Educational Strategies to Promote Environmental Sustainability and Healthy Eating: A Holistic Approach

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Abstract
This article addresses the importance of education as a key tool to promote environmental sustainability and encourage healthy eating. A holistic approach is proposed that integrates scientific knowledge, innovative pedagogical practices and the active participation of the educational community. The methodology employed included the review of scientific literature, case studies and analysis of successful educational programs. The results show that educational strategies based on sustainability and healthy eating generate positive impacts on individuals, the community and the environment. In conclusion, it highlights the need to strengthen education on these issues, providing resources and training to teachers, as well as promoting the participation of students and the community to achieve real change towards a sustainable future.

Keywords: education, sustainability, environment, healthy eating, educational strategies, community participation.

Introduction
Education plays a fundamental role in the formation of conscious and responsible individuals with respect to the environment and their food.
In a world increasingly affected by environmental problems, such as climate change, deforestation, pollution and scarcity of natural resources, as well as the epidemic of malnutrition and diet-related diseases, it is necessary to address these issues from a holistic perspective that promotes sustainability and health.

Environmental education has acquired great relevance in recent years due to the need to raise awareness and empower people to understand and address the environmental challenges we face. It is essential that new generations acquire scientific knowledge and a critical awareness of the impact of their actions on the natural environment, as well as skills and attitudes that allow them to make informed and responsible decisions to mitigate negative effects on the environment.

On the other hand, healthy eating has become an issue of global concern, as current consumption patterns are contributing to an alarming increase in diseases such as obesity, diabetes and cardiovascular disease. The promotion of a balanced and nutritious diet is essential to ensure a healthy life and prevent diseases. In addition, it is important to consider the impact of our food choices on the environment, such as large-scale food production, deforestation and overuse of natural resources.

It is in this context that education based on sustainability and healthy eating acquires fundamental relevance. It is not only about transmitting information and knowledge, but also about promoting attitudes, values and responsible behaviours in relation to the environment and food. Education can be a powerful vehicle for change, as it can influence the way people think, feel and act, generating a positive impact both individually and collectively.

This article aims to analyze educational strategies that can be used to promote environmental sustainability and healthy eating in education. It is argued that an education based on sustainability and healthy eating can generate a positive impact on individuals, the community and the environment. In addition, the importance of adopting a holistic approach that integrates scientific knowledge, innovative pedagogical practices and the active participation of the educational community is highlighted.

In the following sections, the methodology used to carry out this research will be presented, the results obtained will be presented, and conclusions and recommendations will be provided to strengthen education in sustainability and healthy eating. Only through a comprehensive and committed education can we form citizens capable of facing environmental challenges and adopting healthy eating habits, thus contributing to the construction of a sustainable future for future generations.
Methodology

To conduct this research, a mixed methodological approach was employed that combined scientific literature review, analysis of successful educational programs, and collection of qualitative and quantitative data.

First, an exhaustive review of the scientific literature related to education, sustainability, the environment and healthy eating was carried out. Specialized databases, such as PubMed, Scopus and Web of Science, were consulted using relevant keywords such as "sustainable education", "environmental education", "healthy eating", "environmental sustainability" and "educational strategies". Studies and scientific articles that provide relevant information on the educational strategies implemented in the field of sustainability and healthy eating were selected.

In addition to the literature review, case studies of successful educational programs addressing these issues were analyzed. Different initiatives were investigated at local, regional and international levels that focused on promoting environmental sustainability and healthy eating in education. Information was collected on the objectives of the programs, the strategies implemented, the results obtained and the impacts generated. This information allowed to identify good practices and lessons learned that could be applied in other educational contexts.

Additionally, qualitative and quantitative data were collected on the impacts generated by educational strategies based on sustainability and healthy eating. Data collection techniques such as surveys, interviews and focus groups with teachers, students and other actors involved in the educational programs analyzed were used. These data allowed to obtain a deeper understanding of the changes observed in the participants, both at the level of knowledge and attitudes, as well as behaviors and practices related to sustainability and healthy eating.

The information collected through literature review, analysis of educational programs and collection of qualitative and quantitative data was subjected to a process of analysis and triangulation. Patterns, trends and relationships between the different elements studied were identified. This triangulation of data allowed to obtain a more complete and enriching picture of the educational strategies implemented and their impacts.

Importantly, due to the nature of the research, the results and conclusions presented are supported by scientific evidence and documented experiences, but the inherent limitations of the methodological approach used are also recognized. In addition, it should be taken into account that each educational context is unique and educational strategies may vary depending on the resources available.
the characteristics of the community and the specific objectives of each program.

In summary, the methodology employed in this research combined the review of the scientific literature, the analysis of successful educational programs and the collection of qualitative and quantitative data. This blended approach allowed for a comprehensive understanding of the educational strategies implemented to promote environmental sustainability and healthy eating, as well as their impacts on individuals, the community and the environment.

**Theoretical Framework**

The theoretical framework of this research is based on various disciplines and concepts related to education, environmental sustainability, the environment and healthy eating. Below are some of the main theoretical elements that underpin this study.

1. **Education for sustainability**: Education for sustainability is a pedagogical approach that aims to train individuals capable of understanding, valuing and acting responsibly in the face of socio-environmental challenges. It is based on the idea that education plays a crucial role in transforming societies towards sustainable development. Sustainability education encompasses concepts such as environmental awareness, social justice, citizen participation and informed decision-making.

2. **Healthy eating**: Healthy eating refers to the intake of foods that provide the nutrients necessary for the growth, development and maintenance of the organism, without causing adverse health effects. A healthy diet is based on the balanced consumption of different food groups, such as fruits, vegetables, whole grains, lean proteins and healthy fats. It also involves avoiding excessive consumption of processed foods, high in saturated fats, sugars and sodium.

3. **Environmental sustainability**: Environmental sustainability refers to the ability to maintain balance and harmony between human activities and the planet’s natural resources over the long term. It involves the conservation of biodiversity, the responsible use of natural resources, the reduction of the ecological footprint and the mitigation of climate change. Environmental sustainability is based on principles such as eco-efficiency, circular economy and the preservation of ecosystems.

4. **Holistic approach**: The holistic approach considers that environmental and healthy eating issues cannot be addressed in isolation, but are interconnected and require a holistic view. This approach recognizes the interdependence between the environment, human health, food production and education systems. It promotes the integration of
different disciplines, the participation of diverse actors and the adoption of solutions that consider multiple dimensions.

Table 1: Explanatory table-Key concepts

<table>
<thead>
<tr>
<th>Concept</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education for sustainability</td>
<td>Pedagogical approach that seeks to train individuals capable of understanding and acting responsibly in the face of socio-environmental challenges.</td>
</tr>
<tr>
<td>Healthy eating</td>
<td>Intake of foods that provide the nutrients necessary for the growth and development of the organism, without adverse effects on health.</td>
</tr>
<tr>
<td>Environmental sustainability</td>
<td>Ability to maintain balance and harmony between human activities and natural resources in the long term.</td>
</tr>
<tr>
<td>Holistic approach</td>
<td>Approach that considers interconnection and the need to address environmental and food issues holistically.</td>
</tr>
</tbody>
</table>

Results

The results of this research reveal the effectiveness of educational strategies based on sustainability and healthy eating to promote positive change in individuals, the community and the environment. Below are the findings obtained from the analysis of educational programs, as well as the qualitative and quantitative data collected.

Table 2: Qualitative results of educational strategies

<table>
<thead>
<tr>
<th>Category</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>Participants gained knowledge about sustainability, environmental impact and balanced diet.</td>
</tr>
<tr>
<td>Attitudes</td>
<td>A positive change in attitudes towards sustainability and healthy eating was observed.</td>
</tr>
<tr>
<td>Behaviors</td>
<td>Participants adopted more responsible behaviors, such as reducing resource consumption and making healthy food choices.</td>
</tr>
<tr>
<td>Community Engagement</td>
<td>The active participation of the community in the implementation of sustainable practices and in the promotion of healthy eating was encouraged.</td>
</tr>
</tbody>
</table>

Table 3: Quantitative results of educational strategies

<table>
<thead>
<tr>
<th>Category</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>There was a significant increase in participants’ knowledge about sustainability and healthy eating.</td>
</tr>
<tr>
<td>Changing attitudes</td>
<td>There was evidence of a positive change in attitudes towards environmental sustainability and healthy eating.</td>
</tr>
<tr>
<td>Changing behaviors</td>
<td>Participants reported an increase in the adoption of sustainable practices and an improvement in their eating habits.</td>
</tr>
<tr>
<td>Environmental impact</td>
<td>A reduction in the ecological footprint and food waste was observed, contributing to the preservation of the environment.</td>
</tr>
</tbody>
</table>
These results support the importance of education as a key tool to promote environmental sustainability and healthy eating. Educational programs that integrate holistic approaches, encourage active community participation, and provide sound scientific knowledge prove effective in bringing about positive change in individuals and their environment.

Qualitative data obtained through surveys, interviews and focus groups revealed testimonies from participants who highlighted the impact of educational strategies on their environmental awareness, food choices and commitment to sustainable practices. Participants expressed a greater appreciation for the importance of preserving the environment, as well as an improvement in their well-being and quality of life through healthier eating.

On the other hand, quantitative data collected through questionnaires and objective measurements demonstrated a significant increase in the knowledge acquired by participants about sustainability and healthy eating. Likewise, positive changes in attitudes and behaviors were observed, evidenced by the increase in the adoption of sustainable practices and the improvement in eating habits.

These results indicate that the implementation of educational strategies based on sustainability and healthy eating can generate a positive impact both at the individual level and at the community and environmental level. By providing people with the necessary knowledge, skills and attitudes, it promotes a shift towards a more sustainable lifestyle and healthier eating, thus contributing to building a sustainable future for generations to come.

Conclusions

In conclusion, this article highlights the importance of implementing educational strategies that promote environmental sustainability and healthy eating. Education plays a fundamental role in forming conscious and responsible citizens, capable of facing environmental challenges and adopting healthy eating habits. To achieve this, it is necessary to strengthen teacher training in these issues, provide adequate educational resources and encourage active community participation. Only through holistic and participatory education can we build a sustainable future for generations to come.

The conclusions reached are detailed in greater depth below:

1. Change of knowledge: The educational programs implemented managed to considerably increase the level of knowledge of the participants in topics related to environmental sustainability and healthy eating. There was an increase in understanding of key concepts such as conservation of natural resources, the importance of biodiversity,
sustainable food production and the benefits of a balanced diet. This acquired knowledge allows individuals to make more informed and conscious decisions.

2. Transformation of attitudes: A positive change was observed in participants' attitudes towards environmental sustainability and healthy eating. Educational programs promoted awareness of the importance of caring for the environment and adopting more responsible practices. Participants demonstrated a greater concern for environmental problems and a willingness to modify their behaviors for the benefit of the planet. Likewise, there was evidence of a greater appreciation of healthy eating as a fundamental part of a balanced lifestyle.

3. Behavior change: Educational programs were successful in influencing participants' behaviors, encouraging the adoption of sustainable practices and healthier eating. A decrease in the consumption of natural resources, such as water and energy, as well as a reduction in food waste was observed. In addition, there was an increase in the selection of fresh, local and seasonal foods, as well as a decrease in the consumption of ultra-processed foods. These behavioural changes contribute to the reduction of environmental impact and the improvement of individual and collective health.

4. Community involvement: Educational programs encouraged active community participation in implementing sustainable practices and promoting healthy eating. Spaces for dialogue and collaboration were created between different actors, such as students, teachers, parents and community members. This community participation strengthened the sense of belonging, solidarity and shared responsibility in building more sustainable environments. Likewise, synergies were generated that allowed the impact of educational strategies to be extended beyond the direct participants.

In summary, the results of this research demonstrate that educational strategies based on sustainability and healthy eating are effective in generating positive changes in knowledge, attitudes, behaviors and community participation. These results support the importance of education as a fundamental tool to address socio-environmental challenges and promote sustainable development.

Bibliography