–789. https://doi.org/10.1037/0022-0663.93.4.776

Petrocelli, J. V. (2003). Hierarchical multiple regression in counseling research: Common problems and possible remedies. *Measurement and evaluation in counseling and development, 36*(1), 9–22. https://doi.org/10.1080/07481756.2003.12069076

Pomerantz, E. M., Altermatt, E. R., & Saxon, J. L. (2002). Making the grade but feeling distressed: Gender differences in academic performance and internal distress. *Journal of Educational Psychology*, *94*(2), 396–404. https://doi.org/10.1037/0022-0663.94.2.396

Pomerantz, E. M., Moorman, E. A., & Litwack, S. D. (2007). The how, whom, and why of parents' involvement in children's academic lives: More is not always better. *Review of Educational Research*, *77*(3), 373–410. https://doi.org/10.3102/003465430305567

Reed, R. P., Jones, K. P., Walker, J. M., & Hoover-Dempsey, K. V. (2000). *Parents' motivations for involvement in children's education: Testing a theoretical model*. Presented at the Annual conference of the American Educational Research Association.

Rovan, D. (2011). *Odrednice odabira ciljeva pri učenju matematike u visokom obrazovanju* (Doctoral Thesis). Faculty of Humanities and Social Sciences, University of Zagreb.

Schunk, D. H. (1989). Social cognitive theory and self-regulated learning. In B. J. Zimmerman & D. H. Schunk (Eds.), *Self-regulated learning and academic achievement* (pp. 83–110). Springer.

Seefeldt, C., Denton, K., Galper, A., & Younoszai, T. (1998). Former Head Start parents' characteristics, perceptions of school climate, and involvement in their children's education. *The Elementary School Journal*, *98*, 339–349. https://doi.org/10.1086/461900

Shumow, L., & Lomax, R. (2002). Parental efficacy: Predictor of parenting behavior and adolescent outcomes. *Parenting: Science and Practice*, *2*(2), 127–150. https://doi.org/10.1207/S15327922PAR0202_03

Sigel, I. E., McGillicuddy-DeLisi, A. V., & Goodnow, J. J. (2014). *Parental belief systems: The psychological consequences for children*. Psychology Press.

Silinskas, G., & Kikas, E. (2019). Parental involvement in math homework: Links to children's performance and motivation. *Scandinavian Journal of Educational Research, 63*(1), 17–37. https://doi.

org/10.1080/00313831.2017.1324901

Silinskas, G., Kiuru, N., Aunola, K., Lerkkanen, M. K., & Nurmi, J. E. (2015). The developmental dynamics of children's academic performance and mothers' homework-related affect and practices. *Developmental Psychology, 51*(4), 419–433. https://doi.org/10.1037/a0038908

Walker, J. M., Wilkins, A. S., Dallaire, J. R., Sandler, H. M., & Hoover-Dempsey, K. V. (2005). Parental involvement: Model revision through scale development. *The Elementary School Journal*, *106*(2), 85–104. https://doi.org/10.1086/499193

Wentzel, K. R. (1998). Parents' aspirations for children's educational attainments: Relations to parental beliefs and social address variables. *Merrill-Palmer Quarterly*, *44*(1), 20–37.

Wigfield, A., & Eccles, J. S. (2000). Expectancy–value theory of achievement motivation. *Contemporary Educational Psychology*, *25*(1), 68–81. https://doi.org/10.1006/ceps.1999.1015

Wigfield, A., Eccles, J. S., Mac Iver, D., Reuman, D. A., & Midgley, C. (1991). Transitions during early adolescence: Changes in children's domain-specific self-perceptions and general self-esteem across the transition to junior high school. *Developmental Psychology*, *27*(4), 552–565. https://doi.org/10.1037/0012-1649.27.4.552

Wilder, S. (2014). Effects of parental involvement on academic achievement: A meta-synthesis. *Educational Review, 66*(3), 377–397. https://doi.org/10.1080/00131911.2013.780009

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Self-Concept in Immigrant School Children and the Impact of Length of Residence: Evidence from PISA 2015 for Current Educational Practice

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Comparative analyses of the Programme for International Student Assessment between immigrant and native students place immigrant students in an unfavourable position in schools, with disadvantageous indicators regarding socioeconomic and professional paths. However, the Programme for International Student Assessment assesses a series of dimensions that involve constructs that have been little studied in the school immigrant population and that relate to self-concept and school adjustment. Based on the Programme for International Student Assessment's most recent edition, Portugal's database of 7,325 15-year-old students was analysed. We selected 438 immigrant cases with two objectives: (1) to evaluate the impact of the length of exposure in the host country on three dependent variables of school adjustment: sense of belonging, perceived loneliness and attitudes towards school (expectations of educational and professional opportunities); (2) to evaluate the differences in results for the same dependent variables, but considering the first and second generation of immigrants in Portugal. For the data analysis, sampling weights and plausible values were analysed with the International Database Analyzer. The results show that students who have been in the country for a year or less have greater difficulties and increased significant differences compared to other migrant groups in the referred indices of self-concept and inclusion. However, other groups, especially those with periods of long-term residence between four and five years, also face substantial levels of school maladjustment.

Keywords: PISA assessment, immigrants, generations, self-concept, length of residence, school adjustment, sense of belonging

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Samopodoba otrok priseljencev in vpliv dolžine prebivanja: podatki PISA 2015 o trenutni izobraževalni praksi

Sandra Figueiredo, João Marôco, Margarida Alves Martins in Odete Nunes

Primerjalne analize *Programa mednarodne primerjave dosežkov učencev* (angl. *Programme for International Student Assessment*) med priseljenskimi in domačimi učenci uvrščajo otroke priseljence v neprijeten položaj v šolah, in sicer z neugodnimi indikatorji glede družbenoekonomskih in poklicnih poti. *Program za mednarodne primerjave dosežkov učencev* pa ocenjuje število razsežnosti, ki vključujejo konstrukte, ki so bili pomanjkljivo preučeni v šolski priseljenski populaciji in ki zadevajo samopodobo ter prilagoditev na šolo. Na podlagi najnovejših podatkov *Programa za mednarodne primerjave dosežkov učencev* je bila analizirana portugalska podatkovna zbirka 7.325 15-letnih učencev. Izbrali smo 438 primerov priseljencev z dvema ciljema: 1) da ocenimo vpliv dolžine izpostavljenosti v državi gostiteljici na tri odvisne spremenljivke prilagajanja na šolo, tj. na občutek pripadnosti, zaznavo osamljenosti in na odnos do šole (pričakovanja glede izobraževalnih in poklicnih priložnosti); 2) da ocenimo razlike v rezultatih za iste odvisne spremenljivke ter pri tem upoštevajoč prvo in drugo generacijo priseljencev na Portugalskem. Za analizo podatkov smo z *Mednarodnim analizatorjem podatkovnih zbirk* (angl. *International Database Analyzer*) utežili podatke glede na velikost vzorca in analizirali verjetne vrednosti. Rezultati kažejo, da imajo učenci, ki so bili v državi leto ali manj, večje težave, obenem pri njih prihaja do izrazitejših pomembnih razlik v primerjavi z drugimi priseljenskimi skupinami glede na omenjene kazalnike samopodobe in inkluzije, vendar pa se te druge skupine, zlasti tiste z obdobji dolgotrajnega prebivanja med štirimi in petimi leti, vseeno spoprijemajo z občutno stopnjo neprilagojenosti na šolo.

Ključne besede: PISA ocenjevanje, priseljenci, generacije, samopodoba, dolžina prebivanja, prilagojenost na šolo, občutek pripadnosti

Introduction

The performance of immigrant students has been little studied in the context of the Programme for International Student Assessment (PISA) of the Organisation for Economic Cooperation and Development (OECD). One of the goals of PISA is the comparative analysis of the performance of 15-year-olds from different countries (OECD, 2016) in three domains: reading, mathematics and science. At triennial intervals, this international research allows a presentation of indicators of the evolution of the literacy of students from more than 70 countries (OECD, 2016). The analysis predicts the academic and professional success of student generations as they approach the end of compulsory schooling. According to the most recent database, in 2015, PISA was deployed in 72 countries and economies.

In addition to assessing academic content, PISA tests are comprehensive in that they allow us to examine other variables that have been neglected in comparative scientific analyses of students' PISA performance, especially immigrant populations. These variables are mainly related to the conditions of the host countries; specifically, the schools and teaching methods perceived by the migrant students. Self-concept, school adjustment and students' expectations regarding their performance and professional future in the country in which they are living are crucial. There is also a need to consider covariates such as the students' country of origin, languages spoken at home, mother tongue (L1), and the generation of immigration to which they belong (first or second). All of these variables appear in the OECD database and the 2016 report (OECD, 2016).

Based on previous PISA assessments, studies such as that by Cummins (2008) have reflected on the impact of the L1 variable on immigrant outcomes. These studies have concluded that proficiency in L1 is an important factor to consider in schools (valuing students' learning at home and on a continuous basis) and is associated with better performance, rather than total immersion in the second language (L2) (Agirdag & Vanlaar, 2018). One of the main concerns, especially for cases like the Portuguese, has been the performance in reading.

More recent PISA-based studies have focused on the immigrant population and its importance for the variability of general results by country, that is, how to differentiate native students and immigrant students in the same tests. The latest OECD (2016) and Factbook (2016) reports show more optimistic averages (above the OECD performance average) than previous PISA studies for immigrants in specific areas of problem solving, mathematics and reading. However, these results have mostly placed migrant minority students in lower performance positions (Hippe & Jakubowski, 2018).

The evidence has associated the low performance of immigrant adolescent students with the unfavourable socioeconomic contexts of their families, the school environment (as perceived by non-native students) and low expectations of school and professional success, especially job prospects after completing compulsory schooling (Hippe & Jakubowski, 2018). The same authors also found that from 2006 until the last PISA tests (2015), the differences between migrant and non-migrant groups in a considerable number of European Union countries remained significant, with immigrant students being in a disadvantaged position. The most predictive variation was according to the host country.

Other dependent variables have arisen, such as the language spoken at home and expectations that incorporate self-concept (such as the sense of belonging to the school). Another study by Marôco et al. (2016) found that socioeconomic status did not explain the differences between immigrant students (from the second generation) and non-migrant students, with immigrant students being better positioned than their native peers. On the other hand, immigrant populations have interested researchers in the fields of psychology and education (and economics) because of the difference in their performance between generations. Generations are identified as first (born in another country) and second (descendants of the first generation, born in the host country) taking into account variations in school policies in the host countries (Cattaneo & Wolter, 2015; Volante et al., 2019).

On the one hand, studies reveal that the latest generation has shown improvements in results since the last two PISA studies due to the new welcoming and preparation measures adopted by European Union (EU) and non-EU countries to promote the inclusion of these school populations (Šori et al., 2011; Yeasmin & Uusiautti, 2018). On the other hand, in Portugal, the second generation scores were lower than those of the first generation (OECD, 2016), as opposed to Northern Europe countries and the Netherlands, for example. Regarding reading, in Portugal, the second generation surpassed the first, yet native students continue to outperform their migrant peers in class (OECD, 2016). The main reason for coming to Portugal was family reunification, as in most immigration cases (Di Liberto, 2015; OECD, 2016), and immigration was on a permanent basis and in high numbers (9,607,397 individuals, OECD, 2016). Whereas Portuguese immigration declined in 2013, the number of refugees received increased twofold in the 2015–2016 timeframe (OECD, 2016).

Promoting the inclusion of migrant minorities and encouraging the educational equity proclaimed in the United Nations sustainability goals (OECD, 2018) is hampered by inequality of performance in immigrant groups (Welch, 2018). This difficulty is also attributed to school environment factors (Agasisti

& Zoido, 2018) and a lack of awareness that different groups of students involve different pedagogical approaches (Sakellariou, 2018; Woessmann, 2016). Furthermore, these groups are in different stages of development regarding their adaptation because they have different exposure times to the conditions of the host country and therefore different maturation.

One of the factors that has been less studied is exposure time or length of residence (LOR). In studies of the second language (L2), bilingualism and migrant populations, this terminology can also be identified with the "age of onset of acquisition" (referring to the age of the acquisition of L2 in the case of migrant populations). Immigrant (and refugee) students with lower levels of exposure tend to be more exposed to higher levels of anxiety and maladjustment to the host school compared to colleagues who, irrespective of their origin, entered the country more than five years earlier (Kia-Keating & Ellis, 2007; Salmela-Aro et al., 2018).

In the literature, the five-year period for immigrant status is considered "long term" (Grubanov-Boskovic et al., 2017). Students with the lowest LOR are among those facing more difficulties in PISA tests at an early stage, especially regarding problem solving (Martin et al., 2012). This was also verified in studies not related to the OECD (Jang et al., 2013). On the other hand, the last years of compulsory schooling are more associated with anxiety symptoms and lower rates of wellbeing in the general student population (Wang et al., 2015). Thus, the case of the immigrant school population of the same levels of education (especially between grades 10 and 11) is considered to be a group more subject to such symptoms and to wellbeing problems due to the need to adapt to new contexts and a new school environment.

Regarding the length of exposure or arrival date in the host country, several studies have examined the relationship between recent entry into the country and negative (school) performance as perceived by immigrant students (Bozick et al., 2016; Martinez-Taboada et al., 2017). Length of residence is associated with the likelihood of greater or lesser employment opportunities in the host country, with immigrants with more than five years of permanent residence in the country having an advantage. Portugal is part of the group of countries where this correlation has occurred, and, negatively, it is also one of the countries where immigrants perform professional functions requiring low literacy skills (Grubanov-Boskovic et al., 2017).

Portugal was also the object of analysis by Schnell and Azzolini (2015), based on data from previous PISA tests. In Portugal and in three other cases in Europe, the position of immigrants is fragile, especially those who arrive later (with lower LOR) and after the age of six years. The study highlights the

disadvantage variable of immigrant families who take on less specialised occupations than they could given their high level of education obtained in the country of origin (Schnell & Azzolini, 2015).

If 15-year-olds have a poor self-concept and underperform in tests, the likelihood of positive expectations about the labour market in the destination country decreases, as does their effective employability in specialised jobs requiring high educational qualifications. LOR may also influence other dimensions that are assessed in the PISA test but have not been adequately examined in the literature, such as school adaptation. Adjustment to school is measured in PISA (2015) according to items such as self-assessment of the sense of belonging and integration in the school of the destination country. To a large extent, this adjustment determines the level of inclusion and sense of belonging in the host society after completion of compulsory schooling (Schachner et al., 2017). Studies such as Schachner et al. (2017) indicate that host countries with more supportive and mediating inclusion measures for immigrant students (with Portugal appearing in the group of countries with moderate support measures) have better-adjusted and self-determined immigrant students, who also have better performance.

When related to specific ethnicities of migrant minorities, poor school adjustment is significantly associated with dropout rates and low levels of sense of inclusion in the school environment (Ali & Larsson, 2018). Adjustment to school occurs in several ways; for example, it is related to motivation *vis-à-vis* the school environment. However, the specific studies based on the performance and self-concept scores of immigrant students in the PISA tests are still not consensual about the evidence on school adjustment in immigrant minorities (Burgess & Heller-Sahlgren, 2018), and school adjustment in terms of sense of belonging remains poorly studied (Ham et al., 2017).

Loneliness in school perceived by the immigrant students also has a correlation with low school performances (Mai & Asma'A, 2016). The loneliness perceived by the subjects is also evaluated by PISA (OECD, 2016) and it is important to understand that these emotional aspects (such as perceived maladjustment) integrate the construct of sense of belonging (Chiu, Pong, Mori, & Chow, 2012). However, we have no knowledge of any study on the relationship between perceived loneliness and LOR for immigrant student groups.

Concerning professional expectations after schooling, that is, with regard to students' attitudes towards school (Chiu et al., 2012), little is yet known about the expectations of immigrant students and the observable expectations among different ethnic groups. In comparison with native peers and first-generation immigrants, however, immigrant subjects have higher rates of positive educational expectation, with the main variable that differentiates this

expectation being the host country and the respective conditions (Burgess & Heller-Sahlgren, 2018; Chykina, 2019). Furthermore, the educational expectation of second-generation immigrant students is strongly related to their willingness to enter higher education and to have better professional opportunities than their parents (Childs et al., 2017; Figueiredo et al., 2016). Educational preparation, especially the specialisation of skills in schools, leads to better professional opportunities for immigrants (Rangel & Shi, 2019).

Regarding the educational and professional expectations of young immigrants, Nygard (2017) confirmed that the optimism of immigrant status explains the high aspiration of immigrants to good levels of education. It also accounts for the diversified mobility of this population in the context of the plurality of educational opportunities. From an early stage, other authors (Bertschy et al., 2009) have reported that PISA indicators help us to understand students who are more or less suited to particular job opportunities. In contrast, a study by Nygard (2017) found that the early tracking of educational competencies and trajectories has underlined the perception of disadvantage, especially socioeconomic, of immigrant groups because of their difference in performance from that of their native peers (Feliciano & Lanuza, 2016; Fernández-Reino, 2016).

The present study has two objectives: (1) to evaluate the impact of the length of exposure in the host country (the age of immigration with the purpose of obtaining permanent residence in Portugal) of immigrant students aged 15 on three dependent variables related to school adjustment: sense of belonging to the school, perceived loneliness, and expectations of educational and professional opportunities after the completion of compulsory schooling; (2) to evaluate the differences in results for the same dependent variables, but considering the first and second generation of immigrants in Portugal.

Method

Participants

Sample selection followed the PISA sampling methodology based on the protocol determined by the Educational Testing Service (ETS, Princeton), which has defined the different versions of the PISA test (according to the countries and their official languages), the codification of items and the creation of databases. The main criteria for selecting the sample were that the students were 15 years of age and studying above the 7th year of schooling.

In 2015, 7,325 students from 246 schools participated in Portugal. The mean age of Portuguese students was 15.8 years (see Marôco et al., 2016). The type, size

and administrative nature of the school were criteria considered with the aim of covering the national population in an equitable way (mainland and islands).

Students who had been exposed to the Portuguese language for less than one year were excluded (in the case of immigrants). Students with cognitive, functional or intellectual disorders were also excluded. Aspects related to the limits for the careful exclusion of PISA were previously determined so as not to exceed school exclusion rates by country, which would bias the data (OECD, 2014).

The choice of the age of 15 years is related to the expected age for attending the cycle (high school) prior to the end of compulsory schooling. It is also the age group most likely to obtain information about professional prospects and actual performance in school, with applicability in two contexts of problem solving: in school and out of school. On the other hand, 15-year-old students are distributed by distinct school years, including grade-retained students.

For the present study, only the immigrant population in Portugal was selected: 438 cases, of which 205 declared they were female and 217 male. Of the female group, 108 (41.1%) belonged to the first generation and 97 (31.4%) to the second generation of immigrants. Of the male group, 128 (42.1%) were part of the first generation and 89 (30.5%) belonged to the second generation of immigrants (Table 1). Regarding the time of exposure in the host country (LOR), the duration varied from 1 to 14 years (M = 8.6; SD = 4.5).

Table 1

Demographic data from the Portuguese database of PISA 2015: natives and immigrants

Gender	Immigration	N of cases	SD
Female	Native	3372	.560
	Second-Generation	97	.314
	First-Generation	108	.411
Male	Native	3385	.483
	Second-Generation	89	.305
	First-Generation	128	.421

Instrument

Four blocks of items were used in the four literacy domains: reading, mathematics, science and problem solving, according to the PISA assessment protocol, with an estimated duration of 30 minutes to fill each block. Following Item Response Theory (IRT), the items were analysed regarding the difficulty index and the discrimination index.

The coding of the items had a 92% agreement for all countries in which the tests were conducted (OECD, 2016). In addition to the blocks of tests in the areas of science, reading, mathematics and problem solving, specific variables (which will be presented as indices and not items in this study) related to school adjustment, attitudes and self-concept were analysed by PISA.

Measures

Independent variables:

- Length of residence (LOR): the students indicate their date of arrival in Portugal, so the length of permanent residence is measured in years in PISA. In the SPSS database, we computed this variable to select only the immigrant cases and only for Portugal.
- First and second generation of immigrants: the "index immigration status" of PISA evaluates whether the participants belong to one of three categories: natives, first generation of immigrants, or second generation of immigrants.

Dependent variables:

- School adjustment is a psychometric scale that evaluates how well the student fits the school. It is composed of 4 Likert type items (1-strongly agree to 4-strongly disagree). One such item is "I feel awkward and out of place in my school" (PISA 2015 code: ST034Q04TA) and is intended to evaluate how students feel displaced in their school environment. Students have to respond on a scale of 1 to 4, with 1 being "strongly agree" and 4 being "strongly disagree".
- Another item is the perception of loneliness and wellbeing in school measured by the item (PISA code: ST034Q06TA) "I feel lonely at school" with a scale of response from 1 = "strongly agree" to 4 = "strongly disagree".
- Also related to school adjustment is expectation of career opportunities after compulsory schooling: expectation related to performance and professional opportunities after school is measured on a scale of response from 1 = "strongly disagree" to 4 = "strongly agree", where 1 corresponds to the absence of agreement with good options or professional opportunities after high school. The item is as follows: "I want to be able to select from among the best opportunities available when I graduate" (PISA code: ST119Q02NA).

Procedure

The tests were administered by test administrators with previous training in schools for the administration of blocks of tests and for coding tests in their respective academic areas. The test administrators received their training from a supervising teacher according to OECD parameters. Whenever there were doubts, administrators turned to their supervisor (Marôco et al., 2016, idem).

It was ensured that all of the selected schools were equipped with computers and the session dates were confirmed. The samples were checked and correctly identified by the test administrators. Each student was given a USB flash drive with the tests. After completing each test, the students submitted the answers that were stored via the web in the PISA database.

Data Analysis

The study focuses on variables concerning the individual's self-concept (see section Measures) and on school aspects through a series of linear regression analyses, considering the sampling weights of each student using the IDB Analyzer (International Association for the Evaluation of Educational Achievement, IEA). The sampling weights variable was identified as "Final Trimmed Nonresponse Adjusted Student Weight" (FSTUWT). The syntax produced by the IDB Analyzer was then run in SPSS Statistics (v. 24, IBM, Armonk, NY) on the previous immigrants selected database.

Results

- *Question 1*: to evaluate the impact of the length of exposure in the host country (the age of immigration) of immigrant students aged 15 years on three dependent variables related to the school adjustment: sense of belonging to the school, perceived loneliness, expectations of educational and professional opportunities after the completion of compulsory schooling;
- *Question 2*: to evaluate the differences in results for the same dependent variables identified in Question 1, but considering the first and second generation of immigrants in Portugal.

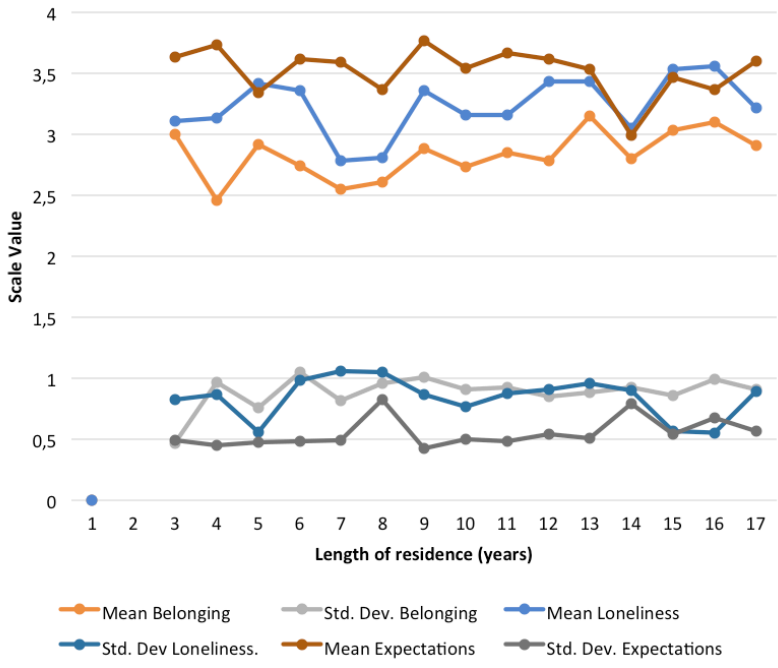
Question 1

Immigrant students with a shorter length of residence, and therefore with less exposure to the school context and to L2, had higher means regarding

school maladjustment and perceived loneliness in school, but not in a linear way. In the first case, in "school maladjustment", the subjects with one and four years of LOR are those showing less adjustment. On the other hand, with regard to perceived loneliness, four and five years of residence in the host country emerge as more critical periods, as the means are lower. See Figure 1.

Figure 1

Means and standard deviation scores considering LOR x sense of belonging (blue line), perceived loneliness (yellow line) and professional expectations after graduation (grey line)



Tables 2 and 3 present a summary of the descriptive analyses (means of response by index) for the immigrant group regarding the three dependent variables and the coefficients of the linear regression analyses: in models 1 and 2 – sense of belonging x LOR (β = .051; S.E. = .011; t = 2.268; R^2 = .13) and perceived loneliness/wellbeing x LOR (β = .042; S.E. = .008; t = 2.401; R^2 = .10) – there are positive and statistically significant coefficients that point to the impact of LOR on the perception of school belonging and on perceived loneliness. It was verified (Figure 1) that recent arrival in the country was not always associated with low or negative levels of sense of school belonging and of perceived

loneliness in the school environment (and, consequently, in the learning environment). In general, however, the higher the LOR, the higher the school adjustment (mainly the sense of belonging).

In the third model, shown in Table 3, the coefficients are negative and highly significant, which reveals that the higher the LOR, the less stable the perception of good professional and academic opportunities that the immigrant students have, unlike the students recently arrived in Portugal (β = -.041; S.E. = .041; t = -3,597; R^2 = .22). By checking the means for each category (according to length of residence, Table 2) the subjects seem more optimistic about the possibility of choosing the best options (labour market) after high school. However, two cases were observed: individuals recently arrived in Portugal (in months <1 year) and others (14 years of LOR) presented lower means in this school adjustment index.

Table 2

Descriptive statistics for school adjustment: (1) sense of belonging, (2) perceived loneliness at school, and (3) professional expectations after graduation

	N	Minimum	Maximum	Mean	SD
Valid N (listwise)	438	<1 year	14 years	8.568	4.4807
I feel awkward and out of place in my school.		1	4	3.01	.879
Valid N (listwise)	427	<1 year	14 years	8.352	4.4632
I feel lonely at school.		1	4	3.39	.802
Valid N (listwise)	434	<1 year	14 years		
I want to be able to select from among the best opportunities available when I graduate.		1	4	3.14	.675

Table 3

Regression linear coefficients for indices of school adjustment: sense of school belonging (model 1), perceived loneliness at school (model 2) and professional expectations after graduation (model 3) considering Length of Residence (LOR)

	Regression coefficient	Coefficient β (s.e.)	Standardised (t-value)	*p*
Model 1	2.646	.104	25.346	
Constant sense of belonging	.024	.011	2.268	.051
Model 2	3.086	.091	33.751	
Constant perception loneliness	.020	.008	2.401	.042
Model 3	3.638	.055	66.659	
Constant expectations	.022	.006	.3597	-.041

Note. β – the standardised linear regression coefficients.

Question 2

As for the prediction of the generation of immigrants regarding the three dependent variables (the second research question of the study), the first- and second-generation groups did not differ significantly. See table 4.

Table 4

Regression linear coefficients for indices of school adjustment: sense of belonging

Immigration index status	Regression coefficient	Coefficient β (s.e.)	Standardised (t-value)	*p*
Model 1	3.032	.013	241.017	
Constant sense of belonging	-.007	-.080	.016	.001
Model 2	3.392	.012	278.174	
Constant perception loneliness	-.055	.055	.012	.010
Model 3	3.462	.011	314.391	
Constant expectations	-.053	-.424	.014	-.006

Note. β – the standardised linear regression coefficients. Model 1 = perceived loneliness at school; model 2 = professional expectations after graduation; model 3 = considering Immigration Index Status**.**

Discussion

The study initially aimed to examine the relationship between length of residence (or duration of stay in the host country) and variables related to the school environment, especially the perception of this environment by immigrant students in Portugal tested in the last PISA (OECD, 2016). For this question (Question 1), the results showed a significant impact of LOR on school adjustment, specifically on sense of belonging, perceived loneliness at school and expectations about professional opportunities after completion of compulsory schooling. The impact was perceived differently depending on the children's periods of residence in the country.

A more recent arrival date (lower LOR) did not always correspond to greater school maladjustment. On the one hand, as expected, students who had only arrived in Portugal a year earlier had a lower sense of belonging, thus corroborating previous studies by Kia et al. (2007) and Salmela-Aro et al. (2018). On the other hand, immigrant students with four years of residence (having entered Portugal at about 11 years of age) had a higher level of maladjustment (negative sense of belonging). These results, related to Question 1 of the study, are worrying, as they indicate different critical periods for the self-concept as perceived by the immigrants to the detriment of their development, especially regarding academic results (Parker et al, 2014).

Thus, there is not necessarily a correlation between less time in the destination country (less exposure to L2 and less experience in school) and low self-concept in indices such as those evaluated in the PISA test. There is a variability that must also consider the chronological (and maturation) age of the children (age of entry into the country and length of residence, which are two distinct variables), instead of being restricted to the typical factors that the literature analyses, such as socioeconomic status and parental investment (OECD, 2015). The OECD report (2015) shows the negative impact of exposure time in destination countries such as Portugal, but it only refers to academic performance (especially reading).

Our study presents the other side of PISA assessment, whose self-concept indices are important to explain the variation in immigrants' academic and cognitive performance. This variation has recently been examined in the context of self-concept indices of young immigrant students, underestimating the predictive effect of other factors, such as the influence of the mother tongue or the socioeconomic level (Huget et al., 2013). Still on self-concept, Weber et al. (2018) examined the perceived vulnerability of immigrant children (up to 15 years of age), the strong ethnic identity of students, and the low levels of academic

performance. The authors concluded that this vulnerability was associated with disturbance of the sense of belonging.

With respect to vulnerability and resilience in the first and second generation of immigrants, the same study by Weber et al. (2018) found that the first generation was more resilient. Probably this resilient behaviour was a result of less awareness of stereotypes, making first-generation immigrants more likely to be the least affected generation regarding the sense of belonging and adjustment. In our research, the two generations did not differ significantly in their sense of belonging. In the academic domain, but not in self-concept, another study (Di Liberto, 2015) analysed the difference between generations and concluded that the second generation has an advantage regarding performance.

Volante et al. (2019) found that in the context of academic (and cognitive) performance, the first generation scored lower in the same tests compared to the second generation, with the socioeconomic factor being a variable differentiating immigrant groups (immigrant groups with a more advantageous socioeconomic background tend to perform closer to immigrant peers). According to authors such as Cordero, Cristobal and Santín (2018), the differences noted in students and between countries in large-scale studies such as PISA, the Progress in International Reading Literacy Study (PIRLS) or the Trends in International Mathematics and Science Study (TIMSS) are largely due to the countries' assessment and inclusion policies and measures, especially in relation to multicultural groups. These differences are also due to the actual format of the large-scale assessment mentioned above (Cordero et al., 2018).

The present study focuses essentially on the factor of length of residence to explain the differences between migrant students. Previous studies have examined the age of immigration, which confers immigration status as identified in the PISA coding categories, although with greater expression in student immigrant groups in North America (Chen, 2019). One of the studied effects of LOR has been the effect of the presence of immigrants in the classroom on the performance of native colleagues, with negative effects being reported when students with lower LOR were included in the class (Bossavie, 2018).

National studies (Castigo, 2017) also found that the immigrant or descendant characteristics of the immigrant family affected the performance of immigrant children, in comparison with the better scores of their native peers (especially in the Lisbon area). In the present study, no significant differences between immigrants and natives could be addressed as statistically significant. Castigo (2017) refers to several other studies using multilevel analysis models with the same evidence: in PISA studies, low performance mainly in reading and mathematics is explained by immigrant status.

Still related to Question 1, regarding the feeling of loneliness, in the context of self-concept, it was found that students with four and five years of LOR had the lowest scores, which corresponds to the higher rate of perceived loneliness in the school environment of the host country. Interestingly, these periods – four and five years of length of residence – are identified as critical periods for the school immigrant population, as they appear frequently and weakly in the self-concept indices analysed in this study.

From another perspective, our data contradict information obtained in previous studies indicating that LOR equal to or greater than five years is less critical for positive self-concept and performance (Bozick et al., 2016; Martinez-Taboada et al., 2017). This evidence is in line with a study by Schnell and Azzolini (2015), in which Portugal is found to be one of the most fragile countries in terms of reception, especially for children over six years of age entering destination countries (considered a critical period by Schnell & Azzolini, 2015).

Recent studies (Nkemasong, 2018) have shown that immigrant students with low self-esteem and sense of belonging (to the community and school) become lonelier in school. Similarly, Chiu et al. (2012) concluded that the loneliness perceived by non-native students is significant, but that it can be attenuated by the teacher-student relationship. However, migrant students tend to isolate themselves in school, which increases the rate of perceived loneliness (Petreñas et al., 2011). PISA studies help us to understand the causes of immigrant underperformance if this type of self-concept index, as presented in this study, is examined, as the feeling of loneliness is a maladjustment that directly explains poor performance in the tests, either at the academic or cognitive level (Chiu et al., 2012). In prior research, loneliness was more prominently perceived in first-generation than second-generation immigrants (Strohmeier & Dogan, 2012). However, in the present study, addressing Question 2, this was not observed.

Although Portugal has only moderate measures regarding support for the reception of immigrants, these are not enough to explain the immigrants' scores in academic tests of the assessed literacy domains. Schnepf (2007) found a similar deficit in other European countries that are destination countries for immigrant students. On the other hand, in terms of the satisfaction index with professional expectations after completion of compulsory schooling, immigrant students in Portugal demonstrate expectation differences according to LOR. There are, however, two scenarios. First, those who have arrived more recently (<1 year) in Portugal have less favourable indices, as expected. Second, by contrast, students with maximum exposure time (or LOR) in Portugal are the least optimistic in this index.

These data support an earlier study by Grubanov-Boskovic et al. (2017), which identified Portugal as one of the countries in which the correlation between LOR and professional benefits is evident. In parallel with other European countries, Portugal demonstrates fragility regarding the professional characteristics of the positions occupied by working-age immigrants. Regarding the topic of career expectations after completing schooling in the host country, Scandinavian studies, such as those by Hvistendahl and Roe (2004), refer to the importance of school reception measures to ensure the academic success of immigrants, who sometimes exceed the performance of native peers. When referring to academic success and professional expectations, the access of immigrant students to higher education prior to entering the labour market in the host country is also relevant. In the last PISA (OECD, 2016), Marôco et al. (2016) reported that immigrants outperformed native Portuguese colleagues in some assessment areas. Expectations also influence academic performance, especially in generations of immigrants, which in turn influences the professional success analysed in the short term, from the early phase of transition from school to university and/or to the labour market (Bertschy et al., 2009).

Conclusion

The data from our study strongly indicate the predictive influence of length of residence (with the permanent duration index and not only "length of stay") in determining immigrant school adjustment. School adjustment incorporates the self-concept dimension. Multiple variables were used: sense of belonging, perceived loneliness and students' professional expectations after graduation. These were intentionally selected in the research based on the 2015 PISA study. For all three variables, LOR revealed a significant impact, although not linearly, as was the case in previous literature. This means that lower LOR (referring to months or less than a year of residence in the country of destination) does not entirely correspond to greater maladjustment, greater loneliness and less professional optimism. On the other hand, more evidence was collected regarding more critical periods of LOR (four and five years of residence in the host country, for example), which explains the variability in the self-concept of 15-year-old immigrant students assessed in the context of PISA, reporting specifically to Portugal. Question 1 of the study was fully addressed. For the Question 2, however, there was no significant data to explore the impact of generations of immigrants.

One of the limitations of the study is the lack of identification in PISA of the countries of origin of immigrant students. Country of origin is important

for a comprehensive analysis of crucial variables such as the individual's educational preparation prior to entering Portugal, the previous socioeconomic context, and the specific mother tongue (and languages spoken at home). However, the PISA database offers a high impact contribution to the educational orientation of the populations in their school and professional contexts. One of the objectives is to predict the trajectories of immigrant and non-immigrant students in the short and medium term, in higher education and in labour markets. This prediction is possible based on the conclusions of the performances of the students of more than 70 countries throughout the world. These performances indicate how reinforcement or maintenance measures can be taken to ensure academic and, subsequently, professional success.

These objectives and studies are also included in the sustainability advocated by the UN Goals 2030, specifically with regard to equity and access to quality education for all. We believe, however, that future research in the fields of psychology and education should benefit from the organised and valid contribution of this large-scale study (PISA) to explore the impact of immigrant students' self-concept on performance in the PISA tests.

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References

Agasisti, T., & Zoido, P. (2018). Comparing the efficiency of schools through international benchmarking: Results from an empirical analysis of OECD PISA 2012 data. *Educational Researcher*, *47*(6), 352–362.

Agirdag, O., & Vanlaar, G. (2018). Does more exposure to the language of instruction lead to higher academic achievement? A cross-national examination. *International Journal of Bilingualism*, *22*(1), 123–137.

Ali, J., & Larsson, K. (2018). *Ethnic victimization as a potential explanation for poor school adjustment among immigrant youth.* Clinical Psychology Program. Orebro University.

Bertschy, K., Cattaneo, M. A., & Wolter, S. C. (2009). PISA and the transition into the labour market. *Labour*, *23*(1), 111–137.

Bossavie, L. (2018). The effect of immigration on natives' school performance: Does length of stay in the host country matter? *Journal of Human Resources*, 733–766.

Bozick, R., Malchiodi, A., & Miller, T. (2016). Premigration school quality, time spent in the United

States, and the math achievement of immigrant high school students. *Demography*, *53*(5), 1477–1498.

Burgess, S., & Heller-Sahlgren, G. (2018) Gabriel, motivated to succeed? Attitudes to education among native and immigrant pupils in England. IZA Discussion Paper No. 11678. https://ssrn.com/abstract=3217496

Castigo, M. J. (2017). *Desempenho dos estudantes portugueses: modelos de regressão multinível* [Achievement of Portuguese students: Regression models multi-level]. (Doctoral Thesis). Portugal: Universidade do Minho.

Cattaneo, M. A., & Wolter, S. C. (2015). Better migrants, better PISA results: Findings from a natural experiment. *IZA Journal of Migration*, *4*(1), 1–19.

Childs, S., Finnie, R., & Mueller, R. E. (2017). Why do so many children of immigrants attend university? Evidence for Canada. *Journal of International Migration and Integration*, *18*(1), 1–28.

Chiu, M. M., Pong, S. L., Mori, I., & Chow, B. W. Y. (2012). Immigrant students' emotional and cognitive engagement at school: A multilevel analysis of students in 41 countries. *Journal of Youth and Adolescence*, *41*(11), 1409–1425.

Chykina, V. (2019). Educational expectations of immigrant students: Does tracking matter? *Sociological Perspectives*, *62*(3), 366–382.

Cordero, J. M., Cristobal, V., & Santín, D. (2018). Causal inference on education policies: A survey of empirical studies using PISA, TIMSS and PIRLS. *Journal of Economic Surveys*, *32*(3), 878–915.

Cummins, J. (2008). Where immigrant students succeed: A comparative review of performance and engagement in PISA 2003. *Curriculum Inquiry*, *38*(4), 493–497.

Di Liberto, A. (2015). Length of stay in the host country and educational achievement of immigrant students: The Italian case. *International Journal of Manpower*, *36*(4), 585–618.

ETS (Educational Testing Service). Princeton University.

Factbook, O. (2016). Factbook 2015–2016. OECD.

Figueiredo, S., Martins, M. A., & Silva, C. F. D. (2016). The parental investment effect on immigrant children at schools: Employment and specialization of parents as an explaining variable for tasks achievement in second language. *International Journal of Advances in Psychology*, *5*, 23–34.

Grubanov-Boskovic, S., Natale, F., & Scipioni, M. (2017). *Patterns of immigrants' integration in European labour markets.* European Commission: JRC Technical Reports. https://doi.org/10.2760/408657

Ham, S. H., Yang, K. E., & Cha, Y. K. (2017). Immigrant integration policy for future generations? A cross-national multilevel analysis of immigrant-background adolescents' sense of belonging at school. *International Journal of Intercultural Relations*, *60*, 40–50.

Hippe, R., & Jakubowski, M. (2018). *Immigrant background and expected early school leaving in Europe: evidence from PISA*. Publications Office of the European Union.

Huguet, A., Navarro, J. L., Chireac, S., & Sansó, C. (2013). The acquisition of Catalan by immigrant children. The effect of length of stay and family language. In J. Arnau (Ed.), *Reviving Catalan at school. Challenges and instructional approaches* (pp. 29–48). Lavenham Press.

Hvistendahl, R., & Roe, A. (2004). The literacy achievement of Norwegian minority students.

Scandinavian Journal of Educational Research, *48*(3), 307–324.

International Association for the Evaluation of Educational Achievement (IEA). (2017). IDB Analyzer. V. 4.0.26. IEA.

Jang, E. E., Dunlop, M., Wagner, M., Kim, Y. H., & Gu, Z. (2013). Elementary school ELLs' reading skill profiles using cognitive diagnosis modeling: Roles of length of residence and home language environment. *Language Learning*, *63*(3), 400–436.

Mai, M. Y., & Asma'A, A. F. A. (2016). Modeling the relation between self-esteem, loneliness and engagement as factors of children achievement in science. *European Journal of Social Science Education and Research*, *3*(1), 107–120.

Marôco, J., Gonçalves, C., Lourenço, V., & Mendes, R. (2016). *PISA 2015 – Portugal. Volume I: literacia científica, literacia de leitura & literacia matemática.* IAVE, I.P.

Martin, A. J., Liem, G. A. D., Mok, M. M. C., & Xu, J. (2012). Problem solving and immigrant student mathematics and science achievement: Multination findings from the Programme for International Student Assessment (PISA). *Journal of Educational Psychology, 104*(4), 1054–1073.

Martinez-Taboada, C., Mera, M. J., Amutio, A., Castañeda, X., Felt, E., & Nicolae, G. (2017). The impact of cultural dissonance and acculturation orientations on immigrant students' academic performance. *Universitas Psychologica*, *16*(5), 6–19.

Nkemasong, A. E. (2018). *Understanding the lived experiences of immigrant students in Finland (*Master's Dissertation). University of Eastern Finland.

OECD (Organisation for Economic Co-operation and Development). (2014*). PISA 2012 results: What students know and can do*. OECD Publishing.

OECD (Organisation for Economic Co-operation and Development). (2015). *Helping immigrant students to succeed at school – and beyond*. OECD Publishing.

OECD (Organisation for Economic Co-operation and Development). (2016). *Programme for International Student Assessment*. PISA.

OECD (Organisation for Economic Co-operation and Development). (2018). *Education at a Glance 2018: OECD Indicators*. OECD Publishing. https://doi.org/10.1787/eag-2018-en & http://dx.doi.org/10.1037/a0029152

Parker, P. D., Marsh, H. W., Ciarrochi, J., Marshall, S., & Abduljabbar, A. S. (2014). Juxtaposing math self-efficacy and self-concept as predictors of long-term achievement outcomes. *Educational Psychology*, *34*(1), 29–48.

Kia-Keating, M., & Ellis, B. H. (2007). Belonging and connection to school in resettlement: Young refugees, school belonging, and psychosocial adjustment. *Clinical Child Psychology and Psychiatry*, *12*(1), 29–43.

Rangel, M. A., & Shi, Y. (2019). Early patterns of skill acquisition and immigrants' specialization in STEM careers. *Proceedings of the National Academy of Sciences*, *116*(2), 484–489.

Petreñas, C., Pozuelo, M., & Redondo, G. (2011). Migrant girls in secondary education in Spain: Fighting to transform difficulties into possibilities. In *Young Migrant Women in Secondary Education* (pp. 125-142). University of Nicosia Press.

Salmela-Aro, K., Read, S., Minkkinen, J., Kinnunen, J. M., & Rimpelä, A. (2018). Immigrant status, gender, and school burnout in Finnish lower secondary school students: A longitudinal study. *International Journal of Behavioral Development*, *42*(2), 225–236.

Sakellariou, C. (2018). Selective immigration policies as screening devices and the immigrant–native educational achievement gap. *Educational Research and Evaluation*, *24*(6-7),1–23.

Schachner, M. K., He, J., Heizmann, B., & Van de Vijver, F. J. (2017). Acculturation and school adjustment of immigrant youth in six European countries: Findings from the Programme for International Student Assessment (PISA). *Frontiers in Psychology*, *8*, 649.

Schnell, P., & Azzolini, D. (2015). The academic achievements of immigrant youths in new destination countries: Evidence from southern Europe. *Migration Studies*, *3*(2), 217–240.

Schnepf, S. V. (2007). Immigrants' educational disadvantage: an examination across ten countries and three surveys. *Journal of Population Economics*, *20*(3), 527–545.

Volante, L., Klinger, D. A., Siegel, M., & Yahia, L. (2019). Raising the achievement of immigrant students: Towards a multi-layered framework for enhanced student outcomes. *Policy Futures in Education*, *17*(8), 1037–1056.

Šori, I., Šušterič, N., & Gaber, S. (2011). Immigrant students' achievements in Croatia, Serbia and Slovenia in context. *Center for Educational Policy Studies Journal*, *1*(3), 31–51.

Strohmeier, D., & Dogan, A. (2012). Emotional problems and victimization among youth with national and international migration experience living in Austria and Turkey. *Emotional and Behavioural Difficulties*, *17*(3–4), 287–304.

Wang, M. T., Chow, A., Hofkens, T., & Salmela-Aro, K. (2015). The trajectories of student emotional engagement and school burnout with academic and psychological development: Findings from Finnish adolescents. *Learning and Instruction*, *36*, 57–65.

Welch, A. (2018). Immigrant student achievement and education policy in Australia. In *Immigrant Student Achievement and Education Policy* (pp. 155–173). Springer.

Weber, S., Kronberger, N., & Appel, M. (2018). Immigrant students' educational trajectories: The influence of cultural identity and stereotype threat. *Self and Identity*, *17*(2), 211–235.

Woessmann, L. (2016). The importance of school systems: Evidence from international differences in student achievement. *Journal of Economic Perspectives*, *30*(3), 3–32.

Yeasmin, N., & Uusiautti, S. (2018). Finland and Singapore, two different top countries of PISA and the challenge of providing equal opportunities to immigrant students. *Journal for Critical Education Policy Studies (JCEPS)*, *16*(1), 207–237.

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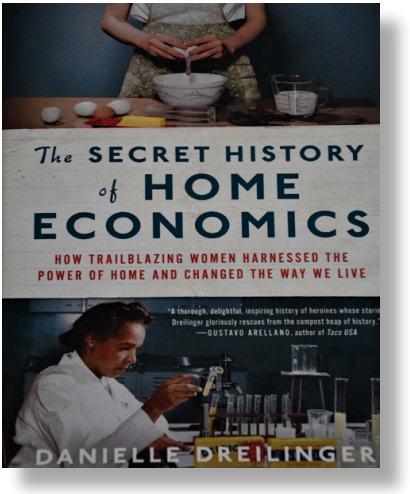
Danielle Dreilinger, *The Secret History of Home Economics. How Trailblazing Women Harnessed the Power of Home and Changed the Way We Live*, W. W. Norton & Company: 2021; 348 pp.: ISBN 978-1-324-00449-3

Reviewed by Francka Lovšin Kozina[1]



The book *The Secret History of Home Economics. How Trailblazing Women Harnessed the Power of Home and Changed the Way We Live* examines the historical role of home economics scientists in America in the nineteenth and twentieth centuries. It is the result of Danielle Dreilinger's (former New Orleans Times-Picayune education reporter) in-depth research work on home economics history and comprises 348 pages, divided into 15 chapters, a conclusion, notes and a subject index.

The book provides an overview of the areas in which home economics has played an important role, as well as the life stories of individuals who have dedicated their lives to this area. The essence of the book is clearly outlined in the preface, entitled Everything You Know about Home Economics is Wrong.

In the book, Dreilinger deals with the problem of girls' education in the nineteenth century, a time when care for women's education was not a priority. Catherine Beecher was an American educator who advocated the education of women. Her motto was: "Educate a woman, and the interests of a whole family are secured" (Dreilinger, 2021, p. 4). In 1841, Beecher published the book A Treatise on Domestic Economy and gave housework a scientific name: "domestic economy". She went on to argue that this subject should be taught not by amateurs but by professional educators.

The second chapter is intended to present the development of the core idea of home economics education. The author presents a conference in Lake

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Placid that took place at the end of the nineteenth century, at which ten participants met and established the goal of convincing universities that "domestic science" should become part of university studies. For this purpose, they also created a new name, "home economics", and outlined the content framework of the field, which received a new (sociological) emphasis: education in which one of the aims is eliminating poverty. The author goes on to present how a series of further conferences at Lake Placid highlighted several topics related to prudent consumerism, juvenile justice, wages, division of labour and women's employment. By the end of the nineteenth century, there was a clearly formulated idea that "domestic science" is not only cooking and sewing, but a scientific field that overlaps with areas of sociology.

In the present book, several fields of interest to home economics are covered. The author presents the role of home economics during the First World War. At this time, public school home economics classes adapted their work and helped make garments for the Red Cross, travelling food-conservation classrooms were established, dietitians took care of soldiers' nutrition, and so on. The role played by experts in the field of households was recognised as positive, which was also reflected in the establishment of the subject of households in the school system.

In the next chapter, we discover that in 1923, the Bureau of Home Economics was founded, which was taken over by Louise Stanley, who had a PhD in physiological chemistry, and became the largest employer of women scientists (experts in nutrition, textiles and economics). These scientists studied the content of nutrients in foods, food preparation techniques, fibre properties and women's use of time, as well as developing standards for clothing measurement and nutrition requirements. Their findings were promoted in women's magazines. During this period, home economists were employed in the food industry, while the emergence of new electrical household appliances meant a new field of employment and the economic boom enabled employment in marketing, recipe development, product testing, writing advice, and so on. Their voices were also heard on the radio. At the academic level, they also focused on birth control and childcare.

The next chapter presents the role of Eleanor Roosevelt in the area of home economics. Roosevelt wrote the book It's Up to the Women, which raised awareness of the importance of smart spending, household budgeting, diet planning, and so on. She also helped promote school nutrition. Representatives of African and domestic Latino economists also played an important role during the Depression. Kittrel was the first black woman with a doctorate in nutrition to follow the philosophy that society can be changed through the family

(e.g., the idea that tackling hunger can help calm politically unstable countries). Latino home economist De Baca Gilbert had a significant impact on the life of Latinos. She wrote a modern professional cookbook with Mexican America recipes, and in addition to the desire to reduce poverty and hunger, she also advocated the preservation of Latino culture. Although a significant proportion of education was related to nutrition, remarkable progress was also seen in other areas thanks to individuals such as Mamar, who recognised an opportunity to improve life by advancing technology. As an expert of the Rural Electrification Administration, Mamar was actively involved in raising people's awareness of the benefits of electrical household appliances, such as the washing machine. She quickly recognised that such machines can save women time, as well as relieving them of repetitive, tiring work and improving their quality of life.

The next chapter describes the role of household professionals during the Second World War. It demonstrates the importance of the production of useful yet attractive textiles for the maintenance of simple clothes for all working women (e.g., nurses), as well as developments in the field of nutrition, while the formation of food groups and RDAs is also outlined.

In the following chapters, we can follow the progress in the field of home economics in the sense that the concept of household increasingly shifted from the idea of educating girls for the home to the concept of science, life skills and career, while also addressing the issues of gender and racial equality. This was not, however, recognised by society. Over time, the view emerged that the household does not actually train women for independent careers, and that it is not intellectually appropriate, as it only trains women for working at home. Home economics scientists tried to avoid strongly ingrained perceptions of the household, such as the idea that cooking and cleaning matters, by changing the name. However, the result was not in line with expectations.

In the final chapter, the author gives the following suggestions on how to bring back home economics: change the name back to "home economics", make home economics mandatory, diversify the profession, embrace life skills such as career preparation, and advance the progressive, scientific and ecological view within home economics.

The present book is interesting and reveals several roles of home economics experts throughout history as well as their impact: they tried to reduce malnutrition and poverty by helping to develop nutritional guidelines and school meals; they researched the chemical properties of fibres and standardised the rules of clothing; they sought a balance between science and the utility of products (e.g., usable and attractive textiles); they introduced innovations in the routine of everyday cooking and cleaning following the modern

technological trends; they collaborated in the development of astronauts' diets; they engaged in consumer awareness and job creation, etc. In short, the central concern of the home economics scientist was how to use the individual's gains in time to improve the quality of life. The present book is also interesting because it speaks openly about the delusions of a particular time, e.g., the slow response to the stereotypical perception of the role of women, racism, etc. It is interesting to note that the author suggests that the current neglect and stagnation of home economics should not be permanent. She gives the reader some ideas for further reflection.

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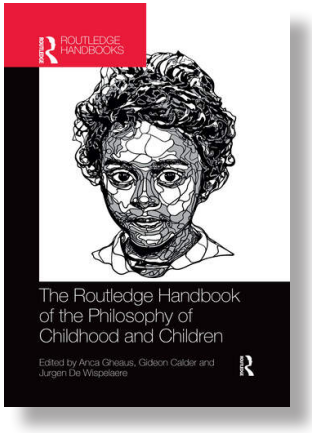
Anca Gheaus, Gideon Calder and Jurgen De Wispelaere, *The Routledge Handbook of the Philosophy of Childhood and Children*, Routledge: 2019; 440 pp.: ISBN 9780367733889

Reviewed by Jasmina Jerant[1]



The fact that children are greatly puzzled about the world around them is no news. However, the idea that children can, due to their naturally conditioned *philosophical openness,* pose philosophical questions that are relevant and very valuable to us all has only recently been embraced by scholars. This and, for example, children's rights to their sexuality as well as to work instead of going to school are just a few of the triggering points evoking further interest in reading this much-needed collection of essays, which finally provides in one place an introductory insight into the state-of-the-art contemporary debate surrounding the philosophy of children.

The Routledge Handbook of the Philosophy of Childhood and Children comprises thirty-six essays collected by three editors. Anca Gheaus, a political philosopher interested in justice and the normative significance of personal relationships, has published numerous journal articles and book chapters and is currently writing a monograph on child-centred childrearing. Gideon Calder, a social and political philosopher, has authored or edited ten books, including *How Inequality Runs in Families*, and is a co-editor of the Routledge journal *Ethics and Social Welfare*. Jurgen De Wispelaere, whose research interests are at the intersection of political theory and public policy, is a Political Economy Research Fellow with the ISRF and a Policy Fellow at the Institute for Policy Research.

With well-distributed topics that have been largely set aside for most of the history of philosophy, the editors have structured a handbook that provides timely guidance to the world of neglected questions that have only recently

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been gaining attention. As Gheaus points out in the Introduction to the book, "in moral and political philosophy, the literature on childrearing, and especially on the parent-child relations, has been multiplying at an exponential rate during the past four decades" (p. 1). Hence, the collection presents some, but not all, of these themes in one place. The editors' aim, however, was "also to draw attention to the many issues that are still under-explored and, therefore, to encourage further research" (p. 2). With many of the chapters setting grounds for further debate, they have succeeded in doing so.

The editors have divided the work of forty-four international contributors from the diverse backgrounds of philosophy, political science, law, social policy, cognitive neuroscience, anthropology, political economy, healthcare, art, paediatrics, bioethics, social epistemology, developmental psychology, etc., into five main sections that provide an overview of the current debate on the nature of children (Part I – Chapters 1 to 5), their moral status (Part II – Chapters 6 to 12), parenting and family (Part III – Chapters 13 to 21), the relationship between children and society (Part IV – Chapters 22 to 27), and the relationship between children and the state (Part V – Chapters 28 to 36). Each of the chapters reveals a different topic related to the philosophy of childhood and children, crossing the individual fields from which the chapter authors come.

As the Handbook is so extensive on a range of topics, it is impossible to present each and every one of them in depth in the limited space available. I have therefore chosen a few essays that might be of particular interest to readers of the CEPS Journal, as they touch upon the questions of education, schooling and knowledge to some degree. In addition, I mention a couple of other essays not directly related to education that address themes largely neglected in philosophy.

The first section, or Part I, entitled *Being a child*, consists of five essays discussing the nature of children. The essays are related to children's development of knowledge, thinking and behaviour, as well as the nature of artistic creativity. In *Epistemology: knowledge in childhood*, the authors explore notions of knowledge in child development and the nature of children's knowledge, or how infants and young children possess knowledge. Fabrice Clément and Melissa Koenig argue that children possess and use metacognitive inquiry. Also on the possession of knowledge, M. J. Cain's essay *Language and communication: evidence from studying children* focuses on how children acquire the meaning of words, develop knowledge of their first language and build vocabulary. In contrast to the usual view of the matter, Cain defends the existence of a distinctive innate endowment that powers us in early age with abstract concepts and a metaphysical perspective, and not only learning mechanisms,

as otherwise claimed.

It is worth mentioning that these two essays deal with very young children and even infants, and that there are only two other essays in Part I with an emphasis on children's age or developmental phase. Furthermore, most of the book's essays omit an acknowledgement of differentiation in children's age. This might represent something of a shortcoming, as age does make a difference in how children behave or what they need. Moreover, Gheaus notes that age-related differences in ability and level of autonomy "have normative and practical significance" (p. 2).

The first of the two chapters that devote attention to a particular age group is *The science of the adolescent brain and its cultural implications* by Suparna Choudhury and Nancy Ferranti. The authors demonstrate that it is necessary to depart from the popular conception of the *teen brain* that has been fuelled through the *neuromythology* of the last twenty years and further boosted via popular culture, consequently creating a misleading image of adolescents. Choudhury and Ferrant blame this brain-based model of adolescence for stigmatising young people through biological reductionism. Hence, the authors argue for turning instead towards social neuroscience and critically oriented cultural neuroscience. Both of these disciplines prove that social and cultural contexts impact the development and activity of the human brain. In fact, they cause an actual difference in brain development that can be seen in intersectionally different groups of adolescents.

The second chapter that deals with an age-specific group of children is on *Philosophical thinking in childhood.* Jana Mohr Lone focuses on children between the ages of 5 and 11 and their ability to engage in meaningful philosophical inquiry. Children possess a common, naturally inborn *epistemic openness* that is especially attributed to them. Besides presenting evidence on how children at this age are capable of engaging in conversations on philosophical topics, the author calls attention to what they have to say. Ignoring them is, argues Mohr Lone, a special case of *epistemic injustice*, as we deny them the instrumental and intrinsic benefits. The instrumental value of philosophy for children shows, firstly, with improved scores on Cognitive Ability Tests, and secondly, with increased critical consciousness and analytical and critical thinking. If prejudiced in regard to philosophy, children lose in terms of intrinsic benefit, as philosophical wondering enhances their experience of childhood. Furthermore, as we lose the epistemic openness with age, children's philosophical thoughts strengthen philosophy's intrinsic value for adults as well. Our own thinking and philosophical inquiry is enriched with children's *sense for magic possibility*. To some extent, the essay also presents a case for

implementing classes in philosophy at an early age, in primary schools, not just in rare examples of grammar schools. This is a thought worthy of acknowledgment, particularly at a time when the whole of society needs to find ways to re-establish the ability for critical consciousness, and analytical and critical thinking in future generations.

Part II of the book focuses on *Childhood and moral status* through seven essays: *The moral status of children*, *The value of childhood*, *Childhood and well-being*, *Children's rights*, *Childhood and autonomy*, *Paternalism towards children*, and *The age of consent*. Part III, as its title *Parents and children* indicates, departs from a sole focus on children and turns to parents and family as well. The debate on parents and children is composed of nine essays on *Reasons to have children – or not*, *The right to parent*, *The good parent*, *Parental partiality*, *The composition of the family*, *Parental licensing and discrimination*, *Ethical challenges for adoption regimes*, *Gender and the family*, and *Filial duties*.

Part IV, entitled *Children in society*, presents an overview of six debates focused on how we, as a society, ought to treat children. The debate spans the themes of race, disability, sexuality, animals, child labour, and the vulnerability of children. I highlight here the essay on *Childhood and sexuality* by Jennifer Epp and Samantha Brennan, which opens a theme that has been largely neglected in the history of philosophy. When sexuality in relation to children has been discussed in the past, the focus has usually been on children as victims of sexual abuse, while the chapter in the Handbook argues for children as independent agents. Moreover, the authors argue that from a particular perspective, sex and pleasure can also be the goods of childhood. For this reason, the authors appeal for child sexuality to also be considered when talking about children's well-being. Their essay opens the ground for more debates on this neglected yet sensitive topic in the current and future philosophy of childhood.

An equally thought-provoking essay in Part IV focuses on children and child labour. In his essay *What's wrong with child labour?* Philip Cook gives an answer that is the opposite to what we usually think: not everything. For some children, Cook argues, labour saves their life. Hence, work can sometimes be more beneficial to children, or even less harmful, than schooling. The author therefore states that philosophy still needs to answer two things in regard to schooling. Firstly, it needs to establish that schooling actually really does benefit children and their development. Secondly, if we look at the issue through the lens of our duty of benefiting children, philosophy needs to answer why, in fact, should schooling not simply be replaced with work, if work can, in some instances, benefit children more than schooling.

Schooling is in fact the main theme in the last section of the book, Part

V, which is dedicated to the question of the relationship between *Children and the state*. In her essay *Schooling*, Gina Schouten explores questions of school's justifiability and its coerciveness for children, parents and taxpayers. Schouten proposes that schooling should firstly promote the potential of students, then equalise the potential and, finally, prepare children for citizenship in a democratic, pluralistic society. The other eights essays in Part V focus on *Childhood and the metric of justice*, *Children and political neutrality*, *The costs of children*, *Children and the care system*, *Children and health*, *Children and the right to vote*, *Children, crime and punishment*, and *Children and war*.

The other essays that touch upon the question of education and schooling are the chapters on *Childhood and disability*, *The good parent*, *Parental partiality*, *Children and political neutrality*, and *Children and race*. Notwithstanding the variety of themes that go beyond education, each of the chapters of the Handbook will be of value to CEPS Journal readers interested in philosophical argumentation on distinct themes and intersections between philosophy and a range of other disciplines exploring children and childhood.

Whether a historical overview or more of an argumentative essay, each of the chapters provides an insightful introduction to the topic that might also be informative for the newcomer to the philosophy of childhood and children. Equally important, many of the chapters leave space for new questions and further research and discussion on what a child is, how to differentiate or value childhood in comparison to adulthood, and what we – either as parents, teachers, family, society or the state – owe children both as the unique individuals they are now, and as future adults.

Although there are shortcomings with chapters not being dedicated more narrowly to a particular age group, it is clear that we would need an entire book for each particular age group for each theme. Hence, we have at least received an introductory anchor that provides an overview of the literature and arguments in the philosophy of childhood and children for further research, as, with the current pandemic, more questions on how to treat children and what they deserve will arise in the decades to come.

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