

International Federation for Home Economics
XXIV World Congress



*Home Economics:
Soaring Toward Sustainable Development*

Abstracts

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ABSTRACTS OVERVIEW

For the first time in Congress history, the prospective Congress abstract authors were guided by a Congress Matrix, outlining the anticipated connections between their submissions and the Congress theme. Congress planners considered the 17 UN Sustainable Development Goals (UN SDGs), especially those to which IFHE had written Position Statements. The planners relied on the human ecological perspective (Bronfenbrenner, 1986; Bubolz & Sontag, 1993) that guides the work of home economists worldwide. Particular focus was given to core professional practices including civil and human rights; service to vulnerable audiences; and interconnected systems of action. The matrix organized author proposals and structured the review process and program organization.

In Fall 2019, Congress planners held multiple reviewer orientations, featuring the online review process and use of the Matrix as part of the evaluative tool. This was a step toward interrater reliability. With the postponement of the Congress due to the worldwide COVID pandemic, reviewers from 2020 were maintained for review of 2022 abstract submissions.

For the 2020 Congress, 529 abstracts were submitted, 498 were accepted, 16 were withdrawn and 15 were rejected. When the pandemic hit in March 2020, not all authors had registered for the Congress. Their deadline to be a presenter was 10 April, 2020. Coming out of the pandemic, and with uncertainty about health and travel, there were fewer abstract submissions, as members had to submit abstracts by 31 August, 2021. There were 384 abstracts submitted, 373 were accepted, 4 were withdrawn and 7 were rejected.

Abstracts are presented as written by authors. Minor edits were made to standardize formatting of author(s) and titles; spacing; English usage abbreviations; and statistical terms.

Bev Card and Janine Duncan, Congress Co-Chairs

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Research Oral Abstracts by First Author

ADEPEKO, Evelyn Omotunde - Adeyemi College of Education, Ondo, Ondo State
Modification of Aso Oke as a Means of Sustaining the Yoruba Clothing Culture
<p>In the past, weaving was practiced as a highly organized urban craft in many Yoruba towns and cities. From it immemorial, the Yoruba people have always used textiles, especially, the woven types. The use of aso-oke was second to none then, when it comes to celebration and commemoration of important social and traditional events.</p> <p>However, the advent of technology which made the production of other textiles easy and cheap, removed aso-oke from the centre stage of clothing choice and almost sent it's use into oblivion, especially, among the young generation of the Yoruba people.</p> <p>The study examined the modification of aso-oke as a means of sustaining the Yoruba clothing culture. The population for the study consisted of aso-oke weavers and potential users of the modified aso-oke types. Random sampling technique was used to select the respondents. A well-structured questionnaire was the instrument for data collection. Some of the findings show that, 79.3% of the weavers hope that, the production of the modified aso-oke will open new demands for their products. While 82% of the potential users have aso-oke positive perception of the modified aso-oke. The study concludes that, the modified when combined with other suitable factory made fabrics could be sewn into different fashionable contemporary styles like gown, skirts and blouse, tops and other casual wears for both male and female.</p>

AKEREDOLU, Ifeoma - YABA College of Technology, Lagos
COVID-19 Pandemic Lockdown's Potential Influence on Nutritional Security and Status of Children Under Five (Cu5) in Shomolu, Lagos
<p>The COVID 19 pandemic was identified by the World Health Organization (WHO) as a health and human crisis that affected the food security and nutrition of millions of people over the world. In an attempt to stop the virus from spreading, the government imposed a national lockdown, however this had an economic impact on food supply and easy access to key staples. As a result of these limits, food production and transportation have been hampered, resulting in a rise in food prices, limiting the population's access to nutritious food and so impeding the fulfillment of SDG 2. (Zero Hunger) The goal of the study was to see how the COVID 19 pandemic lockdown may affect the nutritional security and health of children under the age of five (CU5). 200 CU5 caregivers were recruited using a random sample technique. A structured questionnaire was used to collect information on nutritional security and feeding patterns. Anthropometric data were used to determine the nutritional status of children. The results were analyzed using descriptive and inferential statistics. The result showed that the level of food availability and accessibility was about 74% before the lockdown but dropped to about 57% during the lockdown. About 35% of children suffer severe acute malnutrition, 3.0% were Wasted, 7.0% were Underweight and 28.0% were Stunted. The employment status of the parents/caregivers declined by 18%, unemployment increased by 4.5% and self-employment increased by 3.5%. An inverse relationship was found between Covid-19 pandemic lockdown and the nutritional security and status of CU5. It also showed significant relationship between caregivers' socio-demographic characteristics and nutritional security and status of CU5. It is recommended that caregivers receive nutrition education on good feeding practices, also government and non-governmental organizations (NGOs) are advised to provide meals for CU5, particularly during emergencies.</p>

ALUYOR, Patience - Ambrose Alli University, Ekpoma, Edo State
Food Handling Habits and Lassa Fever Menace In Ekpoma, Esan West Local Government Area, Edo State, Nigeria
The objective of the study was to investigate the food handling habits and Lassa fever menace in Ekpoma community, Edo state. Nigeria. The study was carried out in Ekpoma because it is one of the endemic areas in the state. Three specific objectives, three research questions and three hypotheses were raised for the study. Structured questionnaires were administered to consenting persons within the community. Two hundred and twenty-three (223) persons participated in the study. Data collected was analyzed using Pearson Product Moment Correlation(PPMC). Hypotheses stated were tested at 0.05 level of significance. The result from findings showed that 63.7% of the respondents had no knowledge of the disease. This therefore, indicated a poor awareness of lassa fever menace among the people in Ekpoma community. The findings also revealed that the method of food storage and preservation were among the reasons for the menace of Lassa fever. Therefore, the high number of cases of lassa fever in Ekpoma is as a result of lack of awareness concerning the disease and also poor food handling habits. Based on findings, it is pertinent that government at all levels and health workers carry out massive awareness campaigns to enlighten the populace concerning the consequences of poor food handling habits in relation to Lassa fever spread.

ANDERSON, Carol - retired
Sustainable Elections in a Pandemic
<p>Elections are at the heart of democracy. Results or who is elected can have dramatic influence of the issues focused on families. Family policy is a dimension of home economics that depends on research-based knowledge to inform decision-makers. When COVID-19 became reality and wear masks, be six feet apart, and stay-at-home was encouraged the question of how to have safe elections became a call for action. In 2020, four elections had been scheduled and the first would take place early April 2020.</p> <p>This case study demonstrates that following state and local election rules and regulations as well as the COVID mandates and education, elections could happen, and eligible voters would participate. To make this happen in a small rural village required creativity, an understanding of human behavior, education, and commitment from the community.</p> <p>To prepare residents for the elections meant providing education so that individuals would understand their options and know that regardless of which choice they made, their vote would count. Absentee balloting was explained so that people knew their ballot would be accepted and counted if they chose this option and followed procedures.</p> <p>To prepare the onsite polling location included redesigning the space so the mandates could be implemented creating a safe and secure site for anyone who came to vote in person. Volunteer poll workers including home economists participated in ZOOM training to prepare for their roles and responsibilities.</p> <p>The four elections saw participation range from 27% - 90% (27%, 38%, 52%, 90%) of the eligible voters with the higher percentages for elections with state and federal slates on the ballot. Elections during a pandemic require additional planning so implementation occurs, and voters, staff, and volunteers know it was fair, secure, safe, and sustained.</p>

ANENE-OKEAKWA, Josephine Emebiziogo - Federal College of Education (Technical) Asaba, Delta State
CHUKWURAH, Michael
Home Economics Education, Human Ecology and the Environment: Teaching Sustainable Wellbeing, for Individuals, Families and Households in Nigeria
<p>This paper analyses and synthesizes the field of Home Economics as it is evolving towards human ecology and the environment, with a view to stimulating further discussions and actions towards education for no poverty, zero hunger, good health and wellbeing, clean water and sanitation, and responsible consumption and production. Systematic review of literature using the protocol on Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA), was used for the search and selection of published papers on Home Economics education, human ecology and the environment across the world, and particularly Nigeria. A search of multidisciplinary scientific electronic databases together with manual searches of journals, were conducted in locating articles published in journals from 2012 to 2021. The search strategy included terms for Home Economics, Education, human ecology, environment, sustainable wellbeing of individuals, families and households. Articles included met the following criteria: 1) focused exclusively on Home Economics, human ecology and the environment; and 2) described teaching sustainable wellbeing of individuals, families and households. The search yielded 200 records and the full text of 60 studies were screened for evidence summary. After full text screening, 30 studies met all criteria. The findings of this study revealed among others, four thematic categories namely, schools as integral part, principles and values, environment and health, and evidence base with recommendations and calls for actions. The paper recommends teaching Home Economics through teachers' use of student-centered pedagogical tools associating Home Economics Education, human ecology, and the environment, in inspiring students, towards sustainable wellbeing.</p>

ANTTILA, Sonja - University of Helsinki
JANHONEN-ABRUQUAH, Hille
The Significance of Inner Circle Support for Prospective Parents in LGBTQ Family Forming Processes
<p>This research aims to describe and understand the family forming processes of sexual and gender minority families with children and widen the spectrum of families studied traditionally within home economics field. The family forming process begins with the individual's desire to have a child. Lesbian, gay, bi-sexual, trans, and queer (henceforth referred to as LGBTQ) parents-to-be often require either donated gametes, services from fertility clinics or adoption agencies, or one or more new co-parenting partners to have children. At this stage, they are stepping outside of their private family life zone. In addition to these outsiders, LGBTQ family forming processes are most meaningful and important to their inner circle which includes a family of origin, chosen families, close friends, and various support networks. Their significance for prospective parents varies. The research asks how can the inner circle support for the prospective LGBTQ parents be described in a family forming process?</p> <p>The research data was collected by interviewing parents of LGBTQ families. Face-to-face in-depth interviews (n=18) were carried out through semi-structured thematic interview protocol. Parents were either interviewed individually or as couples. The interviews were recorded and transcribed. Data was analyzed with qualitative content analysis. Prospective LGBTQ parents received emotional and financial support from their inner circle as part of their family forming process. The family was defined not only through legal or biological ties but through emotional connections. Intergenerational assistance was relevant, but close friends of prospective parents also performed tasks that are thought to belong to the family members. The results to be obtained from this study bring new</p>

knowledge about the diversity of family forms from home economics perspective to teacher training and basic education, and to support LGBTQ families' everyday life.

ARAI, Noriko - University of Fukui (emeritus)

SUZUKI, Mayuko; WATAHIKI, Tomoko

Implementation and Analysis of Formative Assessment in Home Economics Learning

Aims: In recent pedagogical theory, formative assessment has been emphasized as an “authentic assessment” to foster competency. To achieve exploratory and deep learning, teachers need to create a place for students to think and reflect during the learning process. This study aims to examine the method of incorporating formative assessment into home economics problem-solving learning process and investigate its effects. Methods: First, we clarify the steps of problem-solving learning: a) focus on the problem, b) collect data and understand the situation, c) define the problem, d) generate alternative solutions and select one after evaluation, e) implementation, and f) reflection. We develop and examine two types of problem-solving lessons, with sustainability perspectives, by focusing on steps c, d, e, and f, which are specifically related to formative assessment. Lesson A is on housing to 8th-grade students, and lesson B is on clothing to 8th-grade students, with formative assessments incorporated in the related steps. Then, we analyze students' assessments and writings to examine if their activities deepen their thinking and learning. Results and Conclusions: In lesson A, students planned “ideal school space” using problem-solving learning. Through several opportunities to present their ideas, students found new perspectives and were inspired by each other's advice. Hence, reflective opportunities in the learning process had positive effects on their motivation and planning. In lesson B, students designed their bags depending on functionality, use, and durability. In the process of sewing and using the finished product, students made assessments and reflections. This clarified the flow of their thinking and had positive effects on the quality of the finished product. The study shows that the formative assessment in four steps of the problem-solving learning effectively deepens students' inquiry and exploration.

AWOSIKA, Bridget - Adeyemi College of Education Ondo Nigeria

OYAYEMI, Temitope

Gender Dimension to Youth Perception of the Value Chain of Indigenous Textiles Technology of Yoruba Nigeria: Challenges and Opportunities

Indigenous textile technology among the Yoruba of Nigeria has a dynamic and lucrative value chain that portends fruitful engagements through empowerment, job creation, poverty reduction and sustainable livelihoods for youth irrespective of their academic leanings or gender. This paper observed that many graduate youth roam the streets of Nigeria in search of ‘white collar jobs’ while indigenous textile technology suffers from inadequate youth involvement. Stratified random sampling was used to select 252 samples among Youth Corps members deployed to Ondo State. Hypothesis tested at ($P < 0.05$) level of significance was: ‘there is no significant difference in the mean responses of male and female youth perception of the value chain of indigenous textiles. Questionnaire was used to collect data on respondents' demography and perception of the value chain of indigenous textiles. Data were analyzed using descriptive and inferential statistics. Results showed that 88.56% of graduates were unaware of the opportunities within the indigenous textiles value chain, while 94% was ready to acquire skills along textiles value chain for self-reliance and economic sustenance. The χ^2 on perception of textiles value chain across gender revealed: the mean for cotton and mulberry cultivation (0.03), sericulture (0.04), fiber and yarn processing (0.021), dyeing and printing (0.15), haberdashery (0.02), fashion design (0.002), fashion journalism (0.05) and textile merchandise with (0.003) respectfully. The paper discussed innovations and inherent opportunities to attract youth

engagement in technology along the value chain and recommended compulsory and certificated vocational courses in textiles technology in the curriculums of tertiary institutions for post-graduation self-engagement and wealth creation for the youth.

BAE, Jinhee - Korea University

YU, Nansook

Contribution of Home Economics Education to Cultivating Sustainability Competency of Secondary School Students in Korea

We are experiencing unprecedented events such as climate change, plastic waste, and COVID 19. As a result, the value of sustainability and sustainability competency has become more important than ever around the world. This study explores the current contribution of home economics education in cultivating the 'sustainability competency' of secondary school students for the Sustainable Development Goals (SDGs) based on a systematic literature review method. The definition and characteristics of sustainability competency were extracted and examined from the studies searched for as keywords of 'sustainability', 'sustainability competency' and 'sustainability core/key competency'. After that, by analyzing the studies related to home economics education philosophy and Korea's 2015 secondary school home economics curriculum, the elements connected to the sustainability competency were extracted. Extracted sustainability basic competencies such as 'critical thinking' and 'communication' were found that closely related to 'practical problem-solving ability' and 'relationship-forming ability' among the subject competencies of home economics education. According to the definition presented in the curriculum, 'critical thinking' could be viewed as a sub-element of 'practical problem-solving ability' and 'communication' could be a sub-element of 'relationship-forming ability'. It indicates home economics education not only encourages improving sustainability competency but also contributing to accomplishing the SDGs. Based on this, the current role played by home economics education and its contribution to society in cultivating learners' sustainability competency was reviewed, and the direction of home economics education' subject competency that should be developed to foster sustainability competency in the future was explored. This study is meaningful in that it demonstrates the value of home economics education in a society that requires sustainability.

BANTANJ, Joanne - Philippines

Perceived Effects of Graphic Health Warning Images to Smoking Behavior of Selected Filipino College Students

Introduction

Efforts of the government to decrease the smokers' population in the Philippines have pushed them to implement the Republic Act. No. 10643, also known as the Graphic Health Warning Law (GHWs). This study evaluates the effectiveness of GHWs on cigarette packages. The study described respondents' smoking experiences, initiation, and quit intentions. It also identified which of the GHWs are the most effective in discouraging smoking and whether there is an association between the effectiveness of GHWs to the factors on respondents' smoking profiles.

Methods

A total of 157 smoker respondents from a state university with varying age, gender, and year level took part in the study. The research is quantitative in nature. Part of the research is a descriptive design and another part is a pre-experimental one-group design.

Findings

The study showed that the average age of the respondents' smoking initiation is 17 years old. The majority of the respondents said that they have intentions to quit smoking, though many of them still find it difficult to quit. Lastly, eight out of ten factors on respondents' smoking profiles were reported to have a significant association with the GHW rating based on the chi-square test.

Conclusion

Results of the study revealed that seven out of twelve GHWs tested, have medium to high impact in the effectiveness in discouraging smoking. Overall, GHWs are most effective to: smokers with ages 19-21 years old, heavy smokers, smokers with good general health, smokers with quit intentions, daily smokers, smokers who buy cigarettes per pack, smokers who are having difficulties in smoke cessation, and smokers with high knowledge on health effects of smoking. The primary recommendation based on the results of the study is for the appropriate government agencies to reevaluate and improve GHWs on cigarette packages to promote consumer sustainability and advocate smoking cessation.

BERG, Alison C. - University of Georgia

WILSON, Hanna; AVERILL, Bradley; CAMPBELL, Christa; CASTILLO-HERNANDEZ, Isa; DALLAS, Jackie; COOK, Georgeanne; MOORE, Jessie; MOORE, Susan; ROBERTS, Alexis; SOLTANMAMMEDOVA, Zoe; STACKHOUSE, Rebecca; SWEDA, Cindee; THOMAS, Rebecca; TUCKER, Candace; WILLIAMS, Ewan; EVANS, Ellen

Extension Delivered Diabetes Prevention Program Supports Quality of Life During the COVID-19 Pandemic

i. Introduction: Health-related Quality of Life (HRQoL) contributes to wellbeing and may be a meaningful, yet understudied outcome of Family and Consumer Sciences (FCS) Extension lifestyle interventions. The yearlong US Centers for Disease Control (CDC) Diabetes Prevention Program (DPP) is proven to reduce the risk for developing type 2 diabetes by more than 50%, but less is known about its impact on HRQoL. This study explored changes in HRQoL during the COVID-19 pandemic among DPP participants.

ii. Methods: Thirteen FCS Extension agents delivered the DPP per CDC guidelines in 2020 – 2021. Weight, demographics, and the CDC HRQoL-14 measure were assessed at 0, 6 and 12 months. CDC HRQoL-14 assesses days per month limited by physical or mental health, worry, pain, sadness, inadequate rest, and days full of energy. Mixed effects and binary logistic regression models were used to evaluate changes over time and relationships between demographics and HRQoL.

iii. Findings: Participants (n = 88) were 56.4 + 13.2 y, 85.2% female, 26.1% black, 5.7% Hispanic, and average BMI was 35.8 ± 7.0. Mean weight loss was 5.2 + 5.0% (p < 0.001). HRQoL assessed as days interfered by physical or mental health, pain, sadness, worry, or inadequate rest did not change significantly from baseline to post-intervention. Older age was associated with lower odds of mentally unhealthy days, (OR= 0.93; 95% CI: 0.90, 0.97, p < 0.001), sadness (OR = 0.93; 95% CI: 0.89, 0.97), and worry (OR = 0.94; 95% CI: 0.89, 0.99).

iv. Conclusions/Implications/Recommendations: As people worldwide reported significant declines in mental health and HRQoL during the COVID-19 pandemic, participants in an Extension DPP experienced stable HRQoL, and older adults reported better HRQoL than younger individuals. FCS

programs like DPP that focus on preventative health may buffer the negative impacts of the isolating COVID-19 pandemic on health and wellbeing.

BERG, Gita - Uppsala University

ELMSTÅHL, Helena; LUNDQVIST, Eva; MATTSSON SYDNER, Ylva

Sustainable Home Economics Teacher Education in Pandemic Times – Experiences from Swedish Universities

Home Economics (HE) is an important site for education about food and health, which is crucial in the striving for sustainable development. The aim of this study is to contribute to the understanding of health education as a part of HE, specifically targeting how food, meals and health is constituted as educational content. The study is a part of a comprehensive case study where one school class and two HE-teachers were followed throughout a school year, using a variety of qualitative methods such as interviews, focus groups, audio- and video documented classroom observations. The analysis, including audio recordings from thirteen classroom observations and eight teacher interviews, is guided by a research methodology grounded in pragmatism, and a conceptual framework based on three functions of education: i) qualification, ii) socialization, and iii) subjectification.

The results show how the qualification function comprises nutrition knowledge, competencies in food selection, and practical cooking skills. The socialization function entails dichotomous values of food and eating as “right” or “wrong”, and valuation based on foods instrumentality in terms of physiological potential and risk. The subjectification function entails students acting as conscious consumers by taking personal responsibility for food and health. Environmental sustainability becomes part of the education as conscious consumers know how to prepare their own meals, evaluate the nutritional content of food, and adjust what is eaten in relation to personal nutritional needs as well as to the “needs” of the planet.

To conclude, this study unpacks how education about food for health is constituted in HE. It contributes to reflections on teaching practices with regards to food, health and sustainability. Thereby, it has implications of relevance for HE-researchers and teachers alike.

BERG, Gita - Uppsala University

HOIJER, Karin; LINDBLOM, Cecilia; RENDAHL, Jenny

“You fuel the car with gas, you fuel the body with food” - Educational Functions of Food, Meals and Health in Home Economics

One aspect of the Sustainable Development Goals is quality education. Not only should education work in favor of sustainable development on a global level; quality education needs to be sustainable in the sense that it provides opportunities for students’ learning in relation to the subject taught.

The school subject Home Economics (HE) is often described as having cooking as a core feature. Consequently, HE-teacher education commonly includes practical cooking as a central part of the content. During the outbreak of the Covid-19 pandemic, educational preconditions suddenly changed, and possibilities for undertaking cooking on campus became limited. In this study, we investigate HE-teacher educators’ experiences of adjusting practical cooking activities during the covid-19 pandemic. The aim is twofold: first, to highlight how the pandemic situation has been tackled in Swedish HE-teacher education. Second, to contribute to the understanding of practical cooking as a part of sustainable HE-teacher education.

In Sweden, there are four universities that offer HE-teacher education. Educators from these four universities were interviewed digitally in focus groups in two rounds. The first round was held in October 2020, the second in April/May 2021. The interviews followed a semi-structured design, and questions were asked about what the pandemic had meant for practical cooking activities in terms of problems, solutions and insights for the future. The interviews are analyzed using thematic analysis, and preliminary results show e.g., how educators used digital solutions, making the education accessible despite new restrictions. These solutions did not necessarily affect students' possibilities to achieve formally stated learning goals, but there was a hesitation concerning whether tacit and situated aspects of learning was lost when physical encounters did not take place. In short, the results evoke new insights regarding what constitutes sustainable education for HE-teachers of today.

BERGSLI, Oddhild - Oslo Metropolitan University

HELLNE-HALVORSEN, Ellen Beate

Diet and Health Education in a Multicultural Perspective

Introduction: This study addresses how vocational teachers, of the vocational programme for health studies, teach the topics of diet, eating habits and nutrition relevant for a health-promoting lifestyle in immigrants.

The health studies programme educates students to work in in kindergartens or elderly care, which are characterized by multicultural users and where health, diet and nutrition are central issues.

Theoretical basis: This is a sociocultural study on diet, nutrition, healthcare and lifestyle focusing on multicultural teaching aspects of vocational education and training (VET).

Research question: How do vocational teachers of health studies implement diet, nutrition, and health for multicultural users?

Method: This is a qualitative study, based on ten semi-structured interviews with vocational teachers in four upper secondary schools. The analysis of the empirical data resulted in the following categories: multicultural diet, culture-sensitive health understanding and multicultural teacher competence.

Findings: The study indicates that teachers are very concerned about food and diet but to a lesser extent with food and diet in a multicultural perspective in the context of the students' future professional practice.

The teachers appear to lack competence in food traditions, diet, and nutrition from other cultures. This may explain why culture-related health and nutrition were not significantly addressed in the teaching.

Conclusion: In preventing lifestyle diseases related to food and health, it is important that multicultural perspectives are included. This study shows the necessity to develop multicultural competence in teachers to achieve a health-promoting lifestyle for all.

BRADY, Jennifer - Mount Saint Vincent University
MACCALLUM, Lindsey; BERTHLET, Alishia
Home Economists Making a Difference in Canada's Maritimes Provinces: A Historical Perspective
<p>Today, home economists are widely involved in change making, including within the social movements that are seeking to redress climate change and intertwining social and structural inequities by enhancing sustainability and sustainable development across social, economic, and ecological systems. However, the history of home economics' involvement in such movements has received little attention from researchers, but is vital to appreciating the development of, contributions to, and factors that positively and negatively impacted home economics' role in social and structural change. The lack of historical research on home economics and the field's involvement in change making is particularly apparent in Canada, and especially in Canada's Maritime region, which comprises the provinces of Nova Scotia, New Brunswick, and Prince Edward Island. What little historical research exists primarily focuses on the development and administration of home economics programming at colleges and universities and draws on documentary evidence of import to post-secondary institutions, but overlooks the lived experiences of home economists themselves. This presentation will share results of an on-going project that combines archival research and oral history testimony to explore the history of home economics in Canada's Maritime provinces. More specifically, this presentation will focus on findings that elaborate the historical involvement of home economics in change-making, such as in extension services, community development, and advocacy that has served as important backdrop to the work of today's home economists to advance sustainability and sustainable development. Broadly, findings suggest that home economists were deeply concerned with and involved in change making, which was partly influenced by the unique socio-economic and religious context of the Maritimes, but which also limited their efforts to effect change as women.</p>

BUTIJN, Carja - Retired from Wageningen University
Allotment Gardening, a Stepping-stone to Health, Resilience and Sustainability
<p>Introduction (and objective): a comparative case study among six allotment gardens, two near Haarlem, the Netherlands (10 respondents), two near Leeds, England (11 respondents) and two near Turin, Italy (5 respondents). All cases owed rent and water to the municipality.</p> <p>Methods: face to face semi-open interviews. Qualitative analysis focuses on individual activities and societal norms (Materials, Competence, Meaning of Theory of Social Practice, and the Family unit with its activities (Consumer-Technology Interaction Model) .</p> <p>Results: Turin plots were tinier (1 m² - 50 m²) and more recent than the rest. Plots of males were often bigger. Except for the 3 eldest (male) respondents all wanted to grow organically though vegetarian gardeners were more strict. Evolution in sustainable gardening and more flowers occurs gradually. Cost is not important: the meaning is its reward. English and Dutch respondents find the rent gradually becoming unaffordable.</p> <p>Most respondents gained knowledge/skills from fathers/grandparents. The English reported this least. Many respondents feel they stand in a tradition and pass it on, others gain competence from books, television, neighbours, workshops. The internet was mentioned by most but the eldest.</p> <p>Allotment gardening is said to be trial and error, but is appreciated as 'experimenting'.</p> <p>Allotment gardening evolved from providing more food for one's destitute family to a 'hobby for males and females that enriches life': quality food (fresh and/or organic), skills, more autonomy, caring for wild life, working manually in the open air, teaching kids about food's origin, reducing stress, green gym, social contacts, more sustainability, family /friends' gifts.</p> <p>Conclusion</p>

Modest material means are needed, resulting in more competence and changing meaning over time. The Turin stimulating and subsidizing initiative contrasted with the other two cities. Turin city government saw the opportunities for allotment gardening. It may result in more resilience; a satisfying hobby with opportunities for other family members and social contacts.

CABALLERO, Yuko - Utsunomiya, Tochigi, Japan

MATAKAWA, Konomi; SUDO, Noriko; AKATSUKA, Tomoko

A Study of the Differences in Urban and Rural Food Consumption in Paraguay

【Background】 According to the Federación Latinoamericana de Sociedades de Obesidad's report, more than a half adults in Latin American countries are overweight—significantly higher than the global average of 39%. Urbanization is one of the main drivers of obesity prevalence. The difference in mean BMI between urban and rural areas is bigger in Paraguay compared to its neighboring countries.

【Aim】 This study aims to investigate the differences in frequency and characteristics of food consumption between rural and urban areas of Paraguay.

【Methods】 From 2015 to 2016, we conducted surveys on men and women adults using food frequency questionnaire (FFQ) in Pirapo (rural area) and Asunción (the capital) with 32 and 36 items, respectively. We also assessed participants' diets through weighed food record (WFR) in Pirapo. The participants' weight and height were measured to calculate BMI. The FFQ data collected from 787 participants (433 in Pirapo, 354 in Asunción) were compared using the Welch's t-test. **【Results and discussion】** The mean (SD) BMI in Pirapo and Asunción was 26.9 (4.9) and 27.2 (5.9), respectively, and there were no significant differences in both men and women comparing between two cities. However, the difference in food consumption frequency and diet were observed in two cities. Cassava and oil rich food with flour like tortilla were more consumed in Pirapo. Whereas, bread, fast food like hamburgers, and fried snack like empanada were more consumed in Asunción. Vegetable plates were consumed every 2 days in two cities and significantly low comparing to the recommendation of WHO (5 servings/day). In conclusion, oil rich staple foods were often consumed both in Pirapo and Asunción, and vegetable consumption was low in both cities. Nutritional education for using less oil and more vegetable rich menu should be promoted for obesity prevention.

CARROLL, Kathryn - University of Central Arkansas

SCHICHTL, Rachel; SARTAIN, Kimberley

Factors Influencing Food Insecurity Empathy: The Role of Service-Learning

Introduction: Prior work suggests service-learning (S-L) courses have several student benefits, including higher levels of academic learning, greater course satisfaction, and a deeper understanding of societal issues (Carnicelli & Boluk, 2017; Eyler et al., 1997; Moely & Ilustre, 2019). Food insecurity continues to be a societal issue, and increasing students' food insecurity empathy (FIE) may be one way family and consumer sciences (FCS) can improve community sustainability.

Objectives: Empathy has been linked to prosocial behaviors in service-oriented professions (Kou et al., 2020; Silke et al., 2018), and work by Harmon et al. (2017) found course content may have a positive influence on FIE. Yet none have examined the possible influence of S-L. This study examines whether S-L courses, and the type of S-L project, influences students' FIE.

Methods: 108 undergraduate students enrolled in FCS courses at a public university in the southern U.S. completed a quantitative survey Spring 2021. One course featured a direct S-L project, while the others featured a research-based S-L project. The survey included measures of FIE from Harmon et al.

(2017), as well as a food insecurity screener. Following Social Cognitive Theory (Bandura, 1977) questions concerning student behaviors, their environment, and cognitive factors were also included. We estimated a binary logit to examine the influence of student attributes, course attributes, and demographics on the odds of having food insecurity empathy.

Findings: The odds of having food insecurity empathy was higher ($p=0.073$) for students who completed a direct S-L project, compared to a research-based S-L project. The odds of having food insecurity empathy were also higher ($p=0.024$) for students who had taken previous S-L courses.

Conclusions: FCS courses that incorporate direct S-L projects may have a positive influence on the likelihood of students developed FIE. Results have important implications for curriculum development in higher education and K-12, and for the development of sustainable communities.

CARROLL, Kathryn - University of Central Arkansas

SCHICHTL, Rachel; ALLBRITTON, Lauren

Factors Influencing Food Pantry Managers' Interest in Adopting Client Choice

Food insecurity remains a problem in the U.S., with community-based food pantries often serving as a source of local food aid (Coleman-Jensen et al., 2018; Gany et al., 2015). Pantries typically use either a prefilled bag/box of items (traditional method), or allow clients to select items (client-choice method), and play an important role in the development of sustainable communities working towards zero hunger. However client-choice is often preferred, allowing more client control and dignity over food choices, and reducing food waste (Kuhls, 2011; Remley et al., 2019; Verpy et al., 2003; Wilson et al., 2017). Yet in light of these benefits, traditional pantries remain the norm. Only 13% of Arkansas pantries offered client-choice in 2020. Gaining a better understanding of factors influencing pantry managers' interest in adopting client-choice is key to increasing their availability. Our objective is to determine factors influencing food pantry managers' interest in adopting client-choice. In Spring 2021, we conducted a mixed-methods survey sent to 366 Arkansas pantry managers (36% response rate). Questions concerning interest in adopting client-choice, potential barriers to adoption, operational factors, and pantry demographics were included. We used an ordered logit model to estimate the influence of perceived adoption barriers, operational factors, and pantry demographics on managers' self-reported interest in adopting a client-choice model. Pantry managers indicating their pantry had enough variety ($p=0005$) and volume ($p=0037$) of food were more likely to express an interest in adopting client-choice. Those who felt extensive training would be needed ($p=0.006$), and who were concerned about having adequate space ($p=0.087$) in order to adopt, were less likely to express an interest. Pantry managers may need additional outreach and education concerning the various ways that client-choice can be implemented. Our findings have important implications for advocates of client-choice, and for those involved in distributing food aid to food-insecure households.

CHOI, Seong-Youn - Chon-nam National University

A Case Study on Sustainable Housing Class Using Process Folio

The purpose of this study was to develop a project plan for establishing a cohousing village for sustainable housing education in Home Economics, and to explore the process folio utilization plan to evaluate the learning results based on the process. Participants in this study were 9 classes (272 students) in the 3rd grade of middle school in Gyeonggi-do, Korea. The cohousing village establishment project class was conducted by the researcher for a total of 10 sessions for about 4 weeks from May 24 to June 16, 2021.

This class consisted of four tasks: writing a cohousing village establishment plan, designing a cohousing village, designing my house in the cohousing village, and making a model of a cohousing house. As a way to utilize the process folio, self-evaluation, peer evaluation, and teacher evaluation were conducted in every class. And the learning results were uploaded to the padlet and shared with the class students so that the learners' creation, perception, and reflection, which is the process folio evaluation system, could be achieved. Regarding the cohousing village establishment project class using the process folio, the students were generally able to grow through the class, reflect on their own action, and evaluated that they were satisfied with the class. The students said that they enjoyed sharing the process of class with their friends, were beneficial to know various opinions, found out that their friends were good at it, and that it was a positive help in solving their own assignments. Through the project, students learned the meaning of cohousing village and how to establish it, how to build a house, and that cooperation is necessary through collaboration.

CHUA, Consuelo - University of the Philippines

GABRIEL, Florenda; BANTANG, Joanne; LLIGE, Aurora

Conceptualization of Filipino Family Wellbeing

The definition of family wellbeing should be sensitive to the characteristics of a specific culture or population. Several studies have examined the conceptualization of family wellbeing among Western cultures. Yet, very little studies exist, if any, among Southeast Asian cultures. This qualitative study aimed to develop a conceptualization of Filipino Family Wellbeing. In-depth interviews were conducted among mothers or fathers of 63 Filipino families from low, middle, and high-income groups. The families came from different parts of Metro Manila (the capital city of the Philippines) and nearby rural areas. During the in-depth interviews, the respondents were asked to determine their definitions and descriptions of family wellbeing, identify the experiences that they associated with family wellbeing, and describe the characteristics of families with family wellbeing. The interview transcripts were analyzed using thematic analysis. To enhance the credibility of the study findings, interview transcripts were analyzed by at least three members of the research team. Eight dimensions of Filipino Family Wellbeing emerged from the analysis – Resource Adequacy, Comfortable Lifestyle, Financial Security and Stability, Good Family Relationships, Good Parenting, Good Health, Virtuous Family, and Family Satisfaction and Contentment. Specific indicators for each family wellbeing dimension were also identified based on the interview codes. A comparison of the research outcomes with existing literature showed that the Filipinos' concept of family wellbeing is similar in various ways with the conceptualizations of other populations. However, some indicators of Filipino family wellbeing were distinct from those found in other countries, such as the strong emphasis on providing the wants of children and leading a virtuous family life. Based on the peculiarities of the Filipinos' definition of family wellbeing, the study recommends the development of a family wellbeing measure that is suitable for Filipino families.

CLARKE, Frances - St. Peter's Community School, Passage West, Co. Cork

MCSWEENEY, Kathryn

Developing Sustainability Lesson Content and Pedagogy Using a Lesson Study Approach: Emerging Home Economics Lesson Study Practice in Ireland

Objective: The experience of creating communities of Lesson Study practice in schools in Ireland will be evaluated, and the impact on pedagogy, pupil learning, and organizational development analyzed. The teachers' experience of collaboratively developing sustainability content and pedagogy as part of this Lesson Study project will be shared.

Description: Lesson Study is an approach to teacher professional development that can enhance

teaching and learning and contribute to organizational development. It provides opportunities for teachers to evaluate pedagogical beliefs and practices, to engage in critical reflection and professional collaboration. This presentation will provide an overview of Lesson Studies conducted by home economics and other subject teachers in partnership with a University researcher in Ireland. The project involved four lesson cycles and incorporated two sustainable development goal elements: health and wellbeing and responsible consumption. The Lesson Study 'cluster' groups selected a sustainable development theme and implemented a lesson cycle. School 1 focused on the use of smartphones to develop subject knowledge and understanding of nutrition and wellbeing. Schools 2 and 3 explored critical pedagogy and experimented with strategies that helped promote critical thinking. The pursuit of pupil engagement and learning of sustainability content was the focus of School 4. All Lesson Study cycles aimed to enhance understanding of sustainable and responsible living. The project illustrates that Lesson Study cycles drew upon home economics teachers' experiences using different classroom pedagogy and facilitated experimentation with new approaches. Lesson Study was viewed by all teachers involved in the project as helpful in achieving higher quality lessons. It enabled the critical exploration of sustainable development goals. The Lesson Study approach gave 'voice' to the home economics teachers as practitioners and enabled reflection and evaluation on professional practice and learning. Critical pedagogy, involving professional noticing, developing awareness, attending, and interpreting, is an emergent research area for home economics teach

CLARKE, Leonie - University of Technology, Jamaica

DIXON STONE, Alicia; PORTER DACOSTA, Audrey

Family Financial Literacy: An Underestimated Tool for Sustainable Development

The family is the nucleus of any successful development process. It serves as the first place where values are taught and reinforced, expectations are created for relationships and responsibilities and roles are communicated and practiced. Consequently, the family is a principal actor in a state's pursuit of development. In a climate where development is predominantly measured in terms of economics and by financial metrics, there exists an area of deficiency in how families serve each other and thereby contribute to the overall development of society. This paper suggests that financial literacy in families is critical to any development agenda which supports economic sustainability and ends poverty. The paper specifically examines the legal requirements with regard to financial obligations of family members to each other seeing that fulfilling these requirements augers well for a fully functioning developing state. Using a survey design, the research will answer three questions; 1) How knowledgeable are individuals of their legal financial responsibility to family members? 2) What are individuals' attitudes toward their legal financial responsibility to their family members? and 3) To what extent do individuals demonstrate their legal financial responsibility towards family members? Descriptive and inferential statistics will be used to analyze the data. Given the Jamaican context of parenting, it is likely that findings will reveal that while participants may be aware and are accepting of parents' responsibility to children and spouses' responsibility to each other, they may not agree that children should take responsibility for parents who had not shown care in parenting. The paper will present practical recommendations on how to teach, practice, reinforce family financial literacy, and promote its value as a tool to drive a state's sustainable development agenda.

DARKWA, Sarah - University of Cape Coast
BARTELS, Addinalla
The Glycemic Index and Load of Sweet Potatoes, Taro and Firm Ripe Plantain.
Consumption of local staples in Ghana comes with a lot of health related issues regarding their load of carbohydrates and their related glucose concentrations. With a rise in the number of individuals getting type 2 diabetes nationally, determining and documenting the glycemic index of carbohydrate rich foods in Ghana to guide consumers consumption patterns has become a necessity. The study therefore assessed the glycemic index and load of common local staples, sweet potatoes, taro and firm ripe plantain, which are commonly consumed in Ghana. The study was conducted at the Biriwa Baobab Medical Centre in the Mfantseman Municipality of the Central Region of Ghana. Nineteen (20) participants (10 males and 10 females) were purposively and further randomly sampled per the protocol of determining glycemic index and load of the test foods for the study. Participants were tested for glucose intolerance and confirmed to be without diabetes before being provided with the test foods. A crossover experimental design was adopted for the study. The results of the study showed that there was a statistically significant difference in the glycemic index of sweet potatoes, taro and firm ripe plantain at $p < 0.004$. Also, there was a statistically significant difference in the glycemic load of sweet potatoes, taro and firm ripe plantain at $p < 0.00$. It was also found that there was a statistically significant difference in the chemical composition of sweet potatoes, taro and firm ripe plantain at $p < 0.00$. It was concluded that sweet potatoes had the least GI of 33.92 while firm ripe plantain and taro had medium and high GIs of 58.89 and 98.76 respectively. The GLs of the test foods were 161.85, 62.88 and 43.64 for taro, firm ripe plantain and sweet potatoes respectively. All the test foods had high GLs ($GL \geq 20$). The study therefore recommended among others that nutritionists and dieticians should help in educating the general public on the consequences of consuming high glycemic foods in large quantities at a time.

DEAGON, Jay – Griffith University
HAM, Miriam
Confident and Empowered Marginalized Nepalese Women
<p>Introduction: Literacy and numeracy rates of women in Nepal are below global targets. Work opportunities for marginalised women in Nepal are very limited. Education is regarded as foundational for increasing women’s agency within social and political structured organisations. This research reports on a literacy and skills program run by minority women for minority women in Nepal for the purpose of increasing women’s opportunities for empowerment and self-determination thereby enabling participation in the Nepali workforce.</p> <p>Method: Aligned with core objectives the United Nation’s Sustainable Development Goals, themes were developed and framed within an ecological systems model of power and agency. Discourse analysis methods were applied to semi-structured interviews obtained in Kathmandu from eleven participants involved in the Seven Women NGO education program.</p> <p>Findings: Analysis revealed that the program is viewed as a significant social good within the context of education and emancipation of women and girls in Nepal. The women discussed a range of personal and social impacts. Highly valued social goods included personal safety, collaboration, stability, giving back, develop skills and knowledge required to enter the workforce; and, supporting their families. As a gateway to agency and self-determination, participants outlined the combination of literacy and skills such as sewing and cooking training, as foundational to their aspirational plans to further their economic and social success.</p> <p>Conclusion/implications/recommendations: Seven Women’s literacy program has an observable</p>

impact on participants' abilities to make independent choices toward economic gain. To empower Nepalese women from complex disadvantaged backgrounds, our research found that respecting and considering individual agency in decision-making; rather than prescribing a set of predetermined program outcomes, allowed for participants to experience self-determination immediately and thus contribute to several SDGs in positive ways.

DOHERTY, Paula - St. Angela's College. Sligo, Ireland

Choosing Home Economics in Secondary School – Lessons Learned from an Irish Context

Introduction: In the Irish context, persistent gender differences are evident throughout education. In relation to studying Home Economics, it is very much evident that gender inequity remains. Of the learners choosing Home Economics, male learners are in the minority - 19% at lower secondary and 12% at upper. Although research supports a shift towards less gender differentiation in many subjects, Home Economics continues to be a female dominated subject. This study sets out to investigate the factors which influence students' subject choice in senior cycle Home Economics. As part of this research, the decision-making process utilised by male and female learners in relation to Home Economics at Senior Cycle was critically analysed to gain an insight into why both male and female learners choose/do not choose Home Economics for Leaving Certificate. Methods: A mixed methods approach was employed in the research. Learners (n=140), completed a paper-based questionnaire exploring subject choice. Data was analysed using SPSS. This informed five interviews with career guidance teachers. A semi-structured topic guide was implemented, and using thematic analysis, the audio from the interviews was analysed.

Findings: The gender imbalance was prevalent in this study. Only 31% of students who participated were male. A number of key influencing factors can be attributed to the low uptake of Home Economics by male students. One notable factor for the discontinuation of Home Economics to upper level was the conflict with another subject on a school timetable. Traditionally perceived male subjects such as Engineering are often placed in opposition to Home Economics. This practice of aligning practical subjects alongside each other is undesirable as it has a pivotal role in influencing what subjects' students choose. The influence of schools and their positioning of subjects has serious ramifications on male student's selection process. Recommendations: In schools that have a more open policy regarding subject choice, there were positive results for students evident. The researcher recommends that schools must re-evaluate how subjects are offered to students.

EDJAH. Hannah - University of Cape Coast

JANHONEN-ABRUQUAH, Hille

Curriculum Convertibility for Remote Learning

This research seeks to develop a content and teaching strategy continuity plan for Ghana's Senior High Schools (SHS). The on-going health pandemic, COVID-19 with its attendant issues in the education sector, has further challenged educators worldwide to look for creative ways to achieve the SDG 4 and 5. Schools all over the world that stayed in session are reported to have resorted to teaching online in various ways. These approaches are laudable but are not without their challenges of access by the poor, difficulty in delivering practical-oriented content and motivation of students to keep learning. In the SHS in Ghana, no changes were made to the curriculum, rather, lessons were recorded and played on the media as a means of mimicking the traditional classroom setting with the hopes that learning will occur when learners engaged.

Considering the practical nature of Home Economics, the skill level of teachers regarding remote teaching and resource capacity of learners needed to engage in remote learning, one wonders how effectively teaching was done to yield learning. The researchers thus carried out a documentary

analysis of the subject matter and teaching strategies of the three-year SHS Home Economics curriculum to identify aspects that need conversion, aspects that can be delivered remotely and aspects that need to be substituted during remote teaching. A model for content and teaching strategy conversion as a crisis management approach for remote learning of SHS Home Economics content in Ghana was developed. This can be used as a baseline for conversion of other SHS curriculum to ensure that remote learning is effective during crisis. Further applicability will extent to situations where only part of a community or a class is unable to receive face-to-face learning experiences.

EIKE, Rachel – Iowa State University

HUSTVEDT, Gwendolyn; BURTON, Michelle

Supporting Sewing Skills

Introduction: Life cycle analyses have demonstrated that knowing how to repair clothes is an important skill that impacts sustainable consumption. Home Economics (HE) education programs around the world are either reducing or eliminating sewing as a formal instructional activity. However, given the importance of sewing skills, particularly during the Covid pandemic, there is an argument for providing access to the bare minimum of tools and materials. In doing so, individuals who have an interest in sewing can engage in sewing practice to, increase their personal sustainability efforts, construct cloth PPE, and/or prepare to teach others these important skills. Objective: The purpose of this exploratory study was to gain an understanding of the current landscape of HE-focused students' sewing skills, access to equipment, and confidence in carrying out select construction tasks to suggest and forecast the impact of findings from sustainability and health/wellbeing standpoints. Methods: A quantitative survey study addressed the following research questions: What level of sewing skills do current HE-focused students currently possess? How do HE-focused students engage in sewing practices? And what are the confidence levels of HE-focused students regarding select construction tasks? Findings and Conclusions: A survey of 180 students at a southwestern US university found that students who had access to sewing machines, even in a public space, had significantly greater confidence in their sewing skills than students who reported no access to equipment. Disturbingly, a statistically significant number of the students who reported they did not have access to a machine were Home Economics teacher certification individuals. Additionally, the results suggest that there is a benefit for HE teachers in districts that have eliminated sewing to have equipment and basic supplies available for independent student use. Recommendations for future scholarship: Future research is needed to explore the challenges posed by machine maintenance and if online sewing instruction is sufficient to provide or improve sewing skills in settings where it has been removed from the HE curriculum.

EJINKEONYE, Uju - Michael Okpara University of Agriculture, Umudike, Abia State

CHUKWU, Elizabeth; NNUBIA, Uju; ENETE, Onyakachi

Perceptions Of Undergraduate Students on the Care of the Elderly in Nigeria

Elderly in Nigeria, relies on the younger family members for care and protection at old age. The study examined Perceptions of Undergraduate Students on the Care of the Elderly Population younger family members are mostly youths and undergraduates, who are the hope of every society. in Nigeria. The study was conducted at Michael Okpara University of Agriculture, Umudike, Abia state. The study adopted a descriptive survey design. The hypothesis include: There is no significant difference in the mean response of students living with elderly person at home and those not living with elderly person at home on: their feelings towards the elderly; how they feel communicating with the elderly, There is no significant difference in the mean responses of male and female students on

how the elderly with health challenges be cared for. The population was made up of 5,400 final year students of the university as at 2017/2018 academic session, while a sample of 270 were randomly selected. Questionnaire was used for data collection, which was face validated by three experts. Cronbach alpha reliability coefficient index was $\alpha = .81$. The questionnaire were administered to the respondents at the Information Communication Technology training workshop organized by the University for final year students. The research questions were analyzed using mean, while t test was used to analyze the hypotheses. The findings include: students feel the elderly are difficult to communicate with, students living with elderly at home feel differently towards the elderly, young people do not like communicating with the elderly, students feel government should make better living arrangement for the elderly among others. Recommendations include that the community leaders and religious groups should be organizing programs and events that enables improve interaction between the elderly and younger populations among others.

EMEKA-OKA, Eugenia - Federal Polytechnic Oko

ONYEKE, Nkechi

Challenges of the Aged in Rural Areas of Enugu, Nigeria and Needed Support

The aged in Nigeria, especially those in rural areas face enormous challenges. They need help to cope and attain sustainable wellbeing. The major purpose of this study was to explore the challenges of the aged in rural areas of Enugu State, Nigeria, and needed support. Specifically, the study identified challenges of the aged in rural areas of Enugu State, Nigeria, determined various support options that could be available to the aged in rural areas of Enugu State, Nigeria. The area of the study was Enugu East Local Government area Enugu State, Nigeria. The study employed a survey design. The population is made up of 32,281 elderly (60 years and above). A simple random sample of 200 respondents (90) male and (110) female was drawn. A questionnaire and focus group discussion (FGD) guide were used for data collection. Data were analyzed using mean and standard Deviation. Focus group discussions were summarized and organized based on the specific purposes of the study. Major findings include loss of financial freedom for the aged, maltreatment and neglect from family members, transportation problems to move about, problems of good housing, high cost of health services among others. 6 recommendations were provided which include: Home Economics practitioners can organize the talk, seminar to the rural people on how to take care of the aged, the government should establish supportive age-friendly facilities such as lunch club and old people's forum, Home Economics can serve as an advisory body to lawmakers when making policies aimed at enhancing the wellbeing of the aged, the government should provide social security to the aged to help alleviate their challenges.

Keywords: Challenges, Aged, Rural areas, needed support, Home Economics, Nigeria.

EZEMA, Priscilla - Michael Okpara University of Agriculture

THOMPSON, Dorothy; NWONYE, Ngozi

Assessment of Protection Attributes of Sustainable Functional Apparel Prototype Developed Using CAD for Female Fishmongers in Aba, Nigeria

The study focused on the Assessment of the Protection Attributes of Functional Apparel Prototype developed using CAD for female fishmongers in Aba, Nigeria. The purpose of the study was to determine the acceptability of the prototype by different size categories. Specifically the study determined the mean ratings of fishmongers on the protection attributes of the developed prototype; determine the mean ratings of judges on the protection attributes of the developed prototype; and to compare the mean ratings of female fishmongers and judges on the developed prototype. Three research questions and two hypotheses guided the study. The study area was Aba, Nigeria. The

Research design employed was descriptive survey. The population 438 fishmongers and 109 respondents that served as judges. A multi-stage technique was adopted at different stages of data collection. The sample size was 209 for fishmongers, and 85 for judges. Two sets of instruments were used for data collection. Descriptive statistics like frequency, percentages, mean and standard deviation were used to analyse research questions while t-test was used to test the hypotheses at .05 level of significance. The findings revealed that the female fishmongers and judges scored the functional apparel very good with mean above 3.00 on all the protection attributes. There was no significant difference in the mean ratings of fishmongers and judges on small, medium and large sized based users on protection attributes of the functional apparel prototype. It was concluded that the developed apparel prototype protected the regular apparel of female fishmongers from ice and blood spill from the fish. It was therefore recommended among others that CAD should be used by lecturers and apparel designers in developing functional apparel for different work force and persons with different disabilities.

FUKUDA, Noriko - Shinshu University

Extending the Useful Life of Clothing Through Design: Proposals Based on a Case Study of Repair Requests by a Nagano City Clothing Store, 2020-2021

Introduction and Objective: The purpose of this study was to propose a design for extending the useful life of clothing as one of the efforts to reduce the environmental load.

Method: We investigated and analyzed cases of resizing and repairs requested by a clothing store in Nagano City from 2020 to 2021. The results were as follows.

Findings: Most of the requests involved autumn/winter clothing. As for the wearer classification, there were clothing for men's, women's, and children. The 2/3 of the requests were for men's clothing. Most of the clothes were for healthy people, but there were also special clothes for people with disabilities. There was a wide variety of wearing scenes, from casual to formal, but casual everyday wear was relatively common. There were also uniforms and patient clothing as special clothes. The requests handled were roughly divided according to purpose: size / design change and repair including fastener replacement. In the size/ design change category, requests were often made to change the length and waist of trousers and skirt. Young women were often asked to shorten their skirts, and young men were often asked to lengthen their trousers. In the repair, the problem areas could be roughly divided into fabric breakage, seam breakage, and fastener damage. The causes of these problems were mainly damage from use over time, accidents, and improper use.

Conclusions: Based on the above survey, I would like to propose designing clothing with more seam allowances, facings, pockets, and folding thin fabric about the design. In addition, it is necessary to promote buttons that are easier to replace than fasteners.

FUKUDA, Noriko – Shinshu University

KOMATSU, Junko

Improving Sewing Learning for Junior High School Students: A Study Based on the Free Description of Students Who Experienced Mask Production by the Simulated Factory Method

Introduction and Objective: The main purpose of this study was to enhance the learning of sewing that is useful for daily life using cloth in the field of home economics in junior high school. In addition, this study was designed to promote the valuing of clothing through the experience of sewing and to foster a sense of responsibility toward the production and consumption of daily goods.

Method: We examined the ideal way of learning to establish students' knowledge and skills, to cultivate deep thinking ability, to develop the ability to solve problems in collaboration with others, and to improve the instruction content and method. This is one of the practical studies in which the students worked together to meet the social needs of the shortage of mask products. We investigated and analyzed the free descriptions of students who had a short-term mass production experience of cloth masks by the simulated factory method. The results were as follows.

Findings: We collected free description responses from four classes in the 2nd grade, which included the cases that were positive statements, showing a sense of accomplishment, usefulness, and satisfaction. However, in this study, we focused on the cases, which were particularly negative. When summarized by content, the negative comments could be roughly divided into anxiety about performance, anxiety about the educational significance of sewing learning, and confusion about the importance of acquiring sewing skills in the present age.

Conclusions: From the above survey, it became clear that it is necessary for the instructor to select carefully the subject matter, teaching method and knowledge skills to be acquired, and to share the lesson's learning goals with the learners.

GELINDER, Lolita - Mälardalen University

Taste as Means for Teaching Sustainable Food Consumption in Home and Consumer Studies Education

Food production and consumption are one of the biggest drivers of global climate change and thus one of the biggest sustainability challenges of our time. A great food transformation is urgently needed, and it includes, among other things, changing people's eating habits. In the Swedish school subject Home and consumer studies students should learn to make sustainable food choices, i.e., make critically conscious choices based on health, economy, and environment. The purpose of this study is to investigate teaching for sustainable food consumption, by focusing on how teachers and students talk about taste during food work, more specifically the meaning constructed in relation to taste and how this teaching content may be understood in relation to different perspectives on taste. Video data from two classes of Swedish lower secondary school students is analyzed using pragmatic discourse analysis methods. The results show that taste mainly occurs as taste judgements and thus convey an understanding of taste as something fixed and unchangeable. A transactional understanding of taste – taste as something that gets meaning in the encounter between the one who tastes and what is tasted - is suggested as an alternative. In this way taste is understood as something changeable and reflexive and can be a part in students developing new taste experiences which is crucial for wanting to change eating habits, or for learning to eat new dishes, and foods, which will be required for people to make sustainable food choices. Continued development of the transactional perspective on taste is necessary to become a tool to use in teaching. Using taste as a content can also help avoid normativity in teaching, as well as make visible and provide tools for handling complex value conflicts in connection with the selection of food.

HAN, Ju - Kangwon National University

PARK, Mi Jeong

Analysis of 'Home Economics' National Curriculum and Textbooks in South and North Korea for SDG 4

The purpose of this study is to suggest the direction of the Home Economics curriculum by analyzing the curriculum and textbooks in South and North Korea to ensure sustainable quality education.

Therefore, this study analyzed the contents of South Korea's 2015 revised curriculum and textbooks, and the documents and textbooks published after the 'Compulsory Education Act of 2012' in North Korea.

The results were as follows.

First, The HE curriculum in South Korea is developed and operated for each elementary, middle, and high school level, and the curriculum document is developed as a separate booklet. On the other hand, North Korea's HE curriculum is only developed for middle schools, and only a small part is presented at the beginning of the 'Teacher's Guide'.

Second, the South Korean HE curriculum has a practical character that emphasizes the development of practical problem-solving competency, self-reliance competency, and relationship-forming competency based on technical, interpretive, and critical perspectives. However, North Korea's HE curriculum emphasizes only the technical point of view.

Third, South Korea's HE textbooks have been developed with 6 types for elementary school and 12 types for middle and high school, so each school can choose it freely. On the other hand, North Korea's HE textbooks had only one type developed by the state, which was smaller in shape and smaller in volume compared to South Korea.

Fourth, in terms of HE curriculum content, South Korea deals with all aspects of family life such as children, family, dietary life, clothing, housing, consumption, and home management, whereas North Korea deals with only technical content related to cooking and sewing. This corresponds to a part of the learning elements of elementary school HE subjects in South Korea.

HUSTVEDT, Gwendolyn – Texas State University

CHO, Hyojung

STEMS-Using Ethics and Sustainability to Motivate Scientific Careers

Home Economics (HE) was founded, in part, to give women access to science education. More than 100 years later, post-secondary education in HE serves to connect students interested in STEM (Science, Technology, Engineering and Math) careers a systemic approach to applied science that centers the human experience that radiates from the near environment. A longitudinal survey (n=611) conducted from 2019-2021 at a university in the Southern United States measured attitudes towards science as a public good (Moore and Foy, 1997) as well as a measure of interested and expectations related to STEM careers that included Ethics (instead of Engineering) as well as Sustainability. The measured is called STEMS. Students majoring in an area of HE were significantly more likely to agree that their intended career path would allow them to make an impact on sustainability than students majoring Health Professions. Some HE majors also saw a significant increase in agreement with statements like "I want to work in a career that requires mathematical skills" or "The career path I have chosen will allow to work in an ethical manner" between the first and third years at university. The results also demonstrated that students who were early in their university careers during the COVID-19 pandemic had significantly lower positive attitudes towards science as a public good that students at the same level surveyed prior to the pandemic. However, HE student interest in pursuing graduate education increased significantly during the pandemic. Along with the benefits of emphasizing STEMS career outcomes, the presentation will discuss the impact on HE students of the cognitive dissonance created by public health and government authorities fighting with online influencers (and each other) about the basic science of public health recommendations.

ISAJI, Yuri - Ochanomizu University
Effects of Leisure Activities on Well-being in Older Adults
<p>INTRODUCTION</p> <p>It has been argued that while older adults have an abundance of free time, it is not being utilized well. This study examines the effects of leisure activities on well-being for older adults in Japan.</p> <p>METHODS</p> <p>Participants who were over 60 years old and enjoyed leisure activities were invited to the study. A questionnaire survey was conducted asking about the top two leisure activities in which the older adults most frequently engaged. We compared the results of the most frequent or primary leisure activities and the second most frequent leisure activities. Multiple regression analysis was conducted using the scores of positive items representing the effects of leisure activities as explanatory variables and the sense of life enrichment in primary leisure activities and secondary leisure activities as objective variables.</p> <p>RESULTS</p> <p>The results of the regression showed that the sense of life enrichment after starting primary leisure activities tended to increase when older adults felt that they were getting a sense of accomplishment from the activities. The sense of life enrichment after starting secondary leisure activities tended to increase, especially when experiencing physical health.</p> <p>CONCLUSIONS</p> <p>Older adults who participate in leisure activities tended to think that their primary leisure activities brought them motivation for leisure and their secondary leisure activities were effective in maintaining their health. Leisure activities based on the results could be suggested as an example of effective leisure activities for older adults.</p>

JOHANNSEN, Ulrike - Europa-Universität Flensburg
LÜTJEN, Katrin
Evaluation: Gamebox "Aufgetischt!" Learning German through Games About Eating and Drinking
<p>Introduction: The gamebox „Aufgetischt! Spielend Deutsch lernen mit dem Thema Essen und Trinken“ (= Dished up! Learn German through games about eating and drinking) addresses people with an immigrant background who want to learn German as a second language. In addition to German language acquisition, the play-pedagogical approach aims to achieve implicit health promotion (Food Literacy). The aim of this evaluation is to describe the potential of the gamebox "Aufgetischt!" for use in setting-oriented interventions within the framework of health promotion for people with a migration and refugee background. Furthermore, recommendations for quality control should be derived.</p> <p>Methods: A mixed-methods approach with quantitative and qualitative research methods was chosen to achieve the objectives, with a focus on qualitative research methods. An online questionnaire was given to people who introduce the games to players (n = 313). In addition, 20 telephone interviews, as well as five observations from practice assignment with focus interview were conducted.</p> <p>Findings: The use of the gamebox had strong effects in the acquisition of language and knowledge as well as promoting health, fun, a motivation to learn, and social interaction. Furthermore, numerous implicit effects were shown (eg. dealing with their own consumption habits).</p> <p>Conclusion and recommendations: Everyday topics stimulated conversation between participants.</p>

Additionally, the need for more relevant topics (household, finances, dental hygiene, etc.) was shown. For this reason, the development of further learning media is recommended. The methodical-didactic approach of playing easily brings together people from different cultures. The more the facilitator actively engages with the issue, the more the learners can benefit. The topic of food received a positive response from learners, strengthening and supporting their learning process.

KANIE, Noriko - Utsunomiya Kyowa University

IMAMURA, Asako

Study of the Current State of Early Childhood Financial Education in the Home and Its Challenges

Financial education teaches the value of money and labor through taking care of things and money. In Japan, money has long been considered “impure,” and parents have tended to avoid discussing matters involving money in front of their children. Systematic education on the functions, roles, value, and proper use of money has not been conducted in the home or at school. Children have learned through experience, such as by accompanying their parents when shopping and through play (e.g., pretending to be a storekeeper), that money can be exchanged for things and that things cost money. However, in recent years, the spread of e-commerce and cashless payment has reduced children’s opportunities to come into contact with cash in their daily lives and to experience the transfer of cash. Thus, understanding the value and role of money directly from experience is becoming increasingly difficult.

In this study, we conduct a survey on the following: (1) household financial education (if children are made to go without buying something they want, if children are allowed to select products, etc.), (2) parents’ mentality regarding money (whether they consider financial education necessary, whether children are taught self-restraint regarding purchases, etc.), and (3) parents’ financial behavior (frequency with which cashless payment is used, etc.). The survey participants are parents/guardians with preschool children (ages 4–6). The survey is ongoing, scheduled for completion in spring 2022.

Although these are partial results for an ongoing survey, we have found that household financial education strongly reflects the intentions of parents/guardians, with large differences between households. In addition, we have also found that some parents/guardians that usually use cashless payment make a point of using cash for their children’s education.

At the conference, we plan to announce our final results and discuss financial education in the early stages of development.

KANTIOK, Esther

ILIYA, Hauwa

Public-Private Partnership in the Provision of Efficient Domestic Waste Management Services Among Households in Zaria Metropolis; Towards Environmental Sustainability

Introduction: This paper assessed partnership between the public and the private sectors in providing efficient domestic waste management services among households in Zaria metropolis.

Objectives: The objective of the study was to ascertain the types of waste generated by houses in Zaria, methods of disposal of domestic wastes, and level of public and private involvement in the collection and disposal of domestic waste from households in Zaria metropolis

Methods: Descriptive survey research design was adopted for the study

The sample of the study involves 122 houses selected using stratified, systematic and simple random sampling technique. A 19-item researcher developed instrument was used for data collection in the

study. Mean and standard deviation was used to answer the research questions stated with a decision mean of 2.50. Chi-square statistic was used to test the hypotheses stated in the study at 0.05 level of significance.

findings: The findings of the study revealed that the types of house hold waste mostly generated among households include food waste, plastic bags and containers. Furthermore, majority of the houses dispose their waste using street beggars also known as (Alimajiris) and private operators focus on profit generation while neglecting efficient service delivery

conclusion: The study shows that public sector has failed as a facilitator for creating an environment for private operators to function, particularly through legislation, enforcement and public

sensitization. recommendation: The study recommends among others that household should utilize the provision of waste trucks provided by waste management service providers. Also, legislation by government should allow for proper monitoring and supervision of the activities of the private waste management service providers.

KANYATI, Malvern - Zambia

LUPAMBO, Hosea Chishala; CHIBALE, Sweetbertha;

Factors Affecting Food Hygiene Practices in Rural Restaurants: A Case of Kawambwa District

Food borne diseases are major health problems in developing countries including Zambia. The objective of this study was to assess food handling practice and associated factors among food handlers working in food establishments of Kawambwa central part, in Luapula province of Zambia. Quantitative study design was conducted among 70 food handlers working in 13 food establishments (restaurants and lodges), and 10 members of regulatory bodies. Data were collected using face to face interview with pretested structured questionnaire and physical observation. In this study, poor sanitary conditions of restaurants, poor water and sewage systems around restaurant areas, lack of consistent health inspections, and inadequate knowledge about food hygiene were found to be the major contributing factors to poor food hygiene practices in Kawambwa Central area. Based on the findings of the study, it was recommended that more studies on food hygiene practices should be carried out in other parts of Kawambwa district and also extended to other parts of Zambia as food safety is an important aspect which can help curb foodborne disease outbreaks. It is also recommended that health inspections should be scheduled and carried out more often by relevant authorities in the area.

KANYATI, Malvern - Zambia

LUPAMBO, Hosea Chishala; CHISHA, Jean

Factors Influencing Food Choices in Northern Province: A Case of Kasama Town

The poor nutritional situation in most parts of Zambia is reported to be urgent need of appropriate and efficient interventions to mitigate malnutrition in the country. In the same vein, to effectively evaluate such nutrition interventions, this study was carried out to assess the perceived factors influencing food choices and also to establish the available food choices in new Kasama community located in Kasama district of Northern Zambia. A total number of 80 respondents were randomly selected from a population of 500 people. 41 were males while 39 were females. SPSS version 20 was used to enter and analyze data. The results of the study clearly indicated that food choices of members of this community are highly affected by food prices, social influence, mass media, religious and cultural influences, and climate change among other factors with mean ranging from 4.25 to 5.56 indicating strong influence. Some of the common food choices established from the study include; sweet potatoes, cassava, rice, kapenta, maize, meat, groundnuts, and beans. From the findings, it is recommended that more studies should be carried out to identify more factors influencing food

choices and also to completely identify the effects of education, income, and ethnicity on food behavior.

KASUYA, Misako - Showa Women's University

SENUMA, Yoriko

A Study on Building a New Regional System for the Realization of a Sustainable Lifestyle in a Rural Area: From a People's Awareness and Behavior Survey in Miyama-cho, Kyoto-fu

Introduction: Miyama Town, Kyoto Prefecture, the target of this study, is an excellent example of regional development by utilizing landscape conservation and farmhouse restaurant management based on traditional farmhouse architecture. Currently, however, there are issues such as depopulation and aging as well as a decline in the function of regional cooperation. In the future, in place of the initiatives carried out thus far, it is necessary to build a new, sustainable regional system that takes the environment into consideration and makes the best use of the characteristics of the area.

Purpose of the study: The purpose of this study is to propose a new regional system for the realization of a sustainable lifestyle in rural areas. Furthermore, the significance of this study is related to the goals and policies of the United Nations Decade of Family Farming 2019 to 2028.

Research method: An awareness and behavior survey was conducted with regard to the residents and persons related to the area. The survey results allowed us to understand the present state and issues in Miyama Town, and clarified intentions and behaviors toward the area.

Results: The results of the study indicated a necessity to create employment by utilizing the resources of the area and to build a new regional system centering on exchanges between local residents and urban tourists/visitors. An analysis revealed that the content of the regional system was related to SDGs Goals 8 (Decent Work and Economic Growth), 9 (Industry, Innovation and Infrastructure), and 11 (Sustainable Cities and Communities).

Implications Specifically, 1. we will rediscover and review resources of the area that lead to growth and employment, and 2. it became clear that there was insufficient rural innovation that incorporated a consumer-oriented management perspective. Based on the results of the analysis conducted by this study, it will be necessary to continue to investigate the preferences of consumers and tourists/visitors as a future task.

KAWATA, Nahoko - Oita University

HIRAYAMA, Yosuke

Housing Affordability and Family Formation in Japan

In Japan, the independence of the younger generation from their parents and the difficulties in forming partnerships and families have become major problems, with trends in housing affordability garnering attention as a factor behind these challenges. This paper explores the difficulties in family formation among the younger generation with a particular focus on their relationship with housing affordability. Empirical data for this study comprised primary data that was collected from 2,000 respondents aged between 25 and 39 in the Tokyo metropolitan area using a structured questionnaire in 2021. We used the multinomial logistic regression model to assess how housing factors are associated with their marriage and fertility intentions. Whether or not living with parents, the burden of housing costs, and the quality of housing affected the young people's intentions of family formation. These findings suggest that housing policies need to be addressed in response to the family and population issues facing Japan today. In addition, it shows that the treatment of housing affordability is becoming more important for home economics and family life education.

KERETH, Gudila - https://twitter.com/gkereth
OIGO, Elizabeth Bosibori; ISIKA, Juliet Kaindi; KIMARO, Michael
Behavioral Determinants Associated with Customers' Choice of Apparel in Dar-es-Salaam, Tanzania
<p>Understanding customer decisions on apparel choice and the underlying behavioral determinants (cultural, social, personal and psychological) is essential in apparel business industry. In Tanzania, studies on behavioral determinants of customers' choice of imported and locally made apparel are scarce. The purpose of this study was to assess the behavioral determinants that influence customers' choice of apparel. A cross-sectional survey design was adopted in this study. A systematic randomly sampling technique was used to collect information from 420 customers aged above 18 years old while purposively sampling technique was applied to select second-hand apparel markets (n=3); shopping malls (n=10), boutiques and apparel shops (n=14) and locally made apparel shops (n=16) in Dar es Salaam. Generalized Linear Model with binomial and Poisson error distributions were used for the statistical analyses, and p-value of 0.05 or lower was considered significant. Quantity, expenditure of apparel, gender, income, and type of outlets were found to be significant determinants of apparel choice. Choice probability of apparel increased to locally made apparel with an increased in expenditure and being female, while the probability of apparel choice decreased from locally made apparel to imported apparel with an increased in quantity, income, and shopping outlets. Social, personal and psychological determinants as well as cultural determinants were significantly related to the quantity and frequency of purchasing apparel respectively. In conclusion, the quantity and expenditure of apparel, gender, income, types of outlets drive customers on the apparel choice. Social, personal, psychological and cultural determinants were associated to the quantity and frequency of purchasing apparel in that order that retailers need to take them into account when developing business strategies. This study provided additional knowledge on the existing customer's apparel choice in Tanzania. Understanding customer behaviour and the types of outlets required in the area may benefit apparel marketers.</p>

KETTUNEN, Henna - University of Helsinki
MINNA, Autio; KOUHIA, Anna
Tracing Consumers Sustainable Relationship with Material – The Co-agency Between Consumers and Clothing
<p>As the Earth's material resources are reduced, it is essential to learn to live and interact with materials sustainably. This requires a change in our anthropocentric world view, which is what the new materialist research trend has sought, pointing out perspectives on the active agencies of materials. However, empirical research on the phenomenon is still relatively limited, especially in the context of sustainable clothing consumption.</p> <p>The objective of the study is to understand the relationships between consumers and materials to reach a more sustainable way of life. The research examines the structure and significance of the co-agency between consumers and materials in the consumption of clothing.</p> <p>The data consist of teacher students' writing assignments (N=18), where they reflect on their relationship with the clothes they own in the context of sustainability. Data are analysed with narrative research approach as cultural stories describing the world of consumer experience.</p> <p>The agency of clothing manifested itself in relation to the consumer (mind, body, everyday activity), time (the garment changes or reappears), space (shop, wardrobe) and other materials. Social and material constraints, such as social norms, or weather conditions, gave the agency boundary</p>

conditions. The consumer and the garment acted together, influencing each other and influencing each other's agency. For example, a garment that is perceived as high quality and durable could increase care, and on the other hand, the careful care of the garment could extend its lifespan. The students' writings enclosed complex relations to clothing and its sustainable consumption, for example, negotiations between sustainability and personal well-being.

Results reveal how consumers and materials co-act in everyday life, bringing up new knowledge on the formation of sustainable, nurturing and respectful relationships between consumers and materials. The results contribute to the field of home economics research to understand lifestyle changes required in ecological crisis solutions.

KIM, Kyungmin - Korea University

CHOI, Jungwon

A Latent Profile Analysis of School Dropout Adolescents' Previous School Life and Differences in the Psycho- emotional States

Our society has considered adolescents who drop out of school as failure or outsiders. However, some adolescents adapt well after school dropouts while others do not. Therefore, in this study, we identified latent profiles of adolescents who dropped out of school based on their previous school life and investigated differences in their psychoemotional states in later life.

This study used data from the School Dropout Youth Panel Survey conducted by the National Youth Policy Institute in South Korea. The sample of 318 school dropout adolescents (M age in the first wave=17.64, SD age=1.17, 52.5% male) were analyzed. Self-report questionnaires were used to assess the previous school life (teacher and peer relationships, learning participation, and school climate) in the first wave and psycho-emotional states in the fifth wave.

Latent profile analysis revealed four subgroups. The largest group (59.8%), 'ordinary school life'; reported moderate levels of all domains of previous school life. The second-largest group (22.0%), 'relationship-focused school life', recalled they were in good relationships with teachers and peers. The third group (12.3%), 'lonely school life', reported they had difficulties in peer relationships when they were in school. The fourth group (6.0%), 'anti-school life', recalled they were not in good relationships with teachers and recognized their previous school climate negatively as well. Additionally, we found group differences in later psycho-emotional states. The 'lonely school life' group reported lower levels of self-esteem, resilience, life satisfaction, and higher levels of depression than the 'relationship-focused school life' group. And the 'anti-school life' group showed higher levels of impulsiveness and social stigma than the 'relationship-focused school life' group.

Our results suggest considerable heterogeneity among adolescents who experienced school dropouts, and different intervention approaches are needed for sustainable well-being in their later life.

KISHI, Noriko - University of Teacher Education Fukuoka

Lesson Improvement through Lesson Studies: A Case Study on the Lessons for Responsible Living and Consumption in Elementary Home Economics Education

Introduction: In Japanese elementary schools, Home Economics is compulsory for fifth and sixth graders, but opportunities for homeroom teachers to train for the latest topics within the subject are few. In-service training is indispensable for improving the quality of lessons on today's issues, such as responsible living and consumption. The purpose of this study was to clarify the process of improving

the class through lesson studies, and to examine effective ways of teacher training based on lesson practices.

Methods: The study was conducted on the unit “Let’s consider ways to use things and money” from the fiscal year 2015 to 2017 at the elementary school affiliated to University A. The lesson plans, videos of the research lessons, and field notes of the lesson planning and review discussions were collected. We analyzed changes in the quality of the classes, utilizing the recorded lesson videos.

Findings: 1. In their first home economics lesson study, the teaching plan changed repeatedly, even for the teachers with plenty of teaching experience. This was because the lesson plan progressed through self-study and one-off exchanges with multiple advisors. In the 2015 research lesson, the pupils performed complex food selection simulations and learned how to choose and buy food. However, the understanding was fragmented and did not lead the pupils to develop an actual shopping plan.

2. Over the three years of continuous lesson studies, the teacher developed a clear idea of what they wanted to draw from the pupils. In the 2017 research lesson, teachers said that the objective was achieved; pupils understood how choices for daily necessities were made and the meaning of family shopping behavior.

Conclusions: Lesson studies that enhanced collaboration among teams and improved classes by discussing goals and evaluation settings for specific lessons were useful for teacher training.

KOPPEL, Kristi - Tallinn University / University of Helsinki

PALJOJKI, Päivi

Student Teachers’ Challenges in Teaching Home Economics and Sustainable Living in Estonia

Introduction: Becoming a teacher is not only a matter of teacher education. Many societal factors influence potential candidates’ decision to enter teacher education. Once they enrol, the key issue becomes how well the programme succeeds in shaping teacher identities compatible with the demands of the sustainability challenges. Teachers are educated following the integrated or consecutive model. Latter is used in subject teacher studies in Estonia, where students choose the teacher education after achieving a subject degree. The concurrent model is used for home economics and handicraft teacher education also in the neighbouring country, Finland. The aim of this study is to find out the student teachers’ understandings about the balance of home economics contents in Estonian schools.

Methods: The data (personal interviews and teaching diaries) were collected from second-year handicraft and home economics teacher students (n=5). They had recently completed their second year of master’s-level teacher education studies, where the emphasis is on school practice. Qualitative content analysis was used to analyze the data.

Findings: In practice schools the teacher students met the attitude that HE is only about cooking. Following the latest curriculum, the teacher students felt the responsibility to handle other HE themes, related to sustainability, consuming, healthy food choice etc., but they did feel the reluctance from their students. They also felt that teaching handicraft is easier than teaching home economics. In conclusion, the teacher students need support in finding balance in the contents of HE, and, at the same time to meet the challenges of sustainable living. Additionally, the concurrent model gives them more time to develop their own understanding of the curricular balance within HE, as compared to the consecutive model. The results suggest that teacher students should be encouraged not to be left alone with their learning experience but to develop skills for professional sustainable development.

KTEILY-HAWA, Roula - Brescia University College at Western
WALKER, Megan; DUNN, Jennifer; COULTER, Sandra-Lynn; GOLDSMITH, Wendy; CHOPRA, Reeti
Bringing Communities into the Family Studies/Home Economics Classroom: A Canadian Experience
<p>Introduction: In a Canadian context, lack of women-specific housing and supports result in women and girls facing or fleeing gender-based violence to remain trapped in traumatizing situations of homelessness and violence. Family Studies professionals working with community partners examined how the housing system in London, Ontario addressed the needs of women and girls fleeing violence during the pandemic.</p> <p>Methods: Family Studies students at Brescia University College at Western received training in interviewing skills and ethics. Students coordinated an environmental scan for programs and services and conducted a gap analysis and needs assessment. Moreover, in-depth, semi-structured interviews with 12 sector leaders were conducted via Zoom, recorded, transcribed and then coded for thematic analysis.</p> <p>Findings: Housing system is not currently meeting the needs of women and girls. Emerging themes include: lack of housing stock; lack of robust funding; shortage of overall space; long wait lists; and inconsistent trauma-informed practice. Many services are only offered in English, which is a barrier for women from diverse communities. Additionally, COVID-19 has impacted access to needed housing services, as many women felt unsafe reaching out.</p> <p>Recommendations: Sector leaders offered a set of nine (9) actionable recommendations: engaging with women and girls with lived experiences; proactive policies, planning and development for better housing; increased safety and affordability of long-term housing; providing funding by the City for priority access to housing, shelter, and community services; investing in a public relations campaign; addressing lack of services for male perpetrators; prioritizing funding for immediate access to long-term, trauma-informed counselling; providing emergency shelters specific to the needs of women; and providing trauma-informed training for front-line staff.</p> <p>Conclusions: The study reinforces long-understood gaps in serving women facing gender-based violence, with added insight into COVID-related issues. This community-university partnership is ripe for replication and should be explored for promising practices and use elsewhere.</p>

KUROIWA, Kaoru - Ochanomizu University
Sentient Activity and Gender Difference in High School Students' Cooking for Peers
<p>Gender equality is one of the most important issues for developing a sustainable society. However, in Japan the stereotype that women should do the housework remains persistent. In fact, the burden of housework, especially feeding, is highly skewed toward women's responsibility. Feeding one's family can be regarded as care, involving sentient activities such as "attending to the likes and dislikes of specific others" or "organizing relationships between oneself and others" (Mason, 1996, p. 27). Previous studies have demonstrated that, among adolescents, cooking for family has an aspect of care (Kaplan, 2000). However, few examine the aspect of care when adolescents cook for their peers. Therefore, this study focuses on adolescents' cooking for peers, exploring sentient activity and its difference in terms of gender.</p>

Group interviews with 28 high school students (18 girls and 10 boys) were conducted in 2021. Each interview comprised 3 – 7 students and lasted for two hours. The participants lived in Japan and interview questions pertained to their and their families' cooking at home.

The findings suggest sentient activities in the act of cooking for peers among several high school students. For example, some female students made sweets that reflected their friends' likes or health, about which they knew from previous conversations. Among some male students, sentient activities, like organizing relationships with friends, could be observed in their cooking. However, the data indicate it may be more likely required of female students to be conscious of others in terms of cooking. For example, one female student reported that her peers asked her to make sweets rather than bring ready-made sweets. This study shows that cooking for peers can be considered an activity to express one's attention to specific others and that gender difference may exist in it, which may work to maintain the stereotype about women's caring.

KUUSISAARI, Hannah - University of Helsinki

Future Needs of Home Economics Education – Finnish Teachers' Perspectives

Home Economics teachers have an important role in developing Home Economics teaching in a way that it stays relevant in relation to pupils, families and society's needs and has an influence on society and the well-being of the families. However, teachers' perceptions of what they address as important future skills and competencies to teach and learn in HE classes have been rarely studied.

The context of this qualitative study is an in-service training which was arranged for a group of Home Economics teachers in Finland. The in-service education was related to curriculum changes and the aim of the training was to develop new teaching practices to be able to develop teaching according to the curriculum changes.

Teachers were asked to reflect on: What knowledge and skills young people need now, what in their near future and what after 20 years? Teachers were asked to discuss this issue by writing first their own thoughts and then comment on their fellow students' writings. Thus, data collection was interactive discussion consisting of the written reflections of 14 Home Economics teachers working at secondary school level. Data collection was conducted by using an online platform and data were analysed by using qualitative content analysis.

The study gives insight into the teachers' perspective on how the contents of Home Economics should evolve as a school subject in the future. The analysis shows that teachers emphasise the need for the teaching and learning of knowledge management skills and critical thinking skills. Teachers highlighted digital technology skills to be among important HE skills. In addition, they focus on the practical application of knowledge such as the recipe literacy, literacy of housing and textile care and the ability to make informed consumer decisions regarding sustainability as well as planning and organisational skills as important future competencies instead of specific content knowledge of Home Economics.

KUUSISAARI, Hannah - University of Helsinki

CAMPBELL, Marial; MINNA, Autio

Home Economics Teachers Curriculum and Sustainability: Empowering Agentive Teachers

Home Economics has the capacity to contribute to future citizens' sustainability practices, especially in the context of everyday decision making and life skills. Our qualitative study examines the factors

which empowered a cohort of 13 Finnish Home Economics teachers from both rural and urban setting, to ensure sustainability for future citizens was central to their teaching of Home Economics. Utilising Bernstein's (2000) concept of Pedagogic Discourse, Classification and the Pedagogic Recontextualising Field and Emirbayer and Mische's (1998) conceptualisation of agency as our conceptual lens, we examine the data gathered from 13 interviews.

Our aim was to discover the extent to which global, national and local interpretations of and representations of the Home Economics Curriculum coupled with the role that iterational, practical-evaluative and projective influences had in enabling curriculum agency in this cohort of teachers.

Our findings indicated that a combination of cultural, structural and material issues both enabled and hindered teachers' agency in selecting the content and methods to teach sustainability as an integral part of the Home Economics curriculum. In particular, the dominant status of climate change globally and locally, coupled with the teachers' belief that they could influence student behavioural change proved key motivating factors in enabling agency in this cohort of teachers.

LEECH, Irene – Virginia Tech University

Consumer Data Privacy Protection: A Global Comparison

Today almost all marketplace and social transactions require transfer of data. Traditional forms of payment, for example, did not necessarily leave a trail that someone could follow. However, electronic forms of payment require documentation that removes anonymity. Data are collected from financial transactions, communication, smart utility meters, wearable technology, and almost every minute of time and every activity is recorded by providers of goods and services. Industry has encouraged government to limit legislation and regulation of consumer data so that its opportunities to create new products and services can be unlimited. Businesses and government use the data created by consumers in many ways, compiling and recombining information from many sources and creating and using artificial intelligence to influence other consumer decisions and actions. This requires consumers to trade privacy for the ability to use new technology and services. Younger consumers readily accept the idea that their data are used by the businesses with which they interact and others. Many have never known a marketplace where data were not collected and used by businesses. Older consumers may have had experiences or become aware of situations where personal data were used against them or others. The European Union leads the globe as it protects consumer data under the General Data Protection Regulation (GDPR). Under the European Union's Charter of Fundamental Rights citizens are granted the right to protect their personal data. The United States lags behind the European Union. While federal legislation has been introduced, no one expects it to pass quickly. States have begun passing consumer data protection legislation to fill the national void. The first was the 2018 California Consumer Privacy Act. In 2021, Virginia passed industry legislation based upon that proposed in Washington state, followed by Colorado. Method: This presentation will compare consumer protections provided by the laws passed through June 2022. Recommendations: Consumer privacy must be protected to ensure market sustainability. IFHE members can help make consumer data privacy law effective.

LUPAMBO, Hosea Chishala - Rockview University, Lusaka
MALAMA, Esther; KANYATI, Malvern
Factors Influencing Non-adherence to Dietary Regime among Diabetes Patients in Zambia: A Case of Monze District
<p>Diabetes mellitus is a condition that results from the body's ineffective use of insulin. Management of diabetes mellitus requires adherence to dietary regime, lifestyle changes and drugs. The purpose of this study was to determine the factors affecting adherence to dietary regime among patients with diabetes mellitus in Monze District. Data was collected using questionnaires on a sample of 70 patients out of the targeted 150. The data was analysed quantitative using Excel 2013 and Statistical Package for Social Sciences (SPSS Version 21) computer software. The results revealed high level of knowledge on dietary recommendations in management at 77%. There was a strong association between the level of knowledge on the recommended dietary practices in management of diabetes mellitus and level of formal education ($P < 0.001$). The mean level of compliance to recommended dietary practices in management as reported by respondents was 46%. Respondents reported financial constraints (93%) as a main hindrance to adherence to recommended dietary practices. Some of the facilitators to adherence were perceived and expected benefits and family support. Other facilitators included availability of information (86%) reported as a strong facilitator towards complying with dietary recommendations. Other facilitators included forming and maintaining healthy habits, availability of food in the area and having enough money to buy food. The study concluded that the level of adherence to recommended dietary regime is low and financial constraints was the main factor that prevent patients with diabetes mellitus to adhere to recommended dietary practices. Therefore, there is need for government, donors and other implementing partners to come up with ways that will ease the burden of diabetes mellitus care.</p>

MACARTHUR, Roseline Love - University of Cape Coast
AMEDEKANYA, Juliet Dzigbordi
Quality Attributes of Fish Processed by Different Fermentation Periods
<p>The study investigated the quality attributes of fermented fish processed by different fermentation periods. The factorial design was used to test the effect of the period of fermentation on the nutritional composition and sensory properties of fermented samples using the locally fermented fish as the control. Freshly harvested cassava croaker was purchased from vendors, Ghana and transported to the laboratory in controlled environment to ensure reliable results. Processing and determination of the nutritional composition of the fermented fish were carried out using standard procedures and methods. Sensory properties and consumer acceptability of the fermented fish samples were assessed using self-developed questionnaire. ANOVA and Chi- Square statistics were used to test for differences among the nutritional composition and sensory properties of samples. The results showed that the longer the fermentation period, the more the nutrients reduced (proteins - from $72.66 \pm 0.56\%$ to 42.95 ± 0.11 and fat - from 2.8 ± 0.41 to 1.98 ± 0.16) after 5 days of fermentation and depreciated further (36.49 ± 0.79 and 1.64 ± 0.17) as salt was added and allowed to mature. The control (MLFF) had more proteins than the developed products. Apart from Phosphorus and Potassium, which followed a consistent pattern of depreciation at the different fermentation periods, Sodium, Calcium and Magnesium reduced at day 1 and appreciated at days 3 and 5. However all minerals, apart from sodium, reduced samples matured. The results indicated that the 3 days fermented fish (MD3F) had comparable sensory attributes and consumer acceptability with the control. ANOVA results showed statistically significant ($p < .05$) differences in the nutritional composition of all samples with the exception of calcium (2 tailed). The study concluded that</p>

fermented fish has reduced nutrient content and therefore recommended that it should be eaten with additional protein sources to meet individual protein requirements.

MACARTHUR, Roseline Love - University of Cape Coast

KORANTENG, Lawerencia Boakyewaa

Proximate and Functional Properties of Wasawasa (Yam Meal)

Yams are perennial herbaceous vines cultivated for the consumption of their starchy tubers in many temperate and tropical regions, especially in Africa. However, the crop is highly perishable resulting in marked post-harvest losses. One major way of preserving the crop in areas where they are mainly cultivated is by converting it to flour for a reconstituted delicacy (wasawasa). Apart from the negative impact on the quality of the meal due to drying kinetics, it is mostly eaten without a protein accompaniment due to poverty, which could have serious nutrition implications for children. The aim of this study was to improve the nutritional quality of wasawasa, from composite flour of yam and soya bean. Standard procedures and methods were adopted to develop a fortified yam flour using different proportions (90:10, 80:20 and 70:30) of soya bean flour to yam flour to produce soya bean fortified yam meal (soywasa). Proximate composition, mineral content as well as functional properties of the developed products and the control were determined. Standard deviation and one-way ANOVA were used to analyse the data at $p < .05$. Results showed that the fortified meal (soywasa) had a significantly ($p > .05$) high protein (18.96%) and fat (7.33%) than the control (4.71% and 4.37% respectively). The bulk density and water holding capacity of soywasa increased with increased soya bean flour, the latter being an essential characteristic as it improves yield and limits expenditure on food. Also, phosphorus, magnesium, and fibre content of the meal improved with reduced cost of production. The developed product could be a candidate for ensuring food security, reducing malnutrition, and sustaining the production of the crop and income of marginal farmers and families. It may also be ideal for diabetics due to the high fibre content, which enhances its satiety value and contributes to low glycaemic index.

MAGUIRE, Helen - St. Angela's College, Sligo

'Everyday' – A Worthy Focus of Inquiry for Home Economics and Sustainable Consumption

Introduction:

A focus on the "everyday" as a way of conceptualising the places and spaces in which we live has long been an important lens for Home Economics inquiry. Everyday life in families and households is recognised by the IFHE as an important quadrant in Home Economics practice. Many home economists have documented the significance of the concept of the everyday to the field. However, some argue that everyday still warrants fuller exploration as it is not yet profoundly entrenched in the discipline as a philosophical construct. On the contrary, other disciplines such as sociology; consumer studies and geographic inquiry may be seen to have forged ahead with research situated in the everyday. Likewise, research which foregrounds ordinary and routine, yet complex, experiences of the everyday has also become central in discussions concerning sustainable consumption, as consumption and production remain inextricable from our everyday lives and from contemporary societies. In such research the analysis of everyday practices, their coordination, routines and dynamics has become an integral task with theories of practice as an overarching theoretical and methodological lens increasingly employed.

Methods:

In this research the notion that responsible daily practices in the micro-level selection and management of household resources, such as clothing, could provide a key pathway towards sustainable consumption will be explored. Information is based on ongoing PhD research investigating

the active use phase of clothing consumption in Ireland through a complex intergenerational dataset generated using in-depth problem-based interviews to enable detailed case and comparative analysis.

Implications:

Research in the everyday can prove insightful for contemporary Home Economics professionals.

Deeply exploring everyday interactions with clothing is facilitating a fuller, more nuanced and holistic understanding of wearer garment relationships, behaviours and everyday clothing practices with insights for sustainable consumption.

MAGUIRE, Helen - St. Angela's College, Sligo

Practicing Fashion and the Household as a Site of Consumption – Employing Wardrobe Studies as a Lens to Reconnoitre Fashion Clothing Consumption Practices

Introduction:

Recent high-level global reports have documented the sustainability and circularity of the fashion industry as weak and requiring renewed effort to positively impact its harmful trajectory. Moreover, the actions and everyday agency of householders with regard the practices of using and wearing fashion in real life contexts beyond the market also remain ill understood.

Methods:

The study distils a practice-oriented perspective on household consumption with the nascent conceptual approach of 'Nexus at Home' research. While, previous work in this area has focused on the interdependence and infrastructures for key domestic resources such as Water-Energy-Food, in this instance attention is moved to fashion clothing consumption with the household as a primary site of activity. This presentation, based on on-going PhD research exploring everyday fashion consumption practices in Ireland, will document wardrobe study methods as a valuable methodological approach comprising problem centred interviews, wardrobe inventories, household tours and laundry diaries and used in this instance to generate a complex intergenerational dataset.

Implications:

Such everyday household sustainability challenges and dilemmas are an important focus in contemporary inquiry in Home Economics. By illuminating everyday practices in regard to the sustainability impact of clothing active use and care over time, in the manner of this research, it is possible to fully consider how to positively influence sustainability of consumption in this phase of clothing lifecycle. Such insights into emergent everyday fashion wear, care/laundry and repair practices at the household scale offer enlightening opportunities for Home Economics education, sustainable household consumption policy intervention and spotlighted promising pro-environmental occasions amid the habits and routines of everyday life.

MBAH, Patricia Etuna - Michael Okpara University of Agriculture Umudike

AZUBUIKE, Ozioma; KANU, Chidindu

Providing Sustainable Nutritional Meal Selection Assistance to People Living with Diabetes Mellitus in Umuahia Environment

Objective: The purpose of this study was to determine the nutritional awareness and meal selection assistance available to people living with diabetes mellitus in Umuahia Environment in Abia State, Nigeria.

Methodology: A descriptive survey design was adopted for the study and simple random sampling technique was employed to select 30 (10 male and 20 female) diabetic out patients attending public clinic with Federal Medical Center (15), Umuahia and Abia State Teaching Hospital (15), Aba based on their willingness to participate in the study. Nutritional and meal planning talks to the patients were

advocated on their clinic days for four 4 weeks consecutively via ethical consent before a structured questionnaire was administered to them. Frequency distribution, percentages and mean ratings were used for analyzing the information from the respondents.

Results: Forty percent (40%) were male while 60% were female; approximately 37% were within the age range of 40-49 years. Majority (70%) were married while 36.7% had secondary school education. Also that, 53.3% had no family history of diabetes; diabetes was diagnosed in the hospital during medical checkup (70%). Lifestyle of the patient reveals that 70% have no regular activity pattern. Whereas 70% of the respondent were aware of the disease diabetes mellitus before coming to the clinic.

Recommendations: This study recommended that creating public awareness on the incidence and predisposing factors to diabetes is ripe for Home Economics professionals in meeting and sustaining SDG 3 and 2 possibly.

MCCLOAT, Amanda – St. Angela’s College

The Future Sustainability of Home Economics as a Subject in Schools – Perceptions of Irish Home Economics Teachers

Introduction

Home Economics has a long history in the Irish education system, stemming from the 1800s, and is now a popular subject on the second-level school curriculum. Similar to international settings, the Irish second-level education system is undergoing unprecedented curricular changes. Curriculum reform has often had varying implications for the status of Home Economics. This research explores the perception of Home Economics teachers in relation to the status and future sustainability of the subject in schools.

Methods

This research utilized in-depth, semi-structured interviews with Home Economics teachers (n=10). Non-probability sampling was applied and teachers from schools were identified to represent a variety of schools including all-girls; all-boys; co-educational; urban; rural; public school; private, fee-paying; and a school with a high representation of students from lower socio-economic background. The University Research Committee granted ethical approval. Data was analysed using the Framework Method by Ritchie and Lewis (2003).

Findings

All of the Home Economics teachers reported a positive perception towards the subject in their school community and expressed the subject has a strong and sustainable foothold on the curriculum. However, they also noted the apparent hierarchy of subjects in schools and the challenge facing Home Economics to compete with subjects perceived to be more academic. They were unanimous in their support to have public advocates promoting Home Economics in order to increase the profile of the subject. Most of the teachers referred to the importance of the transferability of skills learned in Home Economics to everyday life. However, the majority noted significant resource implications on schools associated with Home Economics including physical, financial and human resources.

Conclusions

The Home Economics teachers in this research provide an interesting insight into the future sustainability of the subject in schools. They reflect on the influences on Home Economics in the 21st Century and provide insights that will be of interest to international Home Economics professionals working in education.

MCINNIS, Anne - University of Georgia
WORTHY, Sheri; MEDVEDEV, Katalin
Incorporating a Sustainability Module into the College of Family and Consumer Sciences (FACS) 2000 Foundation Course
<p>At the College of Family and Consumer Sciences (FACS), there is a strong need to proactively rethink how various aspects of sustainability can complement the existing foundation course required for all majors. Within the Body of Knowledge covered in the class, sustainability and wellness are introduced as cross-cutting themes. However, we argue that a separate sustainability module would not only complement but also highly increase the impact of the course. The purpose of the proposed module is to educate students on how sustainability and sustainable development impact their respective majors and their future. The sustainability module introduces the United Nations 17 Sustainable Development Goals (UNSDG) with a synergistic focus on Goal 3: Good Health and Wellbeing and Goal 12: Responsible Consumption & Production.</p> <p>The primary objectives of the module are to:</p> <ol style="list-style-type: none"> 1. Develop a critical understanding of the UNSDG with an integrative focus on good health, well-being, responsible consumption and production to increase students' academic knowledge and enhance their professional and personal lives. 2. Comprehend key concepts and terms such as sustainability and sustainable development; the three pillars of sustainability: social, economic, environmental; and circular economy. 3. Demonstrate through discipline-specific projects focusing on sustainability and wellness of individuals, families, and communities in what ways the UNSDG impact students' majors across various systems including human, political, economic, food, environmental, and health. <p>Approaching the foundational course through a sustainability lens means to teach, incorporate, and use the principles of sustainability in the curriculum to create positive, lasting change that affects the planet, our lives and communities, and our well-being. A sustainability module in the FACS foundation course provides a model "for thinking about the future in which environmental, societal, and economic considerations are balanced in the pursuit of an improved quality of life" (UNESCO, n.d.).</p> <p>UNESCO (n.d.). Sustainable development. https://en.unesco.org/themes/education-sustainable-development/what-is-esd</p>

MCMANUS, Sarah - Griffith University
PENDERGAST, Donna; KANASA, Harry
Challenges to Food Literacy Education in Queensland Secondary Schools: The Influence of Curriculum and School Leadership
<p>Introduction: In 2017-2018, the Australian Institute of Health and Welfare identified that 41% of 15-25 year old Australians were overweight or obese. The United Nations Sustainable Development Goal 3 'Ensure healthy lives and promote wellbeing for all at all ages' incorporates a reduction of non-communicable diseases, such as obesity and its related complications of diabetes and cardiovascular disease. Schools are avenues for obesity intervention through food literacy education.</p> <p>Research Questions: What aspects of the Australian Curriculum, and school leadership, do Home Economics teachers report constrain their ability to deliver holistic food literacy programs? What changes in the Australian Curriculum, and school-based enactment of the Australian Curriculum, do Home Economics teachers report they require to support holistic delivery of food literacy programs?</p>

Methods: An exploratory mixed methods case study was employed using an online survey during February-March 2021. Participants (n=117) included individuals who identify as Queensland secondary school Home Economics teachers. Respondents were recruited via the Home Economics Institute of Australia (Queensland) network. SPSS and Leximancer were used to analyse quantitative and qualitative data respectively, followed by data convergence to address the research questions.

Findings: 80% of respondents agreed the current Australian curriculum needs to change, with 61% requiring school-based change to support food literacy education. The main themes for curriculum change were the incorporation of more explicit practical food education, and transition of nutritional theory into Home Economics subjects. School-based change requirements centred on a greater respect for Home Economics education.

Conclusions: There is a need for the generation of an internationally agreed definition and framework for food literacy that is consistently applied in education globally. Furthermore, key recommendations for curriculum change were constructed to support inclusion of the term 'food literacy' within the Australian Curriculum, alongside more explicit inclusion of practical food skill development.

MCSWEENEY, Kathryn - St. Angela's College, Sligo

The Enquiring Classroom: An Experimental Approach to Teaching Sustainability Content in Initial Teacher Education

Introduction: Lesson Study is an approach to teacher professional development that can enhance teaching and learning. It provides opportunities for teachers to evaluate pedagogical beliefs and practices, to engage in critical reflection and professional collaboration. This approach was applied in an Initial Teacher Education (ITE) context in the Republic of Ireland. Approaches to teaching sustainability and global citizenship education content in the home economics classroom were tested and evaluated by Professional Masters in Education (PME) students.

Objective: This project firstly identified home economics PME students' perspectives, knowledge, and skills pertaining to sustainability and global citizenship education (GCE). Home economics paradigms and competencies were unpacked and opportunities for social and climate justice curriculum themes were explored. The module enabled the advanced development of sustainability and GCE knowledge and understanding and developed informed views. Furthermore, it examined how sustainability and GCE content knowledge coupled with effective pedagogical content knowledge can empower young people to address local and global equity and environmental challenges.

Method: A case study approach was applied. The bounded unit encompassed PME students (n=98). The students collaborated on the design and planning of lesson segments, engaged in discussion on how to improve classroom pedagogy, and addressed selected goals. The lesson segments were tested in small groups using a microteaching approach. A multi-method approach to data collection was adopted and research instruments included questionnaires and focus group interviews.

Findings: PME students collaboratively developed illustrative examples, artefacts of learning, and ideas for teaching sustainability and GCE content using a lesson study approach.

Conclusions: The PME students developed effective teaching materials and artefacts of learning which can easily translate to classroom practice. The research lesson task provided different representations

of content knowledge. It generated dialogue about the appropriateness and use of pedagogical approaches.

MINNA, Autio - University of Helsinki

SEKKI, Sanna; AUTIO, Jaakko; PELTONEN, Katja; NIVA, Mari

Consumers Reducing Milk in Their Diet – Resisting Nutrition Advice, Emphasizing Animal Welfare and Disliking the Taste

Milk consumption has since the early 20th century occupied an important position in Nordic food cultures (Lien 2003) and has been recommended in nutrition recommendations (e.g. Finnish National Nutrition Council 2004). However, people may avoid the use of milk for health (Lanfranchi et al. 2017, Zingone et al. 2017), environmental (Lombardini et al. 2017), ethical, religious and cultural reasons (Allen et al. 2018). As McCarthy et al. (2017) have pointed out, recently the consumption of fluid milk in Western countries has declined while the consumption of nondairy alternatives has increased. However, with the exception of Allen et al. (2018) consumers who are reducing milk in their diet but not necessarily abandoning it have not gained scholarly attention (see Chollet et al. 2014). Our study examines how Finnish consumers justify their milk reduction in their daily life. The data were collected by using snowball sampling, and interviewing 10 people living in Helsinki metropolitan area and 4 people in Eastern Finland (the City of Joensuu). The results show that besides health reasons (e.g. lactose intolerance) and being a vegan, the main argument for reducing milk consumption is that milk is not considered to be nutritionally essential for adults. Thus, consumers are resisting conventional nutrition advice and cultural understandings about the importance of milk in human diet. In addition, animal welfare and the unpleasant taste of milk were also counted as negative aspects. We argue that the cultural narrative of healthy fluid low fat milk is changing, not only for ecological and lifestyle reasons but due to animal welfare argument by questioning the use of animals in food production. This may be sign of a 'new milk order' in which the concept of 'milk' itself changes and plant-and animal-based 'milks' are culturally classified in novel ways.

MINNA, Autio - University of Helsinki

SEKKI, Sanna; RÄISÄNEN, Riikka

Consumer Views on Natural and Synthetic Colours and Colourants in Products – “I Find the Plant Both Natural and Safe”

Colours shape consumer's experiences on goods, brands and home, and create the aesthetics of everyday life. Synthetic dyes and pigments create pretty colours, however, they can contain polluting metals and may cause health risks to workers, end-users and environment (e.g. Brüscheweiler & Merlot 2017, Herrero et al. 2019). Also natural dyes in clothing may cause allergic reactions (Komboonchoo & Bechtold 2009). Consumers consider non-natural food colourants to be unhealthy, and they are concerned about their impact on health (Khajuria, 2018; Bearth et al., 2014). Also Geissler (2009) has suggested that consumers associate natural dyes in clothes with health aspects. The research about meanings of colours, in consumers' everyday lives, has mainly focused on visual and brand image perspectives (e.g. Moutaftsi & Kyratsis 2016) rather than dyes' impacts on human health or environment. Thus, how consumers value origin and sustainability of colours and colourants in daily products requires more scholarly attention. This study focuses on Finnish consumers' views on natural and synthetic colours and colourants. The qualitative data has been gathered by interviewing individual consumers (n=15) and conducting group interviews (n=33). Our study indicates that consumers associate synthetic dyes with the chemical industry, toxicity and being artificial. They conclude that the brightness of the colour in a product indicates the synthetic origin of the colourant. Biocolourants are seen more natural, ecological and safer than synthetic ones. Consumers have the

highest appreciation towards the plant-based colourants, which they see ethical and safe for themselves when used in consumer products.

MUSIWA, Gertrude - Ministry of General Education Chongwe Secondary School for Boys

Nutrition of the Elderly: A Case Study of Mawaya Compound in the Kalomo District of the Southern Province of Zambia

Objective: Enhance the nutritional status and care of the elderly in Zambia.

Method: Qualitative

Findings: Poor nutritional status and care for elderly

The aspect of nutrition in a person's life cycle is cardinal. This is because one's health status directly affects their contribution to their family, community and country. In Zambia, nutrition studies have been widely conducted in relation to children and women, leaving out the elderly. Studies among the elderly have largely focused on their capacities to economically contribute to household wellbeing. This has led to nutritional challenges among them. This study was undertaken to investigate the nutritional status of the elderly people of Mawaya Compound in Southern Province of Zambia. and to assess their health in terms of accessibility to proper nutrition, nature of nutritional supplements taken and the involvement and success of stakeholders in enhancing their nutritional status. A cross-section case study approach was undertaken on an elderly population sample of 20 aged 65 and above. The qualitative approach was used so that respondents could provide best information basing on their experiences, behaviour and perceptions regarding their personal nutrition. Respondents were selected using Simple random sampling and data was obtained by using a semi-structured questionnaire of oral questions and explanations since most of them could not read and write. Data was analyzed under five themes: Activities during leisure time, Health conditions, Readily available food, Inhibiting factors and Stakeholders Support. Findings show that these elderly people obtained nutrition from the foodstuffs such as carbohydrate dense foods but lacked foodstuffs such as fruits. Nutritional related ailments such as diabetes, body pains, poor appetite and hypertension were common. Worth noting is that there were no nutritional supplements and available nutritional programs were not specifically designed for the elderly. This study concludes that the elderly people of Mawaya Compound have some nutritional challenges and recommend that government and other institutions need to improve their nutritional status and create Care System

MYERS, Beth - Georgia Southern University

EIKE, Rachel

Campus Stitch Shops: Opportunities to Promote Sustainable Consumption and Education

The apparel and textile industry (AT) generates nearly 10 million tons of textile waste annually (EPA, 2016). In response, AT educational programs have incorporated sustainability-focused projects into their curriculum. A mending and alterations shop (Stitch Shop) was created at a southeastern U.S. university to promote sustainability, as mending or altering diverts non-functional clothing from disposal. Surveys were administered to stitch shop student workers (n=18) and clients (n=83) investigating their clothing disposal habits and perceptions of the AT industry's environmental impact. The majority of students (n=16) reported that they typically do not throw away non-functional garments, although they admitted to doing that at least once (n=10). Students donate (n=17), swap (n=17), and repurpose garments (n=11). Most students believe that the AT industry impacts the environment (n=17) but were divided by thirds on whether the impact was positive, negative, or were unsure. Clients do not throw away their non-functional garments (n=70). However, the majority would have bought something new (n=46) to replace them if not for the stitch shop. Surprisingly, the majority of clients believed that the AT industry positively impacts the environment (n=57). In

conclusion, participants were not consistently throwing away non-functional garments, but extended their life via alternative means. Stitch shops benefit the environment by reducing the need for new purchases. Participants' perceptions of the AT industry's environmental impact support previous findings that consumers need more education on this topic (Harris, Roby, & Dibb, 2016). Future stitch shops should integrate environmental education into their practices to promote sustainable consumption.

EPA (2016). Advancing sustainable materials management: 2014 Fact sheet. Washington DC: US Environmental Protection Agency. https://www.epa.gov/sites/production/files/2016-11/documents/2014_smmfactsheet_508.pdf

Harris, F., Roby, H., & Dibb, S. (2016). Sustainable clothing: Challenges, barriers, and interventions for encouraging more sustainable consumer behavior. *International Journal of Consumer Studies*, 40(3), 309-18

NAGATA, Natsuki - Hyogo University of Teacher Education

MURATA, Shintaro

The Distribution of Daily Resources for Childcare Group Participants

What exactly is the neighborhood childcare network, which can be obtained through participation in a childcare group? How have mothers perceived this reduction in burden (assumed from joining these childcare networks)? To date, quantitative assessments have been made on these points, but in this study, we uncover the actual situation through interviews. This study examines the activities of childcare groups, whose impact had been measured from a network perspective in previous studies. We conducted a group interview in December 2019 with eight mothers participating in Groups X and Y at a daycare center run by an NPO in City A. The interviews were conducted twice, one for each group containing four people. The interviews lasted about 1 hour each.

The interviews made it clear that, although Groups X and Y conduct different types of activity, both have assisted in network formation among mothers through the accumulation of time and communication. With regards to time, both Group X, where activities last long hours on a daily basis, and Group Y, which presents many opportunities for gatherings entailing responsibility such as staff meetings and various study sessions, require that members dedicate a lot of time to activities. The prerequisite for staff selection is to be a full-time housewife who can manage the time commitment. In addition to time, mothers who participate in Group X and Group Y conduct their own information management. Due to an overabundance of parenting information, mothers have been seeking a foundation they can rely on. By managing time and information and obtaining parenting tips, mothers are gaining their own well-being. This can be felt from the interviews, in which many mothers cited the activities as being "fun" and referred to their network being equivalent to "family."

NISHIHARA, Naoe - University of the Sacred Heart, Tokyo

Impacts of Behavior of Consumption and Usage of Clothing on Life Cycle CO2 emissions.

Introduction: Home economics education is expected to be effective on transformation of lifestyle in climate change issues to sustainable way. It is difficult to realize how much each scenario of lifestyle change contributes to CO2 emissions in daily life. Therefore, it is necessary to visualize the effects.

Objective: The purpose of this study is to create an educational tool for the home economics that shows how effective the consumer behavior and lifestyle changes are. From the perspective of sustainable consumption and production patterns (SDGs 12), this study considered the daily life behavior of clothing by calculating the life cycle emissions of CO2 based on some previous studies.

Methods: The phase of consumption and usage of clothes were estimated. The emissions of CO2 were calculated in some scenarios under the different conditions of the frequency of using same T-

shirts, and the methods of washing and drying clothing. Also, the effect of adjusting clothing on reducing air-conditioning energy consumption were estimated.

Findings and Conclusions: The results showed that our life behavior patterns of consumption and usage of clothes has a large potential of reducing CO2 emissions. Mass-production/consumption/disposal style concerning clothing needs more life cycle CO2 emissions because the embedded CO2 emissions are about 50% in the pre-usage phase, namely production, distribution, and retail phase. The life cycle emissions of CO2 are affected by longevity. In the usage phase, the energy for hot-water supply and mechanical dryer has a large proportion. Typical Japanese washing styles such as using cold water and natural drying is effective for reducing environmental loads.

Implications: The estimated CO2 emission data for the daily life behaviors of clothing in this study are useful to transform consumer's lifestyles toward the sustainable way.

NWAKPADOLU, Glory - Michael Okpara University of Agriculture, Umudike, Abia State, Nigeria

ESIOWU, Priscilla Afoma

Advocates and Inhibitors of Home Economics Teachers' Effectiveness in Teaching Sustainable Food Consumption in Nigerian Secondary Schools

Food consumption is indeed a major issue in the contemporary politics of sustainable consumption and production probably due to its effects on the environment, individual, public health, social cohesion, and the economy. The study examined advocates and inhibitors of teaching sustainable food consumption by home economics teachers in Nigeria. The study used a survey design and focused on six dimensions of potential advocates which are, Knowledge, Culture, Environment, Politics, Administration, and Personality Identity (KCEPAP). Reliability of Instrument was determined using Cronbach Alpha Statistics (reliability > 87%). Knowledge has a significant promotion effect on teaching sustainable food consumption (Coefficient=2; p-value<0.05). Cultural orientation of both the teachers and the students constitute an advocate of teaching sustainable food consumption in Nigeria (-0.138; p-value<0.05). Home economics' teachers' environment has a negative effect on teaching sustainable food consumption (coefficient=1.126; p-value<0.05). Political factors yielded a significant positive effect (coefficient=0.23; p-value<0.01). Administration does not encourage teaching of sustainable food consumption (coefficient=-0.305; p-value<0.05). Personal identity of the teachers yielded insignificant negative effect (coefficient=; -0.029; p-value>0.05). Age of both the students and Home Economics teachers were found to be an advocate to teaching sustainable food consumption in Nigerian schools (coefficient=-0.049; p-value<0.05). Students' academic qualifications positively and significantly affect teaching of sustainable food consumption (coefficient=2.017; p-value<0.05). Lastly career interest of the students constitutes a big obstacle to teaching sustainable food consumption in schools (coefficient=-0.59; p-value<0.05). We recommend that political forces should not be allowed to interfere in sustainable food consumption teaching while knowledge and qualifications of Home Economics teachers should be enhanced.

NWAKPADOLU, Glory - Michael Okpara University of Agriculture, Umudike, Abia State, Nigeria

A.P., Esiowu; NDUBUKA, Chibuzor

Promoters and Inhibitors of Teaching Sustainable Food Consumption by Nigerian Home Economics Teachers

Food consumption is indeed a major issue in the contemporary politics of sustainable consumption and production because of its effect on the environment, individual, public health, social cohesion, and the economy. Home Economics teachers have a vital role to play in the sustainable food consumption teaching chain. However, they are often limited in playing this role by different social-

economic factors. This study examines concurrently the inhibitors and promoters of teaching sustainable food consumption by home economics teachers in Nigeria. The study used a survey design and focused on six dimensions of potential inhibitors and promoters namely Knowledge, Culture, Environment, Politics, Administration, and Personality Identity. The study focused on 200 randomly selected schools where Home Economics is well taught and 100 schools where they have either poor or no Home Economics classes or laboratories. Using random sampling techniques, we selected four teachers from each school thus leading to a grand sample of 1200 Home Economic Teachers. The Reliability of the instrument was determined using Crouchback Alpha Statistics (reliability > 87%). We found that knowledge has a significant promotion effect on teaching sustainable food consumption (Coefficient=2; p-value<0.05). The cultural orientation of both the teachers and the students constitutes an inhibitor of teaching sustainable food consumption in Nigeria (-0.138; p-value<0.05). We also found that home economics' teachers' environment has a negative effect on teaching sustainable food consumption (coefficient=1.126; p-value<0.05). Political factors yielded a significant positive effect (coefficient=0.23; p-value<0.01). Administration does not encourage teaching of sustainable food consumption (coefficient=-0.305; p-value<0.05). The personal identity of the teachers yielded an insignificant negative effect (coefficient=-; -0.029; p-val

OBETA, Anthonia - Michael Okpara University of Agriculture, Umudike

Strategies for Encouraging Labelling of locally Designed Garments - A Case Study of Abia State, Nigeria, Towards Sustainable Development in clothing.

The study focused on strategies for promoting labeling of locally designed garments in Nigeria- A Case Study of Abia State, Nigeria. Survey Research design was adopted for the study. Four research questions guided the study. The population was 1948 subjects comprising 1724 local garment consumers, 74 local garment producers and 150 local garment marketers. A total sample size of 362 was selected and studied. Data was collected with a validated structured questionnaire while mean was used for data analysis. The findings of the study revealed that locally designed garments in Abia State do not carry labels. Identified by the study are influences /benefits of attaching labels to garments which among others include helping to know the designers name/trade mark owner, contents of the fibre of the garment, how to care for the garment and promoting sales of the garment. The study also revealed the factors hindering attachment of labels on locally designed garments which among others include ignorant of the importance of label and inability to interpret the label. The strategies for encouraging labelled of locally designed garments in the state were identified and these among others include educating garment consumers on insisting on buying garments that has labels, as well as enlightening them on the importance of having labels on garments. In conclusion, labeling of garments should be enforced on all produced garments in the country so that consumers of such garments will have knowledge of the contents of the fibres used in making the garment they are buying and obtain equal value of the money spent in buying such garments. This will preserve the scarce resources, give information on proper care, maintenance of the garment and promote good health. Based on the findings of the study, it was recommended among others that both federal and state governments in Nigeria should enforce labeling of all garments produced in the country while the garment consumers and producers should be given consumer education/orientation on how to read and interpret labels of garment.

OBUNADIKE, Joy Chinwe - Michael Okpara University of Agriculture Umudike
Institutionalizing Fashion Merchandizing Skills in Clothing for Sustainable Wealth Creation among Youths in Anambra State, Nigeria
<p>Introduction</p> <p>The study adopted survey research design. 3 research question and 1 hypothesis were formulated for the study. The population for the study was 1,086540 (male and female) youths. The sample for the study was 840 comprising of 420 male and 420 female youths which are the respondents. Multistage sampling technique was used in obtaining a representative sample for the study. Instrument for data collection was a structured questionnaire and a focus group discussion guide which was developed from literature reviewed. 3 experts validated the instrument cronbach alpha reliability method was used to determine the internal consistency of the questionnaire items. Reliability coefficient of 0.79 and 0.87 were obtained. The researchers employed the assistance of 6 research assistants in the administration of the questionnaire on the respondents. A total of 840 copies of the questionnaire were distributed to the respondents. 818 copies of questionnaire were retrieved and analyzed using mean and standard deviation for research question while t-test statistics was used to test the null hypothesis. Among the findings was that skills are key to youth empowerment towards institutionalizing fashion merchandizing skills in clothing for sustainable wealth creation in Anambra state. It was therefore recommended that there should be periodic awareness campaigns on how to empower youth for wealth creation and sustainable development.</p> <p>Description</p> <p>Institutionalizing fashion merchandizing skills in clothing for sustainable wealth creation as in Anambra state, Nigeria is a study carried out to maximize the opportunity possibility of youths in the area of the study being self-reliant and self-employed through acquisition of skills in fashion merchandizing. Fashion merchandizing is a trending business today and it has caught the interest of almost all the youth. It is also very viable area that youths can be empowered to make a living and thereby become meaningful and productive members of the society. Youth in this context was viewed as adult between the age of 12 and 25 years that have energy and vigour for work. They form the bulk core members of the society being in the ag</p>

OKOSUN, Chidimma - Ambrose Alli University, Ekpoma, Edo State
ALUYOR, Patience; ONYEIZU, Rita
Creating Fabric Designs for Interior Decoration Using Wheat Husk and Cassava Resist Agent for Sustainable Development in Nigeria
<p>The use of wheat husk and cassava as resist agent for fabric printing using wheat husk was evaluated to ascertain its acceptability to consumers and also to see how wheat husk can be useful instead of being seen as a waste product, (chaff). Locally made cassava starch was prepared into paste as resisting agent. The paste was used with wheat husk for different patterns on fabrics and thereafter the printed fabrics were used to produce articles for interior decoration. Two specific objectives, among which is to find out the acceptability of interior decoration articles made with fabrics produced from wheat husk and cassava resist agent, two research questions and two null hypotheses were raised for the study. Quasi experimental design was used and the population consists of residents of Kubwa community in Abuja, Nigeria. Twenty (20) adult men and women and twenty (20) youths were randomly selected for the study. The instrument used for data collection was observation score card. Descriptive statistics was used to answer the research questions while t-test and regression statistics was used to test the null hypotheses at 0.05 level of significance. The result showed a high acceptability of the fabric design and the articles produced for interior decoration using wheat husk and cassava resist agent. Therefore, fabrics designs made with wheat husk and</p>

cassava resist agent can be used to produce articles for interior decoration since it is a welcomed idea by the consumers. The findings would greatly encourage the production of fabric designs using the chaff, wheat husk, which could be a sustainable business rather than waste material to be disposed.

OMOTE, Mami - Kyoto Women's University

The Role of Women's University in Japan: From Questionnaire Survey of Female Students.

Purpose:

Women's universities in Japan currently account for about 10% of a total of 800 universities. It is to be noted that about 62% of women's universities comprise either Home Economics or closely related faculties. The employment rate of the graduates of women's universities is higher than the female graduates of coeducational university. The continuation and close cooperation of women's universities seem essential in Japan to correct inequalities of professional status between the sexes.

The purpose of the present study is look into the characteristic features of the students of women's university relative to those of the female students of coeducational university and to thereby reveal possible room for improvement of women's university education if any.

Method:

Conducted was a questionnaire survey of 323 female students comprising 149 of women's universities and 174 of coeducational universities. The survey includes the items relevant to activities, leadership, satisfaction with campus life, self-esteem, love and marriage, gender and occupation.

Results:

Firstly, students of Women's universities seem to have more problems with campus life than female students of coeducational universities do.

Secondarily, students of women's universities, bearing sharp gender awareness, are more eager to get married and have family early than female students of coeducational universities.

Thirdly, comparing with female students of coeducational universities, students of women's universities tend to take up professions that require technical knowledge they acquired.

In this survey, the necessity and merit or demerit of women's university could not clearly be revealed, but dissatisfaction with campus life and sharp gender awareness of the students of women's universities may partly be attributed to those gender-biased teaching stuff. In the women's university education, a further emphasis need be placed on the gender problem to correct inequality of the social as well as professional status between the sexes.

ONU, Rose - National Agricultural Extension and Research Liaison Services, Ahmadu Bello University, Zaria, Nigeria.

OKWORI, Esther; AKPUSUGH, R. A.

Evaluation of Adolescents' Nutritional Knowledge on Appropriate Dietary Patterns for Good Health Among Adolescents' Secondary School Students in North-Central Nigeria.

The study evaluated the adolescents' nutritional knowledge end result pre and post experimental lessons on appropriate dietary patterns for good health using nutrition education materials. The study followed an experimental research design. Simple random sampling technique was used to select the students. The instrument for data collection was Nutrition Achievement Test (NAT) which consisted of questions drawn from SS one and SS two topics on food nutrients, functions and dietary patterns. Forty-five minutes was spent with each group of students per day using directed discussion method of teaching to learn about the topics within a period of twelve weeks. Three research objectives, three research questions and three hypotheses were used. Inferential statistics was used at $P < 0.05$ level of

significant to find out whether there was a significant difference between pre and post experimental lessons. The findings of the study showed statistical significant difference in the mean nutrition achievement test score pre and post experimental lesson test scores. The study result revealed that a greater number of the students had moderate level of nutritional knowledge on food groups and their functions with carbohydrate as energy body givers and protein as only nutrient that promote growth and repair worn out tissue with mean values of ($X=3.5$) and ($X=3.7$) respectively prior to the experimental lessons. However, tremendous improvement in the students' knowledge of nutrition on food nutrients, food functions and how to appropriate dietary patterns was recorded after the experimental lessons. The study further revealed that there was no correlation between accurate knowledge of nutrition and the gender of the students. The study recommended allowing the use of practical demonstration and nutrition education materials by teachers this will lead to improving nutritional knowledge of students at the secondary school level.

OPALEKE, Deborah - University of Ilorin, Kwara State

Nutrients Composition And Acceptability Of Stiff Porridge Produced From Yam And Cocoyam Flour For Household Consumption In Northern Nigeria; Soaring Towards Sustainability

Introduction; In Nigeria, cocoyam is one of the important root food crops especially among the low income earners. However, it still underutilized. As important as yam is, it is very costly and expensive. Objective; The study was conducted to determine the proximate and sensory qualities of amala paste prepared from yam flour, cocoyam flour and yam fortified with cocoyam flour.

Method; Five (5) research questions were raised and two (2) hypotheses were formulated and tested @ 0.05 significant level. Yam and Cocoyam were mixed in different proportions (YO=100%-0, CY5=20%-80%). The panelists used for the study comprised of thirty (30) Home Economics and Food Science, University of Ilorin students.

Results; There were significant differences ($p<0.05$) between proximate components. the proximate composition increased significantly with values ranging from 70.77-72.19% for moisture content; 1.87-2.15% for crude fat; 1.04-1.25% for crude fibre; 2.22-2.40% for ash and 3.46-4.66% for crude protein and carbohydrate values from 17.75-20.92%. The result of organoleptic properties revealed that the sample was the most preferred in appearance $\bar{x}=7.43 (\pm 14.39)$ while the sample CY1 was the most preferred aroma $\bar{x}=7.07 (\pm 9.4)$, and the sample CY2 was least preferred.

Conclusion; Yam flour only was the most preferred $\bar{x}=7.40 (\pm 19.13)$ while the sample CY2 (D)= 60% Cocoyam flour and 40% Yam flour only was the least preferred.

Recommendation; Based on the findings the study recommends that, amala made from yam flour and cocoyam flour should be incorporated into products to increase the intake of balanced diet by the consumers.

OZOUGWU, Stella - University of Nigeria, Nsukka

EKEOWA, Amarachi

Correlating Figure Types and Garment Preferences towards Sustainable Psychosocial and General Wellbeing of Female Undergraduate Students of Federal Universities in South East, Nigeria

Healthy living and well-being for all at all ages is a significant global goal. Well-being entails feeling good, functioning well, experiencing positive emotions such as happiness, contentment, development of one's potential, having some control over one's life, having some sense of purpose and experiencing positive relationships. Clothing is crucial to individual's psychosocial well-being. The skilful application of design elements in selecting becoming fabrics/garments that fit, flatter irrespective of faults, boosts self-image. Related studies correlating figure types and clothing preferences are lacking. Young females are predisposed to body dissatisfaction, self-discrepancy,

social comparison, body modifications, cosmetic surgery , and other risky actions that pose threats to their well-being. To fill this gap, the present survey study correlated figure types and garment preferences of female undergraduate students of Federal Universities in South East, Nigeria. Specifically, the study determined; body mass index; figure types; garment fabric design; garment styles and fit preferences. Study population comprised all female undergraduates from five Federal Universities in the study area. A sample of 300 subjects responded to questionnaire items on personal data and clothing preference variables. Using anthropometric measurements, subjects' BMI were determined. Figure types were determined following body measurement guide. Clothing preferences were determined based on frequency of utilization of fabrics with design elements of line, colour, shape, texture; garments' styles, and fits. Data generated were analysed with descriptive statistics. Significant relationships were established with chi square using SPSS/version 21. Findings: Majority of subjects had normal BMI (57.7%). The overweight, obese and underweight subjects possess pear (53.7%), apple (11.0 %), and straight (23.7%) figure types respectively. There were no significant relationships ($P>0.05$) between subjects' figure types and their clothing preferences. There is need for clothing education on application of design elements and garment fit for different figures for female undergraduates.

PENDERGAST, Donna – Griffith University

DEAGON, Jay

Moving from Liminality to Reconstitution: The Impact of the Global Pandemic on the Value and Contribution of Home Economics/Sustainability

Introduction:

The global pandemic has impacted everyone around the globe. This disruptive force has created the opportunity to rethink, unlearn and reconstitute our values and practices, including our understanding of the importance of home economics in the sustainability agenda. This liminal space of transition, where there are not yet any certainties, is an unexpected space that opens up possibilities, but only if it is actively pursued.

Objectives:

This study set out to utilize the opportunity the liminal space provides, with a view to an evidence-informed reconstitution informing the profession.

Methods:

A multi-methods study was conducted that comprised of: 1). a systematic, quantitative literature review; and 2). a textual analysis of selected policy documents and publications shaping the home economics and sustainability agendas.

Findings:

Findings reveal that a sharpened focus on several components has the potential to heighten the value of home economics as we collectively move from the liminality of transition, to the reconstituted 'new normal'. Details of these findings, along with data visualizations, will feature in the analysis.

Implications:

This is an unprecedented opportunity in the history of our profession.

PENDERGAST, Donna – Griffith University
BLAYNEY, Bill; DEAGON, Jay; DU PLESSIS, Anna
OOFs and Home Economics: The Value of Borderline Discourse Theory
<p>Out-Of-Field-Teaching (OOF) is increasingly prevalent as teacher shortages reduce the availability of qualified teachers in a range of subject areas, including in home economics. The problem of teacher shortages is global and identified by UNESCO as a key factor impacting the capacity to achieve Sustainable development Goal 4: Quality Education, by 2030. The demand and supply of qualified home economics teachers is not a new problem. It was highlighted by Pendergast and colleagues more than two decades ago (Pendergast et al, 2000). This report outlined the challenges of relevance to the home economics field, including OOFs lacking expert knowledge, pedagogical content and skills; workplace health and safety etc</p> <p>The experience of OOFs can be represented through the notion of borderline discourses (Andaluzia, 1987, Elenes, 2001, Alsup 2006 & Gee, 2011). Blayney (2013) explored this notion further in his examination of teacher identities through career transitions into teaching concluding this new type of teacher identity (Green, 2009) in what he described as ‘hybrid identities’ applied to trades persons transitioning to the teaching workforce. In this study he explored the aspects of the two worlds - industry and education – merging, and how this shaped the hybrid professional identity. Blayney (2013) also employed Schlossberg’s (1984) theory of transition to explain the transitional phases these teachers experienced: Moving In: Moving Through: and Moving Out, to characterise and chart the journey of these teachers as their identities shifted. As the home economics field is met by challenges such as lack of specialist programs to educate in field, OOFs are more likely to be a feature of home economics classrooms, and hence the impetus for this investigation.</p> <p>This study employs an online snowballing survey design to gain a deeper understanding of the impact of OOFs in home economics classrooms around the world. We consider how hybrid identities can shift through the three phases to finally identify as home economists, and what mechanisms might be activated to ensure the quality and effectiveness of these educators using Borderland Discourse theory.</p>

PISCOPO, Suzanne - University of Malta, Faculty of Education, Dept. of Health, Physical Education and Consumer Studies
Nurturing Young People as Global Citizens through Food and Nutrition Education
<p>Introduction: In September 2021, the UN organised the first Global Food Systems Summit. Integral to this summit was giving a voice to young people to express their vision for a better world based on sustainable food systems. This goal of facilitating healthy, sustainable food systems (HSFS) has been growing on international and local levels, harnessing the commitment of multiple stakeholders. It is recognised that education has a key role to play.</p> <p>Objective(s): The purpose of this study is a) To explore what young people wish for in a future HSFS, and b) To propose a curriculum model integrating this vision with 21st century learning in food and nutrition for developing responsible, global citizens.</p> <p>Method(s): This study will involve a scoping literature review to include recent scientific articles, as well as other reports or material published by international associations, NGOs and online platforms where young people’s interests and ambitions in HSFS have been identified and discussed. This will inform the design of a curriculum model for schools where competences for responsible global</p>

citizens promoting HSFS are incorporated, considering personal and civic roles, possible roles as future employees, employers or producers in the food sector, and utilising an active learning pedagogy.

Findings: This model will be multi-dimensional and possibly combine topics such as biodiversity, regenerative agriculture, sustainable fisheries, food security, food waste and climate change, among others, as covered in food and nutrition education which tackles a variety of competencies related to attitudes, understanding, skills and practice for personal and career development.

Conclusions/Implications: This study will argue for the potential of the proposed model in nurturing global citizens who value, advocate and act for HSFS and will show how food and nutrition education as embedded in Home Economics education can be a primary player in this learning pathway and goal.

PISCOPO, Suzanne - University of Malta, Faculty of Education, Dept. of Health, Physical Education and Consumer Studies

MUGLIETT, Karen

Time Squeeze versus Wellbeing: Gender Differences in Household Management among Maltese Couples with Children

Introduction: Maternity, paternity and responsibility leave, leave to attend ante-natal visits, as well as teleworking, flexi-time and reduced hours are some of the measures available in Malta to facilitate non-work responsibilities for employees. Many of these measures are focused on early stages of the family lifecycle, or on periods when extra care for a family member may be required. They are availed of frequently by Maltese employees, especially mothers; however, the challenges of work-life balance are still a common lamentation when wellbeing is being discussed. Simultaneously, Malta is experiencing multiple demographic shifts, including a greater proportion of dual-career families, an emerging same-sex parent household group, and labour market entrance of Generation Y individuals who strongly value the balance between professional career and time for personal interests and family. Given this scenario, a research study is being initiated to explore various aspects of time management in Maltese families with children, with a particular focus on gender differences in sustainable reconciliation of work commitments with family obligations and personal needs of both parents.

Methods: This research will revolve around a number of case studies involving families of different configurations (parental employment type/hours; number and age of children; parents' gender; provision of special care for a family member). Data will be collected through household management diaries and one-to-one interviews with parents.

Findings: Differentiated strategies implemented to keep the household operating successfully on a daily basis will be uncovered, as will physical, psychological and social barriers to devoting quality time to children, significant others and oneself. Particular attention will be given to parents' perceptions and realities of the experienced time squeeze, the division of responsibilities and chores, and how these impact on individual careers and wellbeing.

Recommendations: Implications of the study results for decision-making and practical skills in Home Economics education will be presented.

<p>PORTELLI, Lorraine - University of Malta</p>
<p>Ethical Fashion Awareness Campaign among University Students: The Maltese Experience.</p>
<p>The UN Sustainable Development Goals (SDGs) which have been set by the United Nations to be achieved by 2030 have been the focus of the International Federation of Home Economics (IFHE) since 2015. These SDGs address major worldwide social and environmental challenges and the UN has made an urgent appeal for action from all countries and citizens to work together to successfully achieve them. This paper shall focus on one of these goals, SDG 12: ensuring sustainable production and consumption patterns, giving specific attention to the fashion industry. The aim of SDG 12 is to reduce the use of resources, create less pollution and environmental degradation throughout the lifecycle of products, while improving people’s quality of life. As are other sectors, fashion is currently geared towards excessive production and consumption. At the University of Malta, undergraduate Home Economics students organised a campaign in 2018 on ethical fashion as part of their final assessment for a course on the topic. This campaign became an annual event held during the first semester on campus and became increasingly popular. The aims of this initiative were to promote sustainability, spread awareness and empower students to take creative actions towards being responsible consumers with respect to fashion. The campaign focuses on educating university students on specific actions that help reduce the use of natural resources and perceive the relative environmental benefit of each action taken. Students are challenged to change their consumption behaviour practices with regards to fashion and encouraged to take action by following Fashion Revolution’s mantra ‘Be curious, find out, do something’ (fashionrevolution.org). The two-day campaign includes presentations, workshops, various discussion panels and a clothes-swap stand. A short survey is conducted to evaluate the extent of the commitment university students are willing to take to assume an ethical approach towards fashion. In 2020, due to the Covid-19, the campaign was held online and reached even more people. A different approach was taken to ensure that the aims of the campaign were reached despite its online nature.</p>

<p>PORTELLI, Lorraine - University of Malta</p>
<p>ZERAFA, Siobhan</p>
<p>Integrating Sustainable Development in the Fashion and Textiles Curriculum at Secondary School</p>
<p>The United Nations placed an emphasis on education to reach the sustainable development goals (SDGs) set in 2015 by 2030. The contribution of education towards reaching this target can be implemented through integrating sustainable development in school curricula. This paper focuses mainly on the inclusion of sustainable development in the Maltese curriculum of Fashion and Textiles . It investigates the educators’ and policymakers’ perspectives on sustainability, and discusses ways how the current secondary school curriculum of , Fashion and Textiles as a vocational subject can be reviewed and modified to include more sustainable approaches. To address the research questions, ‘How can sustainability be introduced when designing Vocational Education and Training (VET) Fashion and Textiles lessons?’ and ‘How can the current (VET) Fashion and Textiles curriculum be amended to become more sustainable?’, the research adopts a qualitative approach with a variety of methodology tools. Data is gathered through a curriculum analysis of various European curricula related to Fashion and Textiles as well as separate interviews with policymakers and focus groups with VET Fashion and Textiles teachers. Data gathered is analysed through a thematic analysis and emergent themes are compared with existing literature. Findings from this study highlight the importance and need for sustainability to be included in Fashion and Textiles lessons as well as the importance of the educator’s approach towards such issues. Results from the study show that sustainability needs to be an integral part of the curriculum and not addressed as a separate topic. This led to a curriculum review and a modified curriculum that contains different topics and</p>

approaches related to sustainability that educators can include within each learning outcome of the curriculum.

PORTELLI, Lorraine - University of Malta

VELLA, Chantelle

Maltese Consumers' Knowledge of Textile Labelling Information: An Exploratory Study.

The fashion industry is believed to be the second largest polluter in the world. Studies have been conducted on how consumers can lower the negative impact of clothing on the environment (e.g. Health and Environment Justice Support International, 2018). Reading care labelling when selecting, buying and caring for clothing and textile items contributes towards pollution reduction and the conservation of the world's natural resources. The sustainable development goals (SDG) set by the United Nations in 2015 address major issues related to social, economic and environmental challenges. This paper focuses on SDG 12 which focuses on ensuring sustainable production and consumption patterns through data collected on the attitudes and knowledge of university students regarding textiles care labels. The study focuses on a specific group of university students who is reading for a Masters in Teaching and Learning (MTL) (2019-2021 cohort), their awareness on textiles care labelling, and how they can be sustainable consumers with regard to clothing and other textile items, such as accessories. The study aims to educate university students who are prospective teachers about their role in reducing the impact of textiles on the environment through improving their knowledge and interpretation of textiles care labels. The research uses a mixed-method approach, and the main research tools were an online questionnaire and a focus group. This study made the participants more aware of how to make informed choices when choosing and purchasing textile items. Through this research, it was discovered that there is a lack of understanding regarding care labels and environmental degradation caused by the textile industry, as well as misconceptions about textile workers. An informative poster was later disseminated through the MTL Facebook page.

PORTER-DACOSTA, Audrey - University of Technology, Jamaica

TIPPETT, Deborah

Narratives of Jamaican Adolescents, Orphaned by and Living with HIV/AIDS.

An exploration of narratives of the life experiences of adolescents orphaned by and living with HIV/AIDS in Jamaica was the focus of this study. The purpose of the research was to listen to and feature life-giving narratives of adolescents' inner beauty, strengths, and aspirations. Vulnerable adolescents navigate negative attitudes and perceptions, orphanhood, stigmatization, and inappropriate role modelling. This study seeks to promote increased national advocacy towards improving the impact of educational programmes and support systems for adolescents in institutionalized care. Family and consumer studies interests can engage in further research and related dialogues. Appreciative inquiry and phenomenology methodologies were used with seven adolescents (12- 19 years) who are living in an institutionalized facility in Jamaica. Appreciative Inquiry's 4-D (Discovery, Dream, Design, and Destiny) Cycle highlighted four themes: cultural influences, psychosocial impact, and effects, coping strategies and developing supportive structures. Phenomenology's focus on "people's conscious experience of their life world" complemented the appreciative inquiry approach facilitating cohesive imagery of the narratives shared in the study. Adolescents belong to families for whom an atmosphere of hope and psychosocial wellness resonate well. Vulnerable youths survive in learning spaces that promote the 'appreciative eye,' mutually empathetic leadership, and strong interpersonal relationships. Sustainability thrives on these critical components – physical, intellectual, and psychosocial wellness. SDG number three - good health and well-being, and SDG number four - quality education can be optimized for vulnerable youth in a live-

giving and empowering environment. Human development, a pillar of Family and consumer studies, creates a space for wholeness by educating communities, families, and individuals. Through FCS adolescents learn to utilize critical thinking, make informed decisions about well-being, relationships, and optimize resources to achieve optimal quality of life.

PURANDARE, Saloni - Iowa State University

MCKINNEY, Ellen

Firefighter Glove Design: Critical Literature Review and Proposed Design Process Model

Firefighters are exposed to health and safety hazards. Firefighter PPC (Personal Protective Clothing) is the only protective barrier against these hazards. Improving firefighter PPC will improve the health and safety of firefighters, allowing firefighters to do their job better, and improve the lives of firefighters' families by protecting the firefighters; thus, this study comes under the goal of 'good health and well-being of individuals'. An important component of firefighter PPC is the gloves. Current firefighter gloves have incorrect fit resulting in dexterity issues and bulky structure causing loss of sensation and difficulty in hand movements (An et al., 2016; McQuerry, 2019). Further research on design and development is required for the wearers' well-being (Stull & Stull, 2007; Dolez & Vu-Khanh, 2009). Limited studies address the design process for functional gloves, and none were found for firefighter gloves.

The objectives:

- Identify major firefighter user needs and design processes applicable to firefighter gloves.
- Develop a firefighter gloves design process, considering all needs.
- Review firefighter glove studies to identify research gaps within each design process step of the glove.

This research followed the theory synthesis approach, building on existing research by gathering data from various scholarly sources (Pedersen, 2007). Critical literature analysis (Jesson and Lacey, 2006) was executed using qualitative data analysis software MAXQDA. The literature search consisted of two phases: a broad search to identify firefighter glove design steps and a more focused search on the identified research gap. The literature analysis guided towards a step-by-step design process for the firefighter gloves. Each step points out the found research gaps. Since no study was found focusing on the firefighter gloves design process thus, the proposed design process will be a crucial conceptual, theoretical framework for advancing the design of better firefighter gloves.

RATHI, Neha - Department of Community Medicine, Institute of Medical Sciences, Banaras Hindu University

NANAYAKKARA, Janandani; WORSLEY, Anthony; RONTO, Rimante

Exploring Cooking Skills, Food Preparation, and Quality of Dinner Meals in Australian Households during COVID-19.

Introduction: The unprecedented COVID-19 pandemic and associated lockdowns had a significant impact on the socio-cultural and food environment in Australia and globally, with potential implications for dietary and culinary practices as well as overall health and wellbeing. We explored Australian primary food gatekeepers' cooking skills, meal preparation behaviours, and the quality of dinner meals based on food groups during the COVID-19 pandemic and associated lockdowns.

Methods: A convenience sample of 25 primary food gatekeepers was recruited from different states of Australia to participate in semi-structured interviews. During the online interviews, the food

gatekeepers were asked to share photographs of three dinner meals prepared by them. Meal quality (number of food groups), a food preparation scale, and a cooking skills tool were used to analyse dinner photographs.

Results: Seventy-three dinner photographs were provided by the participants. The majority of meals (n=51, 81%) were prepared by the gatekeepers using raw ingredients with only eight meals (11%) being categorised as takeout or restaurant meals. Peeling and chopping vegetables (100%); use of herbs and spices (92%); chopping, mixing and stirring foods (88%); boiling or simmering food (88%), and fry/stir-fry food (80%) emerged as the five most frequently practised cooking skills. The mean number of food skills used in dinner meal preparation was 6.68 (SD 1.52). Vegetables and legumes/beans (75%) and grains (75%) were the most popular core food groups for dinner meals. Fruits (12%) and dairy and/or alternatives (11%) rarely featured as part of the dinner meals. Besides the five core food groups, the use of unsaturated spreads and oils (79%) was very common during the preparation of dinner.

Conclusions: Overall, the primary food gatekeepers practised a variety of cooking skills and the quality of dinner meals was relatively healthy. Future research could explore if these cooking skills and food preparation behaviours continue post COVID-19.

RENWICK, Kerry - University of British Columbia

Exploring Food Literacy as Critical Learning

Food literacy is a growing area of interest for home economics educators as it aligns closely to the field's concerns about sustainable development. As a skill and capability food literacy has the potential to support individuals, families and communities as they engage with food, health and wellbeing. Food Literacy is an emerging concept and how it is both interpreted and enacted in school contexts can vary. In context of this research a Critical Food Literacy model is used.

This paper reports on a study in British Columbia, Canada where Grade K – 12 teachers were asked: What food literacy topics do you teach?; What do you want student to know and be able to do?; and What resources do you use to inform your practice?

The study employed multiple qualitative and ethnographic methods, including surveys, inter-views, participant observation and the use of secondary data. A discourse analysis was used to identify how educators who are providing food literacy education programming frame and inform their work, and how this was implemented with students.

This study revealed that teachers were unlikely to have had formal undergraduate studies in food related courses. As a result, they are drawing from an eclectic range of sources to inform their understandings about food literacy. This was particularly evident for elementary teachers. Teachers were motivated to focus on food literacy with their students as they were concerned for their students' wellbeing as well as using food as a way to raise students' environmental awareness. Using the identified critical food literacy model, it became evident that operational aspects of food literacy was relatively easy and compelling for teachers whereas the critical aspects were problematic and challenging. Lastly the cultural aspects of food literacy were much harder to identify and incorporate into classrooms.

As a growing area of interest food literacy is a key area of expertise for Home Economics educators however it is a professional capability that is ignored or underestimated. With the growing interest in food literacy there is opportunity for the profession to assert its relevance and expertise.

SAARILAHTI, Marja - University of Helsinki
Understanding How Families Cope with the Challenges of Daily Life - Testing the Sequence Map Method
<p>Everyday life in the modern world is getting more complicated by the day for example because of pandemic, digitalization, climate change, poverty, reorganization of working life or lack of wellbeing. My research dealt with a new working method (called sequence map method) that paid attention to daily routines and rhythm of family.</p> <p>Theoretically, drawing upon cultural-historical activity theory, the sequence map was considered as an artefact, which combines the semiotic and functional meanings of the tool. In the analysis of discursive data on an artefact, the study used three different levels, i.e. primary, secondary and tertiary level of artefact functioning (Wartofsky, 1979), for organizing the data into categories to be further analysed thematically. The analysis aimed to reveal the meanings and functions which the sequence map reaches at each level. The following research questions were addressed: 1. How the sequence map can be placed on the artefact levels and what kind of representations it gets on these levels?; 2. What are the meanings of sequence map as a personal tool of family workers?; and 3. What is the potential new knowledge produced in team meetings and how to further conceptualize the sequence map?</p> <p>The research was done using qualitative content analysis. The main finding of the research is the multifunctionality of the sequence map, which extends its use in practice beyond making timetables and fixing a daily structure. The study shows added meanings and functions, such as a collaborative 'pact' between family members, a tool for strengthening the authority of the parent(s), a tool for activating parents, and a tool to bring flexibility to daily life. On the tertiary level the sequence map, mediated by discussions with family workers, revealed new resources of modelling family life, e.g. towards responsible parenthood.</p>

SHINOHARA, Hisae - Miyazaki
TANAKA, Noriko; HAMAGUCHI, Ikue; TSURUTA, Kurumi; CHOSA, Etsuo
Physical Status and Life-Style Factors Among Teacher Training Students: A Pilot Study
<p>Introduction: Locomotive syndrome (LS) is a major health risk factor for elderly in Japan. Preventive measures should be initiated during childhood as 10% of children show signs of musculoskeletal disorders or dysfunction that may lead to LS. This study aimed to elucidate the physical status of LS and life-style factors of teacher training students. Method's: In 2019, the survey was conducted in 107 healthy students (28 men, 79 women) who consented to participate and underwent baseline assessments. We used the two-step test (TST), stand-up test (SUT), and grip strength as screening tools for LS. The K6 screening scale was used to assess mental health. A cut-off score of ≥ 5 on the K6 scale was used to identify persons with mental stress. Dietary habits and life-style factors were elucidated through a self-administered questionnaire, including a brief self-administered diet history questionnaire (BDHQ). Findings: There were no L1 or L2 subjects in this study. However, in the SUT, 25% of men and approximately 14% of women were below the age-specific standard. In the TST, approximately 20% of men and 25% of women were below the age standard. Those with an SUT below the standard value had fewer daily exercise habits. There was a significant correlation between the TST value and grip strength. Approximately 25% of men and 40% of women had a K6 score of ≥ 5. Approximately 60% of students took irregular meals and approximately 20% reported < 6 h of sleep per night. In women's "confidence in physical strength" group, the intake of seafood and dairy products was significantly higher, and the intake of vitamins and minerals was higher than that in the</p>

“no confidence in physical strength” group. Conclusion: To prevent LS in the future, university students need to be counseled regarding appropriate eating habits and lifestyle practices, including exercise habits.

STEWART, Barbara - University of Houston

BROOKDS, Lisa; RUSSELL, Mia

AAFCS Leadership Academy as a Best Practice Tool for Achieving Gender Equality and Mitigating Poverty

Introduction: Leadership development prepares individuals to lead organizations and initiatives to eradicate poverty and promote gender equality. The American Association of Family and Consumer Science (AAFCS) Leadership Academy offers a best practice guide for the initiation of leadership development programs. Participants reported self-efficacy in leadership positions, self-confidence in leadership skills; and knowledge and use strengths.

Objectives: The objective of this research was to assess outcomes of the AAFCS Leadership Academy as a best practice tool for developing leadership skills. These include impacts related to the IFHE matrix goals “no poverty” (seeking free access via leadership to opportunities) and “gender equality” (“gender equality in education and employment”.)

Methods: A mixed method study was conducted. A 24-item survey was created, distributed, and analyzed using Qualtrics. After IRB approval, an email request with a survey link was sent to participants in the Leadership Academy (2013, 2015, 2017, 2019, 2021). Data was collected over a two-week period, fall 2021. Results showed 25 respondents (N=50; 50% response) completed the survey. Data was analyzed using quantitative and qualitative methods including frequency distributions and theme identification analysis.

Findings: Salient findings include:

- 92% high level of self-confidence in skills as a leader
- 92% know strengths
- 88% develop and pursue a personal leadership development plan
- 88% consider themselves a leader
- 84% use strengths
- 81% seek development opportunities
- 80% confident in networking skills
- 80% self-efficacy regarding leadership positions
- 76% quality of life improved

Conclusions: Findings suggest that a leadership training program (AAFCS Leadership Academy) was effective to engender self-efficacy regarding leadership positions, self-confidence in leadership skills, and knowledge and use of personal strengths in leadership roles. Application of findings includes examination of the Leadership Academy as a best practice tool in other settings, including those targeting improvements in eradication of poverty and increase of gender equality.

STEYN, Hester - University of the Free State

JACOBS, Doretha

Hints for the Sustainable Recycling of Clothing and Textiles in Creative Products

The aim with this guidelines for the creative transforming of used clothing and other textile items into useful products in a sustainable way, is to start a class discussion or be used in setting criteria for creative recycling class projects.

Target audience is teachers and lecturers guiding students in recycling clothing and other textile items with the purpose of developing skills in sustainable textile design and construction processing, and

individuals aiming to develop entrepreneurial activities with textile remnants and recycled clothing and household items.

All consumers use a variety of textile products on a daily basis. clothing and other textile items are generally considered to be relative cheap, easily available items with a short lifespan due to fashion and other factors.

These discarded clothing pieces can be detrimental to the environment when discarded of in irresponsible ways, or it can be precious resources if recycled creatively and responsibly. Cut offs that come available during manufacturing also form valuable resources. (Discussion of examples)

Methodology:

Sort according to end use - a once off creative item for personal use or for an entrepreneurial endeavor with resources in constant supply

Consider all the resources required for the end product. The recycled item, any new or other material required, the skills necessary to meet the quality standard, the energy (human time and energy and electricity) invested, other resources like water (another scarce resource), the risk of pollution caused and the equipment required.

Always aim for high quality- that require skill, attention, time - would the end product justify the input?

Consider the maintenance of the end product. for example. Never use home dye on recycled products that should be laundered for the dye can cause pollution and it can damage a whole laundry bundle if washed.

Always remember the least changes required would usually be most feasible.

Keep it as simple as possible, the least amount of additional material, energy, equipment, water required would be most sustainable.

Only plan with available skills and equipment.

Always aim for high standard.

STOKES, Kara – The University of Georgia

TUCKER, Candace; MOORE, Susan; SMITH, Laura; OGDEN, Jackie; WALTERS, Nicole; EADDY, Allison

Empowering Wellbeing Through Food Education in Schools

Background: Food education in post-primary school is an ideal mechanism through which the health and wellness of students can be positively impacted. Students who learn nutrition and practical cookery skills are empowered to make healthier food choices, which in turn enhances their wellbeing. Food education in school captures students while they are still young, and compensates for the potential lack of skills taught at home. In order to positively impact their lives, and therefore their food choices, students must be exposed to formal food education in post-primary school. However, food education is not compulsory in Ireland, despite calls for it to be made a core element of the curriculum. At Junior Cycle, there is scope to develop a unit of learning which focuses on food education so that all students receive formal, evidence-based food education before leaving school. A unit of learning is a planning tool for teachers, and is not restricted in its instruction time. Schools can develop their own units of learning at local level or use an existing unit developed by the National Council for Curriculum and Assessment.

Methods: This study used qualitative research methods. Students and parents participated in focus groups, while other stakeholders (school management, chefs, and dietitians) were interviewed.

Results: A unit of learning was developed for the wellbeing subject based on the data collected, a sample of which was piloted with students. This must be delivered by a teacher with appropriate qualifications; at present, home economics teachers are most suitably qualified.

Conclusions: Overall, while the study recorded favourable results regarding the introduction of

compulsory food education in Ireland, and students enjoyed the pilot, barriers to its introduction exist. The current shortage of home economics teachers must be addressed, as well as providing opportunities for other subject teachers to be trained in this area.

STRAKA, Dorothee - University of Applied Sciences Osnabrück

LÜDER, Vanessa

Education in Sustainable Nutrition - a Participative Approach of Developing Innovative Subjects and Educational Methods.

In the project “education in sustainable nutrition” the concepts of two German educational institutions for consumer information on food, nutrition and sustainability were examined. Referring to the WABE-Center Klaus Bahlsen at the University of Applied Sciences Osnabrück responsible consumption, manual food production and resource management in food preparation are main subjects of educational activities contributing to implement the SDGs (e.g. good health & well-being, quality education, responsible consumption and production): How can educational offers be developed in a participative research approach regarding consumption, food preparation and improving teaching competencies for a health promoting sustainable lifestyle?

Consumers of different age groups participated in target-group-oriented activities offered in both institutions. In a co-creation process the researchers, together with interest groups collected data, generated ideas and formatively evaluated activities, e.g. courses for elementary schools or student projects. Qualitative and quantitative methods as observations and focus-group-discussions were used.

In the revised institutional concept of the WABE-Center the nutrition education approach still focusses on culinary practices to improve consumers' nutrition, food and sustainability competence. Observations of courses, single events and a project confirmed a participant-orientated, multi-perspective educational approach also considering social contexts. Education activities could benefit from institutional specific features combined with the potentials of lecture and research. Concerning valuation of food e.g. two course concepts were developed (food preparation, conservation methods). Students could be more involved in citizen-science and support the transformation from expert to public communication. Improved communication tools may empower different regional dialogue groups.

The participative research approach helped to develop educational programs supporting a health promoting sustainable lifestyle for different interest and dialogue groups.

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THOMPSON, Dorothy - Department of Home Economics, Nutrition and Dietetics, University of Uyo, Nigeria

GOODNEWS, Sarah

Determination of Skills Need of Clothing and Textiles Teachers for Sustainability in Apparel Production in Secondary Schools, Akwa Ibom State, Nigeria.

The clothing and textiles manufacturing sector is currently undergoing a renaissance. In response, teachers of clothing and textiles must be adequately equipped to cope within this atmosphere of creativity and innovation so as to acquire global citizenship relevant for a sustainable future in the sector. This paper determined the skills need of clothing and textiles teachers for sustainability in apparel production in secondary schools in Akwa Ibom State, Nigeria. Two research objectives, two research questions and two hypotheses guided the study. The research adopted a descriptive survey method using a researcher-designed questionnaire titled Skills Need of Clothing and Textiles Teachers for Sustainability in Apparel Production (SKINCLOTEXSAD) with reliability coefficient of 0.85 to obtain data from 130 respondents in 101 secondary schools in the study area where clothing and textiles is taught as a subject. Data obtained from the research instrument were analysed using frequency, mean and standard deviation for the research questions while Independent t-test was used to analyze the research hypotheses at .05 alpha level. The results of the study revealed that there is a high need for pattern-making skills and apparel construction skills for sustainability in apparel product development by clothing and textiles teachers in secondary schools in Akwa Ibom State. Moreover, the study also revealed that clothing and textiles teachers in urban and rural areas of Akwa Ibom State differ in their need for pattern-making and apparel construction skills for sustainability in apparel product development. The study recommended among others that clothing and textiles teachers should be up-skilled on their skill deficient areas to increase their capacity in educating for sustainability in apparel production.

THOMPSON, Dorothy - Department of Home Economics, Nutrition and Dietetics, University of Uyo, Nigeria
INYANG, Emem; ATTAH, Idorenyin
Evaluation of Students' Utilization of Entrepreneurial Skills Development Program in Clothing, Textiles and Allied Craft
<p>Over the years, entrepreneurship education has been a component of comprehensive education given to both undergraduate and postgraduate students in tertiary institutions in Nigeria to curb unemployment incidences. The post training responsiveness to acquired skills among the students have been a subject of debate with respect to the pattern and incidences of utilization. This study therefore sought to evaluate students' utilisation of entrepreneurial skills development programme of University of Uyo in clothing, textiles and allied craft. The study was guided by five research objectives. The research adopted an ex-post facto design using a researcher-designed questionnaire for data collection. The reliability coefficient of ≥ 0.7 was obtained for internal consistency of the instrument. A total of 1078 students from nine centres dealing with clothing, textiles and allied craft trade formed the study population. The sample size was 542 students; 50% of the students' population in each of the centres were randomly selected from a sampling frame for the study. Data obtained from the research instrument were analysed using descriptive statistics and Independent t-test at .05 alpha level. The findings of the study showed that the level of utilisation ranged from moderately high to low in most of the variables under investigation. It was concluded that the level of students' utilisation of entrepreneurial skills was inadequate. It implies that there is need for students to utilise entrepreneurial skills development programme of University of Uyo in clothing, textiles and allied craft for sustainable transformation into productive and self-reliant individuals. The study recommended synergy between the providers of the skills acquisition programme and industries to ascertain adequate utilisation of the skills for job and wealth creation.</p>

TUOVINEN, Emmi - The Martha Association
Everyday Actions for Tomorrow – The Martha Association's Work in Finland
<p>Objective The objective of the work of the Martha Association is to make 1) consumers change their ways of thinking and make their everyday consumption choices in a sustainable way 2) its members to act as spokespersons of sustainable consumption 3) our own actions as NGO more responsible and resource wise.</p> <p>Description The Martha Association is a Finnish home economics extension organization that promotes sustainable everyday life in households. Our strategic goal is to be experts in carbon neutral living, eating and consumption so that living in private homes in Finland would be carbon neutral in Finland in 2045. We offer practical and efficient solutions. We give advice on how the environmental burden can be reduced. Home economics professionals organize workshops for 100 000 consumers all around Finland every year. The organization has a membership of 40 000. Our website is visited 5,4 million times per year, and our social media is followed by over 100 000 persons. In 2019, a survey was carried out by our organization in order to find out about the role of cooking and everyday life in promoting sustainable development and fighting global warming. The average population's attitudes to food, housekeeping, environment and recycling were compared to those of our members. Environment is important to both our members and the wider population. It is believed that everyone can make informed choices that have an impact in sustainable development. Our members' actions are more environment friendly than of non-members. There is still a gap between people's attitudes and their actions. Advice and nudging are needed to help people towards more sustainable everyday choices. The research will be repeated in 12/2021 to</p>

measure eventual changes. The results help us to better focus our extension work and communication.

VAIDYA SOOCHETA, Anagha - University of Mauritius

SEEGOLUN, Heman

Upcycling Waste Glass - A Sustainable Design Approach

Recycled glass surfaces are considered upcycled when they utilize un-melted glass resources. Melted glass uses energy to transform it into a new products or slabs. The present study investigates the use of post-consumer and industrial waste glass such as bottles, jars and beverage containers to upscale it for making interior slab surfaces. Waste glass was crushed and ground into small particles between 4.75 mm to 150 microns. Two types of solid surfaces were developed using cement and polyester resin. Three types of concrete mix were prepared using 60%, 50%, 40% crushed glass and cement plus water in the ratio (1:1). The three concrete mix specimens were casted in plywood molds for 24 hours. They were then removed and cured in water at ambient temperature for 24 hours. Similarly, three polyester resin specimens were prepared using 60%, 50%, 40% crushed glass with a mix of polyester resin, catalyst and pigment. Formica plywood molds were used for casting the mixes. The specimens were cured for 6 hours. The project further reviews the properties of these upcycled glass, cement and polyester resin solid surfaces. Mechanical tests such as density, compressive strength, flexural and thermal shock were performed. Stain and chemical resistance test, cigarette burn test and solid surface tests such as water absorption, knife drop test, were executed. The casted specimens were compared to locally available granite and slab. Specimens of concrete and resin were compared considering the quantity of waste glass used. Cost analysis demonstrates economic benefits. The recycled glass slabs meet high performance criteria for quality and durability. The waste glass is upcycled into surfaces that exhibit a unique product and provide elegant design solution for interior surfaces such as table tops, kitchen sinks, bowls etc. This sustainable approach provides a path to create new jobs in local communities. The study sets an example which employs not only waste management, but recycling, upcycling and responsible manufacture to support the development of new businesses and jobs. It offers an economical and sustainable design solution, increasing efficient use of waste resources.

VAIL, Ann - University of Kentucky

Advocate for Global Engagement to Promote Sustainable Home Economics Programs.

Mary Sweeny was an early US leader in home economics. Throughout her career as a leader at the University of Kentucky, Michigan State University, United States Department of Agriculture, and Merrill Palmer Institute, she advocated for the international involvement of home economists. Her first international exposure was preparing and serving food in the battlefield canteens of World War I. Following WWI, Dr. Sweeny served as president of the American Home Economics Association from 1920-22. She promoted and facilitated the involvement of home economists in global initiatives including the Constantinople College for Women home economics department. At the Merrill Palmer Institute, she led initiatives in China and India to establish pre-school programs. A prolific author related to children's issues, Dr. Sweeny's publications were used extensively in home economics programs.

This historical research project uses documentary methods to describe global initiatives advocated by Dr. Sweeny to promote sustainable home economics programs around the world including programs where she was directly engaged. Specifically, it will identify her impacts on international programs and her efforts to extend home economics worldwide. Strategies for replicating her approach in secondary education, Extension, business, and higher education will be discussed.

The need for global engagement of home economists continues today. An understanding of the early efforts, advocacy strategies, and their impact can inform our actions and decisions.

VAIL, Ann - University of Kentucky

Constantinople College for Women: Home Economics Program Builds Sustainable Families and Communities in the Evolving Ottoman Empire

The original Constantinople Home began in 1873 and evolved over 35 years to become the Constantinople College for Women. Students were descendants of the ancient civilizations of the Ottoman Empire including Turkish, Arabian, Bulgarian, Greek, Armenian, Russian, Serbian, Albanian, and Circassian cultures representing 18 countries. During the 1922 American Home Economics Association (AHEA) Mid-Winter Meeting, the Constantinople Committee, headed by Abby Lillian Marlatt, was approved, and charged with raising funds to support a Professorship of Home Economics at Constantinople College. They raised over \$6,000 for a three-year program and secured the appointment of Mrs. Alice P Norton for the Professorship. For more than a decade, AHEA supported this program. Marion Talbot, Head of Household Administration at the University of Chicago, and co-founder of AHEA, served as President of the college for two years.

A historical analysis of this initiative provides insights and lessons into developing sustainable, global programs with enduring impact. The Constantinople College Home Economics program was led by committed home economics professionals. They and other college faculty provide lessons of leadership for today's aspiring global leaders. Home economists around the world serve families and communities experiencing gender, racial, ethnic, and other types of oppression; economic disparities and deprivation; and civil and international war. Understanding the strategies used by early home economists at Constantinople College provides strategic direction and inspiration for today's globally focused home economists. This session will present lessons of leadership, program strategies, and suggest application for today's home economics programs. Constantinople College for Women advanced the education of girls and women in an evolving society. Students became the first women in their families, communities, and nation to receive a higher education. Upon graduation, students worked in community development, schools, local and national government, and within their own families.

WISTOFT, Karen - Aarhus University

Food for Health – Teaching Taste. Seven Dimensions of Taste for Sustainable Health in Home Economics Education

Traditionally, in the medical health context, taste is perceived having a gatekeeper function of taste buds to avoid uneatable or potentially toxic food and on dysfunctional sense of taste. The idea is that our ability to taste helps us avoid uneatable or potentially toxic food. Further, there is focus on taste disorders and their potential treatment. However, our ability to taste has a much broader function than avoiding illness. It is also the precondition for experiencing food deliciousness and pleasure, which is equally important in a sustainable health promotion context. This paper demonstrates a way in which the taste of food can be systematically described, including a system of seven taste dimensions, all of which are important in the context of using food for health promotion, prevention and treatment of diseases. The research combines theoretical and empirical approaches, including taste philosophy, systems theory, didactics and empirical studies with a focus on effectiveness research in Home Economics Education. We have identified seven dimensions of taste and developed an empirical theory based on this system of taste dimensions. The paper is based on two concepts of health and illustrate a way, in which food tastiness can be systematically described, including the system of seven taste dimensions, all of which are important in a) the context of prevention of

diseases and b) sustainable health promotion and c) sustainable health education according to Home Economic Education. The aim is to support the understanding of the importance of food tastiness for health in Home Economics Education and other food educations, and to develop a research-based vocabulary of taste in order to strengthen sustainable discussions about taste among and health professionals and Home Economics teachers: talking and teaching taste for sustainable health promotion and education.

YAMAMOTO, Sakiko - Ochanomizu University

SAITO, Etsuko; OTAKE, Midori

Motion Analysis of Meal Preparation by the Elderly: Focus on the Gender Difference

Introduction/Objective

Japan became a super-aged society in 2007 and is expected to continue aging. Cooking one's own meals independently is important to expand life expectancy and keep health. In other words, we need to focus not only on being able to eat enough, but also on being able to make one's own meal that one wants to eat. Therefore, there is a need for research that focuses on the actual process of a meal preparation by the elderly and how to support their independence. However, while there have been studies that addressed problems of food accessibility or examined the elderly as recipients of food support, little research has explicitly focused on motions of a meal preparation by the elderly. Objective of this paper is to reveal gender differences in the motions of a meal preparation and to propose a new approach of supporting lives of senior citizens with emphasis on respecting their independence.

Method

We conducted a questionnaire survey among 400 elderlies over 70 years old (men n=200 and women n=200) in Japan, inquiring about difficulties they face while preparing meals, related to body movements and the environment.

Findings / Conclusions

We found that there are differences between male elderly and female elderly in cooking frequency; in what motions of a meal preparation they find difficult; in type of dishes that they want to prepare but are not able to anymore; and what parts of a meal preparation they want to be socialized. These results indicate that the elderly care needs to be different depending on the gender of recipients. Our research findings contributed to the improvement of the elderly care that supports an independent meal preparation, and promoted a sustainable quality of life of senior citizens.

YU, Nansook - Korea University

NAM-SPEERS, Jiwon

Influences of School Education, Parental Involvement, and Media Press on the Korean Adolescents' Panic Consumption at the COVID-19 Inception

During the COVID-19 outbreak, the school's educational service modality changed, and at the heart of this change was the virtual environment. The venue of the virtual educational service delivery has been transformed to home from schools, and the collaborative role of parents as the delivery of educational services has become more important than ever. The purpose of this study was to examine how schools, parents, and media press affect adolescents' panic consumption with the moderation of their psychological risk factors through the online education intervention at the inception of COVID-19. Survey data was obtained from 415 middle school students aged 13 through 15 in South Korea. Findings suggest that media press and peer groups increase the panic consumption

of youth, while parents decrease their panic consumption. No direct evidence exists that schools reduce youth panic consumption. However, rather schools indirectly increase their panic consumption through a mediating link with peer conformity. Additionally, individuals' psychological risk factors, such as low self-esteem moderate the influential degree of peer groups on their panic consumption. Namely, peer influence on adolescents' panic consumption may depend on their level of psychological risks. This finding enhances our understanding of the relationship between psychological risk factors and panic consumption; in that, prior studies have rarely examined how peers and adolescents' panic consumption interact with the level of psychological risk factors in terms of adolescents' panic consumption.

ZOUMENOU, Virginie - University of Maryland Eastern Shore

DIXIT, Naveen Kumar; OYALOWO, Marie Therese

Well Connected Communities (WCC)-"Healthy Street - Health Me Project" in Fruitland Maryland- Culture of Health Initiative

Introduction

Health behaviors and the social and physical environment in which individuals live and work have a stronger influence on well-being than clinical services alone. The proliferation of stakeholders' efforts to promote wellness and prevent diseases has led to a vision for a culture of health where every person has equal opportunity to live the healthiest life regardless of their neighborhood, income, or their color. The purpose of the "WCC-Healthy Street-Healthy Me" project is to implement a culture of health initiative in Fruitland, Maryland using the community engagement approach.

Methods

The Culture of Health Action Framework includes four action areas and one outcome area. This project focused on two areas: "Making health, a shared value area" and the "Fostering cross-sector collaboration for well-being area". The methodology included coalition-building and a multi-sector health council to foster cross-sector collaborations. Under youth and adults leadership, a community health assessment survey based on social determinants of health was developed and conducted. They identified top issues and developed an action plan. Focus groups and a ripple effect mapping were used to evaluate the initiative.

Findings

The WCC-Healthy Street-Healthy Me project initiated after-school program tutoring, gardening, and mini-orchard activities. The results of the program evaluation indicated the following: An increased positive social interaction and increased partnership between youth and adults; A positive cross-collaboration among several organizations and particularly between youth groups and the police department. The multi-sector health council and the city collaborated to introduce a new farmers' market policy in Fruitland. Finally, after 3 years, the mini-orchards helped make fruits available to all.

Conclusion

Making fruits available helped with food access issues. By developing their own action plan, the community was very committed to the implementation of the project. Community engagement including a partnership between youth and adults might be essential for a sustainable culture of health and equity particularly in rural communities.

Research Poster Abstracts by First Author

AKIMOTO, Kiyomi - Tokyo Kasei Gakuin University
The Difficulty in Temporary Childcare Services in Japan
<p>Temporary childcare is a system that provides childcare for a short period of time, such as one day or several hours. In Japan the children of working mothers go to nursery schools, and the children of full-time mothers go to kindergartens. However, since the 1990s, child-rearing stress and isolation of full-time mother have been a social problem. To solve that problem and empower full-time mother, a temporary childcare system that allows them to use nursery schools was established.</p> <p>The purpose of this study is to examine factors affecting the difficulty of temporary childcare using quantitative research data. The difficulty of temporary childcare consists of 7 items, such as relationship with children, with parents, understanding the family situation, cooperation with other childcare workers, caring for a group of different ages, burden of paperwork, few opportunities to participate in learning and training.</p> <p>The participants are childcare workers who engage in temporary childcare at nursery schools (N=132). Their average age is 42.8 years old. About 74% of them are regular employees and about 26% are non-regular employees. In 52% of nursery schools children are cared in dedicated rooms for temporary childcare, in 48% of nursery schools they are cared together in classes of the same age.</p> <p>The analysis revealed the following factors are related to difficulty scores. Childcare workers who do not support mothers' norm feel difficulty. When the number of children that the childcare worker temporarily cares for is 2-4, childcare workers feel strong difficulty. Childcare workers who provide specialized care, it is difficult to temporary childcare. And it was suggested that difficulty of temporary childcare affects the stress of childcare workers. Based on the above results, it is necessary to establish a unified standard for temporary childcare staffing, childcare environment, childcare methods.</p>
ANDRES, Debra - Geary County K-State Research and Extension
MYERS, Lori; GAVRAS, Heather; JONES, Oliia; POUDEL, Remy
Driving Health Impact and Building Capacity Through a Community Nutrition Engagement Model
<p>Introduction: Only 1.5% of American adults eat the type of diet the American Heart Association (AHA) advises for ideal cardiovascular health. The AHA and the American Association of Family & Consumer Sciences (AAFCS) worked collaboratively to equip individuals with skills and confidence to prepare healthy meals at home through the Healthy for Life community nutrition program. This evidence-based community nutrition program empowers people to make healthy food, nutrition, and lifestyle choices.</p> <p>Objectives were to a) improve participant confidence to prepare healthy foods and frequency of healthy shopping behaviors; b) Increase participant consumption of fruits, vegetables, and whole grains.</p> <p>Methods: A four-class program offered over 8-12 weeks was evaluated in 2 community centers in 2019 to measure changes in participant confidence to prepare healthy meals at home, frequency of healthy shopping habits, consumption of fruits, vegetables, and whole grains. Facilitators administered an identical survey to participants at the beginning and end of the series. Results from 46 participants were analyzed using the Kruskal Wallis rank sum test assessed changes in key metrics over time.</p>

Findings: Respondents (N=46) were 55 or older (54%), female (89%), White (45%) or African American (37%), non-Hispanic (89%), and indicated they are the only person in their household preparing meals (63%). Respondent confidence ratings to prepare healthy meals at home increased by 24%* and respondent frequency to meal plan before shopping increased by 32%*. On average, respondents increased their daily fruit and/or vegetable consumption by about one and a half (1.37) servings with half (51%) of participants increased their daily fruit and vegetable consumption by 1 or more servings.

Conclusions: The Healthy for Life program increased participant confidence to prepare healthy meals at home and frequency of healthy shopping behaviors. While there were slight increases in reported consumption of fruits and vegetables, participants may need further exposure to the program over a longer period to see substantial behavior change.

*p<0.05, statistically significant

BERG, Alison C. - University of Georgia

WILSON, Hannah; CHATTERJEE, Swarm; KOONCE, Joan; TURNER, Pamela; BURTON, Dawn; BENTLEY, Rhea; AGUIRRE, Monica; BELTRAN, Ines; CAMPBELL, Christa; CENTNER, Ann; COLLINS, Becky; COOK, Georgeanne; DAVIS, Sylvia; DEKLE, Marnie; FAULK, Kisha; HOLLAND, Kathryn; HUBBARD, Rachel; MOORE, Jessie; MOORE, Susan; PARKER, Mitzi; SANDERS, Mary; SHELTON BELL, Kashara; HAYES, Carla; SMITH, Laura; STEWART, Rachel

Cooperative Extension Cancer Prevention Education Program Increases Cancer Screening and Intention to be Screened for Cancer Among Rural Georgians and Texans

i. Introduction: Cancer mortality rates are decreasing, partially due to increased cancer screening compliance; however, this decline is slower in United States (US) rural communities. This study aimed to determine the effect of the Georgia Extension's Cooking for a Lifetime Cancer Prevention (C4L) intervention on cancer screening compliance and intention to be screened.

ii. Methods: C4L educates participants on recommended screenings for breast, cervical, and colorectal cancer, and nutrition and physical activity for cancer prevention and health promotion. Follow-up events occurred approximately 12 weeks after C4L interventions and included C4L participants and non-participants (non-equivalent control). Extension agents recruited participants from rural communities through listservs, existing contacts, and news outlets. This quasi-experimental study examined C4L participant screening history and intention at the time of the intervention, at follow-up, and compared to non-participants (controls). Screening history and intentions were assessed using a researcher-designed questionnaire including Likert-type scales (e.g., 1 = Not at all likely to get screened, 3 = Definitely will get screened). McNemar and Chi-squared tests were used to evaluate changes within the C4L group over time and differences between intervention and control groups, respectively.

iii. Findings: C4L participants (n = 1182) were 54.3 + 18.4 y, 84% female, 41% black, and 10% Hispanic. Non-participants (controls) (n = 430) were 55.6 + 17.5 y, 81% female, 43% black, and 9% Hispanic. Among C4L participants, compliance with FOBT colorectal cancer screening increased from the time of the intervention to follow-up (p=0.019). At follow-up, C4L participants reported significantly greater intention to get a colonoscopy (p=0.001) and there was a trend for greater mammogram compliance compared to controls (p=0.059).

iv. Conclusions/Implications/Recommendations: C4L increased cancer screening compliance and

improved intention to be screened for some cancers among rural Georgians and Texans. C4L may contribute to cancer prevention and detection, and decreased cancer mortality in rural communities.

CHOI, Kyeongun - Korea University

YU, Nansook

The Role of Adolescents' Academic Self-Concept and Perceived Parental Support on Academic Achievement

Introduction

Students with more positive self-awareness earn higher grades. Parents significantly impact adolescents' academic achievement, and parental support predicts a child's educational performance—parental support functions in many ways in adolescents' environments. We identified the relationship between academic achievement and individuals' academic variation and the relative importance of perceived parental supports, data from the Korean Educational Longitudinal Study 2005.

Objective

We hypothesized a) self-concept and perceived support from parents' impact adolescents; b) parental support has a relative influence on educational achievement.

Methods

Data used were taken from the Korean Educational Development Institute's 2005 Korean Educational Longitudinal Study 2005 (KELS 2005). KELS is conducted each December near the end of the school year in Korea. We analyzed the sixth wave of the KELS 2005 data, conducted in 2010 and followed a high school student cohort (Grade 12th) that included 1,679 aged nineteen years. Academic self-concept (5 items; $\alpha = .82$) was assessed on a 5-point ranging from 1 to 5. Perceived parental emotional support ($\alpha = .81$) and academic support ($\alpha = .85$) were reliable. Academic achievement was the sum of standardized scores in three subjects (Korean, Mathematics, English).

Findings

Participants demonstrated perceived parental emotional support ($M = 3.60$) was higher than perceived parental academic support ($M = 3.11$). The regression results of model 3 ($F = 48.24$, $p < .001$) show students' academic self-concept ($t = 7.43$, $p < .001$), emotional support was significant ($t = 3.92$, $p < .001$); this is analogous to previous research findings. On the other hand, parental academic support was not significant controlled for family income level.

Conclusions

This study suggested students' self-concept and perceived parental support are critical components of academic achievement. Furthermore, by examining parental support as two variations, the findings confirm that emotional support impacts adolescent experience in schools.

CHUA, Consuelo - University of the Philippines

PAEZ, Julie Ann

Complementary Feeding Knowledge and Practices of Selected Filipino Urban Mothers

Malnutrition is a major public health concern in the Philippines particularly among infants and young children. One contributing factor to the prevalence of malnutrition is inappropriate complementary feeding practices. Thus, the aim of the study is to describe the complementary feeding knowledge and practices of selected urban poor Filipino mothers with children aged 6 to 24 months. The study focused on timely introduction of complementary foods, responsive feeding, food safety, diet

diversity, frequency of feeding, and maintenance of breastfeeding. Using a survey questionnaire, 30 mothers, selected purposively, were interviewed to gather quantitative and qualitative data on their feeding knowledge and practices. Results show that mothers in general have correct knowledge on complementary feeding, but some of their knowledge are not put into practice. Most of the mothers practice responsive feeding and adequate feeding frequency. However, only half of the mothers introduce complementary foods in a timely manner and most of them do not meet the minimum diet diversity requirement of their children. Furthermore, food safety awareness and practices in terms of safe drinking water and proper food storage are also inadequate. In addition, while some mothers breastfeed their children, more mothers still provide infant formula. Inappropriate complementary feeding practices are influenced by many factors such as wrong perceptions on children's health and development and incorrect information from family members, elders, peers, and social media. The study recommends the inclusion of complementary feeding topics in the high school home economics curriculum to further strengthen general knowledge on proper complementary feeding and consequently decrease sub-optimal complementary feeding in the Philippines.

DEMPOYA, Ayano - Kanagawa University

KOSHIBA, Tomoko; IWAMOTO, Shizuo

Study on Climate Adaptability of Kimono focusing on Kimono Lining and Undergarments

Introduction; In recent years when the climate is changing, it is necessary to confirm a suitable climate for wearing kimono. There are some traditional Kimono (Nagagi) suitable for seasons. Awase is lined all over the inside of Nagagi and is worn from autumn to spring. Hitoe and for midsummer are unlined kimonos. Recently, a tailoring without back lining called Donuki-sitate has been adopted. Climate adaptability due to differences in the tailoring of the kimono lining has not been evaluated. Previous study reported that skin temperature in Yukata was higher than that in a summer dress under 30°C. It seems to be uncomfortable to wear Kimono in the hot and humid summer in Japan. The purpose of this study was to evaluate the climate adaptability of Kimono to find out the way of wearing Kimono comfortably in modern climate.

Methods; Measurements of thermal insulation values of clothing (clo value) using a thermal manikin were performed in the artificial climate chamber at Kanagawa University. Experimental conditions were comprised of seven conditions for clothing (Awase, Donuki, Hitoe, Kimono for midsummer called Ro, Ro without underskirt and Ro without underskirt with camisole, Yukata) . In addition, the evaporative heat resistance was also measured.

Findings; The clo values of Awase and Donuki were approximately 1.04 clo. The clo value of Hitoe was lower than Awase and Donuki. There was a slight difference in results between Awase and Donuki in an airflow environment. The clo value and the heat of vapor resistance of Ro were reduced by undressing underskirt with camisole.

Conclusions; These results suggested that wearing Donuki may be more comfortable than Awase in warm environment. When wearing Kimono in the midsummer, it may be necessary to reduce some undergarments.

This work was supported by JSPS KAKENHI Grant Number JP19K14037.

EJINKEONYE, Uju - Michael Okpara University of Agriculture, Umudike, Abia State

CHUKWUONE, Chiamaka; EZE, Ijeoma

Challenges and Coping Strategies of Female Headed Households in Ikwuano L.G.A of Abia State

In Nigeria before now, households are being headed by males but recently many families are being headed by female. The study investigated the challenges and coping strategies of Female Headed Household in Ikwuano Local Government Area of Abia State. Two null hypothesis guided the study:

There is no significant difference between the mean responses of educational levels of staffs on the challenges of Female Headed Household and there is no significant difference between the mean responses of different occupation on the coping strategies adopted in their households. The area of the study was Ikwuano L.G.A. Simple random sampling techniques was used to select 285 females from 986 registered population female headed household. Frequency, means and percentages were used to analysis the research questions while ANOVA was used to test the hypothesis. The key findings revealed that the reasons for Female Headed Households include: result of widowhood, abandonment, divorce, migration and separation. The study revealed the challenges of female headed households were economic insecurity, lack of income earning opportunities, poor social status, lack of employment, inadequate finances to run the family, lack of respect by family members/society, gender inequality, difficulty in child raising, lack of support from offspring, lack of regular income, struggling to procure food, poor access to basic healthcare and loneliness among many others, coping strategies adopted by female headed household in managing their households are; involvement in daily/weekly contribution , engaging in menial jobs, gender equality, begging, trading, regular income, support from members of religious group, free access to basic healthcare, support from family members, among others. The study recommended that Conferences, seminars and workshops should be periodically organized for heads of female headed household on how to cope with the challenges associated with them and sustainability across lifespan in households among others.

FUJITA, Tomoko - Tokyo Gakugei University

SAKAMOTO, Yuka

Factors Affecting Japanese University Students' Housework: From the Viewpoint of Family Relations and Home Economics Education

Introduction: Twenty-five years have passed since Home Economics was made a coeducational subject at the junior and senior high school level in Japan. Male students who studied home economics participated in housework more actively than male students who did not study home economics, but men's participation in housework and childrearing remains lower than in Western countries.

Objective: The objective of this study is to investigate the factors that affect the amount of housework that university students do.

Method: Questionnaires were filled out between January 2016 and February 2016 by 1270 university students who had received coeducational Home Economics education in Japan.

Findings: The results of a multivariate analysis indicated that students' share in housework during senior high school, their fathers' housework, their university department, and the number of teaching methods experienced in home economics classes at senior high school had a positive effect on the amount of housework university students did. The student's gender, their mothers' work, and gender ideology did not have an effect.

Implications: These results suggest that students may deepen their understanding of family life and do more housework by learning home economics in a variety of ways. Moreover, it is important for how much housework students do that their fathers also do housework.

FUKUTOME, Nami - Tokyo Seiei College
NOGUCHI, Motoko
Characteristics of Home-cooked Dishes Eaten all over Japan by the 1960s
<p>Purpose Since World War II, the globalization and uniformity of food in Japan has resulted in fewer opportunities to eat traditional foods, thus diminishing regional characteristics of food. This study aims to clarify the characteristics of traditional Japanese home-cooking by analyzing home-cooked dishes eaten all over Japan 60 years ago but now in danger of disappearing, and dishes people in the regions want to pass on to future generations. The results enable discussion of traditional food culture characteristics on a quantitative basis.</p> <p>Method A comprehensive summary of Japanese home cooking up to the 1960s was compiled into a cookbook based on interviews and written surveys with 360 researchers from the Japan Society of Cookery Science. By classifying approximately, 1380 recipes recorded in the 16 books of Tsutaetsugu Nihon no Katei Ryori by main ingredient, dish style, and cooking method, and analyzing frequency, we were able to identify trends in traditional home-cooked dishes.</p> <p>Result</p> <ul style="list-style-type: none"> ▪ The largest group of dishes contained various seasonal vegetables (21.0%), followed by rice dishes (18.1%), and fish and shellfish dishes (14.0% fish, 3.9% other seafood). Very few dishes contained meat as the main ingredient (4.1%). ▪ Rice, the staple food, was often made into sushi for special events. The variations went beyond nigiri-sushi, with many varieties found in western Japan (2.2 dishes per prefecture), while the Tohoku region and Hokkaido were notable for the lack of such dishes (0.3 per prefecture). ▪ In terms of cooking method, more than 75% of dishes were water-heated, including rice dishes, simmered dishes (17.0%) and soup dishes (16.0%). ▪ Traditional Japanese food culture is characterized as rice-based, fish-based, and water-based cooking, and until about 60 years ago, that style was still firmly rooted at the daily table all over Japan.

HÅRD, Louise - University of Gothenburg
LARSSON, Christel; PALOJOKI, Paivi
Methodological Challenges of Exploring Teacher and Student Experiences of Subject Integrated Food Education in a Swedish Primary School
<p>Food knowledge is a prerequisite for sustainable food choices and food preferences developed during childhood set the frames for future food choices in adulthood. Even so, food education starts not until grade six and with very few hours in Swedish compulsory school, which is remarkably late. Food education is central in providing health and equality, and thus by starting already in primary school children's well-being as well as conditions for learning will be improved.</p> <p>The aim of the study is to explore and develops teaching and learning opportunities of food by co-designing subject integrated food education in primary school. The co-design method combines the teachers' practical experience with the researcher's theoretical knowledge, beneficial for collaboratively designing learning tasks. The research questions contain both teacher and student perspectives on subject integrated food education. Focus will be on the students' motivation, engagement and processing of knowledge.</p>

The methodological challenges in developing and implementing subject integrated food education, which this presentation will focus on, derive from accessing the field and co-designing procedure, to observation and participation in lessons without interrupting them. The observation will be sharpened by designing an observation manual. Furthermore, a questionnaire will examine teachers' experience of subject integration and food education, followed by focus group interviews with teachers' and students' respectively, regarding their experiences. A qualitative thematization of the data will be flexible in sorting and resorting empirical data, but at the same time structured to benefit on triangulation of the data collection methods.

Early results from a pilot study indicate that teachers are initially positive about subject integrated food education, provided they have management support, allocated time to plan the teaching, and access to further education in food education.

HAVREBERG, Solveig - OsloMet University

IVERSEN, Ingvild

How Is Food Waste Emphasized in Home Economics' Teaching About Sustainability in High School "Health and Development"?

Norway has committed to the UN's sustainability goals. In Norway, as a country rich in natural resources, it recognises that they should be utilised more sustainably. A significant amount of Norway's greenhouse gas emissions is a result of food waste - considered as food that could have been eaten; current statistics show that Norway has a food waste level of 42.6kg per resident (Ministry of the Environment).

In this context, I take as a reference point, the UN's sustainability goal, No.12.3, which states; "By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses".

One research question: "how do teach lectures on health and development about sustainability and food waste, and what competence did the students acquire?"

According to Hiim's theory of vocationally relevant training, and Schön's model of reflection on action is the basis for the methodology in our research.

The high school students enrolled on "health and development" will be employed in different professions where we have investigated how they handle food waste. In home economics, the use of food resources is important.

In 2020, new Curriculum for schools were introduced. Sustainable development will be implemented in all subjects.

Method: We use mixed methods in our research. We used the quantitative method; questionnaire with open questions about sustainability/ food waste to more than 200 students. Further, we will use the qualitative in-depth interview with 6 high school lecturers from the "health and development" subjects.

Our research show that food waste is taught in different ways in home economics, and we will present these at the conference.

HIRASHIMA, Madoka - Mie University
ISOBE, Yuka; HORI, Mitsuyo
Study of the Awareness and Preparation Ways of Japanese Traditional Meal (Washoku) among College Students
<p>Objectives: Washoku, the traditional dietary culture of Japanese, is designated in a UNESCO Intangible Cultural Heritage. However, the consumption of traditional Japanese food has decreased in Japan due to the availability of various processed foods from all over the world. Moreover, whereas most dishes were traditionally made at home, cooking at home is becoming less necessary. Younger people in particular have less interest in traditional Japanese culture or customs. This study investigated the awareness of, as well as change in eating habits of, washoku among Japanese college students.</p> <p>Methods: Surveys were conducted in 2016 among 509 Japanese college students to investigate the eating experiences for 23 selected types of washoku and their preparation ways (homemade, purchasing prepared food or eating out). The respondents were categorized by cooking frequency, and the results were statistically compared by chi-square test.</p> <p>Results: Of the surveyed students, more than 95 % were aware of the 23 selected types of washoku, and over 90 % had eating experience. The dishes most frequently eaten were “miso soup” and “green tea.” Of the dishes eaten, most frequently and average of 72.6 % were homemade, 16.8 % were purchased, and 10.6 % were dined out. Students who had higher cooking frequency had made “simmered chicken and vegetables” and “grilled fish” more often than students who had lower cooking frequency ($p < 0.05$). However, there were no differences in preparation ways among other 21 types washoku by cooking frequency. Namely, it means that most students had not made washoku by themselves even they had eaten homemade dishes. The dishes most frequently purchased or eaten out the most were “sushi rolls” and “inari sushi (sushi rice stuffed in fried thin tofu pouches)”, while dishes most commonly eaten homemade were “meat and potato stew”, “simmered pumpkin” and “miso soup.” Therefore, it is thought that many washoku dishes will no longer be made at home in the future but will more often be purchased.</p> <p>Conclusion It is concluded that washoku, though widely known to the Japanese college students, is becoming a type of food they purchased rather than make at home</p>

HIRASHIMA, Madoka - Mie University
OKUNO, Misaki; SHINOTANI, Haruka; UEMURA, Mako; TAKAHASHI, Rheo; NISHINARI, Katsuyoshi
The Effective Use of Cornstarch Products with Higher pH
<p>Objectives Starch is one of our major energy sources. Thus, various starch products have been manufactured by the food industry to which many kinds of seasonings are added that have a wide range of pH. Some are alkaline, such as baked goods added baking soda. However, little attention is given to starch properties at higher pH. In this study, the changes in the physical properties of starch products at higher pH were examined to investigate the efficient use of starch products.</p> <p>Methods Cornstarch at 3.0 wt% and 20 wt% was used. The pH was adjusted between 6.4 and 13.1. The starch gelatinization was investigated by DSC measurements and microscopic observation. Then, the physical properties of cornstarch pastes were examined by steady shear viscosity and dynamic viscoelasticity measurements. The degradation of amylose and amylopectin chains was studied by the amount of reducing sugar in starch pastes.</p> <p>Results It was found that the gelatinization temperature and enthalpy of cornstarch increased with</p>

increasing pH at pH < 12.4, but they decreased with increasing pH at pH ≥ 12.4. The crystal structures in starch granules were disappeared at pH ≥ 11.0. It suggests the suppression of the gelatinization process. The shear viscosity and dynamic viscosity of 3.0 wt% cornstarch pastes at pH < 11.5 did not depend on pH. However, they increased with increasing pH at pH between 11.5 and 12.6 and decreased at pH > 12.6. The amount of reducing sugar increased at pH > 9.4, indicating degradation of amylose and amylopectin chains. Therefore, it is thought that many amylose and amylopectin chains formed the network structures and the viscosity of cornstarch increased by adding alkali.

Conclusion Although, the gelatinization of cornstarch occurred at higher temperature, using cornstarch at higher pH led to increasing the viscosity of starch pastes, consequently the required concentration of starch could be decreased.

IKEZOE, Junko - Tokushima Bunri University

NOMURA, Rie; MORI, Suguru; KURIYAMA, Naoko; HATAKEYAMA, Yugo

Pre-disaster Community Planning by Local Residents in Tokushima

Nankai Trough earthquake of a magnitude 8-9 is expected to occur in 70-80% probability within 30 years in Japan. Because of the 2011 Great East Japan Earthquake, people are afraid that tsunamis by the megaquake would flood many areas, and residents might lose their lives or homes. In this study, a hearing survey about their current concerns and problems in their daily lives was conducted in Yuki area of Minami-chō, Tokushima Prefecture, where large-scale tsunami damages by the megaquake are anticipated.

The tsunami is likely to reach Yuki in 12 minutes after the earthquake, and a maximum wave of 12 meters in about 30 minutes. Population of Yuki has been decreasing as in other provincial towns, and in addition young people leaving the area for fear of the earthquake and for schools, jobs, and marriages. Elder people may also feel resigned to the earthquake and tsunamis, saying that they would not be able to escape if a tsunami hits the area.

In 2011, a group of residents started working on the pre-disaster community planning to make the community sustainable in fear of disappearance of the community. They started working out a post-disaster community plan in advance. In 2014, a community cafe was launched to foster a comfortable community through mutual support among the residents. Local volunteers run all. Additionally, a community-building organization of locals, "Minami no SORA" was established in 2020 and has provided livelihood support and administrative support for the elderly. SORA stands for Sustainable development for Our Resilient & Ambitious society. The results of this study can be utilized for activities of SORA in Minami.

ILIYA, Hauwa - Home Economics Department, FCE, Zaria

KANTIOK, Esther

Construction and Assessment of the Sound Aesthetic and Durability of the Improved Dancing Rattle "Kizet" among Ham Dancers in Kaduna State Nigeria

The research work was carried to examine the Construction and Assessment of the Sound Aesthetic and Durability of Improved Dancing Rattle among Ham Dancers in Kaduna State Nigeria. The objective of the study was to determine the attractiveness of dancing rattle produced using blended fabrics, metal sheets, ascertain the durability of dancing rattle produced using blended fabrics, metal sheets and determine the general acceptability of dancing rattle constructed using blended fabrics, metal sheets and gravels among ham dancers in Kaduna State. Product experimental research design was used for the study. 80 Ham dancers were selected using simple random sampling out the population of 127 Ham dancers spread across Nok, Kwoi and Daddu Kurmin Kwara in southern Kaduna. The

sample size was in line with research advisor 2006. The instrument used for data collection was a score card developed by the researcher. Frequencies and percentage were used to analyze the result of the data collected from the study. The findings of the study revealed that the dancing rattle produced using blended fabrics, metal sheets and gravels looks attractive with 63 (78.8%) while 17 (21.2%) of the respondents do not see it as attractive. The findings on the durability revealed that the dancing rattle produced using blended fabrics, metal sheets and gravels looks durable with 73 (91.3%) of the respondents agreeing while 7 (8.75%) do not agree. The findings on the general acceptability reveals that 76 (95%) of the respondents agree that the dancing rattle produced using blended fabrics, metal sheets and gravels is generally acceptable while 4 (5%) of the respondents do not agree. The study recommends that rattle dancers should be encouraged by the ministry of culture, so that the dancers can utilize rattle constructed using blended fabrics, metal sheets and gravels because of its good durability and aesthetic appearance.

IMAKAWA, Shinji - Hiroshima University

KAIKIRI, Hiroko

Study on Food Education Practice and Its Effects in a Kindergarten

[INTRODUCTION] School-provided lunch is common in Japanese elementary schools, but in recent years, the children's uneaten food has become a problem associated with food loss. Before children enter elementary school, the nurseries they attend also provide lunch, though kindergarten children are expected to bring lunch boxes from home. It has been pointed out that those students who leave food behind are those who attended a kindergarten. At H-Kindergarten, a "Pakupaku Bento" project is held once a month, where the children eat the same side dish from their lunch boxes. This aims to broaden the range of the children's food repertoire and contribute to parents' dietary education, helping to reduce future food loss. This study aims to examine the effectiveness of this effort via a study conducted from 2018 to 2020.

[METHOD] A questionnaire survey for parents was distributed after the implementation of the Pakupaku Bento program in each year. The survey aimed to grasp the actual situation of children's eating behaviors and menus, the frequency of ingredient used in lunch boxes, awareness of making lunch boxes, and what foods children began to eat as a result of the project. Responses were received from parents of 178 children: 42 3-year-olds, 66 4-year-olds, and 68 5-year-old children.

[FINDINGS] Through this project, parents came to think more about the menus they prepared for breakfast and dinner, including such concepts as nutritional balance, family preferences, and whether a food can be used as a side dish in a lunch box. Among the ingredients for bento lunches, the use of beans, root vegetables/potatoes, and leafy vegetables increased in frequency. In addition, some parents reduced their frequency of using frozen foods. Following this project, more than 28% of the children were able to eat new foods and dishes.

[CONCLUSION] The study's findings indicate that making an effort to eat the same food together is beneficial for broadening the range of children's tastes and may have a future effect of reducing food waste/loss.

ITO, Teruna - Koriyama Women's University

KUROSAWA, Hiroko; ENDO, Nao; HOSHI, Chitose; ZEMPO, Michika; YAGINUMA, Kazuko; HASHIMOTO, Anna; NEMOTO, Ayaka; YOSHIDA, Akari; KAMETA, Akemi; OKABE, Satoko

What Impact Do Home Vegetable Gardens Have on Health?

Introduction: A high subjective view of health is one of the important factors in supporting the home economy. It is known that contact with nature has a positive impact on subjective health perceptions. Objective: We examined the impact of home vegetable gardens, a familiar opportunity to interact

with nature, on health.

Method: Among those who underwent the specified health checkup in K town, Fukushima Prefecture, 330 people (136 male and 194 female) participated in our survey. The survey items were whether or not the respondents engaged in home vegetable gardening and physical activity, subjective health, and life satisfaction using questionnaire. Chi-square tests were conducted for each item, dividing the respondents into two groups: those who engaged in gardening and those who did not. Logistic regression analysis was conducted to identify factors related to such gardening.

Results: Among both male (mean age 71.9 ± 7.14) and female (mean age 69.3 ± 7.58) respondents, the proportion of those who spent more time in physical activity was significantly higher in the gardening group (male respondents: $P < 0.05$, OR 2.56 (95%CI 1.16–5.60); female respondents: $P < 0.05$, OR 2.51 (95%CI 1.11–5.68)). Furthermore, the proportion of those satisfied with their life was also significantly higher in the gardening group (male respondents: $P < 0.01$, OR 3.67 (95%CI 1.57–8.59); female respondents: $P < 0.05$, OR 2.25 (95%CI 1.10–4.61)). Conclusion: The results suggest that the proportion of people who spend more time in physical activity is related to higher proportion those who garden. It is known, based on previous studies, that having a sense of purpose in and satisfaction with life leads to good health. Thus, these results suggest that home vegetable gardening increases physical activity and life satisfaction, which leads to improved health.

JUNG, Hyojung - Shinshu University

LEE, Soo Hee

Contents and Pedagogical Styles of Food and Nutrition in Japanese Home Economics Textbooks: A Constructivist Perspective

Introduction:

Dietary problems not only threaten our health but are also deeply related to the sustainability of the environment and future society. It is important to educate students, who will be the main pillars of the future society, about dietary issues and how to create a sustainable society, keeping in mind their own health as well as the related issues in society, culture, economy, and the environment.

Therefore, learner-centered education is required so that students can independently solve dietary problems and have a better life. The purpose of this study was to examine how the contents and pedagogical styles of Food and Nutrition in middle school home economics textbooks could promote constructivist learning.

Methods:

The contents and pedagogical styles of Food and Nutrition were analyzed from a constructivist perspective by targeting home economics textbooks ($n=3$) used in Japanese middle schools. In analyzing the educational content, 26 learning elements were examined based on a practical problem-focused curriculum, from a constructivist perspective. As for pedagogical styles, texts and learning activities were analyzed based on four types of pedagogical styles: neutral, injunctive, persuasive, and participative.

Results and Conclusions:

In terms of educational content, the constructivist perspective was found to be sufficiently dealt with for each practical problem-solving process. In the case of learning activities, pedagogical styles from the constructivist perspective, such as persuasive or participative were found to be high (61.5%). Furthermore, there were well considered from the social perspective. However, in the case of the

texts, neutral information constituted the highest proportion(52.7%), indicating that pedagogical styles from the constructivist perspective were low(15.8%). In conclusion, textbooks need to contain more persuasive and participative style since these promote better knowledge construction and students understanding of the learning topic.

KAGA, Keiko - Hirosaki University

SUZUKI, Mayuko; OKUTANI, Megumi; OHMOTO, Kumiko

Transformations in Life Planning Literacy Acquisition among Elementary and Junior High School Students

Purpose

The purpose of life planning education is to provide students with the skills to design their futures. To date, the authors of this paper have researched life planning literacy while considering relationship- and community-forming skills, self-understanding and self-management skills, problem-solving skills, and career design skills. The authors found that all these skills were related, and that there were differences in the degree to which life planning literacy was acquired depending on the gender and year level of elementary and junior high school students. Through use of follow-up surveys, this research sought to clarify transformations in life planning literacy acquisition after a two-year period, and to identify problems in creating curriculums.

Method

The authors analyzed the results of surveys from FY2018 and FY2020, which were conducted with elementary and junior high school students from Osaka Prefecture. The subjects of the analysis were the complete responses from a cohort of 164 6th grade and 142 8th grade students. Survey questions were, among others, about lifestyle planning literacy, awareness of gender roles and bias, and awareness of life risks.

Results and Considerations

Relationship- and community-forming skills increased, with boys showing a significant increase in skill level, thought to be due to increases in receptivity and sympathy. Elsewhere, there was a significant drop in self-understanding and self-management skills. Problems in managing life resources were even more apparent than problems in students' ability to motivate themselves and act accordingly. No significant changes were seen regarding acquisition of problem-solving and career design skills. To further clarify the circumstances of transformations in life planning literacy acquisition, it will be necessary to analyze the relationship between awareness of gender roles, gender bias, and life risks. Based on analysis of these results, the authors propose that curriculums for the purpose of nurturing life planning literacy be instigated by the time students reach 8th grade.

KAWABE, Junko - Hokkaido University

HIROKO, Kamata; ITO, Taiki; GUO, Xinyu; KAWAHARA, Sumire

A Study on the Work-life Balance of High School Students in Hokkaido — From a Comparison of Girls 'School, Boys' School, and Co-schools—

<Aim>

Realization of harmony between work and life is indispensable for the realization of a society where each citizen can live the way they want. Especially in high school, there are various forms of study, such as girls 'school, boys' school, and co-school, and it is expected that there will be a difference in the consciousness of work-life balance that is nurtured. The purpose of this study is to clarify whether there is a difference in the way of thinking about "work-life balance" depending on the environment such as girls 'school, boys' school, and co-school for high school students in Hokkaido.

<Methods>

The questionnaire survey was conducted on a total of 713 students in Hokkaido. The survey method was a selection method and a self-administered questionnaire.

< Results and Discussion >

(1) View of love :

Compared to co-school men, boys' school men were more than twice as young as their ages to marry romance and did not seek economic power from their counterparts. As for the age of dating, more than 40% of co-school women are the same age, and about 40% of girls are older, and there is a tendency to demand economic power from men.

(2) View of marriage :

While 16.1% of women wanted full-time housewives, more than half of men wanted full-time housewives. Women have a life style after marriage. Full-time housewives are more than 20% of girls in co-schools, but girls in girls' schools are less than one-tenth, and work continuation exceeds 40%.

(3) View of child care :

Men were more likely to prioritize work after childbirth, and there was a tendency for family preference to increase. Women in school girls are better off than women in co-schools in the division of housework they want after marriage and childbirth.

It became clear that the work-life balance considered by high school students could be greatly biased by environmental differences. It is more and more required that students who will lead the future think about their future well and aim to create a comfortable environment.

LEE, Sung-Jin - North Carolina A&T State University

MO, Yunjeong; KIM, Suk-Kyung; PARROTT, Kathleen; LEE, Minyong; ROBINSON, Renee

Aging-In-Place Indicator: Housing Affordability of Older (65+) Householders in U.S. Rural Communities

Due to the increasing size of the aging population and their high 'aging-in-place (AIP)' tendency, it has become more important than previous decades to identify factors affecting AIP. This study focuses on housing affordability, which is one of the AIP indicators and has been less visited for U.S. rural older (65+) populations aging in place. With the 2013 American Housing Survey, the authors examined the relationship between housing affordability (dependent variable) and demographic and housing characteristics (independent variables) of U.S. rural older householders (N=1,533). The DV was a dichotomous variable having two categories, affordable (coded 0: spending less than 30% of monthly household income for their housing) and unaffordable (1: spending 30% or more of monthly household income for their housing). With SPSS version 26, descriptive statistics were used to identify the current profiles of U.S. rural elderly householders; and a binary logistic regression was used to reveal the relationship between their housing affordability and demographic and housing characteristics. The results showed that among older householders in rural areas, the householders whose education level was lower than high school; who had less number of household members; who were not married; who lived in Northeast region; who were female; who were living in housing built from 1980-1989 or 2000-2013; who had more number of bedrooms; or who were renters were more likely to live in unaffordable housing. This study is meaningful in identifying significant demographic and housing factors (education, household size, marital status, region, sex, housing built year, structure size, or tenure status) in terms of housing affordability of U.S. rural aging householders. Educational or intervention programs provided by government, community, and/or non-profit organizations are necessary to assist sustainable living of rural elderly populations aging in place within U.S. rural communities.

LESLIE, Catherine - Kent State University
MIFETU, Gloria
The Language of Fashion
<p>This research employed historical and autoethnography methodologies in exploring the background and potential of a discipline-specific resource for sustainable development in Home Economics education. Mary Brooks Picken (1886-1981) was intensely interested in sewing from an early age, learning from her mother's Butterick Sewing book and at her pioneer grandmother's knee. This knowledge, skill, and passion grew after going to Home Economics/Dressmaking School before marrying a Railroad Inspector. The newlyweds travelled all over the Midwestern United States with Mary visiting sewing and dressmaking schools in each city, increasing knowledge that would lead to authorship of more than 90 books in her lifetime. After five short years, her husband suddenly passed in 1911. Seeking a way to alleviate his daughter's pain, Mary's father commented the dictionary did not include many fashion words. Collecting them on index cards organized in shoeboxes, Mrs. Picken worked through her pain, relying on those definitions as she progressed in her notable teaching and publishing career. In 1925, Mary carried those many shoeboxes to New York City and success in the heart of the fashion industry. After her second husband, suggested she "do something," Mrs. Picken published "The Language of Fashion." Said to be the first dictionary written by a woman, this 1939 work was revised and republished several times as "The Fashion Dictionary," most recently by Dover in 1999. While tens of thousands of copies have been released, its distribution and value to Home Economists has not been optimized. Recording the reactions and implications of a professional from Ghana interacting with this resource demonstrates the lifelong value of educational endeavors for individuals and families in rural and urban communities. Mary Brooks Picken Sumner's lived experience and accomplishments, including "The Fashion Dictionary" can expand Home Economics potential for increasing resiliency, success, and wellbeing around the world.</p>

LESLIE, Catherine - Kent State University
MAKELA, Carole
Rainbow Flags: Understanding, Including, and Serving Our Changing Communities
<p>In support of the 16th United Nations Development Goal to "promote peaceful and inclusive societies for sustainable development," this poster explores different constructs and representative identity expressions in variations of the rainbow flag. Home Economists are charged with examining issues of justice, civil, and human rights such as those facing the global LGBTQ+ community. Best practices require professional sensitivity and effort to understand the dynamic nature of identities and find points of connection to act and improve lives. The American Association on Aging noted the need for "accurate information about sexual orientation and gender identity to provide support, understanding, and allyship for LGBT older adults." Connecting to our subject area of Textiles and Clothing, a flag or banner is a piece of fabric with a distinctive design and colors that serves as a symbol, signaling device, or decoration, invoking and communicating a sense of identity. An example of flags as identifiers is one with stripes in the colors of the rainbow. While the designs of rainbow flags and their applications differ, recognizable today is the LGBTQ+ "pride" flag first flown in 1978. Since its introduction, two waves of iterations have emerged (1989-1999 and 2010-2019), representing periods of increased activism in many countries. Attention to the multiple constructs encompassed in the pride flag and its use in clothing and messaging, Home Economics professionals can use knowledge of the different expressions of LGBTQ+ flags and their applications to redress negative systemic actions while promoting actions that improve quality of life and access to justice for all including students and colleagues. Understanding the messaging of flags and their symbolic relevance expands vocabulary and capacity for inclusive positive interactions with our communities.</p>

Analyzing the rainbow flag and 15 LGBTQ+ variations can further our important mission of understanding, including, and serving varied communities while gaining familiarity with flags as identifiers. Implications include school dress codes, graphic representations, and respect for differences in those served.

LLIGE, Auroa - University of the Philippines

ANGELES, Marie Liz

Sustainability Perceptions and Practices of Selected Filipino Craft Entrepreneurs

The craft industry is targeted by the Philippines Department of Trade and Industry (DTI) Go Lokal project to support local products. Given this backdrop as an anchor, this study purposively selected three Filipino craft entrepreneurs, specifically those in the knitting and weaving industries, who market their business as sustainable. This study aimed to describe their perceptions on sustainability, identify their sustainable production practices, and identify their challenges in maintaining a sustainable craft business. Data were collected through personal in-depth interviews with the entrepreneurs using a researcher-made interview guide and observations of production practices through site visits. These were analyzed through a content analysis where three major themes emerged. First is the preservation of local culture by helping indigenous communities keep the weaving/knitting traditions alive through their business. Moreover, they emphasize the cultural uniqueness behind the craftsmanship of their products and the durability of finished products. Second is the provision of work by ensuring the economic participation of community members, especially women. The last theme is limitations in environmentally-sound practices. The entrepreneurs try their best to procure natural and locally available materials. They aim to minimize production wastes through reducing, reusing, and recycling. However, they recognize that the logistics of doing their business, specifically procurement and transportation, are not environmentally sustainable. Despite their challenges, they are committed to serving their communities and preserving their cultural traditions. They recognize that there is still a lack of appreciation for locally made unbranded craft products. They hope to gain more support from government agencies, social organizations, and communities to continue their endeavor. Craft-making in the K to 12 basic education of the Philippines is under home economics at the high school, but only as an optional course. If the DTI hopes to bolster the local craft industry, the home economics curriculum should be strengthened.

LUPAMBO, Hosea Chishala - Rockview University, Lusaka

KANYATI, Malvern; MALAMA, Esther

Obesity Associated Factors Within Female Adults Between the Ages Of 35 and 60: A Study of Six Compounds in Lusaka Central District

Obesity consists a major nutritional health problem in developed and developing countries, which has reached epidemic proportions. Obesity is defined as the condition of excessive fat accumulation to such an extent that affects the individual's health. The purpose of the present review was to explore the effects of obesity in female adults between the ages of 35 and 60. This study used quantitative research approach. The study conducted in eight areas in Lusaka Central District. Obesity is a public health issue which is rapidly increasing and thus needs to be addressed seriously. The study consisted of a sample of ninety four respondents from a population estimated at nine hundred. A structured questionnaire was used as a data collection instrument. The questionnaire consisted of twenty one structured questions. Data was collected, coded and analyzed using Software Package for Social Sciences (SPSS) version 24. The rapidly increased incidence of obesity is due to environmental factors that influence a genetically pathological predisposition, lack of knowledge, poverty and ignorance.

Obesity has been recognized as an important contributing factor in the development of chronic and serious diseases, such as cardiovascular disease, diabetes mellitus type 2, hypertension, stroke, heart failure, dyslipidaemia, uric acid, sleep apnea which is the cause of sudden death in sleep and other diseases. The study concluded that obesity is one the killer diseases in Zambia. The study recommend that specific diet combined with physical activity can achieve the desired loss of body fat and are the most effective and long-lasting ways to treat obesity. At the same time responsible consumption and production of food is very important. Good health and well-being are very critical to humanity.

MARUYAMA, Satomi - Kinjo Gakuin University

MORITA, Ichizo; HOSOI, Nobuyuki

Issues In Eating Habits of Perimenopausal Japanese Women Who are Caring for Family Members

【Objective】 In Japan, women often provide care at home. There are many cases of perimenopausal women caring for their ageing parents but there were few research about eating habits of the people who are providing care in Japan. The purpose of this study was to clarify the issues in eating habits of perimenopausal women who are providing care.

【Methods】 Study design was a cross-sectional study. Study subjects were 180 customers who participated in the health event at an integrated supermarket. 119 perimenopausal women were selected for analysis. We conducted the survey asked age, whether the participant was a carer, meal times, awareness of eating habits and daily life problems using self-administered questionnaires. The subjects were divided into two categories: the carer group (14 women) who responded “yes” to the question of whether they were providing daily care and the non-carer group (105 women) who responded “no”. Independence was analysed with a chi-square test and level of significance was 5% (two-sided testing). The protocol of this study was approved by the Ethics Committee of Nagoya University for Medicine and Health Science (Student; No. 9-169).

【Results】 In the carer group, the ratio of those who responded that they enjoyed their meals ($p < 0.05$) were lower and the ratio of those who responded that they wanted to take their time eating ($p < 0.01$) was higher than the non-carer group.

【Conclusions】 Issues in eating habits of Japanese perimenopausal women who are providing care on a daily basis are that they are not enjoying their meals and that they cannot take their time eating so the problem is that they do not have enough time for themselves.

MASE, Kiyomi - Nagoya Women's University

Laundry Detergent Market Survey and Research on Water Hardness

Detergent use commonly changes in household laundering, where detergency and individual preference weigh heavily. The water itself is generally tap water and therefore not subject to change. Water hardness components such as Ca^{2+} and Mg^{2+} generally bind with anionic surfactants and particularly with fatty acid salts and thus become insoluble, and are therefore known as detergency-reducing factors. These components are also known to increase detergency. In this light, we surveyed the market from north to south throughout Japan for solid soaps, powder detergents, compact powder detergents, liquid detergents, super concentrated liquid detergents, detergent gel balls, and other agents 1).

Water hardness at 35 sites in Japan was measured with the digital PACKTEST (Kyoritsu Chemical-Check Lab., Corp.). Test water (1.5 mL) colored by the PackTest (total hardness (TH)) was transferred to a special cup and the concentration (mg/L and ppm) was measured with the portable single parameter water analyzer 2).

Among the 35 measured sites, the site with the highest hardness was Ishigaki City, located in southern Japan, at over 100 ppm. Aomori City and Morioka City, located in northern Japan, were next

highest, and it therefore cannot simply be concluded that hardness tends to increase with southern location. We found that some powder detergents and softening agents were marketed only in Okinawa Prefecture, but it appears that the large-pack powder detergents were in circulation in Okinawa because of its hot climate and consequent frequent laundering rather than as a particular measure against hard water. In cities, the number of super concentrated liquid detergents, detergent gel balls, and other such products was large in the market.

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MHLANGA, Rossetta - Mufulira College of Education

PHIRI, Anna

Assessment of Health Benefits and Acceptability of Amla Emblica Officinalis with Watermelon Rind Among Quarantined Students – A Covid 19 Remedy

The purpose of the study was to prepare a remedy for treatment of Covid 19 symptoms using Amla Emblica officinalis and watermelon rind. Amla Emblica officinalis has ability to increase defense against diseases because of its anti-inflammatory, anti-viral, anti-bacterial, anti-fungal antioxidant properties that help to improve health and boost immunity. The study involved 110 participants who included 50 panelists and 60 quarantined students with symptoms of Covid 19 at Mufulira College of education on the Copperbelt province of Zambia in Southern Africa. The Covid 19 symptoms included flu, cough and fever. Of the 60 students, 30 were on trial remedy and 30 used as a control group. Random sampling was used to select participants for the study. Permission to conduct the study was sought for from local health experts and college administration. Before being administered to students, the novel product was subjected for sensory evaluation using the 5 point Hedonic scale and was evaluated for texture, taste, colour and acceptability. One way ANOVA showed significant differences ($P = 0.000$) in acceptance of all the characteristics of the novel product between sensory evaluators because $P = 0.000 < 0.05$. Descriptive statistics data was collected on students which included temperature and frequency of coughing to assess their response to Amla Emblica officinalis remedy. Results showed a quick reduction in covid-19 symptoms on students subjected to the remedy after taking 50mls, three times a day for 7 to 10 days of remedy compared to the control group. Basing on the response from students subjected to the remedy, it was concluded that Amla Emblica officinalis has healing properties which could help in the treatment of Covid- 19 symptoms.

MITSUHATA, Yuka - Ochanomizu University

What is Working with Children?

Introduction and Objectives

Conflicts between childcare and work have been a longstanding theme for working parents, and the key to achieving gender equality in Japan. Under such circumstances, a way of working called "bringing infants (or children) to work" has recently become a topic in the media. Often, there are many comments on it, both for and against this topic. However, if I look closely at the content of them, I notice that the term "bringing infant (children) to work" implies differs from person to person. The previous study concludes that it should be considered as one of the work style options for balancing work and life,

Balancing family and work is one of the issues of life management. In the future, more research should be conducted on bringing infants (children) to work as a method of work-life balance. As a basis for this purpose, it is necessary to define and categorize the term "bringing infants to work".

Methods

I did content analysis of newspaper articles on bringing infants (children) to work in past three decades. I also conducted interviews with childcare experts and people who have experience working with children in order to classify the various forms of working with children.

Results and Conclusion

There were various ways of bringing infants(children) to work, ranging from parents taking care of their own children to setting up a daycare center within the company. Based on the above, I defined "bringing infants (children) to work" as a form in which parents keep their infants close to them and perform paid regular work. In addition, I also mapped the types of work with children, categorizing them by the location of the childcare and the caregiver. Through these, I would like to help in considering various working styles for parents with children in the future.

MORITA, Misa - Kochi University

A Study of Gender Equality for Life Enrichment - Exploring How to Make a Difference at Work and at Home

The purpose of this study is to explore how Japanese working women can offer support and have positive influences to those around them to create gender equality while building work-life balance. By looking at typical Japanese work and family responsibilities from the perspective of well-being and sustainable development, we can make a difference to modern Japanese society.

Previous studies on gender equality have mainly concluded that Japanese working women should have the same advantages under the law and in politics, as well as the supportive environment men have. These advantages were from economics and business administration. Thanks to them, some could acquire many "capabilities".

However, studies on gender equality must reexamine whether these "capabilities" are enough. We need to focus on "passing the baton" forward. Can we encourage working women with advantages to pass others on? By focusing on gender from home economics, we can achieve this.

This study consists of a survey of 1,000 employees in Japan in 2019. Major findings are as follows.

1. About 65% of employees (men and women) generally disagreed with gender roles regardless of income or occupational status. However, the ratio of those who didn't have gender bias at work and at home were much lower. In most cases, women did more housework and childcare than men.
2. About half of women agreed that prioritizing private life ahead of work had negative effects on their professional careers. Especially, those working towards positions with higher status were more likely to support the opinion.
3. Women who value professional skills, work dedicatedly for society, valuing health or human relationships were likely to have the drive to raise their voices for gender equality.

MURATA, Junko - Wakayama University

TANAKA, Tomoko

Characteristics of Small-Scale Fee-Based Homes for Elderly People (Housing Type) -Comparison by Population Scale-

Japan is a full-blown aged society. Under these circumstances, the country's policy on the welfare of elderly people faces the challenge of building "community-based integrated care systems" that will

allow its elderly citizens to continue living in their accustomed community while receiving necessary services. In order to establish such systems, housing for those who find it difficult to remain in their homes should be provided. This study focused on one alternative: small-scale (less than 30 residents), fee-based homes (FBH).

In many ways, FBH should be more than a home; it should support the lives of its residents as long as possible and enable them to avoid the trauma of relocation. The aim of this study is to clarify the current condition of small-scale, fee-based homes for elderly people in Japan. Based on results, research in the area can be advanced and the conditions necessary for residents to live continuously in their FBH can be properly assessed.

A questionnaire survey of FBHs was conducted from November 2018 through February 2019. In all, 633 questionnaires on FBH were distributed, producing 168 (26.5%) valid responses. Responses were analyzed by population scale. The results were as follows:

- 1) In smaller population areas, the location of the FBH tends to be more inconvenient.
- 2) For larger population areas, the residents' care needs and symptoms of dementia tend to be more severe, increasing the burden on staff.
- 3) In smaller population areas, there is a shortage of public and private housing for elderly people, as well as inadequate home visitation services. In larger population areas, nursing homes and health care facilities for elderly people are insufficient.
- 4) The main reasons for residents to leave an FBH are entering hospital, death and moving to a nursing home.
- 5) In larger population areas over half of the FBHs have a staff shortage issue. Over 30% of the FBHs are in financial difficulty.

※A fee-based home for elderly people is a form of retirement home. The Japanese Ministry of Health, Labor and Welfare uses this term. There are two types of fee-based homes: one provides care, the other provides housing only.

MURATA, Shintaro - Mie University

NAGATA, Natsuki

Current Condition and Problems in the Life Situations and Parent-Child Relationships of Junior High School Students

The purpose of this research is to understand the parent-child relationship and life situation of junior high school students from a broad perspective through a questionnaire survey for junior high school students, and to clarify the current situation of parent-child relationships as well as the context of the problems in those relationships. According to a survey by the Institution for Research on Household Economy in 1991, parent-child conversations tended to decrease among junior high school and high school students. In particular, conversations with fathers was reported to be less frequent than conversations with mothers. Additionally, while over 60% of the counselors of troubles also consulted with parents during elementary school children, about 30% of junior high school students and about 20% of high school students decrease. In other words, intimacy in the parent-child relationship (especially with the father) has been said to decline during the time of middle and high school. In recent years, the "parents like friends" initiative has reported positive results in parent-child and mother-infant relationships. According to a survey by the Meiji Yasuda Life Welfare Research Institute in 2016, 70% of students and their parents had good relationships with each other. However, the survey does not specify which factors make this parent-child relationship good.

Therefore, a questionnaire survey was conducted with about 650 junior high school students. In the questionnaire survey, we will solicit information regarding 1) awareness of parent-child relationship among junior high school students, 2) consultation partner in trouble, 3) life situation (life time, cultural capital, media use, etc.). As a result, we gained a clear understanding about the intimacy of parent-child relationships among junior high school students. In particular, intimacy with the mother was higher than intimacy with the father.

MYERS, Lori – The American Association of Family and Consumer Sciences

BOWERS, Jan

An Evaluation of the National Partnership to Recruit, Prepare, and Support Family and Consumer Sciences Educators

In the US, the Family and Consumer Sciences (FCS) profession has documented a national need for increasing the number of educators for the workforce. The nationwide closure of educator preparation programs has disadvantaged individuals who want to join the workforce and employers who want to fill vacant educator positions. The National Partnership to Recruit, Prepare, and Support Family and Consumer Sciences Educators facilitated collaborative interaction with educational institutions, state departments of education, Extension community programs, K-12 educators and students, professional associations, student organizations, and industry partners on a nationwide basis to address the challenges of educator recruitment, preparation, and retention. The Partnership was designed to increase the number of qualified educators by establishing and facilitating partnerships among stakeholders. The purpose of this research was to evaluate the outcomes of the national leadership academies and self-sustaining models that were created to holistically address the need to increase the number of qualified educators for the workforce. The robust stakeholder partnerships collaborated to produce and/or distribute resources to support educator recruitment and preparation; to promote workforce opportunities to wide audiences to recruit diverse candidates; to share undergraduate and graduate post-secondary faculty and students and online educator preparation courses on a national level; and to provide targeted support to the Northeast region of the US. Quantitative and qualitative data were collected. The National Partnership developed and implemented a total of nine projects focusing on curriculum, instructional, and marketing resources; educator preparation programs and licensure; scholarship and financial assistance; and professional development over a three-year period (2018 - 2021). Evaluation outcomes were measured and tracked for each of the nine projects. While this project was limited to the US, the strategies and collaborative model can be utilized and implemented in other countries experiencing challenges with educator recruitment, preparation, and retention.

NAKAGAWA, Hideko - Utsunomiya Junior College

SHIGEKAWA, Junko

Strategy and Belief for Successful Family Budget Management: A Case Study of Family Account Books for Over 50 Years

Introduction

In recent years, income inequality and poverty have been recognized as social issues in Japan. The percentages of households without savings and the number of individuals with late debt repayments have increased, and the incomes of many households are falling. In addition, concerns about retirement grow as life expectancy increases. Based on long-term family account books, this study aims to clarify the methods and perspectives of family budget management that enable a financially-secure life after retirement. This case study allows extracting measures to prolong the sustainability of income balance stability.

Methods

The case study was conducted using a family account book maintained over 52 years by the wife. Her husband was an office employee. How the family budget was managed was clarified through time series analysis of income, balance of income, etc. In addition, through an interview with the wife, household income management, perspectives, and specific methods were clarified.

Findings and Conclusion

Although the income was higher than the head-of-household cohort average, spending on education and housing, etc., caused a family budget deficit in seven out of 52 years; budgeting for daily living expenses and life events allowed income and spending to be smoothed out over a number of years. Contributions to stable retirement finances came from: 1) the wife going to university in her late thirties and thereafter being employed full-time; and 2) real estate investment earnings. Also, her dream (a large house with garden) was shared by her husband, and they set concrete targets. In summary, short- and long-term budgeting based on the family account book, investment in human and financial assets, and spousal cooperation were key to successful management of this case-study budget, and these factors are applicable to many households.

NAKAYAMA, Setsuko - Chiba University

JUNG, Hyojung; XIA, Peng Xiang

A Comparative Study of Child Perception of Family and Lifestyle Diversity

Introduction

It is important to consider how children perceive their families in a society where diverse life courses, values, and types of family forms exist. The purpose of this research is to clarify children's perception of family in three countries, Japan, China and Korea, where the viewpoint regarding the family has been based on Confucianism, and to consider how we approach various issues surrounding families with respect to the achievement of the SDGs.

Methods

A picture book "The Great Big Book of Families" was employed as a tool for research. Children were readily familiar with the book, which made it easy to image the diversity of families and lifestyles. After reading this picture book, translated and published in each country's language, we conducted qualitative research on how children perceive diverse families and lifestyles. The research subjects were children aged 11-12, which corresponded to sixth graders in each country.

Results and Conclusions

A similar tendency could be seen in children's descriptions in the three countries. After reading the book, children freely described what they had learned, what they were most interested in, and how they felt the illustrations in the book linked up with their lives. It was clear that the use of picture books was effective in this study. The children's descriptions were divided into three categories from the viewpoints of family diversity, lifestyle diversity, and emotional diversity. There were few descriptions of family diversity in some countries. It is considered that there were few opportunities for the research subjects to experience diverse families in their daily lives and the cultural and social environment surrounding the children may have affected their perceptions. It was found that there were several patterns in the way children perceived diverse families and lifestyles. In conclusion, to understand the basic idea of Goals 3 and 5 in SDGs, it is particularly important to realize family diversity for children.

NAGATA, Haruko - Otsuma Women's University

A Study of Clothing Life Education on Environmentally Friendly and Sustainable Life

Objective:

The concern with environmental problems in the field of clothing has been growing in recent year. In the new course of study for Japanese home economics education, it is emphasized that students are able to create a sustainable life in the food, clothing and shelter life.

The purpose of this study is to investigate conscious of the purchase of clothes for university students, and consider useful educational practice of "Clothing Life" in a basic subject class.

Description :

Participants in this study were female university students enrolled in the faculty of home economics. The survey was conducted using a questionnaire form about their consciousness of clothing life including what is important when buying your clothes and awareness of terms such as "organic cotton", "fair trade" and "ethical fashion". The result of free descriptions was analyzed by using text-mining approach.

The major findings of this study were as follows :

- The most important factor in their consideration when they buy clothes was "price" and "design". On the other hand, there were few students who answered environmentally friendly thoughts.
 - The awareness of "organic cotton" and "fair trade" was 86.0% and 76.9%, but "ethical fashion" was only 36.4%. They had few opportunities to see a goods and a store of "ethical fashion".
- Not only increasing interest in environmentally friendly, but also learning by visualization of environmental problems is necessary for educational practice.

NISHIOKA, Rina - Tokyo

Effects of Different Age Exchange Class in Elementary School Home Economics on Younger Children

AIM

For children, it is important to engage with people of various generations and build good relationships with people in the community in order to realize a sustainable society. In Japan, in school education, we are working on how to interact with young children and foster nurturance through exchanges of different ages. However, it is not well under clear how younger children feel about interacting with the older children.

The purpose of this study is to clarify how first grader (6-7 years old) feel about the exchange class with sixth grader (11-12 years old) in elementary school home economics. The exchange class was related to the food field of home economics. The sixth grader and the first grader will be able to deepen the relationship between the two by cooking and eating together.

METHODS

The analysis target is 105 first graders. In the exchange class, the sixth grader and the first grader made the sweet potato cake together. After the class, the first grader wrote the impressions. Their impressions were analyzed by text mining

RESULTS & CONCLUSION

The top five extracted words were "sweet potato cake", "make", "sixth grader", "together", and "delicious", and there were many descriptions that they rejoiced in making sweet potatoes cake with sixth graders. As a result of analyzing words that express emotions, "delicious", "fun", "happy", "sweet", "well" were ranked high. For the first grader, the class was instrumental in helping them develop a sense of a positive view of the sixth grader.

NOMURA, Rie - Hokkaido University
Sustainable Community Living for Foreign Residents and Locals in Rural Areas of Hokkaido
<p>In the Niseko area, Hokkaido, attracting many international tourists, the establishment of tourism zone and cooperation beyond municipal borders have been underway. Amidst increase in number of longstayers and immigrants, it is important to establish a foundation to live their lives and a coexistence with locals. Thus, the purpose of this study is to examine how foreign and local residents can live together sustainably in the depopulated rural areas.</p> <p>We conducted the research in three stages:</p> <p>(1) Understanding regional characteristics and historical development process In the Niseko area, hot-spring resorts and other resort facilities have been established. Since around 2007, visitors, mainly Australians, have become popular. After 2011, there has been a significant increase in international visitors, including Asians. It became clear that there is a large gap between the resort areas where the population trend is rapidly changing and the urban and rural areas where the population decline is accelerating due to aging population.</p> <p>(2) Understanding living situation and life sphere of foreign residents We conducted the survey of foreign residents stayed in the Niseko between 2018 and 2021, analyzing their living situation. There are various foreign residents in the Niseko, including seasonal workers living in the resort, longstayers in condominiums, and year-round residents. As for year-round residents, it is important to secure a place where they belong, offering immigrant-owned restaurants, public baths, international school, and Japanese language classes.</p> <p>(3) Relationships with locals and examination of development policy in the cross-jurisdictional community</p> <p>The Niseko is made up of three towns, one of which is Niseko Town, appointing Coordinators to support foreign residents and internationalization efforts among locals. Those towns also work together to offer driver training and lifestyle guidance in winter. On the other hand, some problems still remain to be solved, such as public transportation coordination and emergency communications.</p>

ODA, Naomi - Kinjo Gakuin University
TSUJI, Michiko; FUKUOKA, Megumi; UCHITA, Yuki; YAMAGUCHI, Atsuko;
The History of Young People's Associations Within the Japan Society of Home Economics and the Characteristics of Their Activities
<p>Aim</p> <ul style="list-style-type: none"> . This study aims to clarify the details of the activities of three regional Young People's Associations of the Japan Society of Home Economics (JSHE) . . The Japan Society of Home Economics was established in 1949 to advance studies in home economics by disseminating research findings to its members across the country. . The society has four Young People's Association members: one based at the headquarters and three are in other regions in Japan, namely Kanto, Chubu, and Kansai. . To attract more young people and multidisciplinary researchers, the association has conducted lectures and roundtable discussions in each region. However, Young People's Associations from each region have no interaction with each other, and lectures topics and roundtable discussions are unplanned. <p>Method</p>

The activities of the Young People's Associations in the three regions were extracted from the contents posted on the website.

Results

The study results revealed the following about three regional Young People's Associations of the Japan Society of Home Economics:

- (1) The first Young People's Association was established by the headquarters in 1997, followed by Kanto and Kansai in 2003 and Chubu in 2007.
- (2) The main activity across the three regional branches comprised lecture-type presentations; 64% of the Kansai branch's activities fell into this category, followed by Chubu and Kanto branches.
- (3) The most common themes of discussion were food, career development, and statistics.

Conclusion

Thus, to enhance the operations of the regional Young People's Association and deepen its coordination across its member organizations, it is recommended that active yet participatory web conferences are held with the young members from each region. A more detailed study using hearing surveys must be conducted to properly assess the Young People's Association

OGBONNA, Kemi - Federal College of Education (Technical) Akoka, Lagos

EZE, Ngozi; AJULUCHI, Chika; ADENIJI, Oluwatoyin; ONYEKA, Francisca; ADEYEMI, Moyosore

Strategies For Enhancing Gender Equity Among Railway Workers in Lagos State South West Nigeria

OBJECTIVES: The aim of the study was to determine the strategies needed for enhancing gender equity among Railway workers in Lagos State South West Nigeria.

METHODS: The design used for the study was a descriptive survey design. The population of the study was 670 and the sample size was 250 consisting of 5 Home Economics Teachers from Ijero Girls Junior Secondary School, 100 senior and 145 junior staff of Nigerian Railway Corporation Ebute-Metta Lagos. Purposive sampling technique was adopted. Structured Questionnaires were the instrument used for data collection. Data collected was analyzed using mean.

RESULTS: Findings revealed that the strategies for promoting gender equity are equal pay, considering leadership roles for women, workplace transparency, enacting and enforcing strict and effective policies against female harassment, promotions and placement to be on merit, equal opportunities for both men and women, formulation and implementation of policies against gender discrimination in workplaces by the federal government.

CONCLUSION: Based on the findings, it was concluded and recommended that awareness should be created on the need for equal right for men and women in workplaces, more emphasis should be placed on the need to inculcate gender equity education into the curriculum, curriculum reformers to consider the inclusion of gender education into the curriculum, national gender policy should be introduced into laws to provide a legal framework for gender mainstreaming in the national development plan, coalition amongst female Railway workers should be encouraged by the management. Mentoring should form part of the organizational spolicy and male counterparts should form the major part of the mentorship team.

OIKARINEN, Kati - University of Helsinki

JANHONEN-ABRUQUAH, Hille;

Gendered Practices in Home Economics Classroom – Analyzing Multimodal Interaction

Globally agreed sustainable development goals challenge professional fields to reflect and revise current educational programs and practices from a socially sustainable perspective. Home economics

teachers need both research findings and practical tools to improve the quality of their professional work towards socially sustainable practices.

In Finland, there is a strong belief that gender equality has already been achieved, but the issues of gender are deeply entrenched in the structures of a society, as well as in our embodied subjectivities. According to the Finnish National Basic Education Core Curriculum, education must promote gender equality. Teachers should recognize gendered practices and attitudes and act in a gender-responsive manner. Home economics as a school subject has a thorough aim towards genuine gender equality. However, due to the traditional female genderization of the subject, teachers and students could be involved in unconscious gender-related processes.

The aim of this study is to recognize equality practices related to gender in home economics classrooms and reflect on the reality in schools against the curricula documents. By making visible the equality practices but also the repetitious, unconscious practices, it is possible to reveal the hidden gender orders. This study is a qualitative case study, and the data were collected in an upper comprehensive school in Finland with 7th grade students through video recordings in home economics classroom. Methodological framework to interpret equality practices is based on multimodal interaction analysis, which focuses on the embodied (e.g. language, gestures, postures) and the disembodied (e.g. material) interaction.

The results obtained from the video analysis offer a detailed view of classroom practices. In conclusion, socially sustainable development has generally received far less attention than economic and ecological development even though it is closely linked to quality of life and wellbeing of future generations. Gender responsiveness is needed at all levels of education and that involves consciousness of social and cultural differences, inequalities, and otherness.

OKABE, Satoko - Koriyama Women University

NEMOTO, Ayaka; HASHIMOTO, Anna; YUMIYA, Yul; GOTO, Aya

Trends in Leaflets for Nutritional Guidance Sought by Patients with Mental Illness and E-Health Literacy of Instructors

【Aim】 Lifestyle-related diseases are prevalent among psychiatric patients, and nutritional guidance is important for the prevention. In recent years, the digitalization of nutritional guidance has been progressing worldwide. However, dietitians in Japan are yet to recognize the importance of such information trend. The purposes of this study were to assess changes in accessibility of a nutrition guidance leaflet for patients before and after the revision and to evaluate an e-Health Literacy level of dietitians.

【Methods】 The leaflets before and after revision were evaluated among six psychiatric patients and 22 healthy subjects. The eHL assessment was conducted among 21 dietitians working at hospitals.

【Results】 Two patients (33%) and 5 healthy persons (23%) found the leaflet easier to understand after revision. Patients found it difficult to determine adequate amount of food intake according to their BMI. In terms of preference, 5 patients (83%) and 11 healthy persons (50%) selected the revised leaflet. The eHL scores of instructors tended to be significantly higher among those who were younger, used online information, and provided diet instructions more frequently.

【Conclusion】 Patients with mental illness required an individual support to understand specific instructions in the leaflet. Digital visual information might be useful in such cases, but dietitians who were older, not familiar with online information, and with less clinical experiences, required additional training in digital information usage.

OLAREWAJU, Cecilia Abiodun - Adeyemi College of Education, Ondo, Ondo State
Problems and Prospects of Snailery and Catfish Farming in Ondo West Local Government Area of Ondo State, Nigeria
<p>The study examined the aspects of catfish and snail farming as well as the benefits and challenges among entrepreneurs in Ondo West Local Government Area of Ondo State. The study was carried out on thirty-six registered catfish farmers and two registered snail farmers in Ondo West Local Government Area of Ondo State. Two questionnaires consisting of structured items on problems and prospects of snailery and catfish farming were used for data collection. The questionnaires were subjected to face and content validity and were administered on the selected farmers in the local government area. Three research questions were stated to guide the findings of the study. Using frequency counts, simple percentage, mean and standard deviation, the information gathered were analyzed to answer the research questions. Major findings revealed that there are different aspects of snail and catfish farming for farmers and entrepreneurs. Some of these aspects are sorting (50%), transportation (100%), production of feed (63.9%), sales of smoked fish (50%), sales of table size fish (41.7%) and fingerlings (58.3%), and intermediary between farmer and consumer (69.4%). Findings also revealed that catfish and snail farming are of great benefits to the farmer. They are good sources of income, employment and they are highly nutritious. The high reproductive ability of snail and catfish also make the business a viable one. The challenges of snail and catfish farming were related to capital (69.4%), availability of infrastructure (47.2%) and amenities (50%), pest and diseases (100%), siting (66.7%) and scarcity of feeds (55.6%). It was recommended that extension agencies should encourage fish farmers to subscribe to various fish and snail farmers' groups as a means of making the required information and best practices readily accessible. Also that there should be improved extension agent-farmer, so that regular and prompt visits could be made to fish and snail farmers in order to intensify their awareness and adoption of improved technology, formal fund sourcing and others</p>

ONO, Yumiko - Tokyo Kasei Gakuin University
A Study on the Handling of Cashless Payments and User Awareness in Students, with Reference to Japan's High School Home Economics Education
<p>In order to examine the handling of cashless payments in home economics education in Japanese high schools, this study investigates the ideal state of consumer education in the future by surveying usage and attitudes of high school students.</p> <p>The government aims to increase cashless payments in Japan from 20% in 2018 to 40% in 2027. The 2018 revision of the high school curriculum guidelines for defining the basic standard for education, points out the need for improving consumer education because of the lowering of the legal age of adulthood. The Integrated Home Economics curriculum covers the merits as well as the demerits of a cashless society for household finances. Regarding cashless payments, the home economics textbooks based on the previous curriculum guidelines carried a table on the variety and features of credit cards, with references to household finances management using electronic money or cashless payments.</p> <p>Among the high school students surveyed, approximately 40% of the students use their parents' credit cards and around 20% use prepaid cards; thus, cashless payments are becoming pervasive. While more than 50% of the students wished to use cashless payments, less than 15% did not, and more than 30% did not understand cashless payments. Going forward, consumer education should equip students to independently make cashless payments—not just deferred, but prepaid as well as on-the-spot payments—and instill awareness of building a credit history.</p>

ONU, Rose - National Agricultural Extension and Research Liaison Services, Ahmadu Bello University, Zaria, Nigeria
OKWORI, Esther; AKATSUKA, R. A.
Influence of Early Childhood Education on the Academic Performance of Junior Secondary Students in North-West Nigeria: Implication for Child Development. (SDGs4)
<p>The study assessed the extent of influence of early childhood education on the academic performance of Junior secondary students in North- West, Nigeria: Implications for child development. The study was necessitated by the poor academic performance of students in the study area which has become of much concern to parents, teachers and even the government. Total number of 1000 junior secondary school students were randomly selected from 20 schools each from the selected states in the North- West zone of Nigeria. The main instrument used for the study was the student final examination results comprising of nine subjects, Mathematics, English Language, Basic Science, Home Economics, Social Studies, Creative Arts, Computer, Agricultural Science and Civic Education, to test the cognitive abilities, social skills and motor skills of the junior secondary school students. Five research questions and five hypotheses guided this study. Data analysis was done using descriptive statistics of mean to answer the research questions. While, t-test statistics technique was used at $p < 0.05$ Level to find out whether there was a significant difference between students who had nursery education and those without nursery education. The result showed that, there was a significant difference at $p < 0.05$ in Mathematics, English Language, Social Studies, Civic Education and Basic Science between students who attended nursery school and those without nursery education. In conclusion Nursery Education influenced the performance of junior secondary school students results in all the subjects tested. It is suggested that children should attend nursery schools and good primary schools before admission into secondary school. The implication for child development is that every child care giver should be aware that early childhood education has significant influence on the overall development and the later live of every child hence, it should be taken holistically.</p>

OTAKE, Midori - retired
KUDO, Yukiko; AKATSUKA, Tomoko; MIYAMOYO, Michiko; HORIKOSHI, Eiko; JUNG, Hyojung
Theme: Training of Family Finance Consultation Specialist to Support Low-Income Households in Japan: Contribution of Home Economics counselor for the improvement in household finances
<p>Purpose: Although Japan has been considered a rich country, the number of poor people has been increasing, and growing attention has been paid to people who struggle financially. In order to support the lives of these people, social security systems have been established, mainly through public assistance benefits. Yet, a number of people, not covered by the public assistance, still lived below facing multiple challenges in their lives.</p> <p>In response, in 2015, the Japanese government started a system to support people in need. This system mainly consists of seven types of support, among which the consultation support to improve family finance seems to play a major role. However, training of the specialists to engage these consultations has not been fully developed yet. The authors discuss the ways to train consultation specialist to improve family finance and identify the challenges facing the training system from the perspective of Home Economics, the specialty focusing on families and financial management of families.</p> <p>Methods: Interviews are conducted with family finance consultation specialists, extract data on the techniques they need, and identify the skills necessary for family finance consultation specialist.</p>

POIRIER, Sandra - Middle Tennessee State University
BRINTHAUPT, Tom; KWON, Jasmin; IYER, Uma; REMSEN, Mary Ann; FAZALI BIN SABRI, Mohamad; FATIMA, Ghulam; MALIK, Misbah; TAFNER, George; CASPER, Marc
A Cross-Cultural Examination of Materialism and Happiness: A Review of Preliminary Findings from Nine Countries
The purpose of the symposium is to examine cross-cultural perceptions of materialism and happiness in Malaysia, South Korea, Japan, India, Pakistan, Nigeria, Austria, Germany, and the United States. Because the factors of materialism and happiness are multifaceted, the constructs are operationalized and experienced differently in different societies. During this symposium, the international research team will briefly present a “snapshot” of the research process focusing primarily on our preliminary findings on the ways that materialism and happiness are expressed in different countries. In addition to these data, the discussion will focus on results from open-ended questions on what participants valued most in life and what really mattered in their current and future life situations. Additionally, each international research member will highlight changes and challenges within their own culture as they relate to materialism and happiness. At the conclusion, the audience will be invited to join in the discussion on future research possibilities and global trends.

RATHI, Neha - Department of Community Medicine, Institute of Medical Sciences, Banaras Hindu University
WORSLEY, Anthony
Vegetarian Practices of Urban Indian Adolescents
<p>Introduction: Since ancient times, vegetarianism, the practice of abstaining from meat consumption has been very popular in the Indian subcontinent. However, with increasing urbanisation, globalisation, and cross-cultural influences, there has been a shift from plant-based diets to new and diverse meat-based meals, predominantly in urban regions. In the light of this dietary transition, the purpose of this research is to explore the current vegetarian practices of urban Indian adolescents. In India, 40% of adolescent girls and 18% adolescent boys are anaemic. Adolescents enjoy experimenting with novel foods and food preferences formed in adolescence often persist into adulthood, therefore it is important to understand the vegetarian practices of this vulnerable group of individuals.</p> <p>Methods: A convenience sample of adolescents 1026 (356 boys, 670 girls; aged 14-16 years) recruited from nine independent, English-speaking, secondary schools in Kolkata, India participated in a cross-sectional survey. A self-reported, paper-based questionnaire on dietary intake and lifestyle was administered. Descriptive and cross-tabulation analyses were conducted to analyse data. Deakin University’s Health Ethics Advisory Group (HEAG-H 187_2014) approved the research protocol.</p> <p>Results: Milk and milk products (49.3%) emerged as the most popular foods while red meat (3.2%) was identified as the least popular food. In general, the vegetarian practices of boys were significantly different from those of girls. Boys tended to consume milk and milk products more frequently than girls did, while female participants tended to consume eggs, fish, white meat and red meat more frequently than male participants did.</p> <p>Conclusions: The vegetarian practices of urban Indian adolescents appear to be related to the enduring prevalence of iron-deficiency anaemia. The incorporation of sustainable plant-based protein-rich foods including nuts and oilseeds in vegetarian Indian adolescents’ diets along with the</p>

nationwide Weekly Iron and Folic Acid Supplementation programme could be an effective measure to mitigate the prevailing health challenges.

ROLLING, Virginia - Georgia Southern University

Family and Consumer Science Teachers' Professional Insights about Their Careers

Family and Consumer Science (FCS) disciplines experienced enrollment decline, whereby professional associations may provide assistance to upcoming FCS professionals to sustain the profession (McGregor & Halls, 2020). Thus, the purpose of this research was to gain insight from current FCS Middle School and High School teachers about their careers (e.g., greatest needs, curriculum resources, etc.) to inform future FCS professionals about their upcoming careers through a professional association. This qualitative study used content analysis in the analysis of 11 open-ended survey questions asked to FCS educators about their careers. A total of 12 FCS Middle School and High School educators from a United States Mid-Atlantic state reported the following: 1) 100% of participants felt students should have access to all FCS disciplines (e.g., sewing, cooking, etc.), 2) the most important FCS disciplines reported included culinary (100%), child development (100%), finance (75%), and sewing (67%), 3) most participants (58%) expressed that FCS disciplines should not be taught by one teacher due mainly to time limitations and the need for specialization, 4) the greatest needs were resources such as money, time, additional teachers, partnerships, textbooks and better curriculum materials, and 5) there were certain preferred curriculum resources commonly reported as useful. In conclusion, upcoming FCS professionals should consider teaching various FCS disciplines while specializing in certain disciplines such as culinary and childhood development as these were deemed as the most important by current professionals. In this way, FCS can remain interdisciplinary rather than fragmented (Harden, Hall, & Pucciarelli, 2018). Additionally, certain resources were suggested to be useful to upcoming FCS professions in their future careers. From this limited sample size, these recommendations have been shared with this professional association to help future FCS professionals gain insight into their future careers to help sustain the FCS profession.

SABOE-WOUNDED HEAD, Lorna – South Dakota State University

Native American College Students Attitude Toward Development of Financial Capability

The objective of this study was to identify Native American college students' attitudes and behavior toward developing financial capability. Financial capability is the aspect of behavior that relates to how individuals manage financial resources and make decisions to meet current and future financial needs and goals. The body of knowledge of family and consumer sciences focuses on meeting the needs of individuals, families, and communities. Native American college students from a Midwestern university were selected as participants for this study because they are more likely to be first-generation college students and come from families who have a low socioeconomic status. This qualitative study used a focus group interview method to collect data. Four 60-minute focus groups were held, with a total of 10 participants. A standard set of questions was used. The analysis found that family and socio-economic status influenced the development of financial capability through observation of family and interactions with other people. Participants recognized there were other strategies to manage finances now and in the future from what they knew when coming to college. Participants attending college with significant scholarship resources seemed to be very conscious of their finances. Even though most expenses were covered through the funding, they were careful about spending and paying attention to other expenses that were not covered. Participants who were funding college through loans, working, and other sources had more difficulties. For example, dealing with credit card debt, or going without necessities. Participants who had families members that attended college could rely on them for support, not always financial but help with transportation, or

understanding the college experience. These findings are formative in determining how colleges can address building financial capability and wellbeing of Native American college students and how the needs affect retention and completion of a degree program.

SAITO, Mieko - Chiba

SATO, Mayumi; KANOUCI, Akane

Development of Young Careers' Identities -- Through the Concept of Young Careers in Other Countries and Interviews with Young Careers in Japan--

Introduction

The objective of this research is to redefine the concept of the young carer, examine the development of their identifies, and investigate what needs to be done to engender action in this regard.

Methods

1. By bibliographic survey, we organized the concept of the young carer in other countries and compared it with the situation in Japan.
2. We conducted semi-structured interviews with young carers, referencing Korthagen(2001), Kitada(2009) in a qualitative analysis, and modeled the learning process of caring.

Results

The concept of the young carer was limited to care for family members with illnesses or disabilities. Approaches such as participation in carers workshops, with the assistance of individuals such as friends or teachers of young carers, helped give these carers a sense of awareness of their role as carer. In order to access public assistance or government support, these individuals needed to revise their view that everyone is a carer, and to free themselves from the custom that family takes care of family members and the self-binding involved with this notion.

Conclusions

Our research suggests that the concept of the young carers needs to be revised, including the ideas that care is an essential component of human interaction and that all people are carers. Where young carers were aware of their role, this awareness led to development of their identity. In such cases it is critical that the people around the young carers, including teachers, engender dialog on the subject of care. It is important that the recipients of the care also receive support, in addition to the young carers themselves. Our research also suggests that economic support can free young carers from an excessive care burden, and can lead them to seek the necessary public assistance.

SATO, Noriko - Hyogo

Sensory evaluation of wood powder-added cookies

[Introduction]

Overview of Dietary Reference Intakes for Japanese (2015) tentatively recommends that males and females (18-29years old) should intake 20g and 18g of dietary fiber, respectively, for prevention of life style relates diseases. But many people lack dietary fiber. On the other hand, wood-derived product has not been used as food, while it has potential as source of dietary fiber. The objective of the present study was to examine sensory properties of wood powder-added cookies to facilitate usage of wood as source of dietary fiber.

[Methods]

Ingredients for 20pieces of cookies consisted of soft flour (90g), powdered wood/tea leaves (up to 10g), baking powder (3g), margarine (25g), egg (1/2), sugar (50g) with a few drops of vanilla essence.

The ingredients were mixed. The dough was baked at 160°C for 12min. Sensory evaluation was carried out on July 12, 2016 or July 14, 2016. Sensory panel consisted of 30 students (2 males and 28 females) of Nara University of Education. They evaluated appearance, food feeling, meltability in palate, sweetness, bitterness, and over-all preference and delicious look of the cookies containing wood powder (0,3,5, and 10%)

[Findings]

The cookies containing 10% wood powder showed significant difference in appearance and over-all preference compared to control (0% wood powder). Addition of wood powder at 5% significantly affected food feeling, meltability in palate, and sweetness compared to the control (0% wood powder). Meltability in palate was significantly affected by addition of 3% powdered wood, while addition of wood powder up to 10% did not affect bitterness and delicious look.

[Conclusions]

Cookies containing 10% of wood powder can be accepted on bitterness and delicious look, while meltability in palate was significantly affected by addition of 3% powdered wood. Thus, wood powder can be added to cookies to increase dietary fibers.

SCHÖN, Eldbjørg - Oslo Metropolitan University

Green Entrepreneurship in Vocational Teacher Education

In recent years, knowledge of sustainability has been strengthened in Norwegian schools as well as in vocation teacher education <https://www.udir.no/lk20/hsf01-03> and <https://www.udir.no/lk20/rmf01-03>

This indicates that teacher educators, educating vocational teachers, require knowledge of sustainability and can implement it in their teaching.

This study focuses on the sustainability knowledge vocational student teachers in Health and Restaurant & Food Sciences have acquired during their education.

The students teachers, when qualified as vocational teachers, will teach future skilled workers in sustainability. The social responsibility of skilled works entails incorporating social, economic, and environmental considerations into their day-to-day tasks.

One of the ways to implement sustainability is to make use of green entrepreneurship.

Sustainability is often divided into three basic areas: economics, environment, and social responsibility.

As a result of the growing focus on man-made environmental and climate changes, green innovation has gained increased relevance in Norway as well as globally.

Green entrepreneurship can serve as both a theoretical and practical basis for creating understanding, reflection and implementation of environmentally friendly and sustainable learning processes .

In teaching this to their student skilled workers, teachers promote them to think green and contribute to knowledge and a willingness to have a sustainable working life.

Qualitative focus group interview is used to collect data about vocational teacher students' knowledge of sustainability, green innovation, and green entrepreneurship

Focus group interviews are characterized by a non-controlling interview style that allows for different points of view .

The results indicate that student teachers benefit from learning about sustainability and green entrepreneurship.

Entrepreneurship as a teaching method proves to be particularly suitable for increasing student teacher's knowledge of sustainable perspective in green innovation process.

Tomorrow's teachers can play a significant role for a sustainability and be an illustrator for a sustainable future.

SHIMA, Asami - Kwansai Gakuin University
Effect of Common Space on Social Environment Formation in a Shared Housing — Survey of shared house —
<p>This study aims to examine the factors that influence the formation of a good social environment by ascertaining the realities of human relationships formed in shared housing.</p> <p>Today, with the increasing number of single households, we are in a situation where there are changes in and influences on the way of living and the functions that a traditional family has been responsible for. It is considered that human connections and mutual support obtained in shared housing further enriches the life of residents.</p> <p>The research method included examining the shared house where about 40 people were living in Osaka Prefecture.</p> <p>This included conducting a survey over a period of three years and a case study of participant observation conducted by the author who stayed in the targeted house for a period of eight months. Also, from an interview survey of 17 residents, examined it from the point of view of the formation of a social environment.</p> <p>Most of the residents in the targeted shared house desired contact and conversations with the people in the house and were satisfied that it was a shared dwelling where these expectations were realized. The spiritual enrichment in life that arose from the casually exchanged greetings and conversations was an aspect that could not be obtained by staying alone and can be considered to be realized through living in shared housing where one can mutually connect with other people. The richness of life that can be obtained from communication with the people residing here is not something that is obtained from strong human relationships of trust such as in the case of family, but from variable human relationships assuming relocation as the shared house is a temporary residence.</p> <p>It is possible that sharing food and items interact with human relationship formation.</p> <p>By clarifying the factors that influence the formation of a social environment in shared house, it is thought that this paper demonstrates knowledge beneficial in the formation of a social environment in the life of single households.</p>

SHINOHARA, Yoko - Okayama University
Sustainable clothing care: Laundry detergent selection by university students
<p>Purpose</p> <p>Based on the subject of laundry, I developed Education for Sustainable Development (ESD) for home economics where students learn the careful use of water for sustainable clothing. Since laundry drainage can have a negative impact on the aquatic environment, it is necessary to make some crucial scientific decisions. An important feature of ESD is the use of the Analytic Hierarchy Process (AHP) to select detergents.</p> <p>Methods</p> <ol style="list-style-type: none"> 1) The goal of ESD is for learners to think responsibly about the use of limited water supplies in relation to the Sustainable Development Goal 6: Clean Water and Sanitation. 2) Using worksheet 2014.1–2019.1, 43 university students engaged in a 90-minute learning session. The AHP tests were conducted before and after the learning session. <p>Results</p> <p>I. According to the pre-learning AHP results, the detergent weight was 0.39 and the finishing effect was 0.36. Post learning, both these scores reduced and the weight of environmental impact (0.25) and production impact (0.23) increased. Learners were able to base their selection on a new environmental perspective.</p>

II. University students who selected detergents using the AHP reported the following impressions: 1. Forty-three students (100%) believed that scientific decision making is important. 2. Forty-two students (97.7%) understood the AHP. 3. Forty students (93.0%) wanted to use the AHP. 4. Thirty-four students (79.1%) had difficulty using the AHP.

Conclusion

Through ESD, students became aware of their position as end users of limited water and of their environmental responsibility. The AHP is an effective scientific decision-making method for ESD.

STEWART, Barbara - University of Houston

Supporting Human and Political Systems: AAFCS Leadership Academy as a Best Practice Tool for Achieving Gender Equality and Mitigating Poverty

Objective: DesignHER Code Camps are used to demonstrate the opportunity to improve gender equality and technological sustainability to impact human and political, economic, food, environmental, and health systems. The value of coding camps for underserved girls is underscored by the recognition by UN members that “gender equality and effective participation of women are important for effective action on all aspects of sustainable development” (Hoseini, 2014, p. 66). The attainment of the IFHE sustainability goals requires a workforce which capitalizes on women who apply technology skills for multiple audiences (individuals, families, households; rural and urban communities; educational and caring institutions; gender; ageing; migrants and refugees; minorities; and disabilities). As change agents of the future, girls benefit from early skill development in technology grounded fields, especially coding.

Description: The unique approach of the DesignHER Code Camps was to engage middle school girls in STEM concepts and careers based on their pre-existing interests in fashion and retailing. The technology that undergirds fashion and retailing then became a stepping stone to expanded coding and STEM (science, technology, engineering, and math) interests. Collaboration among government, university, school, community, and business partners created summer coding camps for underserved girls. The primary population included 6th, 7th, and 8th grade girls of low income and minority families, and youth in foster care. Three one-week camps served 133 students during the summer of 2019. Camp features included:

- Hands-on coding experiences
- Creativity and critical thinking activities
- Group engagement games and presentations
- Female STEM role models
- Field trips
- University scavenger hunt and orientation to educational opportunities
- Transportation to and from the camps and partner schools.

These tuition-free STEM/coding camps far exceeded expectations and provided productive learning experiences that foster gender equality and technology readiness. Replication of the camps to other locations, countries, and contexts is possible.

TANIGUCHI, Asuka - Tokyo Kasei University

KYOGOKU, Nami; NAGAO, Keiko; KOBAYASHO, Rie

Application of Barley and Buckwheat Flour to Deep-fried Products to Prepare for Future Food Crisis—a Study from Palatability Based on Tempura, a Traditional Japanese Food—

Introduction: Concerningly, the production of major crops will decrease due to climatic change in the future. Consequently, using grains, such as barley and buckwheat, which could be cultivated in a harsh environment, would help with the food crisis. However, for popularization, the palatability of

their products is essential. Therefore, this study focused on tempura, a world-famous Japanese traditional food, among deep-fried products that used wheat flour for coating, to conduct sensory evaluations that reveal their palatability.

Method: As the palatability depends on the ingredients, sweet potato, fish cake, green pepper, and eggplant, having different characteristics including smell, color, texture, and water content, were selected as tempura ingredients. Barley, buckwheat, and wheat flour were used for tempura coating. For sensory evaluation, each tempura was scored for smell, color, texture, oily, coating adhesion, and comprehensive evaluation; the palatability differences were analyzed using principal component analysis.

Result: Although barley tempura exhibited different palatability in fishcake tempura compared with other ingredients, it got high comprehensive evaluations for all ingredients as with wheat tempura. For buckwheat tempura, it was suggested that the factor of low palatability for all ingredients was the grayish color of the coating. However, using mixed buckwheat flour with 90% of the inner layer and 10% of the outer layer flour, not the whole layer flour, and making the color pale, their palatability improved.

Conclusion: Barley tempura was preferred for all the ingredients, although the palatability changed depending on the ingredients. Buckwheat, which had unfavored color, was improved in palatability by selecting the part of the buckwheat flour used. It was clarified that preferred tempura could also be prepared using barley and buckwheat flour, and utilizing the flour will aid the preparation for food crises. These results could be applied to other deep-fried products.

UMEH-IDIKA, Adaku Sandra - Micheal Okpara University of Agriculture, Umudike, Abia State

AZUBUIKE, Ozioma; OKWUCHI, Njoku Chigozie;

Tackling the Root Cause of Poverty and Hunger in Households in Southeast Nigeria for Sustainability through Food and Agricultural Development

Introduction:

Due to the high rate of food insecurity, unemployment in South East Nigeria households has been faced with extreme poverty and hunger which has resulted in poor health and malnutrition as it has reflected in infant mortality and low life expectancy among household.

Objectives: The study aimed at assessing the causes of poverty and hunger in South East Nigeria, tackling the causes of poverty and hunger in South East Nigeria, identifying the roles of Sustainable Development Goals 1&2 in tackling poverty and hunger through food and agricultural development in South East.

Method: The study was a descriptive survey design. The population was 2651, registered famer in the farmer's cooperation society. The sample size was 200 famers in South East who were chosen through Multistage sampling techniques. The data was analyzed using descriptive statistics of mean and standard deviation.

Results: The result revealed that many (68.2%) of the household studied were male headed households while some (31.8%) of the households were headed by females. On the wealth index category, many (52.7%) of the households studied were on low wealth quintile, some (32.3%) of the households were on the medium wealth quintile while (15%) were in the highest wealth quintile. Among the major cause of poverty and hunger in South East Nigeria, unemployment (4.21 ± 0.31), famine (3.84 ± 0.58), over-population (3.25 ± 0.84), insecurity (3.55 ± 0.67) and land fragmentation (3.12 ± 0.98). On the strategies for tackling the causes of poverty and hunger among households, home

gardening (3.75±0.55) was top on the strategies list.

Conclusion: The study showed that the causes of hunger and poverty could be tackled by efficiently applying the home gardening strategy in households for sustainable development, it further recommends channeling the policies and programmes of Government towards food and agricultural development.

VERMAAS, Jana - University of the Free State

MATLHOKO, Ketshepileone

The Exploration of the Electrochemically Activated Water (Catholyte) as an Environmentally Friendly Wool Scouring Agent

South Africa is one of the top countries that produce high-quality wool worldwide. Moreover, the wool farmers and community members who contribute to raw wool production have little knowledge of wool scouring and environmental issues encountered in scouring. Wool scouring is the essential technique of cleaning raw wool by removing all the dirt such as lanolin, vegetable matter, and suint from the wool fibre. The process of scouring is a concerning environmental issue because wool scouring requires energy, hot water, formulated detergent, and produces effluents that are toxic to the environment. This study aimed to explore a possible environmentally friendly alternative by scouring wool with Electrochemically Activated Water known as Catholyte. Catholyte is a nontoxic solution with detergency characteristics and have been shown to clean effectively and eliminate grease. Wool was scoured in an economically and sustainable approach without using any industrial equipment to make it applicable to communal farmers. The effectiveness of the Catholyte solution was compared with other detergents and cleaning agents known to scour wool. The scoured wool was evaluated for parameters such as wool weight loss after scouring, wool colour change by comparing wool colour before and after scouring, microscopic appearance of the wool fibre, and the impact of scouring time. The results reveal that Catholyte did not cause any damage to the wool fibre surface under the Scanning Electron Microscope. Additionally, Catholyte scoured wool significantly changed the wool colour after scouring and decreased wool weight after scouring. Catholyte removed some of the dirt, without damaging the wool fibres, however, not as effectively as commercial detergent.

WATASE, Noriko - Tokyo Gakugei University

Characteristics of the “Senior Leader” Image in the Policy of “Fulfillment in Life for Elderly People” in Japan

【Introduction】 The baby boomers, born between 1947 and 1949, have now crossed 70, and Japan is expected to see a rapid increase in its aging population. For instance, Japan’s aging rate was 28.8% in 2020, and it is predicted that this figure will cross 40% by the middle of this century. In the face of this challenge, enhancing the mental and physical health of the elderly is very crucial for both individuals and society. In 1989, then Ministry of Health and Welfare launched the project “promoting health and fulfillment in life for elderly people” as a key policy. The project aimed to reform the stereotypes surrounding the elderly and kick-started a national campaign for achieving that goal. The enlightenment of the social participation of senior citizens and the training of the “senior leader” were incorporated in this project. Therefore, this study focuses on a public information magazine published by the Foundation of Social Development for Senior Citizens, which executed the project; the purpose of this study is to clarify the characteristics of the “senior leader” image in this project.

【Methods】 I carried out a content analysis of an article (an interview of an elderly person) featured

in the public information magazine, which was published from 1989 to 2020(N=155).

【Conclusion】 Right until the late '90s, there were many articles describing the “senior leader,” especially “the individual” who engaged in traditional industries/performing arts and enjoyed sports activities or hobbies within the community “continuously.” After the 2000s, this changed, and the articles placed importance on networking to stay connected to people in the broader community through activities. Thus, the characteristics of the “senior leader” image changed from “charismatic leadership” to supportive/cooperative leadership.

WELSH, Melissa - University of Maryland

Exploring Financial Capability Perceptions of Mid-Shore Maryland Residents

The Mid-shore Financial Capability Focus Group Study explored the perceptions and personal financial experiences of individuals residing in rural counties in Maryland. Upon arriving at the 3 focus group evenings, a total of 27 participants first enjoyed a family style meal to become acclimated to each other prior to the 90-minute discussion sessions. The questioning route reflecting the elements of financial capability (knowledge, skills, attitude, and self-efficacy) was used to guide the focus group discussions with follow-up probe questions to further illicit family and individual financial perceptions. The audio recording from each session was transcribed. A qualitative thematic analysis summarized the data according to initial codes. The original four themes for analysis were expanded to six. Findings provide insight on individuals’ financial well-being with respect to sustainable financial practices. Applied knowledge of financial skills was expressed as the strongest impact on their behaviors or decisions for behavior change. Financial learning experiences that lasted longer than a single experience were more meaningful to their current financial behaviors. Money management skills varied with youth noting the lack of autonomy from their parent’s management style. Challenges of successfully managing online accounts, using bank cards and budgeting tools were debated in accordance with how they acquired and practiced the skills with confidence. Adults having positive initial experiences as youth at banks continued to show loyalty to those financial institutions later in life. Within self-efficacy, adults described how they were very confident to save money as children but that changed to confusion as an adult. Participants predominately expressed their feelings about managing money, making financial decisions and interacting with financial intuitions in regards to trust issues. Lastly, the follow-up public forum event shared the research steps, the process of data analysis and summary of the study’s findings to spark action among community groups in attendance.

YUEN, Yee Lin Elaine - Kent State University

LESLIE, Catherine

Ancient Greece to the Fashion Runway: An example of Sustainability through Time

Ancient Greece civilization has a notable impact on the Western dress as part of the Clothing and Textiles focus of home economics. The purpose of this study was to investigate the influence of Ancient Greece and connections with contemporary global fashion to reveal the sustainability of Hellenistic influences.

This study centered on a site visit to different museums in Athens, Greece to look for the archaeological evidence in Ancient Greece, following a specified illustration on the change of arts from Bronze Cycladic period to Classical Period 3000-323 BCE chronologically. The findings were defined systematically in silhouettes, colors, motifs, and materials from the literature, painting, and sculpture in Ancient Greece. The latest fashion presented on the runways is another platform for understanding the long-lasting and sustainable influence of Ancient Greek costumes. Various well-

known fashion designers chose for analysis, comparing the relationship and background inspiration between the Ancient Greek costume and contemporary fashion. These designers are including but not limited to Mary Katrantzou, Sophia Kokosalaki, and Eleni Kyriacou, originally born in modern Greece.

A golden gown named, The Goddess of Awaken, is an ensemble design as a result and inspiration from this research. The researcher intends to flourish the Ancient image as a lighthouse to reaccelerate and support human life's enthusiasm towards success by overcoming global and personal hardships under the pandemic in 2020.

The analysis found many intersections and connections between contemporary fashion and Ancient Greek costume in silhouette, materials, function, motifs, and colors/pigments. Different alterations through technology and fashion trends reveal changes in modern lifestyle. Thus, negative culminations and harmful elements found in ancient aesthetics were replaced by new forms. The interconnection between the past and present shows a sustainable continuation of aesthetics from Hellenistic, development of a better quality of life, and the improvement of pleasure in human health.

YUEN, Yee Lin Elaine - Kent State University

LESLIE, Catherine

Exploring the Essence of Headwear in the 21st century Fashion Outfit: Inspiration from East to West

Throughout human history, headwear was a significant item containing various symbolization and aesthetic viewpoints. With earliest documented examples dated from 27,000 BCE, headwear served as an expression of emotion, physical existence, and communication across global cultures (Chico, 2013). The decline of headwear in Western fashion since the 1960s, especially in the United States led to a transformation period from hats as a dominant and essential component of the dress code for daily life to the hatless style that persists into the present (Norwich, 2006). Despite the majority lack of hat wearing in the U.S., there remain many cases where hats are commonly worn as part of fashion throughout the world. For instance, CA4LA, a headwear brand in Japan, challenges its head accessories to provide artistic, sunshine protection, and personality expression (Lys, 2019).

This study aims to observe the Japanese hat-wearing culture and explore the factors that affect the essence of headwear in 21st century America to understand and foster the growth of this aspect in the fashion industry. The researcher combined skills and techniques learned from the apprenticeships along with insights from autoethnographic analysis, Japanese hat instruction books, fashion trend analysis and Japanese dressing styles from the literature review to create six fabric hats. These hat designs contained multi-functional aspects, transformation features, user-friendly concepts, historical millinery preservation purposes, and future upgrading values aligned with sustainability principles. To utilize inspiration from Japanese hat wearing culture, the final outcome of this study was presented in a hat instruction book, indicating preview, construction sketches/notes, and suggested fashion style illustrations to achieve a complete fashion outfit for each fabric hat.

This study created a new aesthetic and merged innovative ideas resulting from exchange between East and West to broaden fashion interculturality. The concentration of U.S. fashion styling in local brand choices encouraged hat-wearing and ultimately could stimulate a growth in the 21st century's U.S. millinery industry segment.

Research Symposium Abstracts by First Author

Symposium 1
MCSWEENEY, Kathryn - St. Angela's College, Sligo
Developing Sustainability Lesson Content and Pedagogy using a Lesson Study Approach
<p>Introduction: Lesson Study is associated with teacher professional development and learning. It is recognized as a methodology for improving classroom teaching and the quality of lessons. The speakers will provide an account of research-based professional development projects.</p> <p>Objective: The purpose of the Symposium is to explore the development of sustainability lesson content and pedagogy using a Lesson Study approach. The feature and structure of Japanese Lesson Study will be explained, and its potential in sustainable development education evaluated.</p> <p>Methods: Three Lesson Study research projects will be presented using a case study approach. The experience of creating communities of Lesson Study practice in schools in Ireland will be shared, and the impact on pedagogy, student learning, and organizational development analyzed. An in-service education study from Finland will reveal how home economics teachers' professional development was supported and how they collaboratively developed topical teaching contents and pedagogy. Lesson study collaboratively conducted by home economics teachers and university researchers in Japan will be analyzed for its relation to the sustainable development goals. The study explores the possibilities and challenges of current Lesson Study in Japan.</p> <p>Findings: Lesson study cycles enhanced understanding of sustainable and responsible living, drew upon home economics teachers' experiences of using different classroom pedagogy, and facilitated experimentation with new approaches. Application of the phases of Lesson Study supported teachers' professional development and developed the quality of content and pedagogy in home economics lessons.</p> <p>Conclusions: The three case studies illustrate how Lesson Study can support collaborative knowledge creation, critical thinking, the development of integrative teaching themes, and pedagogy. Lesson Study was helpful in achieving higher-quality lessons.</p>
MCSWEENEY, Kathryn - St. Angela's College, Sligo
Developing Sustainability Lesson Content and Pedagogy using a Lesson Study Approach: Emerging Home Economics Lesson Study Practice in Ireland
<p>Introduction: Lesson Study is an approach to teacher professional development that can enhance teaching and learning and contribute to organizational development. This presentation will provide an overview of Lesson Studies conducted by home economics and other subject teachers in partnership with a university researcher in Ireland. The teachers' experience of collaboratively developing sustainability content and pedagogy as part of this Lesson Study project will be shared.</p> <p>Objective: The experience of creating communities of Lesson Study practice in schools in Ireland will be evaluated, and the impact on pedagogy, pupil learning, and organizational development analyzed.</p> <p>Method: The project involved four case study schools and four lesson cycles incorporating two sustainable development goal elements: health and wellbeing and responsible consumption. The Lesson Study 'cluster' groups selected a sustainable development theme and implemented a lesson cycle. School 1 focused on the use of smartphones to develop subject knowledge and understanding of nutrition and wellbeing. Schools 2 and 3 explored critical pedagogy and experimented with strategies that helped promote critical thinking. The pursuit of pupil engagement and learning of sustainability content was the focus of School 4.</p> <p>Findings: All Lesson Study cycles enhanced understanding of sustainable and responsible living, drew upon home economics teachers' experiences using different classroom pedagogy, and facilitated experimentation with new approaches. Lesson Study methodology enabled the critical exploration of</p>

sustainable development goals. The Lesson Study approach gave ‘voice’ to the home economics teachers as practitioners and enabled reflection and evaluation on professional practice and learning. Critical pedagogy, involving professional noticing, developing awareness, attending, and interpreting, is an emergent research area for home economics teachers.

Conclusions: Lesson Study promoted successful collaborative professional development on classroom pedagogy. It enabled experimentation with teaching approaches and overall was viewed as helpful in achieving higher quality lessons.

KUUSISAARI, Hanna - University of Helsinki

Developing Sustainability Lesson Content and Pedagogy Using a Lesson Study Approach: Aspiring Towards Lesson Study in Finland - Home Economics Teachers Developing Home Economics Lessons

Introduction:
 In-service education is a way to support teachers’ professional development and support the development of Home Economics pedagogy in classrooms. This study presents an in-service education which was developed for the members of a local Home Economics teachers’ society in Finland related to curriculum changes. The aim of the in-service education was to support teachers’ professional development and develop Home Economics pedagogy. The goal was to together with the teachers collaboratively develop topical teaching contents and pedagogy of HE and design integrative teaching themes that comply with the latest curriculum and the requirements of technology-enhanced teaching-learning processes in schools.

Methods:
 The in-service education was developed and organised based on the theoretical framework of Design Experiment (DE) and Kuusisaari’s (2016) earlier research on the in-service education. However, the phases of the conducted in-service education have similarities to Lesson study structure: Goal setting and planning, Reflection and Refine the lesson plan. Extensive data was collected from the in-service education.

Implications:
 Application of the phases of Lesson study structure could be a way to implement Lesson study approach in different countries in order to support teachers’ professional development and develop the quality of education i.e. the content and pedagogy of home economics lessons. The developed in-service education fostered collaborative knowledge creation, critical thinking and helped teachers to develop integrative teaching themes including lesson plans, which focus on knowledge, understanding and skills relating to sustainability.

ARAI, Noriko - University of Fukui (emeritus)

Developing Sustainability Lesson Content and Pedagogy Using a Lesson Study Approach: Collaborative Case Study in Japan

Introduction: Lesson study, a methodology to improve the quality of teaching and learning, is widely used in Japan. It creates research collaboration and mutual assistance among lesson study members. Home economics education in Japan is a compulsory subject from elementary to high school and lesson study is actively applied in both public and private spheres. This presentation investigates the features of Japanese lesson study and explores possibilities and challenges of how the current lesson study practices relate to SDGs.

Methods: The structure and the features of Japanese lesson study will be clarified based on literatures and interviews, and several cases of lesson studies conducted by teachers and researchers will be analyzed for its relation to sustainable development goals (SDGs).

Results and Implications: Lesson studies are conducted for the purposes of: A) developing lesson content and methods in accordance with the course of study and B) improving an instructor’s teaching skills and enhancing the content of the lesson. Also, lesson studies can be classified into the

following types: (a)HE research societies with publicly-organized, (b)teacher training, (c)research development, and (d)human network on a voluntary basis. In this research, the lesson study of type (d) for the purpose of B) is focused and analyzed, which is conducted by teachers and researchers in the Hokuriku region, located in the northwestern part of Japan. It illustrated that the lesson study cycle (lesson plan proposal, examination, implementation, and reflection) was successfully applied and that members well recognized the study cycle was helpful to achieve higher quality of lessons. In addition, the group developed more than forty lessons incorporating the following SDGs elements: good health and wellbeing, gender equality, and responsible consumption and production. Some case studies reveal that the quality and effectiveness of lesson study and teachers' positive awareness for it improves as members work continuously and collaboratively with equal partnerships.

Symposium 2

Lee, Sung-Jin - North Carolina A&T State University

DIXON, Devona; HOPFER, Elizabeth

FCS Best Practices on Research for a Sustainable Community for Underserved Populations in the United States

Sustainability means meeting the needs of the current population without compromising future generations' ability to meet their own needs (Brundtland et al., 1987). For a sustainable community, FCS scholars should conduct teaching and research into possible solutions to meet underserved populations' needs. In the symposium, five best practices in the U.S. will be presented. The first presentation discusses adults with intellectual and developmental disabilities seeking to improve self-sufficiency and nutrition knowledge. Adults with I/DD face social and learning challenges affecting personal autonomy, relationships and diets. The presentation will discuss a mentoring program and FCS curriculum for these adults. The second presentation discusses teen mothers who may have economic, social, and physical challenges as they care for a child. The presentation will share approaches to best meet the needs of teen mothers through integrated FCS topics. The third presentation discusses low-income older populations and their aging-in-place challenges. The presentation will focus on intervention approaches to assist their aging-in-place practices. The fourth presentation focuses on students of color and practice-based teaching in a course designed for successful entry into the child development and family studies field. Students of color experience equity challenges upon workforce entry. The presentation will share strategies that empower students to contribute education, service and support in sustainable communities. The fifth presentation also focuses on students of color, sharing the certification in family life education program at NC A&T - the only historically black university to have the certification. This presentation will discuss careers/professional development opportunities for students and its effectiveness within limited-resourced communities. The symposium will close by discussing future directions promoting sustainable living of U.S. underserved populations.

Symposium 3

IMOTO, Rie - Kagawa Nutrition University

MALAMA MUTTI, Esther; WERHAN, Carol R.; MAGUIRE, Helen

Best Practices in Primary & Secondary Levels Related to SDGs

First, we share some good practices from four countries. Presenters explain lessons or units contribute to one of the SDGs preferably one of the six of IFHE position statement.

[Chairperson] Rie Imoto

[Presenters]

1. Esther Malama Mutti (Zambia)

2. Carol R. Werhan (U.S.A.)
3. Helen Maguire (Ireland)
4. Rie IMOTO (Japan)

Each 12 minute PPT presentation includes 1)objective, 2)lesson plans, 3)pedagogy (teaching methods) and 4)evaluation (How students changed after the lesson.) Under the influence of COVID-19, various efforts such as online lessons have been put into practice in home economics education in each country. So presenters include such effort as well in their talk.

Then 10 mins discussion will be done about differences and similarities, how we should develop the class, and further ideas.

After that, for 30 mins all participants discuss in a group of four about their own class practices and exchange ideas. Participants are recommended to bring a 3 copies a brief lesson plan/unit for discussion with 3 members of the group. The groups will be formed from the workshop participants. The lesson plan might be related to SDGs or not related to SDGs. We can also discuss how to link the lessons to the SDGs.

Best Practice Oral Abstracts by First Author

BARROGA, Anna Marie - Foods & Family Ilocos Sur Polytechnic State College, Philippines

Nutrition Intervention for Sustainable Development

The project is composed of two sub-studies: “Adult Nutrition Literacy Program on Edible Landscape and Menu Planning Preparation” and “Supplemental Feeding Program for Grade 1 Pupils of Five Schools of Sta. Maria, Ilocos Sur, Philippines”. The project was funded by IFHE Development Fund given during the IFHE 2016 World Congress in Daejeon, Korea. The general objective was to expand the school feeding program from one elementary school recipient to five schools and conduct adult nutrition literacy program. Specifically, the objectives were: a) implement a breakfast feeding program for Grade 1 pupils of five selected elementary schools; b) evaluate the effect of the feeding program on the weight of the beneficiaries for a period of six months; c) conduct information dissemination drive on proper health care and nutrition; d) educate the the parents on edible landscaping; e) evaluate the effect edible landscaping to the nutrition status of family.

A total of 109 Grade 1 beneficiaries from the five school-recipients were provided the supplemental feeding program for duration of six months. The feeding program was found to helped increase the average weight of the beneficiaries and at the same time served as a motivating factor for them to attend school.

All the parents strongly agree that edible landscaping is one way of providing a ready-food-item for the table. They also rated menu planning as a very important tool in addressing the provision of needed nutrients to family members. It was concluded that these activities helped in the improvement of the nutrition status of the family in general and the pupil-beneficiary in particular. It was also concluded that edible landscaping is a very good nutrition intervention activity that will help provide food items for the family. It is recommended that edible landscaping should be practiced in every home. Further, activities of this nature maybe given emphasis or support from the government units or other institutions focusing in nutrition intervention

BÖRRIES, Gabriele - University of Applied Sciences Osnabrück
STRAKA, Dorothee
Germany: Global Classroom Experience
<p>Due to the challenges the Corona Pandemic imposed on student mobility, Osnabrück University of Applied Sciences has established the Osnabrück Global Classroom as an alternative for international students from partner universities to make studying in an international and intercultural setting possible. The students in this course, Home Economics, Nutrition and Education, were enrolled in different study programmes, mostly Home Economics (HE) and Nutritional Sciences but also Landscape Architecture and Food Technology/Agronomic Engineering. The course took place via the video conference tool Zoom, was taped and provided for everyone. The three students from the ISA University, Santiago, Dominican Republic (DR) - due to the time difference – always received tasks in advance, handing in their results, which were accordingly included in the seminar. Seminar subjects were global aspects of home economics, nutrition and education, international organisations and their work, including IFHE, UN, FAO, WHO, human rights, food and nutrition security and current research topics.</p> <p>The 6 hours workshop, in which the DR students participated live online, included an interactive part about intercultural communication, contributions of students who studied or spent an internship abroad and presentations by the DR students concerning the history of HE, treatment of dysphagia as well as food safety and nutrition, all of them with a special focus on their home country. Lively discussions arose. Other student presentations included topics like nutrition security, gender issues, social security systems, virtual water, obesity worldwide, Covid-19 and families and future kitchens. The feedback for the course was positive highlighting the possibility of direct communication with the DR students and sharing ideas with students from different universities, as well as learning new, global aspects of home economics, nutrition and education and the incentive of seeing things from a different point of view. The main aim of the course to enhance intercultural competence was achieved and as the course was held in English everyone could practice and improve their foreign language skills.</p>

BYRD, Sue – Retired, The University of Tennessee at Martin
STEWART, Barbara; ROOFE, Nina; MENDENHALL, Juanita
Sustainability of Home Economics Profession through Leadership Development Programs: Steps and Processes
<p>In order for home economics professionals to develop vital programs within human and political systems that work to educate individuals, families and communities, enhancing well-being, with goals such as ending poverty and hunger and promoting sustainable production and consumption patterns, there must be strong leadership. Both individuals and professional organizations play critical roles in these pursuits. One means to enable success is training competent home economics leaders, who are primarily female, to provide the necessary leadership to achieve these sustainable development goals. Home economics leaders teaching/educating women, who keep the home functioning and thriving, can make a positive difference for families and communities and increase equality. The objective of this presentation is to offer a framework for the creation of effective leadership development programs for Home Economics professionals in order to achieve sustained development based on the successes of the American Association of Family and Consumer Sciences' Leadership Academy and the Council of Administrators in Family and Consumer Sciences' (CAFCS) Emerging Leaders' Workshops.</p> <p>Description: One of the first steps in developing such a program is to identify individuals with passion and experience who will serve as a core in the process. Then create a planning team to develop</p>

mission, value, and goal statements and identify the target audience. They should also create a list of specific ingredients/pieces to include in the program based on the group's mission. Another key to success is to research leadership models currently being used. In the AAFCS Leadership Academy development, the team researched multiple models, selecting two and three key resources. The CAFCS Emerging Leader's Workshops team selected four essential resources. These are just the beginnings of the process that will be fully explained in the presentation along with content areas and components that are common in the two models, including planning, implementation and refinement strategies. Following the suggested strategies will aid in creating and implementing a successful leadership development program.

BYRD, Sue – Retired, The University of Tennessee at Martin

STEWART, Barbara; BUCK, Sue; ANDRES, Debra; Coots, Elizabeth; WYCHE, Anita

Sustaining Leadership in Home Economics by Training New Professionals Through the AAFCS Leadership Academy

The objective of the presentation is to demonstrate the benefits of the American Association of Family and Consumer Sciences' (AAFCS) Leadership Academy, an effective model to build a sustainable leadership structure within the organization and beyond. This model can be adapted by any organization seeking to empower women to become leaders and help organizations strengthen their sustainability through building support for their newest professionals. It has been recognized by UN members that "gender equality and effective participation of women are important for effective action on all aspects of sustainable development" (Hoseini, 2014, p. 66). By using such a model, leaders will be able to effect Human and Political Systems through providing leadership to those who work with individuals and families in Home Economics.

Description: The three main components of the Academy curriculum include first Leading Yourself within AAFCS, which includes content on self-awareness, problem-solving, risk-taking, ethics, emotional intelligence, identifying strengths, and developing a personal leadership credo. The second component, Leading Others within AAFCS, includes developing a shared vision, building and leading teams, and how to motivate others to make a difference. The third component, Leading AAFCS, includes learning about the history of the profession, current programs and structure, visioning for the future of the profession, and learning to assume various leadership positions in AAFCS. In addition, participants are matched to mentors to guide and support them in their leadership endeavors throughout the year.

The Academy, a biennial event since 2013, having trained 66 new professionals (64 females), has resulted in alumni becoming involved in leadership roles in AAFCS on the state and national level and in the field of home economics. Three have become members of the national AAFCS Board.

Hoseini, N. D. (2014). Gender inequality and sustainable development. Ontario International Development Agency International Journal of Sustainable Development, 65- 73.

COZEN, Kathy Jo - San Diego

All Aboard the Sleep Train

New parents/families are exhausted and employed . A common mantra today is, "Have you sleep trained your newborn yet?"

Sleep training is controversial.

Objectives:

1. What differences, if any,, exist between parent led , enforced sleep training, versus honoring the

newborn's sleep rhythms ?

2. If differences exist , what are the differences?

COZEN, Kathy Jo - San Diego

Alternative Senior Housing

Alternative Senior Housing : Grandma lived in My Dining Room

After 8 years living in my dining room my dear mom moved to a long term stay hotel, neither a RCFE (residential care facility) nor a SNF (skilled nursing facility) with a caregiver .

The success of this alternative provided me, the primary caregiver , the opportunity to regain control of my life and reduce caregiver stress .

Objectives:

1.What differences if any exist between this unique Alternative Senior Housing situation and a traditional skilled nursing or residential care facility?

2. If differences do exist , what are the differences?

DESIMONE, Christina - IntraFi

Creating Equity-Focused Educational Programs

Creating equity-focused teacher perpetration programs through teacher/student examination of implicit bias, the historical impact of children's literature, and an examination of the social-cultural impact of these factors on young children.

Objective: To create a framework for guiding students in the education profession pathway in the critical examination of implicit bias, racism, sexism, discrimination, and bias through the context of professional development, children's literature and the social-cultural impact of these factors on young children.

Session Description: Multicultural literature serves as a powerful tool for individuals to gain a better understanding of both their own culture and the cultures of others. Through this deeper exploration, we can better understand and relate to people of diverse cultural backgrounds (Hseu & Hetzel, 2000). Students of the 21st century are global participants; as such, it is imperative that they possess cultural competence. These skills are valuable for everyone but essential for students in the educational profession pathway. The objective of this session is to provide a framework for guiding individuals in the critical examination of implicit bias, racism, sexism, and discrimination through the context of professional development, children's literature, and the social-cultural impact of these factors on young children. Through extensive research, D.B Norton found that exposure to multicultural and anti-bias curriculum increases a young child's ability to relate to global events and community experiences. Through this exposure, young children, therefore, develop greater cognitive skills as they learn to engage with others and think critically about the world. By empowering the next generation of teachers in the educational profession pathway to create an anti-bias classroom, we are securing a more equitable future that elevates gender and racial equality to promote more positive wellbeing for all.

HOLLAND, Jacqueline - Morgan State University
Sustainability through STEAM (Science, Technology, Engineering, Arts, Mathematics): An Interior Design Project
<p>Purpose The purpose of this study was to ascertain student knowledge on recycling and sustainability through science, technology, engineering, art, and mathematics in creating an accessory for the interior of a home.</p> <p>Rationale Repurposing, transforming an object from one use to another, supports the value of ecological preservation and economic astuteness. Science, Technology, Engineering, Art, and Math (STEAM) woven throughout the curriculum facilitate active learning, problem-solving, and creativity through interdisciplinary practices.</p> <p>Methodology This mixed-method approach included a pre and post-survey, student redesigns, and team presentations to determine student knowledge and awareness of STEAM principles in a repurpose project for the course "Introduction to Interior Design." Using a team approach, students applied decision-making strategies to repurpose an item to accessorize a room. The project supported principles of research, problem-solving, and creativity to produce a home accessory. The survey measured student perception of the principles of sustainability, repurposing, and STEAM. Presentations demonstrated and detailed the processes to the final design.</p> <p>Findings Student understanding of repurposing and sustainability increased. The awareness of utilizing science, technology, engineering, art, and mathematics was pronounced on every level. As a result, students gained a more transparent comprehension of the relationship between the completed design project and the components of STEAM.</p> <p>Conclusions The research concluded that given the appropriate project, students would utilize STEAM principles in definitive ways.</p> <p>Implications for research and practice STEAM activities can be embedded in the FCS curriculum. Collaboration with areas such as architecture, engineering, mathematics, and art should be pursued for projects and initiatives to highlight and communicate the components of STEAM that exist in FCS courses.</p>

HORIUCHI, Kaoru - Yokohama National University
NAKANISHI, Sachiko
Knowledge Management Emergence in Home Economics Teachers' Community of Practice: Focusing on Male Home Economics Teachers
<p>Introduction Japanese home economics aims to develop students' skills and knowledge for independent and sustainable living. Despite being extremely meaningful, it has been allocated little time in the school curriculum. Additionally, as there is only one teacher at each school, she/he faces difficulty with consultation and in obtaining advice from other teachers about her/his practices.</p>

Therefore, a learning community for home economics teachers called HELCY (Home Economics Lesson/Learning Community in Yokohama) has been organized for over ten years. HELCY online meetings have been held once a month since May 2020.

The participating home economics teachers could easily join the meeting online and discuss their practices in the difficult times during the COVID-19 pandemic.

Objective

In this research, focusing on male home economics teachers who participated in the HELCY online seminars, these teachers' perspectives on home economics teaching were analyzed and the characteristics of the aim and meaning of home economics education were clarified.

Methods

The discourse analysis of dialogues from the interviews and results of the descriptive questionnaire survey towards home economics teachers were analyzed.

Findings and conclusion

The members joining the seminars were working at various types of schools and had different teaching careers. The male teachers also had developed careers as teaching professionals in home economics. Despite the smaller overall number of male home economics teachers in Japan, almost 25% of the participants in HELCY Seminar were male teachers. They were proud of their teaching expertise and passionate about educating young students on gender equality. There were no gender differences in the specialties of the home economics teachers, and each teacher made use of their own specialties to create their own lessons. The tips for teaching and ideas for teaching materials shared in the online workshop were reflected in each teacher's practice and helped to improve their teaching.

LIANG, Yuli – Texas State University

HUSTVEDT, Gwendolyn

Guiding Fashion Undergraduates to Conduct Research: A Pandemic Example

Previous research shows that participating in research as an undergraduate student is valuable because it can help students connect their knowledge with the real-world implications and develop hands on experiences (Falconer & Holcomb, 2008; Wylie & Gorman, 2018). Like other home economics disciplines which consistently train students by including them in laboratory work, fashion educators are fortunate that also we conduct applied research that is relevant to students' life and can tackle up to the minute and relevant issues. The COVID-19 pandemic introduced face masks, a new item of apparel for many, and it also brought a unique opportunity to include fashion undergraduate students in research. To this end, we trained 8 undergraduate students to conduct an observation study of mask wearing and behaviors on campus in a major university in the United States for two weeks in mid-October 2020, when mask wearing was mandated on campus.

During virtual and in-person sessions, students learned to code and record observation data including gender presentation of participants, ethnicity, mask deployment (e.g., covering nose and mouth with no side gaps, hanging from ear), pattern/mask type, aesthetic details of masks, the participants' behavior at the moment of observation (e.g., walking along or talking to others) and proximity to other walkers. Observation points on campus were selected and mapped using geo-tagging and

observation forms and clip boards were provided to students. During each observation session, students used Zoom to check-in and Zoom or GroupMe to communicate with faculty with questions. After each observation, the students were trained to code the results in an Excel file and submit the file online. During and after the observations, researchers kept communicating with the students about their impressions of the trend and behaviors. This model of capturing “street style” can be used going forward for other fashion trends.

LINDQVIST, Terhi - The Martha Association

Home Economics Workshops to Empower Disabled Women in Addis Abeba, Ethiopia

OBJECTIVE

The Martha Association is a Finnish 122-year old NGO working in the field of home economics extension both in Finland and in Sub-Saharan Africa. In 2020, it celebrated its 40 years anniversary of development cooperation with Sub-Saharan African women’s NGOs. The presentation focuses on one cooperation project, that aims to empower women from different disability groups, belonging to the Ethiopian Women with Disabilities National Association, through practical workshops in home economics at the association’s premises in Addis Abeba and Adama since 2016 up to present day.

DESCRIPTION

The Martha Association was invited to plan and carry out home economics workshops with EWDNA Association in Ethiopia in 2016. EWDNA is unique in the context of Ethiopian disability organizations in that it works with women from different disability groups: visual, hearing, physical and intellectual disabilities and leprosy as well as mothers of children with severe intellectual and other disabilities. What is in common to many of these members, is that being women, disabled and living in an LLDC country puts them in a triple marginalized position. EWDNA gives social support and training on different topics and carries out advocacy work.

Through home economics training which includes a theoretical part, a Q and A session on nutrition and hygiene, and a practical session on cooking, these women, in groups of approximately 8 participants at a time representing all disability groups, have learned new skills, gained confidence, enjoyed finding new contacts and friends. Though the model was first introduced by a nutritionist and a home economics extension worker from Finland, the workshops are today carried out independently, in cooperation with food preparation teachers from local vocational schools. Each training lasts 3 to 5 days and the participants get a certificate for themselves.

In interviews the women tell they are now more confident in cooking and more conscious about eating healthy food. This in turn helps them value their own position in their family and the Ethiopian society.

LINDSEY, Glenda – Morgan state University

FLETCHER, Arnetta

The External Pressures of The Family- Creating Sustainability Solutions

Objective: Discuss innovative methods to teach students how to effectively examine external pressures within existing families and communities.

Description:

Nutrition and Family and Consumer Sciences courses include teaching problem-based learning and strategy development. Lesson plans were designed to facilitate student exploration and development of resolutions related to issues of family pressures (such as food insecurity, housing and sustainability). Lesson plans integrated cognitive, affective, and psychomotor domains of student learning. Students focused on the economic forces that nuclear and extended families may face (including spending, education, housing, diet, health, marital status) within urban and rural

communities. As an outcome of the learning experience, students demonstrated life applicability of their findings in small group presentations and student-directed community involvement activities. To demonstrate effectiveness and impact of this learning opportunity on students enrolled in urban and rural- based institutions, the lesson plans were administered simultaneously at Morgan State University in Baltimore, Maryland and Shepherd University in Shepherdstown, West Virginia.

LÜTJEN, Katrin - Germany

LUDEWIG, Edwina

Outreach Nutrition Education in the Klimafood Project

Objective: The KlimaFood project (11/20 – 12/23) aims to establish a lifestyle-oriented, climate-friendly and health-promoting nutrition education, especially among vulnerable and lower educated population groups. Two of this target groups are people with low income who are dependent on food banks and families with many children and a low income. One of KlimaFoods's strategies to reach these groups is to seek them out within their everyday life with new participatory nutrition education programs. These programs aim to promote awareness of climate-friendly and health-promoting nutrition and lifestyles among the target groups through inspiration and taste experiences. The additional aim for the target groups is to gain experience in the selection and preparation of food.

Description: The KlimaFood project uses mobile kitchens (e.g. a kitchen on a cargo bike) to reach the target groups. These kitchens are equipped with hobs, sinks and some essential kitchen utensils such as pots, pans, cutting boards, knives and cutlery. Additionally, they are fully self-contained and do not require any connection to electricity, water or gas ports. This way the kitchens can be used flexibly at different places e.g. while the target group is queueing in front of food banks or during waiting times in front of daycare centers or at playgrounds where parents are watching their children. So, the target groups can be contacted within their everyday life and can take part at learning opportunity without additional costs and efforts. Furthermore, easy access to the program is achieved through simple recipes and the target group just needs to observe some hygiene aspects to participate. Additional trainings for volunteers and multipliers are intended to establish the program in existing structures (e.g. at food banks or daycare centers) and ensure its long-term continuation after the end of the project.

MAHACHI, Getrude Chikonde – Ministry of Education

Sustainability of Home Economics Profession through Leadership Development Programs: Steps and Processes

Objective: To advocate for best practices in families, household and industries in saving ourselves and environment

Description: This is to help enhance and promote good health and wellbeing through environmentally sustainable approaches used Home Economics.

The Zambian education system has experienced a transformation as evidence shown in the revised 2015 curriculum in the implementation of policies, putting much emphasis on life sustaining skills especially in practical subjects including those in Home Economics. There is still need to advocate for best practices to save our environment, beginning with our schools in achieving Sustainable Development Goals by 2030 through quality education and healthy environments.

One aspect that has posed a challenge in the country is poor waste disposal, which has resulted in

polluting our environment. It has developed into a healthy hazard due to poor practices and improper management, as less attention has been given to the impact of Home Economics skills on sustainable development. One should not overlook the little things man can do to make the earth a better place for positive change or fail to do, hence destroying its beauty and people as evidenced by climate change which has affected all areas of human activity due to irresponsible actions of not taking care of our surroundings.

There is need for advocacy for environmentally friendly practices through quality education, particularly in tacking action to orient others with good practices in families, household and industries responsible for production of various goods, by emphasizing on reducing, reusing and recycling of products that have wasted and polluted our environment, these can simply be remodeled to add value to sustain livelihood. In promoting simple acts, one not only create wealthy, fight poverty, have safe clean water and wellbeing instead of destroying communities. In order to do this, people need to change their mindset in transforming our societies and sustaining lives for everyone; by proper implementation of environmental policies, have leaders with a political will in raising awareness and to appreciate skills oriented Home Economics curriculum.

MOSER, Sheree - University of Nebraska-Lincoln

ALEXANDER, Karen; BORR, Mari; GRAVES, Nicole; MILLER, Cynthia; ROBERSON, Kyle

Vlogging as a Means for Teaching Lab Management Best Practice

Objective: Illustrate pedagogical best practices of lab management into curriculum demonstrated by Great Plains IDEA FCS alumni via videos. The Association of Career & Technical Education adopted new standards in 2016 that included 'Facilities & Equipment Planning.' A recent literature search resulted in no studies within the past 10 years related to these standards, which has contributed to designing facilities and/or equipment plans supporting the implementation of Family & Consumer Sciences (FCS) programs & curriculum. FCS programs normally include units that include lab classes to include orientations for safe & sanitary procedures, remaining compliant with ADA, keeping space organized, & learning to use new equipment, tools & technology.

The use of remote teaching skills learned during the COVID-19 pandemic will likely continue to be common practice, particularly when working to reach students remotely. This project supports Human & Political Systems through the sustainable delivery of pedagogy as captured through digital mediums & Quality Education because of the innovative & equitable access to these products.

This presentation will summarize the project designed to capitalize on the skills sets developed by FCS education alumni and meet the standards introduced from ACTE and NATEFACS related to lab management. Alumni who are currently teaching were recruited from middle & high school settings to illustrate a variety of examples of lab management in clothing, textiles, fashion, child development, culinary arts and food preparation. These standards include laboratory policies, procedures, safety of students & clients, & sustainability of products & the environment. Teachers must also design labs that allow students to transfer learned skill sets to career and/or home settings, as well as demonstrating & modeling appropriate health, safety, & sanitary practices.

MUNDEN, Karen – Virginia Cooperative Extension
MUNDOMA, Elizabeth
Bank On Hampton Roads
<p>Bank On Hampton Roads (BOHR) is a regional financial educational program, organized to serve at-risk households with limited income and/or living in poverty. BOHR's goals were to minimize the effects of financial vulnerability of becoming unbanked, homeless, or falling prey to financial frauds and predatory lending. BOHR goals included maximizing behavior changes and increasing knowledge to improving financial stability. Bank On Hampton Roads was created using a community collaborative model that included municipalities, financial businesses, educational institutions, faith-based organizations, and community volunteers working together to create the greatest impact on improving financial health and well-being; while reducing the impacts of poverty.</p> <p>BOHR is a catalyst for transforming individuals' lives through classroom instructions, homework assignments, and one-on-one financial coaching. During COVID, instructions were conducted through WebEx, and coaching was conducted by phone. BOHR model is different than most financial education programs because it provides education, practical applications, and accountability. Helping participants develop financial best practices, strategies to survive budget constraints, and strong financial behaviors to improve saving while reducing debt. The financial program is a 5-month program, which provides resources to assist individuals on the path towards financial security and promote good financial health and well-being.</p> <p>BOHR graduates are encouraged to further their financial literacy by training to become financial coaches and/or instructors. This training is provided through a Master Financial Education Volunteer (MFEV) program, conducted by Universities' Cooperative Extension educators. MFEVs enhance the financial program by sharing their journey to financial sustainability with program participants. A pre and post-survey is administered to measures 23 financial behaviors. To gather these quantitative measures, participants complete a workbook called the "Financial Passport." Participants implementing financial strategies learned during this educational program have demonstrated significant outcomes.</p>

NELSON, Janiel – Brigham Young University - Idaho
THUERNAGLE, Aubrey
Personal Growth and Sustainability through Understanding the Resource Management Process
<p>At BYU-Idaho we offer high quality education to our student members of our church whether local or global since 2009. In doing so we have learned several things. The current class I'm teaching Resource Management is a perfect fit for online education. It helps students become self-sustaining where they are located. Some of the challenges we have found is that it is very westernized in the resources to manage. The US economic system is the basis for this content and the challenge we find is not all resources are available throughout the world but the basic principles of management are still viable for producer and consumer. We find that people all over the world are managing their resources. Once basic principles of resources are understood, these principle will assist individuals, homes, and families where they reside. It goes beyond sensitizing people to the challenges to giving people the tools and information to act to be sustainable. Rand Wentworth has said, "Even when times are tough, people want to take care of their home – the places they see every day."</p> <p>This presentation has us understanding the Resource Management Process through Experiential Learning. Together participants will walk through the Resource Management Process to identify resources available for a current issue impact families.</p>

NJERU, Sophia - Kenya
Fashion-Abled Special Groups: Implications of Co-Creation for Fashion Design Undergraduate Degree Pedagogy and Sustainability
<p>Special-needs persons (SNP) require specialized apparel to lead a relatively normal and productive life. Persons exposed to occupational hazards (PEOH) need functional/work clothes to perform their tasks effectively. Fashion actors': students', educators' and practitioners' creations neglect these two groups. Some fashion design-related Masters theses in Kenya that tackled their apparel needs lacked practical solutions. Further, a unit titled Fashion Design for Special Groups offered at undergraduate level in Kenya is ordinarily delivered as a theory. Thus, the SNP and PEOH apparel-related conundrums persist in the 21st century. Hence, this author incorporated co-creation in the unit offered to 2nd year students at Kirinyaga University, Kenya whose objective was to co-design and produce specialized apparel and functional/work clothes for real end-users based on their special needs and preferences. The design brief: (a) co-create specialized apparel and functional clothes with real end-users, that is, SNP and PEOH respectively (b) establish end-users' opinion on co-creation and the apparel produced. The students co-created with SNP including those living with albinism, dwarfism, epilepsy, elephantiasis, visual and physical disability, the elderly, expectant women, lactating mothers, in-patients and toddlers' caregivers. PEOH comprised metal fabricators, plumbers, automotive mechanics, barbers, pharmacists and masons. Fashionable and functional specialized apparel produced included maternity wear, hospital gowns, dresses, blouses, trousers, shirts and rompers. Functional clothes comprised coveralls, laboratory coat and apron. Evidently, in co-creation the faculty play a critical role in inculcating students with ethos and principles of sustainability. Co-creation proffers students and real end-users benefits and promotes sustainability. The students were endowed with creativity, empathy, responsiveness and technical knowledge and skills. The end-users shall wear the apparel for longer due to attachment. Students surmounted various challenges. Recommend adoption of co-creation in delivery of all fashion design studio-based units and among practitioners' creations.</p>

OGBEDEAGU, Rev. Sister Clara - Nigeria
ANOZIE, Georgina
Chemical Composition, Utilization and Sensory Evaluation of African Black Pepper (Piper Guineense), Guinea Pepper (Xylophia Aethiopic) and Aidan Fruit (Tetrapleura Tetraptera) in Recipe Development
<p>This study aimed to analyze and evaluate the local spices, African Black Pepper (Piper guineense), Guinea Pepper (Xylophia aethiopic), and Aidan Fruit (Tetrapleura tetraptera) in developing recipes. To achieve this, five specific objectives were formulated, five research questions guided the study. The experimental design was employed for this study. These spices were used to prepare dishes and drinks, Uziza/Oshosho sauce and white rice, stimulating pineapple drink enriched with uziza, uda, and oshosho, Kunuzaki drink enriched with uziza, uda, and oshosho, Ugba (local salad) with uziza and uda, Zobo drink enriched with uziza, uda, and oshosho. The already existing dishes and drinks were used as control. Also, these samples were subjected to sensory evaluation. A nine-point hedonic scale was used and rated as follows: extremely dislike to nine extremely liked. Twenty panelists randomly selected from the Michael Okpara University of Agriculture, Umudike, participated in the evaluation exercise. It was analyzed using a statistical package for social sciences SPSS version 23, and Means were compared using a one-way Analysis of variance and significance level at $p = 0.05$. The chemical composition, phytochemical composition, and functional properties of these samples were also determined. However, there was no significant difference in general acceptability of uziza/oshosho sauce and white rice ($8.05 \neq 0.69$) and curry/thyme sauce and white rice ($8.05 \neq 0.83$). At the same time, there was also no significant difference in the acceptability of local salad-Ugba with uziza and</p>

uda (7.10 \neq 1.52) and local salad-ugba with ehuru and ogiri (7.20 \neq 1.44). Based on the findings, it was recommended that extract from these spices be standardized and used in food processing industries to replace some artificial antioxidants. It was also recommended that the government encourage the farmers who cultivate these spices by giving them loans to increase the level of production.

OKUI, Kazuki - Kobe Shoin Women's University

KISHIMOTO, Yukiomi

Creating Conceptual Diagrams for Home Economics as Educational Tools : By The Research Group on Home Economics Principles of Kansai, Japan

[Objective] In the year 1948, the first faculty of Home Economics was established in Japan, stimulating research in the field throughout the country. However, although the principles of Home Economics have been studied extensively, some fundamental questions still do not meet unanimous answer: "What is exactly Home Economics?". This absence of clear boundaries might have indifferent consequences, such as causing students to lose interest when the teacher provides a too complicated definition. In that context, we intend to clarify the concept of Home Economics for educational purpose. We therefore propose in this study conceptual diagrams that might serve as tools for Home Economics education.

[Description] In order to conceptualize and create "Diagrams about Home Economics", we reviewed previous researches in the field. Our diagrams were deliberately designed in an attempt to be easily understood by high school students, in order to give them incentives to continue studying Home Economics in the future. They might indeed benefit the most from those diagrams, having then to define their career path. To create those diagrams, we held in-depth discussions during a monthly study group, since 2016, and conducted some pilot questionnaires asking both students and researchers in Home Economics their impressions on the diagrams. We created four types of Conceptual Diagrams, all for education purpose: "(1) The Structure of Human Life", "(2) Learning Process in Home Economics", "(3) Learners' Development" and "(4) Discipline Boundaries and related field of study". By simplifying concepts, diagrams have the merit to be more accessible, while having the consequent demerit of omitting details. This is what we might call the "limitation of drawing". Further investigation is required to continue improving those four diagrams. The next steps are to make students familiar with those diagrams.

OLUWALEYIMU, Olufunke - University of Lagos, Nigeria

Assessment of The Potential Effects of Digitization of Ethic Dress Designs On Sustainable Development Of Fashion Industries.

The sustainability pressures facing the fashion industries point to digital transformation being necessary rather than optional. To keep up with social media trends, the only way to meet global consumer demand is to digitize the local dress designs. Digitization has great potentials for making dress designs available locally and internationally. This paper sought to expound on how the African local dress designs can be preserved and transmitted to the larger world via a successful digitization process. The purpose of the study was to assess the potential effects of digitization of ethnic dress designs with a view to improving its availability and sustainable development of fashion industries. Four research questions guided the study. Descriptive survey research design was adopted. The area for the study was Lagos State, Nigeria. The total population for the study was 1,250 respondents made up of registered fashion designers. The sample consisted of 120 respondents, drawn from the population. The instrument for data collection was a structured questionnaire face-validated by experts with Cronbach Alpha reliability co-efficient of 0.86. Data were collected by the researcher with the help of research assistants. 120 copies of the questionnaire were completely filled and

returned. Data collected were analyzed using frequency count , percentage and mean. The results showed among others that digitization has great effects on ethnic dress designs and that different ethnic dresses could be designed digitally. Based on the findings, the study therefore recommended that in order to remain relevant in the present digital environment, fashion industries especially in developing countries should make every effort to digitize their local dress designs and provide capacity building training for designers through seminars and workshops, this will give opportunity for skill transfer and make construction of traditional dresses faster and enhance mass production.

OLUWALEYIMU, Olufunke - University of Lagos, Nigeria

IGBO, C.A.; NWABAH, N.I.; OHAKA, A.R.

Mass Production of Functional Maternity Skirt Pattern For a Sustainable Economy

The study developed functional straight maternity skirt patterns in small, medium and large sizes with different variations on drop waist lower torso, using established block patterns obtained from established mean body measurement by Oluwaleyimu and Igbo (2018). The purpose of the study was to develop functional maternity skirt commercial patterns for pregnant women for a sustainable economy in Nigeria.

Research and Development design was employed in carrying out the study. The area for the study was Lagos metropolis, Nigeria. Purposive sampling technique was used to select 28 respondents that participated in the final evaluation of the prototype skirts. Two sets of sample respondents were involved: Users and Judges. The instruments for data collection were established; mean body measurement and maternity skirt Assessment Questionnaire. Method of data collection was in 3 phases. Analysis of Variance (ANOVA) was employed to test the hypotheses at 0.05 level of significance. Findings revealed that the fit, comfort, protection and aesthetic attributes of the maternity skirt constructed from the patterns were rated very satisfactory by the Users and Judges. Among others, it is recommended that, the adapted patterns should be used by the apparel industries in Nigeria for mass production of functional maternity skirts for local use and exportation since the mean body measurements used did not significantly differ from the standardized body measurement.

OWOH, Ngozi - Department of Home Science and Management, University of Nigeria Nsukka

NWOBI, C. A.; OKOYE, Obiageli

Perceived Impact of Online Infidelity on the Sustainability of Marriage Institution in Enugu Urban, Enugu State Nigeria

The paper investigated the perceived impact of online infidelity on the sustainability of marriage institution in Enugu urban, Nigeria. Specifically, it identified causes of online infidelity, consequences of online infidelity and proffered solution to online infidelity among married couples in Enugu urban. The study adopted survey research design. The population comprised of all the married couples who are computer literate in Enugu urban. The sample was made up of 300 married men and women randomly drawn from the population. A structured questionnaire which was validated by 3 experts from the Department of Home Science and Management was used to elicit information from the respondents. The internal consistency of the instrument was computed using Cronbach alpha and a reliability co-efficient of 0.77 was obtained. Data was analyzed using mean and standard deviation. The result of the study revealed causes of online infidelity to include, unhappiness in marriage, economic dependency, lack of love and so on. Consequences of online infidelity include, keeping couples away from each other, prevents intimacy, causes couples to be emotionally distant from one another and equally creates communication gap between them among other things.

Recommendations were made based on the findings that couples should be transparent on internet usage and should not counsel online interactions to one another among other ways.

PADDOCK, Morgan – Kansas State University

SCHINDLER, Mia

University Student Leadership Strategies for Advancing FCS/HE Education

As reflected in the constitutional purpose, the Kansas State University Family and Consumer Sciences Education Organization (FCSEO) prioritizes work to sustain the profession by equipping pre-service educators to be leaders, who create change in the lives of future students and their communities. Through this presentation current and past executive board members share their efforts to organize professional development. These experiences provide a unique environment to connect pre-service educators with national leaders in the field who effectively guide and coach students towards using clear communication, visioning, goal setting, and team building. In response to COVID-19 and school closures the FCSEO facilitated virtual professional development as well as fostering group mentoring activities and mental health check-ins. FCSEO has worked to benefit members in their journey to becoming FCS/HE educators by prioritizing development in areas students have expressed their need for support, both personally and professionally. As Kansas State University leaders, the executive board members model and invite participation in organizations surrounding financial literacy, social justice, and mental health, highlighting the importance of the interdisciplinary aspects of FCS/HE curriculum. In order to ensure students have the best undergraduate experience, the executive board members focus on inspiring and encouraging future FCS/HE educators to contribute to sustaining the profession as the next generation of young professionals.

PALMER, Megan - Thomas County Middle School, USA

Student Achievement in Middle Level Family and Consumer Sciences

The objective of this presentation to share best practices with other individuals, showcasing a program that works to fit the needs of the community and that reflects the goals of Home Economics in improving the quality of family life and the home.

Tasked with the responsibility of opening a new Family and Consumer Sciences (FCS) program, in-depth research, design, and organization were executed to ensure that a proper facility, equipment, and curriculum are available to middle school students. Program organization allows students a comprehensive view of FCS and encourages continued involvement at the high school level. FCS at Thomas County Middle School seeks to bridge conventional skills and knowledge of traditional Home Economics with current FCS curricula, meeting the needs of individuals, families, communities, and careers.

This program would be well-suited among the Human and Political Systems of Action and Partnership, as students are informed of the continued impact of FCS on the sustainable nature of families and communities throughout the world, including the historical relevance to the field of study, thus showing the impact of FCS education on sustainability practice (UN Goal #12).

Opportunities are given through the Family, Career, and Community Leaders of America (FCCLA) leadership organization to allow students to see FCS-related industries within our community, creating a further connection to the advocates businesses and individuals, those in the profession, and students and families involved at Thomas County Middle School.

PHIRI, Anna - Rockview University
MHLANGA, Rossetta; LÜDER, Vanessa; JOHANNSEN, Ulrike
Health Benefits of Cecropia Paltata in Stimulating Appetite in Convalescents for Family Sustainability
<p>The study was intended to produce a novel product from Cecropia paltata that could therapeutically be used in stimulating appetite in home based patients. Cecropia paltata is rich in organic acids, including citric, acetic, malic, and fumaric acids which give it its sourly characteristic. In addition, it has an ability to fight disease and improve immunity due to its anti-viral, anti-fungal and anti-bacterial properties. The study was an experimental design conducted at Rockview University in Lusaka Province of Zambia, Southern Africa. It involved forty (40) participants who included thirty (30) panelists and ten (10) convalescents drawn from the sick-bay within the University premises. Random sampling was used to select the participants. The panelists were university teaching and non-teaching staff selected for sensory evaluation and acceptability of the product. The novel product was evaluated for taste, colour and acceptability and judged using the affective and descriptive tests. The sensory evaluators accepted the product for its sourly taste and stimulating effect. Following this acceptance, the novel product was administered to ten (10) convalescents who had suffered from malaria and had loss of appetite. Eighty (80) percent of the convalescents consumed the product with acceptance of its sourly taste and stimulating effect. After consumption, the patients asked for some foods that they were not taking before due to loss of appetite. This led to a conclusion that Cecropia paltata has the ability to stimulate appetite in convalescents.</p>

RENWICK, Kerry. – University of British Coloumis, Canada - https://twitter.com/dragonkezza
OGURA, Ikuyo; MIYAZAKI, Yoko; HANAWA, Yuki; HOSHINO, Ayumi; YOSHII, Minako; NAGAISHI, Keiko; TANI, Masayuki; TANI, Asuka; OHMOTO, Kumiko; OMOTE, Mami; NAKANISHI, Mayumi; MORINO, Hitomi; SHIMA, Asami
Enabling International Collegial Conversations and Professional Development
<p>Since March 2020 opportunity to connect with colleagues and peers needed to change in response to social distancing while still needing to connect professionally. During this time educators had to engage with human systems in varying ways to enable ongoing educational opportunities and social interactions. As a result, collegial opportunities and conversations have shifted from in-person encounters to virtual events. The objective of this paper is to present on how an international consortium focused on food literacy is responding to challenges associated with providing professional development opportunities across nation state boundaries.</p> <p>The shift from largely in-person to fully online experiences has generated a number of positive aspects. Participants have noted that organisations such as schools are able to allow multiple staff to attend as the associated costs to attend is substantially lower than it would be if the event were in-person. Additionally, presentations and stimulus materials have been provided to participants in pre-recorded formats that are accessible after the event. The international nature of the food literacy project consortium means that utilisation of webinars, asynchronous delivery and panel presentations have been enabled that explore topics around food literacy and are accessible online by educators in schools across the levels early childhood-Grade 12 as well as by those in community and higher education contexts. The presentation will provide insights into the consortium’s experiences including initial successes and ongoing improvements.</p>

RYSLETT, Kari - Volda University College
VIKANE, Jan Håkon
Indigenous Culture in Early Childhood Education in Norway
<p>Objective: Sami people is a recognized indigenous group in Norway, with its own culture, language and integration in society. The curriculum of early childhood education in Norway states that the Sami culture in kindergarten should be visible and help the children develop respect and community feeling for the Sami diversity. This is also in accordance with UN's sustainable development goals to ensure inclusive and equitable education and reduce inequality within and among countries. The present contribution describes a multidisciplinary case from kindergarten teacher education where we sought to provide experiences of practical activities and learning in kindergarten about Sami people and culture.</p> <p>Description: The teaching sequence, which is a part of a multicultural week in early childhood education, consists of a one-day programme of practical activities with focus on food culture and outdoor activities in Sami culture. The sequence starts with a lecture about Sami as an indigenous group in the northern hemisphere, historical residentials, traditional Sami diet and use of reindeer as a traditional resource. The lecture also highlights how the modern Sami community is organized and is included as a minority group in the society. The sequence proceeds with alternately practical outdoor activities. The students make a typical Sami dinner on open fire, do physical activities connected to Sami children culture and the one-day practice is summarized through a quiz based on the theoretical and practical knowledge. The sequence allows for various degrees of interactivity and is highly adaptable into the kindergarten curriculum. The presentation will include students evaluation, descriptions, photos and Sami artefacts. Possibilities and challenges about our one-day practice will be discussed.</p>

SOLJANLAHTI, Maija - The Martha Organization
The Martha Organization's Work for Less Food Waste in Finland
<p>The Martha Association is a Finnish home economics extension organization that promotes sustainable everyday life in households. Our strategic goal is to be experts in carbon neutral living, eating and consumption so that living in private homes in Finland would be carbon neutral in Finland in 2045.</p> <p>We offer practical and efficient solutions. Home economics professionals organize workshops for 100 000 consumers all around Finland every year. The organization has a membership of 41 000. Our website is visited 5,4 million times per year, and our social media is followed by 160 000 persons.</p> <p>Reducing food waste is the goal for the global food system. The EU goal of cutting food waste to half by 2030 is well recognized in Finland. The Martha association is funded by the Ministry of Agriculture and Forestry in collaboration with other NGO's and organizations for three years 2020-2022 to take actions based on a scientific data ("HävikkiFoorumi" – WasteForum, coordinated by an NGO The Consumers' Union of Finland). The solution needs a broad cultural change in the reduction of food waste in society at large by changing people's attitudes and increasing knowledge.</p> <p>The research shows that information-based guidance plays a key role in reducing food waste. The Martha Association concentrates on digital practices to arise awareness, giving tips and best practices online. We have started podcast-production targeted to families with young children and in two of</p>

ten episodes the food waste is discussed. We are regularly on Facebook-liveshows and on Instagram giving advice on how to plan grocery shopping, how to store food, how to read food labels and how to cook from “waste to taste”. Blogs, campaigns on social media are actively used. We are evaluating the efficiency of our actions by monitoring the social media metrics regularly.

TURNER, Pamela - University of Georgia

BALES, Diane; MOORE, Susan; OGDEN, Jackie; EADDY, Allison

Developing Healthy and Sustainable Preparedness and Emergency Management Practices

Changes in climate have led to an increase in natural disasters around the world. Helping people prepare before a natural disaster increases their resiliency during and after the event and helps reduce negative impacts to the family’s well-being.

We implemented a multi-faceted approach, with the overarching objective of improving preparedness and recovery from natural disasters and other types of emergencies. Three tools were designed to reach different types of audiences. Some of the tools are accessible online and all can be adapted for use in other states and countries.

A home emergency management guide was developed for public use. The guide provides information on preparedness, mitigation, response, and recovery for several types of emergencies, including floods, hurricanes, chemical spills, and public health. The guide includes information on ways to purify water and a comprehensive home emergency preparedness supplies list. It’s available online and used for local programs and activities.

The second tool focused on children. About 87% of children under six live in a family where at least one parent is employed full-time. Many of these children are in child care arrangements. We designed an online self-paced emergency management training module for Early Care and Education (ECE) programs. This course helps ECE teachers understand what they can do before, during and after emergencies to help children and staff.

The third tool focuses on building capacity within the organization. Four regional teams were created and trained to provide integrated communication and support within the organization and with state and regional partners. Team members receive training about how to handle emergencies. They are deployed to assist in response and recovery throughout the state.

VAIDYA SOOCHETA, Anagha - University of Mauritius

MOOTOOSAMY, Silvanee

A Sustainable Portable Home-Made Solar Dehydrator

With the abundance of tropical fruits and vegetables in Mauritius, sellers of dried fruits, herbs, vegetables and pickles are omnipresent in marketplaces. The typical way of dehydrating produce consists of sun drying. The study presents the design, development, assembly and performance testing of a portable home-made solar dehydrator for foodstuff. It works on a simple principle of using solar energy. The unit can be reconstructed with ease; made using simple techniques and recycled materials, as beverage cans and reclaimed wood. Cans painted with nontoxic black paint were used to replace the common photovoltaic system that contributed in an efficient heating system allowing a homogenous drying process. The mechanism works on the concept of cool air entering the cans from the lower open end; hot dry air generated by the solar heated metal cans are transported into the box chamber dehydrating the food placed on trays. A variety of herbs such as thyme, parsley,

coriander, chilies were tested. Locally available fruits and vegetables as banana, mango, jackfruit, gooseberry, eggplant, carrots, apples were dried. Performance tests revealed that the temperature inside the dehydrator was much higher than the ambient temperature which aided the dehydration process. It exhibited adequate ability to dry food items rapidly retaining nutritional value. It avoids contamination by dust, molds, fungi, and insects which is commonly seen when drying with traditional techniques. The vegetables and fruits retained their color and flavor when mixed with authentic spices and did not require addition of preservatives or refrigeration. The shelf life of the preserves also increased. An awareness program for dissemination and presentation of this simple, green, technology that uses Earth's most abundant source of energy to National Women's Council, addressed, the role of technology in sustainable food systems for responsible production. This project provides an excellent income generating profitable business venture.

WARNOCK, Mary – retired (United States)

KEITH, Mary; MENDENHALL, Juanita; BORR, Mary; DEVLIN, Breanne; GRAVES, Nicole; HOLLAND, Amanda; MILLER, Cynthia; ROBERSON, Kyle; TRIPP, Paula

Home Canning in Post-Hurricane Puerto Rico, Response by IHES and DAP

This Puerto Rico (PR) Project meets the Food Systems criteria for individuals and families living in rural and urban communities through teaching/training of PR Extension faculty to can foods; thus, increasing resiliency and sustainability while decreasing dependency on stores and electricity. Through the collaborative efforts of International Home Economic Services, Inc. (IHES) and Disaster Assistance Partnerships (DAP), over 6 tons of teaching materials were shipped to PR for use by school teachers and Extension Service faculty in recovery efforts after Hurricane Maria. Following discussions with Dept of Education, PR affiliate of AAFCS distributed classroom materials to member teachers. Included were pressure and boiling water canners, canning jars, lids and auxiliary equipment. Objective of PR Extension was to use "best practices" to teach residents how to can home-produced foods in the event of another natural disaster. To meet this objective, IHES funded trip by retired Univ Florida Extension Agent with 20+ years of experience, to teach/train PR Agents in use of both types of canners. Agent conducted 2 one-day-long classes in Spanish, at opposite ends of island. Due to availability and common use in household meals, the PR Extension faculty determined that tomatoes (boiling water) and chicken (pressure canner) would be appropriate foods for demonstrations. Flash drives with USDA Guide to Home Canning, Spanish materials from US Extension universities, and teaching posters were provided. A total of 56 PR Extension faculty participated. Post-class surveys indicated that 54% felt confident they could teach home canning; 36% planned to offer classes; and 52% planned to can at home. Impact of the trainings led to discussions with Univ PR Dean of Extension, Program Leader for Family & Consumer Sciences and others to plan a Master Food Preserver program, and possible research into canning local staple foods.

WIRTH, Sarah - Samuel Marsden Collegiate

Rethinking Textiles Technology High School Education in the 21st Century

To prepare our Textiles and Fashion students for the future, we need to think about issues such as the consumption of natural resources, the slow fashion movement, protection of waterways, textiles workers' rights to earn a living wage in a safe work environment and the enormous problems of textile waste in landfills.

A life changing trip to India in 2018 to look at organic cotton production and a personal journey to reduce my carbon footprint and be more sustainable, made me rethink my teaching practice and how to inspire my students to be thoughtful global citizens. Our program reflects on Goal 12 of the United Nations Sustainable Development -Ensure sustainable consumption and production pattern.

At Marsden School we have had to rethink our use of resources and teaching practices to prepare our students for the use of new technologies and careers that do not exist yet. We want students to be innovative and creative in our changing world.

Just by incorporating more technology and preloved fabrics into our programmes has reduced our waste as a department. Starting from our junior programmes we have used preloved denim items to create patches using a lasercutter and Adobe Illustrator. We constructed shorts out of second-hand sheets and pillowslips. and designing matching tops using an old t-shirt. Students learn about copyright and increased Adobe Illustrator skills to add colour, refine images and create an iron on transfer. Students are learning to be more creative and understand the realities of upcycling. Social action sewing courses help the developing world through initiatives as “Dress a Girl Around the World.” Using preloved business shirts or textiles items students turned them into beautiful garments. The strict specifications make students understand the hardships of the wearer and need for good construction, as garments may be in washed in the natural state in rivers and on rocks.

This presentation will look at how students are understanding the lifecycle of textiles garments/ items and their role as consumers and designers of the future. Also how to change programmes to incorporate social consciousness regarding sustainable development.

Best Practice Poster Abstracts by First Author

BALDWIN, Kimberly - Douglas County School District, United States

Sustainability in the Culinary Classroom in the USA

The Culinary Classroom at Ponderosa High School in Parker, Colorado, USA has implemented a composting program and reduced food waste going to the trash by over 40%. In addition the classroom room uses Induction cooktops to reduce energy use.

Ponderosa High School with an enrollment of 1600 students is located in the Denver Metro area and is at an elevation of 6200'. This impacts food preparation in many ways. The Family Consumer Sciences Dept. has a Hospitality Pathway with three levels of culinary classes.

These practices have been in place for 5 years and continually show a reduction in waste going into the trash. During culinary labs students have a green bucket to place any fruit and vegetable scraps. At the end of each lab they place the contents of the bucket into the composter that is located outside of the classroom. The composting allows students to see how the waste breaks down and then can be used to enrich gardens. The classroom has a growing herb and container garden area. This creates a system of sustainability that the students can use fresh herbs in their food production. The site of the school does is not suitable for a traditional garden area.

The use of induction cooktops allows for efficient use of energy. The school is located at an elevation of 6200' and induction allows for water to boil in about half the time of gas or traditional electric cooktops. Induction cooking is efficient and reduces the amount of heat in the classroom therefore keeping the classroom temperature lower. The cooktops also do not heat up like a traditional electric cooktop and are safer for student use and cleanup.

The intent of this poster presentation is too educate members the benefits of composting food waste from foods labs and illustrate the reduction in energy use with the use of induction cooktops.

FUKUDA, Toyoko - Ryukoku University
YOSHII, Minako
Teaching about Food through Hand-on Food Production
<p>In Japan, The Basic Law on Shokuiku (food and nutrition education) came to force in 2006. In recent years, students no longer have much experience with growing food ingredients or even with touching them. This is problematic, since recent research reveals that the more experience of life and nature children have, the more independent they will be. Food ingredients, whether vegetable or meat or seafood, were once all living things. Seeing, listening, smelling, tasting or touching them is an important experience for students, even more so is growing them. The purpose of this practice report is to introduce lessons in teaching about food by growing or producing them before preparing them for consumption. For example, one lesson covers how students can be re-grown after cutting and harvesting them by watering the remaining seeds and roots. Most of the students had never grown pea sprouts. They described their impressions, how their "sense of wonder" seemed to have been awakened by this simple experiment. One student said. "It was wonderful to be able to grow them again. It was amazing to see them growing back in such a short time." Some of these students might become teachers. If they are conscious of this "sense of wonder" themselves, they can inspire the next generation's "sense of wonder" as well. The other trial lessons being planned are: Digging up bamboo shoots and cooking them into "tempura". Observing the tree, flower, seed and fruit of the Pomegranate. Hatching and growing quail's eggs.</p>

HOLLAND, Jacqueline – Morgan State University
Druid Heights Community Development Corporation Community Library: A Sustainability Project
<p>Purpose This project supported the International Federation of Home Economics “World Home Economics Day.” The theme “Creativity and Innovation in Home Economics for Sustainable Development” was the foundation to create a literacy project in the Druid Heights Community of Baltimore City, Maryland. Druid Heights Community Development Corporation is a non-profit organization whose mission is to promote and encourage a stable and safe community environment. The study measured children perceptions of reading books.</p> <p>Rationale Providing children access to books and a supportive environment contributes to academic and life skill success. The concept of reading supports several components of the Body of Knowledge (2009) framework for family and consumer sciences. These components include Community Vitality, Individual Well Being, Life Course Development, and Family Strengths.</p> <p>Methodology This project included the creation of a library at the Druid Heights Community Development Corporation to be used by children who attend the after school tutoring program. Children completed a ten-question survey before the library was created to measure their perception of books and to discover how they interact with print material. University students conducted a brief discussion with the children about reading books.</p> <p>Findings All of the participants like to read, 54% indicated they always like to read. When asked which, was more valuable reading books or watching television, 81% chose the former. Regarding recorded</p>

books, only 18% enjoyed them. In the era of social media, only 18% believed that the Internet and television would not replace books. A majority of the students indicated they would like to have a personal library.

Conclusions

The research concluded that children do see the value of reading books. Of interest is the firm belief that social media will replace books. The children showed enthusiasm for the library, as observed through their self-selection of a book to take home.

Implications for research and practice

Children value reading. Whenever possible opportunities should be provided to expose them to literacy through books.

KLEMME, Diane - University of Wisconsin-Stout

Responses to the Global Housing Shortage

United Nation's Special Rapporteur, Leilani Farha (2016), warned of a global housing crisis. The World Resource Institute (Paris, 2019) echoed this, plus predicted by 2025 approximately 1.6 billion people will lack access to housing that is affordable and secure. The predicted world population of 440 million households in 2025, up from 330 households in 2017 is escalating the crisis (Parsi, 2019).

Housing is infused throughout the Congress's Model by serving the social function of providing family space and provides opportunities to connect individuals to community. Farha (2016) suggested currently housing is viewed as path to asset growth and has lost its social function. Key to addressing the housing crisis is to develop sustainable structures that are environmentally friendly, promote health/well-being, provide avenues to support community, and are affordable.

Governments, developers and entrepreneurs have developed innovative ideas to address this crisis including building an artificial island and converting water pipes into housing units in Hong Kong, pop-up villages in London, tiny houses in many countries and 3-D printed homes in the United States. But how will these structures support family life?

The objective of this presentation is to provide an overview of innovative approaches to the global housing shortage and how they impact the human, economic, and environmental systems as it relates to the sustainable developmental goal of Good Health and Wellbeing (Goal 3) and Responsible Consumption and Production (Goal 12).

Farha, L. (2016). Adequate housing as a component of the right to an adequate standard of living. United Nations General Assembly.

Retrieve from shorturl.at/mnIKN, search Farha

Paris, N. (2019). Home grown. *PM Network*, 33(4), 6-7 retrieved from <https://web-vip.pmi.org/learning/library/home-grown-teams-affordable-housing-crisis-11531>

LÜTJEN, Katrin - Germany

JOHANNSEN, Ulrike

Gamebox "Aufgetischt!" Learning German through Games about Eating and Drinking

Objective: The gamebox „Aufgetischt! Spielend Deutsch lernen mit dem Thema Essen und Trinken“ (= Dished up! Learn German through games about eating and drinking) is a collection of educational

games which are designed for immigrants and refugees who are learning German as a second language. In addition to learning how to speak, read and write German, the gamebox has a secondary benefit of promoting health education for individuals.

Description: The gamebox contains 15 games for beginners and advanced learners of German that can be played with 2 to 10 Players. The set of rules includes game instructions, useful background information and templates that can be copied. Additional orientation material is provided through pictograms informing about the number of players, the required material, the duration of the game, the objective, the degree of difficulty or the required template. Game variants or tips are listed for each game in order to adapt the mediation process to the heterogeneous requirements of learning groups.

The material of the gamebox is based primarily on the concept of Food Literacy. The term literacy not only designates reading competence but also includes life skills and everyday knowledge. The concept focusses on the transfer of knowledge, the ability to evaluate everyday situations (household and family, work and leisure, society and politics) and corresponding actions. In addition to basic literacy skills, decision-making power should be strengthened in the context of food literacy, for example: to make self-determined, responsible and enjoyable food choices in everyday life.

Evaluations of the game box show the versatile use of the material can be adapted to individual needs of learning groups (pupils, adolescents, adults, mothers with migration background, German illiterates and many more).

MURAKAMI, Kaori - Hiroshima University

MASUDA, Tomoe

Development of Sewing Skills Education Materials for Vocational Trainees in Sierra Leone by Students Enrolled in a Japanese Home Economics Teacher Training Course

【Introduction】 In Sierra Leone, West Africa, adolescents are educated to acquire skills such as sewing and cooking for independence. However, the educational environment is poorly developed, so educational support is needed to realize one of the specific goals of the SDGs, "quality education." With this in mind, students enrolled in a home economics teacher training course in Japan developed sewing skills education materials for use in vocational schools.

【Methods】 In March 2020, I visited a vocational school in Sierra Leone, observed the sewing skills curriculum, and introduced the clothing life education teaching materials I produced. Some of the materials were experimentally incorporated into the lessons to verify the students' reactions. Upon returning to Japan, I introduced the current state of the Sierra Leone program to students enrolled in a home economics teacher training course. They thought about the ideal way to provide educational support and developed sewing skills education materials.

【Results and Conclusions】 Vocational schools in Sierra Leone lack textbooks and sewing tools, such as fabric and needles, for repeated practice. However, the students showed great interest in the teaching materials I used to show them how to make a basic bag and pants and worked actively on them. This confirmed the need to develop basic teaching materials. Although students at my university were unfamiliar with Sierra Leone, when I told them about the school, they, as future home economics teachers, were interested supporting the creation of teaching materials to help these students. At present, it is difficult to carry out local educational activities due to COVID-19, but we believe that the educational environment will be improved by developing and transmitting images and video teaching materials that can be used to learn sewing procedures, and by continuing to use trial and error.

NAKAYAMA, Setsuko - Chiba University
SHIMURA, Yumi; ARAI, Noriko; SUZUKI, Mayuko; KUDO, Yukiko
Japanese Home Economics Education and SDGs
<p>Objective</p> <p>Home economics education in Japan is a compulsory subject taught from elementary through high school. Its learning contents a comprehensive view of life, which deeply related to the United Nations' 17 Sustainable Development Goals (SDGs). It stresses that children should connect issues in front of them with the idea of the 'sustainable society', look them as their own issues, and think about how they can solve problems to create a better society they wish to live in.</p> <p>The purpose of this presentation is to clarify, through an analysis of examples at elementary, junior high, and high school classes, how Japanese home economics plays an important role to achieve the SDGs.</p> <p>Description</p> <p>In a class on clothing and daily life incorporating the perspective of SDGs practiced in elementary school home economics, teacher and students explore why plastic bags are no longer free, learn about the usage rates for plastic versus reusable bags. Through learning connected to the viewpoints of Goal12 and 14, the students come to understand how they can contribute to solving an environmental problem by making and using their own bags.</p> <p>Junior high school home economics class on consumer life and the environment, which connects to numerous SDGs, aims to help children understand the significance of energy conservation and to see energy issues not only as societal but personal. The 'cross-curriculum' approach, combing content from both home economics and technology fields, proves effective.</p> <p>In a home economics class at high school, also based on key SDGs, students learn about their own communities and support local people by making universal design shirts for them. By using students' own residential area as a subject, the importance of building a curriculum that combines multiple learning areas within home economics: clothing, housing, the elderly and inclusive society and welfare has been confirmed.</p>

OBUNADIKE, Joy Chinwe - Michael Okpara University of Agriculture Umudike
ESIOWU, A.P.; EZENWANNE, Dorothy
Strategies for Enhancing Environmental Stability of Contemporary Families for Sustainable Development
<p>The study investigated strategies enhancing environmental stability of contemporary families for sustainable development. Specifically, the study identified strategies in coping with the effect of kidnaping on families, determined strategies in coping with herdsmen influence. To achieve this objective two research questions and a hypothesis guided the study. The study adopted descriptive research design. The area of the study was Abia North, Abia State. Population of the study was 110,539. A total of 300 families were selected using multistage sampling techniques for the study. The instrument for data collection was a structured questionnaire. Data collected was analyzed using mean and standard deviation at 0.05 level of significance. Findings showed that proper application of environmental launching of special programs or reorientation programs and stoppage of indiscriminate dumping of refuse are strategies for managing the effects of climate change that affect contemporary families. The findings further showed that training strong anti-kidnapping agents, capital punishment for offenders and youth empowerment are among the strategies for coping with the effect of kidnaping on contemporary families in Abia State, Nigeria. The result revealed that</p>

coping with the effect of kidnapping on families include training strong anti-kidnapping agents, punishing the offenders, creating jobs, monitoring the activities of police, among others are the solution that may reduce kidnapping. For the herders' problems, it was revealed that government should embark on dialogues and support local peace initiative. It was also revealed that their t-calculated values were less than t-tab value of 2.02. Based on the findings, it was recommended that government, private sectors and individuals should train more special agents that will handle the environmental stability and kidnapping problems squarely. Furthermore, government should probe the source of sophisticated weapons at the disposal of herdsmen. The grazing of the herdsmen should be regulated.

OGDEN, Jackie – The University of Georgia Cooperative Extension

Ocean to Table: Helping Consumers Make Informed Seafood Purchasing Decisions

The 2015-2020 U.S. Dietary Guidelines recommend that Americans eat a variety of protein foods, including at least two servings of seafood per week, as part of a healthy balanced diet. Seafood is a nutrient-rich, low fat and calorie food that is a good source of protein, vitamins and minerals. Regular consumption of seafood has also been linked to healthy brain and eye development in children and reduced risk of heart disease in adults. Despite these known health benefits a study by the U.S. Department of Agriculture found that 80-90 percent of Americans do not eat the recommended suggestion of two seafood servings per week. Lack of awareness about the health benefits of seafood, confusion about food safety and sustainability issues and unfamiliarity on how to purchase and prepare seafood can all contribute to consumers not eating enough seafood. At the same time as local food movements continue to gain traction, consumers are increasingly interested in purchasing seafood. A recent Georgia Sea Grant funded project found Athens and Atlanta-based farmer's market shoppers were overwhelmingly interested in purchasing more seafood products. University of Georgia (UGA) Cooperative Extension Family and Consumer Sciences Agent, Jackie E. Ogden received consumer requests to learn about selection, purchasing, food safety and storage of seafood including oysters, crabs, fin fish and shrimp. Program collaborations were initiated between Ogden, UGA Marine Extension and Georgia Sea Grant to respond to local clientele requests. Ogden developed a program series named "Ocean to Table" featuring seafood products based on UGA Marine Extension's research. Each program selected a specific seafood product to feature and identified the need to develop Extension publications and educational resources about seafood for consumers. In-Service program delivery was provided to Extension agents in a train the trainer series developed by the "Ocean to Table" planning team. Participants learned about seafood research, production, the seafood industry, food safety, storage, purchasing, and preparation. Both rural and urban consumers were informed about benefits of seafood.

OGDEN, Jackie – The University of Georgia

University of Georgia-Athens Extension: Healthy Georgia Wellness Curriculum—Educating Georgia's Workforce and Beyond

The Healthy GA Wellness Curriculum consists of 10 to 15 lessons used individually or in a series, depending on the needs of those requesting programming. Lessons are used in a group setting and provide hands-on activities that can be taught in a 30 - 45 minutes. Lessons are used for Employee or Consumer Wellness Programs. Each lesson consists of one to two page lesson instructions. Resources and handouts are provided in addition to evaluation for each lesson. Topics covered in the series include: Positive Thinking, Physical Activity, Planning for Success, Adequate Sleep, My Plate-Portion Control, Energy Drinks, Understanding Food Labels, Stress and Health, Increasing Financial Capacity, Healthy Housing, Food Safety, Stress on Brain Development and Time Management. Southeast

Georgia University of GA Extension Family and Consumer Sciences Agents collaborated to develop this curriculum. Meeting community needs and creating a "culture of health" was the driving force for this educational project. Family and Consumer Sciences (FACS) Extension Agents have coordinated their efforts to provide non-biased, research-based education on the topics for this curriculum. Under the direction of Ali Berg, University of GA Extension Nutrition and Health Specialist. FACS Agents included: Rachael Stewart, Jackie Ogden, Laura Smith, Susan Moore, Becky Collins and Marnie Dekle. The Healthy Georgia Wellness Curriculum Train-the-Trainer Series was delivered through a in-service program delivery to Cooperative Extension Agents in the areas of Family and Consumer Sciences, 4-H, and Agriculture & Natural Resources to implement throughout the state of Georgia. Both rural and urban consumers have benefited from the entire package of health information. Funding awarded through a University of GA Extension Innovation Grant provided funds to develop and pilot curriculum. Family and Consumer Sciences Logic Models and Focus Outcomes were used in the Train-the-Trainer program design. Participant evaluations of the Healthy GA Wellness Curriculum helped raise awareness of healthy lifestyles throughout Georgia rural and urban communities with impact.

ROLLING, Virginia - Georgia Southern University

Best Practices for a Family and Consumer Science Textiles Workshop

Objective: Best Practices for a Family and Consumer Science Textiles Workshop provides insights into how to create a dynamic and engaging day of events for professionals, educators, and students to experience FCS education in any educational institution setting while ultimately promoting FCS. Best Practices includes the following: Firstly, inviting local textile industry professionals to guest speak at FCS workshop events about their company's internships and career opportunities. The objective being to connect industry professionals with educators who need to understand current knowledge for specific jobs in the textile field as well as connecting industry professionals with the upcoming workforce of students so students are exposed to these careers. Secondly, providing hands-on textile activities to participants such as converting a donated t-shirt into a handbag using only scissors with the objective to provide a positive experience with textiles for participants along with a positive FCS educational experience for seasoned FCS students given the opportunity to demonstrate their skills to others by teaching them hands-on activities. Lastly, providing giveaways such as educational textbook resources on FCS tips with the objective being to further provide FCS information and generate interest in FCS even after attendees enjoy the workshop.

SCHICHTL, Rachel – University of Central Arkansas

ROOFE, Nina; BRYAN, Ann

Best Practice for Integrating Nutrition and Family and Consumer Sciences into an Existing Interior Design Study Abroad Program to Florence, Italy

Objective: The objective is to design an interprofessional study abroad course that interior design, nutrition and family and consumer sciences majors can experience together.

Description: Study abroad is one way to develop students' world perspectives (Knight,2006) and develop higher functional knowledge (Smith and Yang, 2017).

The University of Central Arkansas has offered a Study Abroad trip to Italy for Interior Design majors since 1990, focusing on architectural and artistic advancements of the Florentine ruling families. While other students in the department could take this course as an elective, there was not a focused course for other majors within the department. In 2019 the department added two additional study abroad course offerings. NUTR 4336 Nutrition for Life and FACS 4335 Body Image and Culture courses were added as study abroad options to count as electives for the respective majors. NUTR 4336

focuses on the Mediterranean diet and the arts of wine, olive oil and balsamic vinegar production. FACS 4335 focuses on views of how the human form and body image were impacted with introduction of humanism. Both courses focus on the Italian culture, language and navigation using several forms of Italian public transportation.

Students enrolled in the two newly created courses, along with the established courses from Interior Design, travel together and participate in many of the same tours and experiences, with individualized reading, assignments and tours for each course. The group's home base is in Florence, Italy with day trips to Padova, Venice, Orvieto and San Gimignano, a 4-day trip to Cinque Terre and a free weekend where students travel in small groups to other locations. Interweaving the art, architecture, food, culture, and body image into the emersion of a study board experience reinforces the knowledge learned in each course thus enriching the experience for the students.

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SCHICHTL, Rachel – University of Central Arkansas

SARTAIN, Kimberley; CARROLL, Kathryn

Best Practices for Integrating Interprofessional Service-Learning into a Family and Consumer Sciences Project

Objective: To design an interprofessional service learning project that nutrition, personal finance and family and consumer sciences education students can use to learn about food insecurity.

Description: Food insecurity is a problem in the U.S. and Arkansas, where in 2018, 15.1% of households were food insecure (Coleman-Jensen et al., 2018). In Spring 2021, a service learning (SL) project was developed to help undergraduate students at the University of Central Arkansas learn about food insecurity. According to Moehler et al., (2001) students engaged in SL showed greater satisfaction in courses and reported higher levels of learning in academic fields than students not participating in SL.

The basis of the SL project was to learn about food insecurity in the community through a partnership with a local food pantry. Students enrolled in Methods of FACS created food videos and recipes for food pantry recipients. Personal and Family Finance students developed a purchasing budget and Community Nutrition students packed bags with recipes and ingredients to deliver to the food pantry. Each class had three assignments related to food insecurity throughout the semester. 1) watching a documentary about food insecurity during COVID and completing a journal reflection, 2) watching a video tour of the partnering food pantry and completing a corresponding assignment and 3) an actual SL assignment that would assist the partner agency, which related to the content for each respective course.

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STEWART, Barbara - University of Houston
Gender Equality and Technological Sustainability Via Coding Camps for Underserved Girls
<p>DesignHER Code Camps are used to demonstrate the opportunity to improve gender equality and technological sustainability to impact human and political, economic, food, environmental, and health systems. The value of coding camps for underserved girls is underscored by the recognition by UN members that “gender equality and effective participation of women are important for effective action on all aspects of sustainable development” (Hoseini, 2014, p. 66). The attainment of the IFHE sustainability goals requires a workforce which capitalizes on women who apply technology skills for multiple audiences (individuals, families, households; rural and urban communities; educational and caring institutions; gender; ageing; migrants and refugees; minorities; and disabilities). As change agents of the future, girls benefit from early skill development in technology grounded fields, especially coding. Description: The unique approach of the DesignHER Code Camps was to engage middle school girls in STEM concepts and careers based on their pre-existing interests in fashion and retailing. The technology that undergirds fashion and retailing then became a stepping stone to expanded coding and STEM (science, technology, engineering, and math) interests. Collaboration among government, university, school, community, and business partners created summer coding camps for underserved girls. The primary population included 6th, 7th, and 8th grade girls of low income and minority families, and youth in foster care. Three one-week camps served 133 students during the summer of 2019. Camp features included: •Hands-on coding experiences •Creativity and critical thinking activities •Group engagement games and presentations. These tuition-free STEM/coding camps far exceeded expectations and provided productive learning experiences that foster gender equality and technology readiness. Replication of the camps to other locations, countries, and contexts is possible</p>

Best Practice Workshop Abstracts by First Author

Food Systems Workshop
HARDEMAN, Rebecca – The University of Georgia
Clayton Fresh Mobile Market: Sustainable Growth with Urban Youth
<p>Recent increases in childhood obesity pose a serious health threat for our communities. Obese children lead to preventable chronic diseases that once affected adults only. These chronic diseases lead to decreased mobility and shortened life spans. According to the National Center for Biotechnology Information, children who live in urban areas tend to have a higher risk of overweight and obesity due to unhealthy dietary behaviors, such as the high intake of sugar-sweetened beverages. The habits formed, decisions made, and knowledge gained during childhood can have a significant impact on future health.</p> <p>Clayton County is an urban, metro-Atlanta county with almost 300,000 citizens. While Georgia has the 18th highest child obesity rate in the nation, in 2016, Clayton County was found to be the state’s most obese county for youth. Clayton Fresh’s mobile market works to address poor diets and inactivity in youth and families. Clayton Fresh’s mission is to increase awareness about the benefits of a balanced diet, to promote the practice of trying new foods, and to increase knowledge of Georgia’s agriculture for Clayton County youth.</p> <p>The goals of the Clayton Fresh Mobile Market are (1) to encourage youth and families to consume more fresh, healthy foods and establish healthy and sustainable eating habits and (2) to disseminate</p>

research-based information to increase knowledge of the correlation between balanced diet, physical activity, and future health. The objectives are (1) an increased knowledge of the MyPlate system, (2) the ability to identify foods to eat more of and understand the nutrients that help us grow and stay healthy, (3) an increased understanding of the importance of engaging in daily physical activity and adopting a healthy diet, and (4) an increased consumption of fresh, healthy foods and establishment of healthy, sustainable eating habits. Since its inception, the Clayton Fresh Mobile Market has reached 6,236 youth through direct education and 4,832 youth through indirect education. Through Clayton Fresh, over 80% of youth have reported increasing their intake of fruits and vegetables.

MHLANGA, Rossetta - Mufulira College of Education

PHIRI, Anna

Assessment of the Sensory Quality, Preference and Acceptability of Watermelon Rind and Banana Peel Products

The purpose of the study was to manipulate watermelon rind and Banana peels to turn them into delicacies acceptable for consumption. The food products from the rind included savoury stuffed watermelon rinds that were compared with sweet stuffed watermelon rind. Savoury stuffed banana peels were compared with sweet stuffed banana peels. The savoury stuffed watermelon was made with mashed cowpeas, mixed herbs and spices while the sweet stuffed watermelon was made using sweetened mashed pumpkin to which tamarind was added. The same stuffing was used for stuffed banana peels. Two samples were produced from watermelon rind and two from banana peels. The study was based on an experimental design. It was undertaken at Mufulira College of Education on the Copperbelt Province of Zambia, Southern Africa. Random sampling was used to select fifty (50) panelists who were involved in sensory evaluation of the developed products. Of the fifty, thirty (30) were lecturers and twenty (20) were students. The test-tasting of the samples were conducted in a laboratory sensory booth, where the panelists would not interact and exchange ideas amongst themselves towards the products. The samples were judged using the affective and descriptive tests and evaluated for texture and tenderness, taste, colour, preference and acceptability. The results showed that there was more preference and acceptance by the panelists of the savoury stuffed watermelon rind and stuffed banana peel with sweetened mashed pumpkin to which tamarind was added. This led to a conclusion that watermelon rinds and banana peels were edible parts of foods once manipulated well.

Health Systems Workshop 1

WARREN, Judith - Retired from TX AgriLife Extension

Improving Adoption of Practices that Sustain Health and Independence in Aging Adults

Objective: This session will demonstrate the use of cognitive reframing, a psychological strategy, to affect perception and adoption of assistive devices and safety practices which reduce risk for falls, medication problems, and improve mobility in aging populations. Successful adoption of environmental and health practices can result not only in improved health and well-being but also improved family relationships, lifespan sustainability, and decreased economic risk.

Description: Global life expectancy rose from 64.2 years in 1990 to 72.6 years in 2019 (UN World Population Prospects, 2019). The world is home to over half a million centenarians in 2020 (US- 97,000; Japan-79,000). Aging adults in developed and developing countries experience increased risk for a number of chronic health conditions (arthritis, high blood pressure, heart disease, type 2 diabetes, vision and hearing changes, osteoporosis, and imbalance) which affect independent functioning. With increased interest in supporting people to remain in their own homes, delaying

moves to institutional settings, the World Health Organization's Global Collaboration on Assistive Technology (GATE – 2018) developed position papers on global research, innovation and education related to assistive technology (AT). In one GATE position paper (Desmond, et. al, 2018), the importance of personal meaning/perspective on AT was identified as fundamental to successful adoption. Particularly, AT identified with terms such as "invalid aid" or "designed for the disabled" were viewed as markers of illness and loss, reducing their use. Viewing devices or practices as "enablers of participation" improved adoption and sustainability.

This session will illustrate effective modifications in the home environment that maximize healthy aging in place and reduce health risks. Cognitive reframing, shown to facilitate adoption and continued use of safety devices/practices, will be illustrated through educational video clips. A paired-participant interaction exercise will focus on personally challenging health scenarios and encourage participants to apply the cognitive strategies demonstrated to their scenario.

HOLLAND, Jacqueline – Morgan State University

Utilizing Mindfulness for Sustainable Living

When our present conditions generate feelings of stress and anxiety, the practice of mindfulness can assist in expanding our ability to regulate emotions and reduce stress, anxiety, and depression. Often, we try to complete many tasks simultaneously and discover a lost connection with the present moment. Regardless of the circumstances, mindfulness helps us focus our attention to observe our thoughts and feelings without judgment irrespective of the events. A consistent practice of mindfulness can sustain us physically, psychologically and contribute to overall health. This workshop will introduce participants to principles of mindfulness and the association for health and wellbeing. Participants will explore implications for personal and professional settings. Mindfulness techniques will be demonstrated and practiced by the participants.

Objectives for the workshop

Participants will be able to:

- Identify and explore characteristics of mindfulness and the impact it has on coping, well-being, and sustainability;
- Identify and discuss traits of emotional and social leadership skills which contribute to a positive working environment; and
- Apply a variety of strategies, which reflect emotional and social intelligence in leadership that have proven to contribute to wellbeing.

Planned activity/Activities

- Overview of mindfulness
- Utilizing mindfulness strategies
- Implications and reflection for the profession

Method/ Approach

- PowerPoint presentation
- Discussion
- Collaborative activities

Health Systems Workshop 2
MYERS, Lori – The American Association of Family and Consumer Sciences
BOCK, Nancy
Dine-in Day - A Worldwide Opportunity to Promote Good Health and Well-Being
<p>Evidence suggests that children who take part in family meals are less likely to be overweight, eat more healthy foods, have less delinquency, greater academic achievement, improved psychological well-being, and positive family interactions.</p> <p>Family & Consumer Sciences Day is a special annual celebration to promote the mission of the profession. The "Dine-in for Healthy Families" campaign theme focused on food and family and encouraged family mealtime, with the goal of having participants sign up to prepare and serve a healthy meal and "Dine In" on December 3rd.</p> <p>The entire family benefits from family mealtime by having better nutrition, improving family communication, fostering family traditions, and teaching essential skills, such as meal planning, budgeting, and food preparation. The date of December 3 was selected to honor the birthday of our founder, Ellen Swallow Richards.</p> <p>Encouraging families to prepare simple, healthy meals and eat together supports the essence of family and consumer sciences: "Creating Healthy and Sustainable Families." It also amplifies the value of our work to help others lead better lives, build strong families and make meaningful contributions to communities. Since 2014, almost 400,000 individuals from every state in the U.S, from 24 countries, and from all 7 continents have pledged to "Dine In for Healthy Families."</p> <p>During the session, strategies and best practices for participating in the FCS Day celebration and the "Dining In for Healthy Families" initiative will be shared. Attendees will be provided with educational resources to assist them with implementing the initiative and targeting specific audiences across the globe.</p>
MOTASEM, Marybeth - Bexley High School, United States
Applying Practical Reasoning to Solve the Future of Food.
<p>Working in a secondary classroom provides unique opportunities to explore big topics like how this generation of students will rise to the challenge of feeding 9 billion people by 2040. Using the practical reasoning strategy developed by Dr. Janet Laster, The Ohio State University, students are equipped to solve some of the biggest challenges of our future. Come join the journey that 18 Food Science students have traveled as they spent an entire semester examining the future of food and creating innovative solutions that fail, and then going back to the drawing board again in the hopes of finding an answer that works. Discover how collaborations between students, the community in which they live, and experts in the field find ways to implement National Geographic's 5 Step Plan to</p> <ol style="list-style-type: none"> 1. Decrease our agriculture footprint 2. Grow more food 3. Use resources more efficiently 4. Shift Diets 5. Reduce Food Waste <p>Attend and become inspired by how students in Room 7229 find innovative strategies to reduce food waste and create their own strategies to feed the next generation. The intent of this model is to share a methodology that can be adopted and adapted to meet the needs of other schools as they strive to integrate curriculum sustainability standards into their programs.</p>

Human & Political Systems Workshop 1
ALEXANDER, Karen – Texas Tech University
DOTSON, Arnessa
Using Technology for Sustainable Development and Delivery of Home Economics Curriculum
<p>Participants will explore the concept of sustainability as it relates to the daily teaching process. The recent global Pandemic has forced educators to embrace more sustainable educational practices through technology. Participants will explore: What technologies are FCS/Home Economics teachers already using? What adjustments and new technologies were made in response to virtual teaching during the Pandemic? What technologies can be used with minimal investment yet result in maximum yield?</p> <p>Conduct an internet search on sustainability and hundreds of thousands of results populate. Even if teachers feel they are doing their part by personally recycling their used clothing, plastic bottles, or paper goods, the environment and society are forcing us to rethink the way we make things – including lesson plans and instructional resources. One ton (2,000 lbs. or 907.185 kg) of paper takes 98 tons of resources. Paper production is the third-largest industrial polluter of air and water. If the average person uses almost half a ton of paper a year and the global population is expected to grow by 2.6 billion people by 2050, teachers must not wait for a different political leader or superintendent or department chair to direct change– but decide to change things themselves. Using technology for sustainable development and delivery of the home economics curriculum means that teachers can affect immediate change in the environment and can influence the next generations to do so as a matter of course. During the workshop, participants will explore several examples of paperless technological applications that are effective for various audiences and appropriate for home economics content. Participants will have the opportunity to share resources and applications they have discovered during virtual teaching assignments to advance sustainable resources. After this workshop, participants will have a list of the highlighted and additional vetted technology applications to implement in their class settings as well as connections with trendsetters in their field for further ideas, dialog, and feedback on their journey to sustainable lesson development and delivery.</p>

Human & Political Systems Workshop 2
DUNCAN, Janine – Purdue University
KEMPEN, Elizabeth
Building a Home Economics Identity
<p>Home Economics (HE) is challenged by a decline in HE educators; limited awareness of indigenous or cultural knowledge systems in the HE classroom (Leddy, 2021); emerging thoughts regarding the decolonisation and transformation of HE curriculum across countries (Smith, 2020); the impact of HE on the Sustainable Development Goals (SDGs); and the professional socialisation (McGregor, 2011) and development of pre-service HE teachers (Duncan, 2021), among others. How do these challenges affect the HE identity and does it call for repositioning the purpose and role of HE going forward? The 2008 IFHE position statement outlined four HE dimensions of practice, clarifying HE within an academic discipline, everyday living, curriculum area and societal arena to influence and develop policy. Given the challenges outlined and these dimensions, revisiting current HE practices and thoughts to determine how well HE has adapted is suggested. Use of a world café method will guide reflection and discussion to promote innovative ideas (Brown & Isaacs, 2005) about general perspectives on national and global HE issues related to the HE dimensions of practice to identify the gaps and strategies to strengthen: (a) the academic discipline in terms of (i) teacher education, (ii) addressing the gap between HE education and content information and expertise; (iii) professional</p>

socialisation; (iv) curriculum structures/standards; and (v) research; (b) SDG-informed everyday living in households, families and communities; (c) a curriculum area that facilitates student (learner) capacity to address (i) socio-cultural values/indigenous knowledge systems (ii) poverty and (iii) SDGs; (d) a societal arena to influence and develop policy impacting: (i) national initiatives and (ii) public relations campaigns. These discussions will lead to the gap identification, prioritization, strategies, and actions that will strengthen the HE identity and dimensions of practice to address current challenges HE confronts.

Human & Political Systems Workshop 3

EMPEY, Cheryl – Brigham Young University - Idaho

RYDALCH, Lola

Teaching Textile Skills Through the “Fiber to Finish” Project at BYU-Idaho

In the U.S., textile skills are not being taught in the home as they once were. Many college students do not realize what is involved in the production, construction, and distribution of textiles. At BYU-Idaho we have an outstanding Apparel Construction program. We teach basic and advanced sewing construction as well as the latest CAD program for creating a clothing line. Textiles Science is one course that provides students with an understanding of the Textile Complex and nurtures an appreciation for acquiring textile skills. These skills are taught and practices through the “fiber to finish” project. The student engages with the raw fiber, spins it, ply’s it, knits and then dyes it. This practice allows the student to learn textile skills in stages as they study about the textile industry and the challenges of sustainability that exist in it today. It opens their minds to what has been and what could be more sustainable resources in the future. Participants will have a hands-on opportunity to card, spin, ply, knit and dye fiber. They will also be allowed time to share what textile skills are commonly taught in their own countries. A discussion will be facilitated as to how resources are being managed globally.

HOUGH, Twyla – Texas Tech University

MILLER, Cynthia

Preparing Youth for Productive Employment through Work-Based Learning in Home Economics

Work-based learning (WBL) is vocational education and training that directly connects students to employers. When integrated into home economics/family and consumer sciences courses, youth have the opportunity to develop “knowledge and skills for decent work and life” (UNESCO, 2014, p. 3). Such employment training and development is integral to achieving the United Nations’ Sustainable Development Goal 8, which is to “promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all” (United Nations, 2020, p. 10). Given that 22% of youth worldwide were not employed or involved in formal education or training in 2019 (United Nations, 2020), integrating work-based learning into general education and home economics education is pertinent to accomplishing goal 8. When approached strategically, WBL options vary from simple employer-engagement activities, such as guest speakers, virtual tours, and career videos, to more nuanced and extended learning activities, such as internships, apprenticeships, and service learning. In this session, we will discuss a continuum of WBL opportunities that include four levels of career development: awareness, exploration, preparation, and training. We will emphasize the early development stages (awareness and exploration) because these WBL activities require less time and financial resources to facilitate. Additionally, we will engage participants in an interactive discussion about common barriers (e.g., access), challenges (e.g., risk management, finances, institutional support), and solutions to planning, implementing, assessing, and sustaining high-quality, equitable, and educational WBL opportunities. By sharing best practices for providing WBL opportunities

through home economics and family and consumer sciences, we support the IFHE World Congress Model in the context of Economic Systems (labor), Human and Political Systems (education), and Human Impact (youth).

*UNESCO, 2014 - <http://www.unesco.org/new/fileadmin/MULTIMEDIA/FIELD/Santiago/pdf/Muscat-Agreement-ENG.pdf>

*UN, 2020 - <https://unstats.un.org/sdgs/files/report/2020/secretary-general-sdg-report-2020--EN.pdf>

Human & Political Systems Workshop 4

KISHI, Noriko – University of Teacher Education Fukuoka

ARAI, Noriko; IMOTO, Rie; SUZUKI, Mayuko; MCSWEENEY, Kathryn; KUUSISAARI, Hanna

Lesson Studies for Responsible Living and Consumption in Home Economics Education: A Case Study on the Japanese Middle School

Aims: It is essential to improve the curriculum and practice of teaching responsible consumption in school education. In-service training of teachers is an important method of enhancing Home Economics classes, in terms of both pedagogy and content. Lesson study is recognized internationally as one of the initiatives to improve the effectiveness of classes. The purpose of the workshop is to examine the methods, and possibilities, of lesson study by having participants observe and discuss of the Japanese Home Economics class; this is an important part of collaborative lesson study. School teachers, supervisors, and researchers who are in charge of Home Economics education and teacher training are most welcome to the workshop. This 90-minutes workshop relates with the impact of Home Economics education on sustainability practices.

Methods: For this workshop, the research group members conduct the lesson study model that nurtures students to be responsible consumers. In the workshop, the participants will first observe the Japanese Home Economics class by watching a DVD. Post that, we will have a group discussion on the lesson and share ideas to improve the lesson. All members will reflect on the discussion and share a common understanding of the value of classes and directions for improvement.

Expected results: Through discussions based on the actual lesson, you will be able to clarify issues surrounding lesson design and understand the method of collaborative lesson improvement through lesson observation and discussion. Participants will be able to apply their own views and teaching skills for Home Economics education. This workshop will also pursue international collaborations for lesson studies in the future.

Human & Political Systems Workshop 5

HOUY, Gencie – Texas Tech University

Incorporating STEM Practices into the Family and Consumer Sciences Education Field

Participants will learn and experience how to incorporate research-based STEM (Science, Technology, Engineering, Math) strategies into the Family and Consumer Sciences education field. Examples include utilizing the principles and elements of design in STEM, supporting career-based student projects, collaborating with teachers across the STEM curriculum, and exposure to hands-on project-based activities to be incorporated into the classroom or educational field.

MILLER, Cynthia – Texas Tech University

Creating Globally Competent Home Economics Teacher Preparation Programs to Enhance Sustainability

Objectives: 1. Define global competence and explain its importance in increasing the sustainability of Home Economics teacher preparation programs. 2. Prepare future Home Economics educators with

the global competencies needed to effectively embed global perspectives and issues into their curriculum. 3. Introduce new project management tools available that increase student engagement and ownership in developing creative and thought-provoking projects related to global Home Economics perspectives and issues. 4. Discuss strategies for partnering with Home Economics educators in other countries to coordinate global curricular projects and/or study abroad projects.

Description: This workshop will demonstrate how to implement various globally competent education activities and resources designed to help Home Economics teacher preparation programs integrate global competence into their curriculum and increase their sustainability. The resources include sample projects ready to be used in Home Economics teacher preparation courses, global career planning resources, global workforce readiness rubrics, crosswalks of global education and national/international Home Economics standards, and more. Further, participants will have access to an online LiveBinder of globally competent teacher education resources.

Expected Outcomes: 1. Preparing future Home Economics teachers to integrate global competence into their thinking and teaching; 2. Developing the skills, knowledge, and dispositions to help future Home Economics teachers acquire the perspectives necessary for their roles in a globally interconnected world that is a requisite for successful teaching today; 3. Equipping future Home Economics teachers with the project management skills to make them competent in creating relevant and impactful projects on global issues related to Home Economics; and 4. Establishing new global partnerships in developing Home Economics curricular and/or study abroad projects.

Human & Political Systems Workshop 6

SWIERK, Marilyn

Sustainable Development Requires the Key Steps in Partnership Development

OBJECTIVES to define partnerships, the importance of home economics engagement in partnerships achieve the Sustainable Developmental Goals (SDG), list the advantages of partnerships, explore potential partners for home economics, and to provide basic partnership development steps.

THE SPEAKER is an international/national speaker, author and consultant, an FCS legend, former AAFCS president, and former AAFCS National teacher of the Year with specific expertise in motivational keynotes for home economics, education, brain development, service learning and partnership development.

DESCRIPTION: Home economics professionals throughout the world play a vital role in empowering families for a sustainable society by using research and a systemic approach, We must become empowered with the tools for developing, strengthening and retaining partnerships to successfully achieve the SDG.

A comprehensive description of varied and viable partnerships, their advantages and the visibility they provide for our field will be explored along with partnership opportunities related to human and political systems. Examples of partners related to achieving Goal 1 Poverty-workshops on savings and budgeting for low income families with local banks, schools, churches, or civic groups as partners.

Goal 2-Zero Hunger-Workshops, instructional materials, and posters with food banks, Community Action Programs, or schools as partners.

The basic steps in partnership development use the acronym P-A-R-C-A. as it is easy to remember: PREPARATION, ACTION, CELEBRATION, and ASESSMENT.

The EXPECTED OUTCOMES

Participants will be able to: define viable partnerships, their advantages and their importance for home economics in achieving the sustainable goals, investigate potential partners, network with

potential partners at the Congress, utilize the PARCA guidelines to achieve the Sustainable Developmental Goals.

MYERS, Lori – The American Association of Family and Consumer Sciences

BOWERS, Jan; BERGH, Karen

Best Practices and Strategies for Educator Recruitment, Preparation, and Retention: A National Model

The demand for classroom teachers is far greater than the supply of individuals entering educator preparation programs and the classroom. The shortage increasingly results in educator positions going unfilled or being filled with unqualified individuals. Shortages of educators and those enrolled in educator preparation programs too often result in program closures. When programs are closed, the future of the profession is in jeopardy. What should be done about recruiting, preparing, and supporting Family and Consumer Sciences/Home Economics teachers? Is it possible to be innovative and collaborative in an approach to resolve the issue? The answer is YES! This session highlights a national, collaborative project that offers a model for countries, states, and local school/community programs to address the educator shortage. To accomplish this project, stakeholders demonstrated experience in effective communication, problem solving, self-management, teamwork, professionalism, and leadership. Implementation of the strategic initiatives and practices required interaction among academic institutions that created efficiencies for all stakeholders, expanded recruitment efforts, increased candidate access to information about licensure options and professional content resources, and strengthened the preparation of educators entering the work force. Through federal grant funding and matching funds from two national organizations, the National Partnership to Recruit, Prepare, and Support Family and Consumer Sciences Educators was created. The goal of the Partnership was to increase the number of qualified educators by establishing and facilitating partnerships among multiple stakeholders and organizations. Over a three-year period (2018 -2021), a total of nine projects were implemented. The projects and strategies focused on curriculum, instructional, and marketing resources; educator preparation programs and licensure; scholarship and financial assistance; and professional development. The lessons learned and best practices implemented by the Partnership provide a model for others facing challenges of educator recruitment, preparation, and retention.

Human & Political Systems Workshop 7

VINCENTI, Virginia – The University of Wyoming

DUNCAN, Janine

Living Our Values & Mission: An International Exchange About HE-Related Social Justice Issues—Developing a Home Economics Diplomacy

Home economics (HE) emerged from an historically-situated, ethical foundation with a mission promoting social change. Organized internationally through IFHE (1908), HE professionals around the world began work to improve the quality of life for individuals, families, and communities, while advancing a shared mission of social change within the confines of their own nations' socio-political norms. This resulted in a variety of culturally-referenced practices and perspectives used to address problems shared by citizens around the world. With increased global interdependence, it is critical that HE professional practices are responsive to the strengths of these different norms and practices. Inspired by Bronfenbrenner's biocological model, Hofstede's dimensions of culture (2001), Resnik's Definitions of Key Ethical Concepts (1997; revised by Vincenti, 2002), and other perspectives, the objective of this workshop is to situate the work of HE professionals internationally in these and other theoretical perspectives. Through presentation, discussion, and application of critical thinking and

ethical reasoning strategies in and across break-out groups, participants will locate themselves among colleagues, responsive to shared international perennial, social justice problems. This dialogical process will demonstrate the relevancy of HE as a sustaining force to address social justice issues around the world. Participants will develop a broader appreciation for the diverse perspectives and strategies necessary to solve HE-related issues at the global level. They will recognize that these shared culturally-referenced, socio-politically framed professional practices could be adapted and used to better engage citizens locally. We will facilitate and encourage continuing connections among participants, sparking international collaborations that are fundamentally culturally responsive to local/global advocacy for social change. This will serve as a starting point for an HE diplomacy consistent with our IFHE mission and the UN Sustainable Development Goals.

Human & Political Systems Workshop 8

MAKELA, Carole – Colorado State University

Educating Students for a Sustainable World: A Hands-on Approach.

Since today's teens were born, there are a billion more people on the planet, and significantly more public concern about the health of our global environment. Interesting curricula that addresses these issues and provides opportunities for analysis and problem-solving can engage and empower students. Sustainability education cuts across several disciplines, providing for integrative curriculum that builds critical thinking and process skills in science, social studies and math. Its relevance to Home Economics is rooted in individual actions within the household and community.

In this workshop, participants will discover activities to help students examine their roles as global citizens, especially as it relates to issues of the environment and the sustainability of healthy, educated communities. They will engage in role-playing and cooperative group problem-solving that show the connections between individuals and the global family on issues ranging from climate change, population and food security to family life decisions and gender equity. All of the presented activities relate directly to the U.N. Sustainable Development Goals (SDGs), and one, in particular, explores how the SDGs collectively aim to improve the human condition around the globe.

As a result of participating in this workshop, attendees will learn strategies to foster critical thinking and global awareness on issues that relate to meeting human needs, conserving resources and working toward a more just world. They will also be able to help students understand the evolving realities of human well-being in a world of increasing demand on natural resources and compromised ecosystems. This will include an appreciation of how different local communities are affected by these global changes.

Activities will be followed by discussion about how to best fit these lessons into the Home Economics curriculum. Participants will receive lesson plans and background reading in an electronic format.

SWIERK, Marilyn

Service Learning: An Integrative Approach to Assist in Achieving the Sustainable Development Goals (SDG)

OBJECTIVES and EXPECTED OUTCOMES: All Participants will be able to describe: Service Learning (SL) and its benefits, how SL showcases home economics skills and visibility locally to globally, the populations that perform and/or receive service, the major components of SL, examples of service activities to assist in the achievement of the IFHE/UN Sustainable Developmental Goals (SDG), and how this would enhance home economics in all parts of the world. Potential service activities will be

shared by participants.

THE SPEAKER is an international/national speaker and trainer, author and consultant, an FCS legend, AAFCS past president, and past National Teacher of the Year with expertise in home economics, education, service learning, partnership development, brain development and motivational keynotes. After researching the various ways service was conducted in educational settings, she authored "A Guide to Service Learning," used by many teachers within, and outside the field. of Home Economics. She also conducts national/international SL training and will share her national user friendly PARCA model that includes the basic steps of Preparation, Action (conducting activities), Reflection, Celebration, Assessment & portfolio development.

DESCRIPTION: Service Learning (SL) is a successful method widely used in the USA utilizing classroom curricula from PreK to adulthood to address the needs of individuals, families and communities. SL has many benefits, involves many populations and can include most systems in the matrix, especially Human and Political systems. SL Activities can easily be integrated into home economics programs/settings worldwide, can play an important role assisting home economics in achieving the SDG, and quite often the recipients of service also become providers!
Sample Activities: Students partner locally to globally to teach foods & nutrition, health & safety, water conservation methods, budgeting and so much more to various populations through skits, story books & posters. Global partnerships in SL and idea sharing in the future will be encouraged. among participants.