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ABSTRACTS

“Home Economics, AI, Values, and Attitudes: Interrogating the Nexus”

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The Integration of Artificial Intelligence (AI) in the Family and Consumer Science Classroom

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Abstract

The Family and Consumer Science (FCS) discipline traditionally focuses on improving the quality of life of families, youth, and the community. It is, however, now embracing the transformative approach of Artificial Intelligence (AI) and how it reshapes education, career paths, and work environments. FCS educators are now recognizing the need to integrate AI into their teaching practices to prepare students for emerging career options and to navigate the world of work. Therefore, this survey research seeks to investigate FCS teachers' use of AI in the teaching and learning environment. Essentially, examining their understanding of the use of AI, their perceptions, and the use of AI as a pedagogical tool/digital tool in the teaching and learning environment. A simple random sampling procedure will be used to select forty (40) FCS teachers across the Caribbean. Data will be collected via a closed-ended questionnaire, and descriptive data analysis will be used to analyze the participants' responses. Preliminary findings indicate that AI enhances students' engagement and motivation, provides valuable data to inform teaching, prepares students for the future, and provides students with valuable 21st century skills. Conclusions and recommendations will be drawn and will serve as a framework for other studies integrating AI in the FCS classroom.

Key Words: *Artificial Intelligence (AI), Family and Consumer Science (FCS), Pedagogical Tool, Digital Tool, Emerging Career Options*



Assessing the Impact of Artificial Intelligence (AI) on Home Economics Practitioners in six Caribbean Territories

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Abstract

The increasing integration of Artificial Intelligence (AI) into various sectors has prompted growing interest in its potential applications within Home Economics. Despite its transformative potential, limited research exists on how AI impacts Home Economics practitioners in the Caribbean context. This study assesses this gap by exploring the extent to which AI influences professional competencies, educational practices, and resource management among Home Economics practitioners across six Caribbean territories. Specifically, the research investigates the integration of AI technologies and practitioners' perceptions of its role in reshaping traditional practices. An exploratory sequential mixed-methods approach was employed, starting with open-ended interviews conducted with 10 practitioners, including educators, industry leaders, and entrepreneurs, followed by a survey targeting a broader group of 100 practitioners selected through purposive sampling. The data were analyzed to identify recurring themes related to AI adoption, skill development, and barriers to implementation. Findings reveal that while AI adoption remains constrained by technological limitations, cultural resistance, and insufficient training opportunities, it holds significant potential for enhancing household efficiency, resource management, and professional development in Home Economics. The study underscores the urgent need for educational reforms that incorporate AI-related competencies into training curricula, ensuring that future practitioners can harness technological advancements effectively. The conclusion reinforces that addressing these challenges and opportunities is crucial for fostering innovation within the field. By bridging the research gap, this study provides valuable insights for policymakers, educators, and practitioners striving to modernize Home Economics in the Caribbean through AI-driven advancements.

Key words: Artificial Intelligence, Home Economics, Caribbean Territories, Professional Development, Technological Innovation.



Exploring Home Economics, Humanness and Spiritual Wellbeing in an AI World

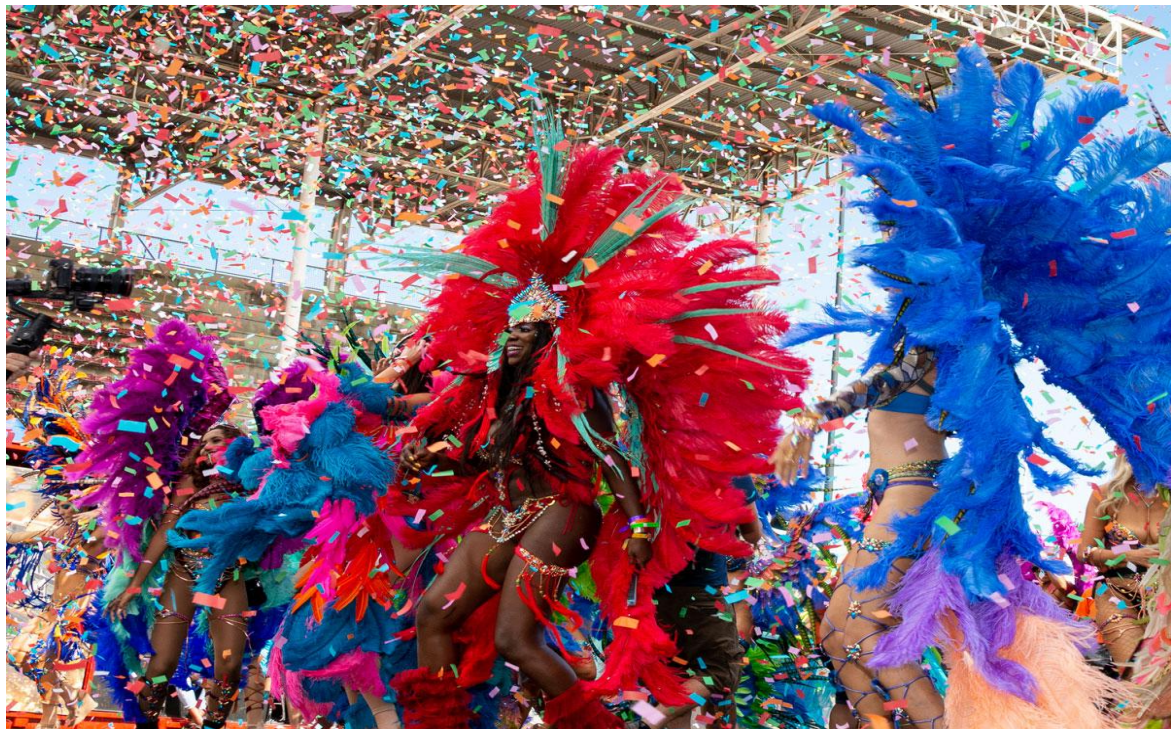
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Abstract

The advent of Artificial Intelligence (AI) excites many, yet it prompts a profound question: what does it mean to be human? Scholars are urging a re-evaluation of our humanness in the context of AI. While some researchers argue that spiritual health and wellbeing are inherently private and unmeasurable, social scientists observe public expressions and social enactments of spirituality within a shared world of meaning.

How does AI perceive human spirituality? Can AI ever “think” of itself as spiritual? Will it achieve consciousness? Until AI can independently think and reason, how do we ensure it learns spiritual ways of being? In this presentation, Dr Jay Deagon will pose more questions than answers, guiding you on a journey of discovery. Home Economics offers a unique opportunity to explore our core values as individuals, educators, community members, and global citizens. These concepts underpin Dr Deagon’s framework for spiritual health and wellbeing in Home Economics. To help the audience identify aspects of Home Economics that contribute to spiritual health and wellbeing, Dr Deagon will demonstrate how to “see” spirituality in our work. This exploration of personal and professional humanness aims to keep humanity central to positive AI futures.

Key words: *Home Economics, humanness, spiritual wellbeing, GenAI*



Investigating Home Economics Teachers' Perspectives on Artificial Intelligence's Effects on Teaching and Learning

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Abstract

Artificial Intelligence (AI), involving tasks such as decision-making, speech recognition, and language translation, has the potential to transform teaching and learning. Its adoption depends on educators' perceptions, preparedness, and willingness to integrate AI. This study addresses a research gap by exploring how home economics teachers perceive AI's educational role.

The study examines teachers' views on AI integration, adoption barriers, and readiness for using AI tools. It also considers AI's impact on curriculum development, teaching methods, and student learning.

Quantitative research design was employed. Data collection involved administering surveys to 100 home economics teachers selected through stratified random sampling. The survey measured teachers' perceptions, levels of AI awareness, and readiness to adopt AI tools. Findings reveal that while teachers see AI's potential to improve teaching and engagement, challenges such as limited training, inadequate technology infrastructure, and job security concerns persist. Teachers with greater AI awareness were more willing to adopt AI tools, emphasizing the need for targeted training and support.

The study highlights the necessity of professional development programs, infrastructure investment, and supportive policies to enable effective AI integration into the education systems, fostering more equitable and innovative learning environments.

Key words: *Artificial Intelligence, Education, Home Economics, Teacher Perceptions, AI Integration, Professional Development, Educational Technology.*



Perceptions and Attitudes towards AI in Home Economics : A Generational Approach

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Abstract

The advent of Artificial Intelligence (AI) in Home Economics has reshaped daily household tasks through the introduction of smart devices, automated systems, and AI-driven solutions. However, generational differences in the adoption and perception of these technologies remain underexplored. This study seeks to examine the varying attitudes towards AI in Home Economics across different generations, with a focus on understanding how each generation perceives AI's benefits, challenges, and risks. Using a mixed-methods approach, including surveys and in-depth interviews, the study will gather data from participants belonging to distinct generational groups - baby boomers, generational X, millennials and generation Z. The research aims to uncover key trends in generational acceptance, such as how younger generations (millennials and gen Z), often more technologically adept, display greater comfort and enthusiasm towards AI adoption compared to older generations (baby boomers and gen X), who may express skepticism due to concerns over privacy, security and the potential erosion of human oversight in domestic tasks. Additionally, the study will explore how AI influences traditional household roles and responsibilities, such as caregiving, budgeting, and home maintenance, and whether these roles shift differently across generations. By identifying the underlying factors shaping generational attitudes - such as technology literacy, trust in AI, and personal values - the study will provide insights into how AI developers can design more inclusive and adaptable home economics technologies. Moreover, the findings will have implications for policymakers, as they seek to address digital divides and promote equitable access to AI-driven solutions in homes.

Key words: *Artificial Intelligence (AI), Home Economics, digital divide, technological literacy, perceptions and attitudes.*



Aid or Adversary: Perceptions of Artificial Intelligence (AI) among older Jamaicans

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Abstract

This study employs the survey design to explore the experiences of the elderly in their use of artificial intelligence (AI) in daily living in Jamaica. Numerous research from a global perspective advances the role of artificial intelligence in facilitating medical, conversational and assistive technologies Zeng, J., et al. (2023); Kaur, S., et al. (2023); Liu, Y., et al. (2022) & Esteva, A., et al. (2021), yet there is limited information on how older adults in Jamaica “perceive and experience current AI-enabled everyday technologies in general, which could impact their adoption of future AI-enabled products and services” (Shandilya & Fan, 2022. P. 105). This study will replicate work done by Shandilya and Fan (2022) which investigated older adults’ perceptions and challenges encountered using AI-enabled technologies, inclusive of but not limited to, customer service chatbots, personal finance, social network, search engines, navigational application, and voice assistance. Questionnaires and semi-structured interviews will be used to collect data concurrently. Frequency distribution and thematic analysis will be used to analyze the data. The findings could inform local home economics association’s contribution to empowering older adults’ experiences in using AI and developing their competence and comfort with AI. Further, the study will provide evidence that the National Council for Senior Citizens (NCSC) can use to support policy for the elderly population. It will extend research into the use of AI among the older population in developing countries.

Key words: *Artificial Intelligence, technology, older adults, lived experience, Jamaica*



Practical Applications of Large Language Models (LLMs) in Enhancing Instruction and Student Engagement in Teaching

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Abstract

As AI technologies become increasingly accessible, educators have new opportunities to enhance their teaching methods and provide more personalized learning experiences for their students. The purpose of this presentation is to explore the practical ways in which teachers can leverage the large language model AI (LLMs) to enhance their instructional practices and improve student learning outcomes. This presentation examines five key areas where teachers can effectively integrate LLMs into their daily practice. These areas include: Lesson Planning and Content Generation; Using LLMs to brainstorm ideas, create outlines, and develop diverse instructional materials; Differentiated Instruction: Employing LLMs to generate varied examples, explanations, and practice exercises tailored to different learning levels and styles; Formative Assessment: Utilizing LLMs to create quizzes, discussion prompts, and open-ended questions that assess student understanding; Writing Support: Assisting students in the writing process by providing feedback, suggesting improvements, and offering writing prompts; and Language Learning; Supporting language acquisition through conversation practice, vocabulary expansion, and grammar explanations. The researchers demonstrate how LLMs can be effectively integrated into the classroom. The study also identifies challenges, including the need for critical evaluation of AI-generated content, strategies for maintaining academic integrity, and the importance of balancing AI assistance with human instruction. Practical guidelines for addressing these challenges and maximizing the benefits of LLMs in teaching are discussed. The educators will gain valuable insights to help them integrate AI into their teaching practice. In conclusion, a framework for effective implementation including long-term impacts on teacher workload and student learning outcomes are discussed.

Key words: *Large Language Models (LLMs) in education, AI-assisted teaching, instructional technology, personalized learning, teacher productivity*



Research Title: Threats or Opportunities: Integrating Generative Artificial Intelligence (Gen AI) in the Human Ecology Teacher Training Classroom

Elaine Brown-Taylor et al. Church Teachers' College: Mandeville, Jamaica

Abstract

Though there is a lack of research on the application of Generative AI tools in tertiary education, there is a definite interest and enthusiasm toward its inclusion in pedagogy (Fern, 2024). This research investigates the integration of generative artificial intelligence (GenAI) in home economics education within the teacher training Human Ecology curriculum at two Jamaican teacher training institutions, specifically measuring its impact through classroom use, integration methods, and user perceptions. Using a sequential explanatory mixed-methods approach, the study examined lecturers' and pre-service teachers' experiences through structured surveys followed by semi-structured, open-ended interviews with purposive sampling of 75 participants (67 pre-service teachers and eight lecturers).

The study was guided by three research questions examining (1) potential threats of GenAI in developing pre-service teachers' life skills, (2) strategies for lecturers to address these threats, and (3) ways GenAI enhances pre-service teachers' learning outcomes. Addressing these questions directly, findings revealed: (1) Pre-service teachers identified significant threats to critical thinking and authentic learning experiences, while lecturers expressed concerns about academic integrity; (2) Lecturers developed responsive strategies, including modified assessment methods and clear usage guidelines to address these threats; and (3) majority of the pre-service teachers reported enhanced understanding of complex concepts, with most also indicating improved learning outcomes through GenAI integration.

Based on these findings, key recommendations include implementing structured training programs for lecturers, developing clear institutional policies on GenAI use, and creating balanced assessment methods that incorporate both traditional and AI-enhanced approaches. This research contributes to the discourse on GenAI in tertiary education by providing empirical evidence of both opportunities and challenges in Human Ecology education, emphasizing the need for a balanced approach that leverages technological advancements while preserving essential human-centred teaching elements.

Key words: Generative Artificial Intelligence, Home Economics, Human Ecology, Teacher Training

Using AI Tools to Conduct Effective Interviews

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Abstract

Effective interviewing, especially when it involves a prominent figure, is a crucial skill for students. In this context, Artificial Intelligence (AI) emerges as a unique and valuable tool. It significantly enhances the preparation, execution, and post-interview analysis, making the process more efficient and insightful. The interview project was designed to facilitate student awareness of individuals of African descent who have/are contributing to the profession of Home Economics, chronicling their backgrounds and career history. Students selected professionals based on their interests or those that parallel their career interests. The experiential learning opportunity, with the help of AI, provided legitimacy and made a positive affirmation and acknowledgment for individuals of African descent whose contributions needed to be consistently recognized, fostering a culture of inclusivity and respect. Key educational strategies encompass AI-powered research tools for gathering relevant background information about the interviewee, natural language processing (NLP) systems for formulating insightful questions, and machine learning algorithms for analyzing interview responses. However, the unique contribution of AI lies in refining students' communication skills. It provides real-time feedback on tone, pacing, and body language, thereby enhancing their overall interview performance. The integration of these AI strategies not only streamlines the preparation process but also fosters more effective student-interviewee interactions, thereby improving the quality of the interview and the learning experience. The presentation discusses the potential applications of AI in education, offers practical and straightforward recommendations for implementation, and explores the ethical considerations surrounding the use of AI in student-led interviews. These practical recommendations are designed to reassure and instill confidence in educators, students, and professionals interested in educational technology and interviewing skills about their ability to apply these strategies effectively.

Key Words: *Interviewing Techniques, Artificial Intelligence*



Artificial Intelligence powering Clothing, Textiles and Fashion

Cassandra Dickerson, Morgan State University, United States of America

Poster Title: *Where Do We Fit? The use of AI/AR in the apparel design industry to address fit bias for African Americans (AA).*

Abstract

Introduction

Experienced designers and patternmakers are still needed for appropriate pattern design and apparel fit (Nayak & Padhye, 2018). The potential use of Artificial Intelligence (AI) can be used to predict certain pattern features with 3D Body measurements. However, AI should be more appropriately used for inclusivity of all body types.

Problem

For more than forty years, size standards for African Americans have been grouped together with other ethnic and racial categories. AA participants were measured at MSU for the Size North America project. A determination should be made for how this group is categorized in Humanetics size tables and Avatars.

Approach/Procedure

A comparative analysis will identify key measurement variables and metrics used by Humanetics (formerly known as Human Solutions) to evaluate their size tables and 3D Avatars. Data will be visualized for clarity, specifically the Curvy women size measurements (See Fig. 1). Clear comparative frameworks will be established to compare this data with the data collected during the Size North America research at Morgan State University (MSU) in 2018. Data will be evaluated and criteria scored for curvy measurements identified. IRB will be updated. New participants meeting Humanetics' established measurements may be recruited and measured using a 3D Body scanner and a Gerber 3D Avatar (MSU) to be created for further analysis.

Discussion

This comparative study will evidence how data of the AA body type is used in anthropometric software platforms and algorithms. It will challenge, where necessary, the inappropriate use of such data, and spur need for accurate representation of size for AA. It will also determine how AI/AR can more specifically add to this needed research area.

Future Work

MSU and Humanetics will continue to work together to provide the most up-to-date and realistic representation of the AA consumer. Further analysis and fit data collection will ensure a consistent basis for size table and digital avatars for this population.

References

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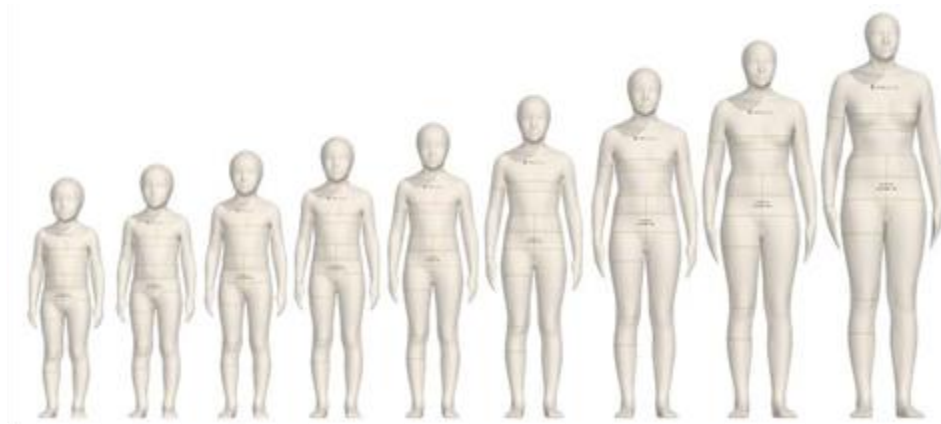


Fig. 1. Avatars established by Humanetics after Size North America data collection

Available 3D avatars and size tables includes:

- Women: Sizes 8–30 (straight, curvy)
- Men: Sizes 34–56 (short, regular, tall)
- Girls: Sizes 6–20 (slim, regular, plus)
- Boys: Sizes 6–20 (slim, regular, husky)
- Babies & Toddlers (unisex): Sizes Premie–5T

Artificial Intelligence powering Clothing, Textiles and Fashion

Cassandra Dickerson, Morgan State University, United States of America

Abstract

The process used to define size chart measurements has been universally applied across all ethnic groups for decades. The purpose of this study was to identify and compile body shape categories predominant among African American females through 3D Body Scan technology. U.S. pattern companies have kept the same size measurements for over 50 years. Throughout the history of both the women's ready-to-wear and home sewing industries in the U.S., the basis used for what is considered "standard", "average" or even traditional has been one group. The participants in this study were 539 African Americans, (225 males, 314 females; 6-75 years). They were predominantly students from Morgan State University in Baltimore, Md., in partnership with the Human Solutions (HSNA), Size North America project. Our goal: to capture the size dimensions of as many local African Americans as possible. Participants completed a consent form, an intake survey, including basic demographic, geographic, income, and shopping preferences. Participants were also manually measured for standing height, sitting height, head girth and upper arm girth. A full body image was captured in approximately 6-8 seconds. Four scanning positions were taken: 3 standing; 1 seated. A k-Means Cluster Analysis was used to find the classes from the data. Cluster analysis identified three sets of female shape clusters. The number of clusters used were: five, six and seven. In a bi-plot, six clusters were selected. This initial study identified homogeneous groups of African American, female somatotypes. Further research will examine additional body shapes within the population. Further morphotype analysis will allow the categories to emerge naturally from the data and identify more shape categories.(Olds, 2013). Future work will also continue the analysis of standard body shapes and measurements used for the African American female in the apparel industry.

Keys Words: *3D Bodyscanning, body shapes, standard measurements, ASTM*

Artificial Intelligence (AI) as Co-intelligence Partner in Teaching and Research in Home Economics Education

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Abstract

The integration of artificial intelligence (AI) in higher education is transforming traditional disciplines, and home economics is no exception. The purpose of this symposium is to explore the concept of "AI as Co-intelligence" in home economics education and research. It will focus on how AI can enhance human expertise to improve teaching methodologies and research practices in the field of home economics. The researchers will examine AI's potential to revolutionize home economics education and research across its diverse subfields. Key areas of discussion include AI-enhanced teaching methods for practical skills, AI-assisted research and the ethical implications of AI integration in home economics curricula. The participants will: Explore innovative applications of AI in home economics curriculum design and delivery; Discuss strategies for human-AI collaboration in teaching and research; Address ethical considerations in using AI; Examine how AI is reshaping the roles of home economics educators and researchers and Investigate AI's impact on student engagement and learning outcomes in practical and theoretical aspects of home economics. Additionally, this symposium aims to provide a platform for home economics educators, researchers, and industry professionals to collaboratively shape the future of discipline. By fostering dialogue between diverse stakeholders, we seek to develop best practices for leveraging AI's potential while preserving the essential human elements of home economics education. Participants will gain insights into cutting-edge AI applications in home economics, engage in critical discussions about the field's future, and contribute to shaping policies that govern AI use in home economics programs. Thus, the researchers envision a future where human expertise and artificial intelligence synergize to advance home economics education and research.

Key words; *Artificial Intelligence (AI), Co-Intelligence, Teaching, Research, Home Economics Education*

Comprehensive Ethical Consideration in AI Education for Children Ages 5-14

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Abstract

Introduction:

Understanding artificial intelligence (AI) has become increasingly important for children in today's rapidly evolving world. This paper outlines a one-year comprehensive AI education program for children aged 5-14 with the Y in Central Maryland. The program will cover the fundamentals of AI but also emphasize ethical considerations and practical applications of AI in Family and Consumer Sciences, including child development and interior design.

Program Objectives:

1. The fundamentals of AI will be introduced to children in a fun and engaging manner suitable for their age group.
2. Ethics of AI will foster an understanding of ethical considerations related to AI.
3. Integration with Family and Consumer Sciences demonstrates that AI will enhance learning and understanding in areas such as nutrition and interior design
4. Hands-on Activities will provide opportunities for children to apply AI concepts through creative projects using collaborative learning.
5. Parental involvement: Resources will be provided to support children's AI education at home during the learning process.

Program Components:

1. Curriculum Development will design a comprehensive curriculum covering AI fundamentals, ethics, and applications in Family and Consumer Sciences. It will also develop age-appropriate learning materials, activities, and resources.
2. Hands-on projects will be organized where children can apply AI concepts to solve real-world problems. Examples include designing AI-powered meal planners, creating virtual interior design simulations,
3. Guest Speakers and Field Trips: Invite guest speakers and field trips of AI-related industries to share insights and experiences with children.
4. Parent workshops will offer informational sessions to parents to support their children's AI learning at home.
5. Assessment and Feedback will be Implemented regularly to evaluate children's understanding of AI concepts and their application in family and consumer sciences.

