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Sustainability-Oriented Home Economics Instruction and Circular Consumption Education Among Public Elementary School Teachers

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ABSTRACT

This study was anchored on the increasing need to integrate sustainability into practical classroom learning, particularly in Home Economics instruction among public elementary school teachers in the City of Ilagan, Isabela. It determined the extent of sustainability-oriented instructional practices, assessed the level of circular consumption education, and tested the relationship between the two constructs. A quantitative non-experimental design using a descriptive-correlational approach was employed. Data were gathered through a validated and reliable researcher-made questionnaire administered to selected public elementary school teachers. Descriptive statistics such as weighted mean and standard deviation were used to describe the variables, while Spearman's rank-order correlation and ordinal logistic regression were applied to examine association and predictive influence. The findings revealed that teachers manifested a very high extent of sustainability-oriented Home Economics instruction and a very high level of circular consumption education. A strong and statistically significant positive relationship was found between the two variables, indicating that teachers with stronger sustainability-oriented instructional practices also demonstrated higher promotion of circular consumption education. Regression analysis further showed that the instructional dimensions significantly predicted circular consumption education, with integration of sustainability concepts in lesson delivery emerging as the strongest predictor. The study concluded that sustainability-oriented Home Economics instruction played a vital role in strengthening circular consumption education among teachers. It was recommended that schools further reinforce sustainability-driven pedagogies through contextualized materials, professional support, and classroom practices that cultivate responsible and circular patterns of consumption.

Keywords: *sustainability education, Home Economics instruction, circular consumption education, public elementary school teachers, instructional practices*

INTRODUCTION

Sustainability has become one of the most urgent educational concerns of the present time because schools are increasingly expected to prepare learners not only for academic success, but also for responsible living in a world affected by climate change, resource depletion, waste generation, and ecological imbalance. In response to these realities, Education for Sustainable Development has been advanced as a framework that helps learners acquire the knowledge, values, skills, and attitudes needed to make informed decisions and act responsibly for environmental integrity, economic viability, and social well-being.

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UNESCO emphasized that education must help individuals address complex issues such as overuse of resources, biodiversity loss, and inequality, while also developing the capacity to participate in more sustainable futures (UNESCO, 2020, 2026). This global direction suggests that sustainability should not remain an abstract concept in policy documents, but should instead be translated into concrete classroom instruction through subjects that directly connect with everyday life.

One of the most relevant sustainability perspectives in contemporary education is the idea of circularity or circular consumption. Unlike the traditional linear model of take, make, and discard, a circular approach encourages the reduction of waste, prolonged use of products and materials, reuse, repair, regeneration, and more thoughtful patterns of household and community consumption. The Ellen MacArthur Foundation explained that a circular economy is built on the principles of eliminating waste and pollution, circulating products and materials at their highest value, and regenerating nature, while UNEP further noted that circularity contributes directly to sustainable consumption and production patterns across the life cycle of goods and services (Ellen MacArthur Foundation, 2026; United Nations Environment Programme [UNEP], 2021). In educational terms, this means that learners should not only understand environmental issues, but also develop practical habits of responsible consumption that can be applied in food use, clothing care, household resource management, and daily decision-making.

Within this perspective, Home Economics instruction occupies a particularly important place because it deals with areas of life where sustainability is actually practiced. Home Economics is closely associated with food preparation, nutrition, clothing and textiles, household management, budgeting, resource use, and everyday living decisions, all of which are directly connected to circular consumption education. Research has shown that teachers in Home Economics recognize the subject as a meaningful platform for integrating sustainable development topics, particularly in the areas of food and living environments. Erjavšek et al. (2021) found that in-service Home Economics teachers viewed the subject as rich in opportunities for sustainability education, although the integration of sustainable topics varied across teaching modules. In a related study, Gisslevik et al. (2018) reported that teachers considered it important to educate the next generation of sustainable food consumers, but they also identified factors that either supported or limited the effective teaching of sustainable food consumption. These findings suggest that while Home Economics is naturally aligned with sustainability goals, actual classroom practice may still depend on teacher readiness, curriculum emphasis, and instructional conditions.

The central role of teachers in sustainability education has also been emphasized in wider educational research. Teachers are not merely transmitters of knowledge. They shape how sustainability is interpreted, localized, and practiced in schools. However, sustainability-related teaching is often difficult to implement consistently because it requires interdisciplinary understanding, suitable materials, contextualized examples, and confidence in handling emerging issues. Hamwy et al. (2023) found that teachers faced moderate to significant challenges in teaching Education for Sustainable Development, with sustainable consumption and production identified as one of the most difficult themes because of limited curriculum coverage and assessment difficulties. At the same time, evidence suggests that school-based environmental education can positively affect learners' knowledge, attitudes, and practices. Jaime et al. (2023) found that environmental education programs produced a sizeable positive effect on children's knowledge, attitudes, and practices related to the consumption and disposal of plastics. This strengthens the argument that teacher-led sustainability instruction in the basic education level can shape meaningful behavior, especially when sustainability concepts are embedded in practical and developmentally appropriate classroom experiences.

The relevance of this concern is clearly reflected in the current basic education agenda in the Philippines. The Department of Education stated that climate change concepts are already integrated across the K to 12 curriculums, including Edukasyong Pantahanan at Pangkabuhayan and Technology and Livelihood Education, and that there remains a need to further strengthen learning competencies and standards related to climate education (Department of Education, 2022). More specifically, the MATATAG

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curriculum for EPP/TLE identifies Education for Sustainable Development, environmental awareness, protection and conservation, and green economy as important cross-cutting concerns in the learning area (Department of Education, 2023). These policy directions indicate that sustainability is no longer peripheral to basic education, but an essential part of preparing learners for contemporary life. Since public elementary school teachers serve as key implementers of these curricular expectations, it becomes necessary to understand how sustainability-oriented Home Economics instruction is being practiced and how circular consumption education is being promoted in actual teaching contexts.

This study becomes timely and relevant because it focuses on public elementary school teachers who are in a position to shape learners' early understanding of responsible household practices, mindful consumption, and sustainable living in the City of Ilagan, Isabela,. While policy frameworks already support the integration of sustainability in the curriculum, there remains a need to examine how these ideas are translated into instruction at the local level, particularly in Home Economics-related teaching. Investigating sustainability-oriented Home Economics instruction and circular consumption education among public elementary school teachers may provide valuable insights into current instructional practices, strengths, and possible gaps that can inform future interventions, teacher support, and curriculum enhancement. In this way, the study does not only respond to global and national sustainability priorities, but also contributes to the improvement of elementary education in a locality where teacher practices can help cultivate a more environmentally responsible and resource-conscious generation.

Literature Review

Sustainability Education as a Foundational Educational Direction

Sustainability education has increasingly been recognized as a major direction in contemporary schooling because education is now expected to prepare learners not only for academic achievement but also for responsible participation in environmental, social, and economic life. UNESCO described Education for Sustainable Development as an approach that helps learners acquire the knowledge, skills, values, and attitudes needed to address complex issues such as climate change, biodiversity loss, overuse of resources, and inequality. This view positions sustainability not as an isolated topic but as a transformative orientation that cuts across subjects, school practices, and everyday decision-making. The literature consistently presents sustainability education as a necessary response to present global realities, especially in contexts where schools are expected to cultivate informed, ethical, and action-oriented citizens (UNESCO, 2020, 2026).

The same body of literature further emphasizes that sustainability education is strongest when it is linked to lived experience. Rather than limiting sustainability to abstract environmental messages, the educational process must connect ecological responsibility with actual household practices, consumer habits, and community life. This is important because sustainable behavior is often formed through repetitive, everyday acts such as conserving resources, reducing waste, choosing reusable materials, and valuing long-term use over instant disposal. In this sense, the educational literature supports the inclusion of sustainability themes in subjects that directly shape practical living, which makes Home Economics especially relevant to the present study (UNESCO, 2020; UNESCO, 2026).

Home Economics as a Strategic Space for Sustainability Instruction

Among school subjects, Home Economics occupies a particularly meaningful place in sustainability education because it deals with food, clothing, household management, budgeting, care work, and resource use, all of which are strongly connected to responsible living. The literature suggests that sustainability is not external to Home Economics but deeply embedded in its content and purpose. In-service teachers themselves have recognized that Home Economics offers many opportunities to teach

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sustainable topics, especially in the areas of nutrition and living environments. Erjavšek et al. (2021) found that teachers saw stronger opportunities for integrating sustainability in food-related and living-environment modules than in economics or textiles, showing that some areas of the subject may more naturally lend themselves to sustainability instruction than others.

This view is reinforced by literature on sustainable food consumption in Home Economics. Gisslevik et al. (2018) reported that Home Economics teachers considered it important to educate the next generation of sustainable food consumers. Their study highlighted that teachers did not question the importance of sustainability in the subject; rather, they pointed to the conditions that either enabled or constrained their teaching. This finding is important because it shows that Home Economics is widely viewed as an appropriate platform for sustainability learning, yet the actual depth and consistency of instruction may depend on pedagogical support, teaching materials, and school conditions.

Circular Consumption Education and Its Relevance to Basic Education

Circular consumption education is rooted in the broader idea of the circular economy, which offers an alternative to the traditional linear pattern of taking resources, producing goods, consuming them, and then discarding them as waste. The Ellen MacArthur Foundation defined the circular economy as a system in which waste is designed out, products and materials are kept in use, and nature is regenerated. UNEP similarly explained that circularity helps promote sustainable consumption and production patterns. In educational terms, this means learners must be guided to think beyond disposal and to understand practices such as reducing, reusing, repairing, repurposing, and extending product life. Such ideas are highly relevant in-Home Economics because household consumption choices are among the most immediate ways people interact with material resources (Ellen MacArthur Foundation, 2024, 2026; United Nations Environment Programme, 2026).

The literature on sustainable consumption also supports the educational value of this approach. Al-Nuaimi et al. (2022), in their review of sustainable consumption and education for sustainability, showed that educational research increasingly treats consumption behavior as something that can be shaped through awareness, values formation, and structured learning experiences. Their review underscores that sustainable consumption is not merely a matter of personal preference but also of educational formation. Likewise, Sahakian et al. (2018) argued that teaching sustainable consumption involves competencies, values, and reflective decision-making, not just information transfer. These ideas are directly relevant to circular consumption education because they frame consumption as a teachable and socially significant domain.

Teacher Capacity and Instructional Readiness for Sustainability

The literature consistently identifies teachers as central actors in sustainability education. Even when policy directions are clear, the quality of implementation depends largely on what teachers know, value, and are able to do in the classroom. UNESCO's ESD for 2030 framework explicitly identifies the building of educator capacities as one of its core priority action areas, which reflects the international recognition that sustainability goals cannot be meaningfully pursued in schools without capable teachers. This indicates that sustainability-oriented instruction is not only a curriculum matter but also a professional capability issue (UNESCO, 2020, 2026).

Research also shows that teacher competence in sustainability involves more than awareness. Ateskan and Lane (2018) demonstrated that professional development in Education for Sustainable Development can strengthen teachers' systems thinking and deepen their ability to handle sustainability-related issues in an integrated way. More recent work by Corres et al. (2024) likewise emphasized that educators perceive specific sustainability-related competences, motivations, and teaching orientations as necessary for quality ESD practice. These studies suggest that sustainability instruction requires teachers to move beyond routine delivery and toward interdisciplinary, reflective, and action-oriented teaching. Applied to Home Economics, this means that public elementary school teachers may need both conceptual

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understanding and practical pedagogical readiness to teach sustainability and circular consumption in meaningful ways.

Challenges in Integrating Sustainability into Teaching

Although the literature strongly supports sustainability education, it also acknowledges that implementation is often uneven and challenging. Teachers may believe in the value of sustainability, yet still face barriers related to curriculum time, lack of resources, limited training, uncertainty in assessment, or weak institutional support. Gisslevik et al. (2018) showed that teachers identified both facilitating and inhibiting conditions when teaching sustainable food consumption, which implies that willingness alone does not guarantee strong implementation. In a similar way, the findings of Erjavšek et al. (2021) suggested that sustainable topics may be integrated more often in some teaching modules than in others, indicating uneven pedagogical confidence and curricular fit across Home Economics content areas.

Broader sustainability teaching literature echoes these concerns. Hamwy et al. (2023) found that teachers encountered moderate to significant challenges in implementing sustainable development-related themes, especially in areas where curriculum coverage and assessment remained difficult. This pattern is important because it reflects a recurring reality in schools: sustainability is often endorsed at the policy level, but its classroom enactment can be limited by practical constraints.

Sustainability Learning, Behavior Formation, and Everyday Practice

A recurring theme in the literature is that sustainability education becomes most meaningful when it shapes actual behavior and not merely knowledge. This is especially relevant to circular consumption education, which is fundamentally concerned with habits of use, care, conservation, and disposal. Research by Jaime et al. (2023) found that school environmental education programs had a positive effect on children's knowledge, attitudes, and practices relating to the consumption and disposal of plastics. This is significant because it shows that school-based teaching can influence practical behavior, particularly when environmental content is presented in understandable and action-oriented ways.

Related studies also suggest that schools can influence learners' action competence and social agency in sustainability. Kosta et al. (2025) reported that primary educators were generally positive toward teaching-learning related to sustainability and circular economy, while also emphasizing the need for more systematic inclusion and teacher support. These studies support the idea that sustainability and circularity should be introduced early and meaningfully, and that teachers can serve as key mediators between environmental concepts and everyday practice.

Philippine Curriculum and Policy Support for Sustainability-Oriented Instruction

In the Philippine setting, the movement toward sustainability education is supported by curriculum and policy directions. The Department of Education has stated that climate change concepts are integrated across the K to 12 curriculum and has acknowledged the need to further strengthen climate and sustainability learning standards. In the MATATAG curriculum materials for EPP and TLE, sustainability-related concerns such as environmental awareness, protection and conservation, and Education for Sustainable Development are explicitly included as cross-cutting ideas within the learning area. This is important because it shows that sustainability-oriented instruction is not detached from basic education policy but is already recognized within curricular reform efforts (Department of Education, 2022, 2023).

This policy context is especially relevant to the present study because public elementary school teachers in the City of Ilagan, Isabela are among those expected to translate broad curricular goals into classroom practice. Since Home Economics-related learning in EPP involves practical life skills and household-oriented competencies, it offers a logical setting for introducing sustainability and circular consumption concepts. The literature and policy documents together suggest that there is now both a curricular basis and an educational need for sustainability-oriented Home Economics instruction. What

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remains important is to understand how these directions are actually carried into teaching practice among elementary school teachers in local contexts (Department of Education, 2023; UNESCO, 2020).

METHODS

Research Design

This study used a quantitative, non-experimental research design, specifically employing a descriptive-correlational approach. The descriptive component was utilized to determine the extent of sustainability-oriented Home Economics instruction and the level of circular consumption education among public elementary school teachers. This approach made it possible to present a clear picture of how sustainability-related instructional practices and circular consumption concepts were manifested in the teaching context. The correlational component, on the other hand, was applied to examine whether a statistically significant relationship existed between sustainability-oriented Home Economics instruction and circular consumption education. This design was considered appropriate because the study intended to describe existing conditions and analyze the association between the two major variables without manipulating any aspect of the natural school setting.

Research Locale

The study was conducted in selected public elementary schools in the City of Ilagan, Isabela. The locale was considered suitable because the city represents an educational setting where public elementary school teachers are expected to implement learning competencies connected with practical life skills, environmental awareness, and responsible resource use. As sustainability has become an important concern in educational practice, the City of Ilagan provided a relevant context for examining how Home Economics instruction reflected sustainability-oriented principles and how circular consumption education was promoted among teachers in basic education. The accessibility of schools, the presence of teachers handling learning areas related to Home Economics, and the relevance of the setting to the study objectives further justified the choice of locale.

Participants and Sampling Technique

The participants of the study were public elementary school teachers assigned to teach learning competencies related to Home Economics and practical household education in the selected schools of the City of Ilagan, Isabela. Simple random sampling was employed in selecting the participants. This technique gave every qualified teacher from the identified target population an equal chance of being included in the study. The list of eligible teachers served as the sampling frame, from which the participants were randomly selected. This method was considered appropriate because it minimized selection bias, promoted fairness in the selection process, and allowed the study to gather responses that reasonably represented the views and practices of public elementary school teachers handling Home Economics-related instruction.

Research Instrument

Data were gathered through a researcher-made structured questionnaire designed specifically for the study. The instrument was composed of two major parts corresponding to the central variables: sustainability-oriented Home Economics instruction and circular consumption education. The first part measured instructional practices related to the integration of sustainability concepts in Home Economics teaching, while the second part assessed the extent to which circular consumption education was reflected in teachers' educational practices, perspectives, and classroom-related guidance.

To establish content validity, the questionnaire was submitted to a panel of experts composed of specialists in educational management, Home Economics education, and research methodology. Their

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comments and recommendations were used to refine the wording, relevance, clarity, and alignment of the items with the study objectives. The instrument obtained a Scale-Level Content Validity Index (S-CVI) of 0.94, indicating that the items were highly valid and suitable for data collection.

Before the actual administration, the questionnaire was pilot tested among teachers with characteristics similar to the target participants but who were not included in the final study. The responses were subjected to internal consistency testing using Cronbach's alpha. The sustainability-oriented Home Economics instruction scale obtained a Cronbach's alpha of 0.91, while the circular consumption education scale registered a Cronbach's alpha of 0.89. The overall instrument yielded a Cronbach's alpha of 0.90, which indicated high reliability and confirmed that the instrument was dependable for use in the study.

Data Gathering

The conduct of the study began with the preparation of a formal letter addressed to the appropriate education authorities and school heads requesting permission to administer the instrument in the selected public elementary schools. Upon approval, the researcher coordinated with school administrators for the schedule and procedure of questionnaire distribution. Before the actual data collection, the purpose of the study was clearly explained to the participants, and they were informed that their participation was voluntary. Copies of the validated questionnaire were then distributed personally or through coordinated school arrangements. The participants were given adequate time to read and answer the instrument carefully. After retrieval, the accomplished questionnaires were checked for completeness, organized systematically, and prepared for coding, tabulation, and statistical processing. Great care was taken throughout the process to ensure orderly collection and accurate handling of the responses.

Data Analysis

The data were analyzed using both descriptive and inferential statistical tools. To determine the extent of sustainability-oriented Home Economics instruction and the level of circular consumption education, the weighted mean and standard deviation were used. These measures were appropriate for summarizing teachers' responses and describing the central tendency and variability of the data.

To examine the relationship between the two major variables, Spearman's rank-order correlation coefficient was employed. This statistical treatment was selected because it provided a robust measure of association for data derived from ordinal-scale responses and was suitable for determining the direction and strength of the relationship between the variables. To further determine the predictive contribution of the dimensions of sustainability-oriented Home Economics instruction to circular consumption education, the study also used ordinal logistic regression analysis. This treatment was selected to provide a more refined explanation of how instructional sustainability practices influenced the level of circular consumption education. The use of this method allowed the study not only to identify association but also to estimate the extent to which the independent construct significantly explained variations in the dependent construct. All hypotheses were tested at the 0.05 level of significance.

Ethical Consideration

Ethical standards were carefully observed throughout the conduct of the study. Permission was secured from the concerned authorities before the administration of the research instrument. The participants were informed about the purpose of the study, the nature of their participation, and their right to decline or withdraw at any point without penalty. Informed consent was obtained prior to data collection.

Confidentiality and anonymity were strictly maintained. The questionnaire did not require the disclosure of personal identifiers that could reveal the identity of the participants. All responses were treated with full confidentiality and were used solely for academic and research purposes. The collected data were stored securely and handled only by the researcher. Honesty, transparency, and respect for the rights and welfare of the participants guided the entire research process.

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RESULTS AND DISCUSSION

Table 1. Extent of sustainability-oriented Home Economics instruction among public elementary school teachers

Indicators	M	SD	VI
Integration of sustainability concepts in lesson delivery	4.44	0.48	Very High
Promotion of resource-conscious classroom and household practices	4.38	0.52	Very High
Use of contextualized and practical sustainability activities	4.29	0.56	Very High
Overall	4.37	0.52	Very High

Scale: 4.21 to 5.00, Very High; 3.41 to 4.20, High; 2.61 to 3.40, Moderate; 1.81 to 2.60, Low; 1.00 to 1.80, Very Low.

Table 1 shows that the overall extent of sustainability-oriented Home Economics instruction among public elementary school teachers was very high, with an overall mean of 4.37 and a standard deviation of 0.52. This result indicated that the teachers generally manifested strong sustainability-oriented practices in their Home Economics instruction. Among the three indicators, integration of sustainability concepts in lesson delivery obtained the highest mean of 4.44, suggesting that teachers consistently incorporated ideas related to environmental care, wise use of resources, and responsible household practices in their classroom discussions and learning activities. This implies that sustainability was not treated as a peripheral topic but was meaningfully embedded in the instructional process.

The indicator on promotion of resource-conscious classroom and household practices also received a very high mean of 4.38, indicating that the teachers commonly encouraged practical habits such as minimizing waste, conserving materials, and valuing efficient use of resources. This result suggests that teachers were able to connect sustainability not only to concepts but also to daily actions that learners could understand and apply. Meanwhile, use of contextualized and practical sustainability activities posted the lowest, though still very high, mean of 4.29. This indicates that while teachers widely used sustainability-oriented activities, there was slightly more variation in how such practices were localized or translated into concrete classroom experiences. Overall, the findings suggest that sustainability-oriented Home Economics instruction had already become a strong instructional tendency among the teachers in the study.

Table 2. Level of circular consumption education among public elementary school teachers

Indicators	M	SD	VI
Teaching waste reduction and responsible use of materials	4.46	0.47	Very High
Teaching reuse, repair, and repurposing practices	4.31	0.54	Very High
Teaching mindful purchasing and value retention of goods	4.24	0.58	Very High
Overall	4.34	0.53	Very High

Scale**:** 4.21 to 5.00, Very High; 3.41 to 4.20, High; 2.61 to 3.40, Moderate; 1.81 to 2.60, Low; 1.00 to 1.80, Very Low.

As presented in Table 2, the overall level of circular consumption education was likewise very high, as reflected in the overall mean of 4.34 and standard deviation of 0.53. This revealed that the teachers generally promoted educational practices that encouraged learners to think critically about consumption, use materials more responsibly, and appreciate more sustainable ways of handling household resources. The result suggests that circular consumption education was not weakly represented but was already a visible component of Home Economics-related teaching.

Among the dimensions, teaching waste reduction and responsible use of materials received the highest mean of 4.46, which implies that teachers most strongly emphasized the prevention of waste and the careful use of available resources. This finding may indicate that waste reduction is one of the most familiar and easily teachable aspects of circularity in the elementary school setting. The indicator on teaching reuse, repair, and repurposing practices obtained a very high mean of 4.31, showing that teachers also promoted the idea that materials and products need not be immediately discarded when they can still

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be reused or given alternative value. The lowest mean, though still interpreted as very high, was obtained by teaching mindful purchasing and value retention of goods at 4.24. This suggests that the more decision-oriented aspects of circular consumption, such as thoughtful purchasing and long-term product value, were present but slightly less emphasized than the more direct practices of reducing waste and reusing materials. Even so, the results point to a strong culture of circular consumption education among the respondents.

Table 3. *Relationship between sustainability-oriented Home Economics instruction and circular consumption education*

Variables	Spearman's rho	p-value	Decision	Interpretation
Sustainability-Oriented Home Economics Instruction and Circular Consumption Education	0.73	0.000	Reject Ho	Significant Strong Positive Relationship

Table 3 reveals that the relationship between sustainability-oriented Home Economics instruction and circular consumption education was strong, positive, and statistically significant, with a Spearman's rho of 0.73 and a p-value of 0.000, which was lower than the 0.05 level of significance. This finding led to the rejection of the null hypothesis and indicated that teachers who demonstrated stronger sustainability-oriented instructional practices also tended to exhibit a higher level of circular consumption education.

The strong positive correlation suggests that the two constructs were closely linked in the teaching context. This means that when teachers intentionally integrated sustainability ideas into Home Economics instruction, they also became more likely to promote circular practices such as waste reduction, reuse, repurposing, and mindful consumption. The finding supports the view that circular consumption education is not separate from sustainability-oriented teaching but is one of its practical extensions. In other words, sustainability-oriented Home Economics instruction appeared to function as a meaningful educational pathway through which circular consumption values were reinforced in the classroom. The strength of the correlation also suggests that these two variables moved together in a substantial way, making the association educationally meaningful and not merely statistically significant.

Table 4. *Ordinal logistic regression analysis on the dimensions of sustainability-oriented Home Economics instruction as predictors of circular consumption education*

Predictor	Coefficient Estimate	Standard Error	Wald Chi-Square	p-value	Decision	Interpretation
Integration of sustainability concepts in lesson delivery	1.21	0.29	17.40	0.000	Significant	Predictor
Promotion of resource-conscious classroom and household practices	0.94	0.27	12.11	0.001	Significant	Predictor
Use of contextualized and practical sustainability activities	0.58	0.25	5.38	0.020	Significant	Predictor

Model Summary

Model Fit Indicator	Value
-2 Log Likelihood	118.64
Chi-Square	46.87
p-value	0.000
Nagelkerke Pseudo R^2	0.49

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Table 4 presents the results of the ordinal logistic regression analysis, which examined whether the dimensions of sustainability-oriented Home Economics instruction significantly predicted circular consumption education. The model was statistically significant, as shown by the Chi-Square value of 46.87 and p-value of 0.000, indicating that the predictor variables, taken together, significantly explained variations in the level of circular consumption education. The Nagelkerke Pseudo R^2 of 0.49 further suggests that about 49 percent of the variability in circular consumption education could be accounted for by the combined dimensions of sustainability-oriented Home Economics instruction. This indicates a substantial explanatory contribution of the model.

Among the predictors, integration of sustainability concepts in lesson delivery emerged as the strongest predictor, with a coefficient estimate of 1.21 and a p-value of 0.000. This indicates that when sustainability concepts were more consistently embedded in lesson delivery, the likelihood of having a higher level of circular consumption education also increased significantly. This result implies that conceptual integration in teaching served as the strongest instructional foundation for promoting circularity-related educational outcomes.

The second strongest predictor was promotion of resource-conscious classroom and household practices, which registered a coefficient estimate of 0.94 and a p-value of 0.001. This finding indicates that teachers who more actively encouraged conservation, careful material use, and practical household responsibility were also more likely to promote circular consumption education. This reinforces the idea that everyday resource-awareness practices are directly linked to the broader teaching of circular values.

Lastly, use of contextualized and practical sustainability activities also significantly predicted circular consumption education, with a coefficient estimate of 0.58 and a p-value of 0.020. Although it was the weakest among the three significant predictors, it still contributed meaningfully to the model. This suggests that localized and hands-on sustainability activities remained important in strengthening circular consumption education, even if their predictive influence was somewhat lower than the more conceptually and behaviorally embedded instructional dimensions. The regression findings showed that sustainability-oriented Home Economics instruction did not merely correlate with circular consumption education but also significantly predicted it. The results imply that teachers' instructional orientation toward sustainability played a vital role in shaping the level of circular consumption education in the elementary school context.

CONCLUSION

The public elementary school teachers in the City of Ilagan, Isabela demonstrated a very high extent of sustainability-oriented Home Economics instruction and a very high level of circular consumption education, which indicated that sustainability and circularity had already become strongly evident in their instructional practices. The findings further established that sustainability-oriented Home Economics instruction had a strong and significant positive relationship with circular consumption education, confirming that teachers who more consistently integrated sustainability concepts, promoted resource-conscious habits, and used practical sustainability activities were also more likely to advance circular consumption education in the classroom. Moreover, the regression results revealed that the dimensions of sustainability-oriented instruction significantly predicted circular consumption education, with integration of sustainability concepts in lesson delivery emerging as the strongest predictor. Based on these findings, it was recommended that school administrators and education leaders sustain and strengthen the integration of sustainability concepts in Home Economics instruction through targeted capacity-building activities, contextualized teaching resources, and school-based initiatives that further promote circular consumption values. Teachers may also be encouraged to enrich classroom instruction with more localized, practical, and learner-centered sustainability activities that reinforce waste reduction, reuse, repurposing, and mindful consumption. In addition, curriculum planners and supervisors may continue supporting the inclusion of sustainability and circularity themes in elementary education to deepen their classroom application and long-term educational impact.

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