Green Future as a New Model for Curriculum Development

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Introduction:

Since the Fourth Industrial Revolution, humanity has experienced many advances and challenges that have overtaken the world. There have been and continue to be very serious environmental changes and catastrophic climate events that have put the planet at risk. Therefore, humanity must abandon irresponsible behaviors in dealing with the environment and modify them to achieve peaceful coexistence with all its elements, and man is a friend of the environment.

The Global Risks Report (17th Edition) issued by the World Economic Forum (World Economic Forum, 2022) pointed out ten risks that threaten humanity at the present time and pose major global challenges, including five risks that threaten the environment, namely: Climate action failure, extreme weather events, biodiversity loss, environmental degradation, environmental damage, and natural resource crises (McLennan, et al., 2022). This has required the international community to mobilize various efforts to minimize the damage caused by human activities on Earth.

As an extension of the UN's efforts to help countries move towards a low-carbon economy, the UN coordinated the agreement between (197) countries on 12 December 2015 to create the 'Paris Climate Change Agreement' (COP-21) with the aim of accelerating the transition to clean energy, containing global warming to less than 2°C, significantly reducing greenhouse gas emissions, and striving to keep global warming to no more than (1. 5°C-degree). The Paris Agreement specified that emissions must be reduced by 45% by 2030 and reach zero net emissions by 2050, marking the beginning of a shift towards a low-carbon world.

The First Arab Conference on Climate and Sustainable Development, under the slogan 'Green is Life', was launched in September 2022 on the sidelines of hosting the Sharm El Sheikh/Egypt Conference (COP27) from (7-18) November 2022 to prepare the Framework Convention on Climate Change (FCCC).

Due to the increasing interest and international cooperation to achieve a green future on the planet, 9 December of each year has been set to celebrate World Green Science Day (World Green Science Day). It aims to promote green science in society, bring science closer to the people, and raise awareness of health, economic, food, climate and biological issues to restore environmental balance, reduce global warming, and achieve well-being for humanity (JLASC, 2022).

This international interest has been reflected in the reality and future of education, as the United Nations Decade of Education for Sustainable Development (2005-2014) represents a roadmap for embedding green environmental sustainability in all sectors of education worldwide.

Also, The Council of the European Union recommended that green education should be supported in all European countries and treated as education for social, economic and environmental sustainability, with the aim of shaping a sustainable green future for learners of all ages (Rat der Europäischen Union, 2022).

The novelty of the topic 'green future' at the international level requires careful study of the terminology associated with it. Several studies (Baghdadi, 2022; Leung & Ng, 2019) have indicated that the journey to a green future requires a period of (Transition to green) that begins with making decisions that minimize the depletion of natural resources at all levels and moving towards sustainable energy. The Council of the European Union has also recommended that sustainable development and Go-Green should be considered one of the priorities of policies and educational programs that enhance the competitiveness of the world's countries (Gough, et al., 2020).

The literature (Arthur, 2022; Kardoyo, 2020; Centre for Green Schools, 2010; Sterling, 2001) refers to Green Education as education that seeks to practice sustainability (social, economic and environmental) in a conscious and critical manner. It is therefore a transformative model that recognizes, supports and realizes human potential in relation to the need to achieve and sustain social, economic and environmental well-being. Studies have also considered Green Curricula as a means of developing green skills that the learner must acquire to become a green citizen who preserves the planet by implementing green activities that aim to accelerate the process of going green, increase environmental awareness and strengthen communication in the fields of environmental protection. Green Skills are defined as the skills that people need to apply new sustainable eco-friendly technologies; they express the soft skills and soft skills that individuals need in the workplace. Green curricula are the means of green education to practice sustainability in a conscious and critical way.

Arabic and foreign studies have been conducted to study the roles of green education in schools and curricula, the obstacles to its implementation, and proposals to support it in schools, including: (Mujahid, 2020; Abdullatif, 2021; Ghoneim, 2022) and studies: (Ramli, et al., 2012; Louw, 2013; O'Neill, 2015; Kerlin et al., 2015; Aithal & Rao, 2016; Warju & Soenarto, 2017; Chakraborty, Singh & Roy, 2018).

It is clear from the above that green education is important and must be included in all educational levels and curricula to face the future challenges of global risks in the 21st century. This requires identifying the dimensions of the green future that must be included in the curriculum to ensure the upbringing of green citizens who preserve the planet for future generations so that the inclusion is done in an organized, coherent and harmonious manner that leads to development and facilitates societal transformation towards a green future**.**

Research Problem and Research Questions:

Despite the international agreement on the need to achieve the Sustainable Development Goals (SDGs) by 2030, international follow-up reports issued every four years indicate that the implementation of these policies is still slow and going in the wrong direction in some countries in the areas of: Fighting hunger, inequality, biodiversity and climate change. This requires more innovations, technologies and increased financial support to move towards a green future (United Nations, 2021).

As for Egypt, the Global Green Economy Index (GGEI, 2022) measures national sustainability performance in its four main dimensions (leadership and climate change, sector efficiency, investment and markets, environment and natural capital) Egypt ranks 52nd globally out of 130 countries, as the value of the index in the degree of progress achieved by the Egyptian state from 2005 to 2020 is equal to (0.357). This indicates the need to exert more effort to reach a greener future.

Due to the lack of foreign and Arabic studies in this field - to the best of the researchers' knowledge - there is still an urgent need for more efforts to identify the dimensions of the green future that should be included in the curricula of all educational levels to achieve a greener sustainable future for humanity.

Accordingly, the current research is concerned with the growing need to identify the dimensions of a green future, in preparation for their inclusion in all curricula at all levels of education in Egypt. To address this issue, the current research endeavored to answer the following question:

What are the dimensions of a green future that can be included in school curricula?

Research objectives:

The current research aims to: Identify the dimensions of the green future that should be included in all curricula at all educational levels in Egypt.

Importance of the research:

The results of the current research are useful in:

(1) Drawing the attention of Ministry of Education officials and curriculum experts to the importance and how to include the dimensions of the green future in school curricula.

(2) Contributing to national efforts to develop the educational process in Egypt, which contributes to the speed of green transformation.

(3) Encouraging teachers and learners to participate in environmental friendliness and green future formation efforts at all national levels.

Research limits:

The current research adhered to the following limitations:

(1) Thematic boundaries: The dimensions of the green future extracted from Arab and foreign literature.

(2) Spatial boundaries: Arab Republic of Egypt.

(3) Temporal boundaries: The research was carried out in 2024.

Research terms:

Green Future:

(Young et al., 2010) explained the scientific concept of Green Future as: Adopting a Zero Waste philosophy that focuses on eliminating waste through: Recycling, reusing, and restructuring production and distribution systems. This achieves preserving the value of

materials, conserving natural resources, and minimizing the impact of environmental pollutants.

The term green future is procedurally defined in this research as: A sustainable, environmentally friendly future that fulfills its three dimensions (green environment, green energy, and e-mobility) and aims to preserve natural resources from depletion, protect living organisms, and improve the quality of life for current and future generations.

Theoretical Framework

The Concept of Green Future and its Importance:

The 2020s is the decade of global transformation to a new world based on clean and renewable energy, clean transport, and urban environmental management to end the destruction and pollution caused by the use of fossil fuels (Boyd, 2020).

In scientific terms, a green future means adopting the Zero Waste philosophy, which focuses on the safe disposal of waste through: Recycling, reusing, and restructuring production and distribution systems to minimize waste, thereby preserving the value of materials, conserving natural resources, and reducing the impact of environmental pollutants (Young et al., 2010). The Zero Waste International Alliance (ZWIA) explains that zero waste means reducing emissions and conserving all resources by reproducing, consuming, reusing and recovering all products, packaging materials responsibly, and not burning waste, discharging it into agricultural land or waterways, or releasing it into the air in a way that threatens the environment or human health (Davidson, 2011).

The Intergovernmental Panel on Climate Change (IPCC, 2021) has shown that human activities have led to an increase in extreme weather events that disrupt the Earth's climate and increase its temperature, thus warming the atmosphere and oceans, and leading to climate warming at an unprecedented rate during the past 170 years (1850-2020). This has caused widespread and rapid changes in the atmosphere, oceans, cryosphere and biosphere. The Earth is now 1.1°C warmer than it was during the second half of the 19th century, before the rise in fossil fuel emissions from industrialization has begun. Scientists are predicting that global temperatures will exceed the 1.5°C threshold, the Paris Agreement's global warming limit, for the first time in the next five years (McGrath, 2023).

This requires human beings to take this grave responsibility and adopt the Green Transition in their daily habits and practices. Building a green future fulfils the sustainability pathway as an opportunity to rebuild a better future. The journey towards a green future achieves its goals by preserving and supporting our limited planetary resources, helping us save money, time and resources so that we can fully enjoy life, while making sure that future generations have access to clean air and clean water (Brueton, 2020).

Thus, the concept and importance of going green and the positive impact on humanity in reaching a green future is clear from the above.

The Role of Education in Creating a Green Future:

Education is the pillar of the progress of nations and peoples, and the main entry point for influencing human resources. Advanced societies attach great importance to education, as

confirmed by international experiences. Education is concerned with providing the learner with knowledge, values, attitudes and skills that make him able to interact positively with the society in which he lives (Ghoneim, 2022Pal et al., 2023;).

School curricula are one of the most important tools that achieve the best educational outcomes that can bring about radical changes in society to raise self-confident citizens who are proud of their country and assume their responsibility towards their homeland and the world in order to achieve sustainability and quality of life for current and future generations (OECD, 2020).

In light of the various global challenges and increasing threats to the environment, the international community has joined forces to minimize the damage caused by human activities on Earth. Many international organizations have called for supporting Green Education in all educational institutions at all levels and treating it as an education that leads to the formation of citizens who preserve the planet from extinction by charting a green future for the planet (World Economic Forum, 2022; McLennan, et al., 2022).

Therefore, many international organizations have called for supporting green education in all educational institutions at all levels, and dealing with it as an education that leads to the formation of citizens who preserve the planet from extinction, and contribute to a greener future by drawing a sustainable green future in preparation for reconciliation with the planet.

The study (Mujahid, 2020) explained that green education is concerned with environmental programs and green infrastructure such as afforestation, buildings, green energy sources and services. In addition to the proper use of technologies and applications, which requires attention to the development of curricula and practices that promote green culture. The study (Abdul Rasheed, 2022) showed that green education aims to raise generations capable of contributing to solving environmental issues and reducing their various impacts, by providing learners at different stages of education with a set of necessary knowledge, concepts, skills and emotional values that include achieving the requirements of quality of life in various fields.

The literature (Bacon et al., 2011; Aithal & Rao, 2016; Simone, 2023) has highlighted green practices and sustainable living within formal and informal educational institutions. These are practices that conserve and rationalize resources (water and energy), prevent air, water and land pollution, reduce the carbon footprint (reducing the total amount of greenhouse gases emitted by the lifestyle), and improve the quality of life within the school. A learner who understands how his/her choices and lifestyle affect the planet will endeavor to lead a sustainable lifestyle that helps to go green.

UNESCO (2008) called on countries to rebuild their capacities in education for sustainability because traditional education is no longer relevant. This is done by focusing on three approaches to promote green sustainable practices in the areas of: Climate Change, Biodiversity and Disaster Risk Reduction. The study (Aithal & Rao, 2016) also compared the nature of Conventional Education and Green Education, as shown in Table 1.

Table (1): Comparing Traditional and Green Education

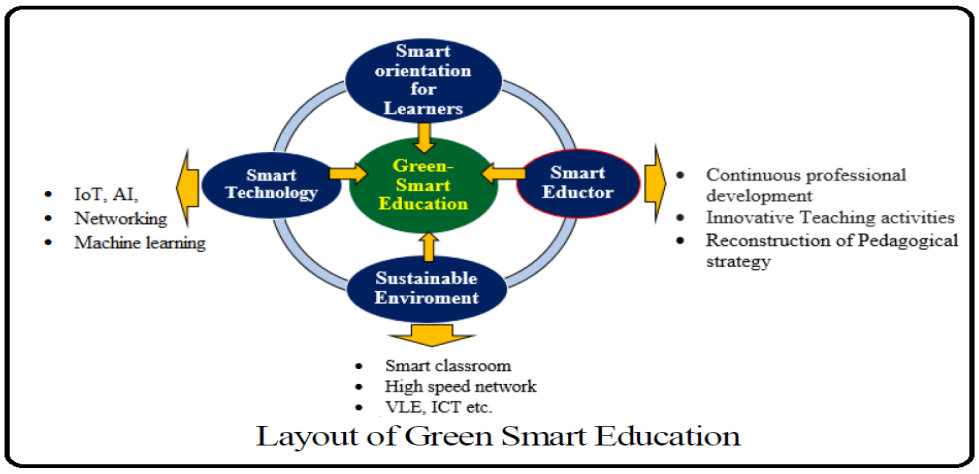
Traditional education	Green Education
Aimed at achieving limited goals	Aims to restore harmony to the planet
Seeks to fulfill old pedagogical principles	Seeks to realize the principles of modern pedagogy
Less demand for graduates	Demand for green jobs is growing
Draws on traditional approaches	Draws on contemporary approaches
Utilizes traditional technology	Uses green technology
Causes environmental degradation	Causes the environment to evolve

The UNESCO (UNESCO, 2022) and United Nations (UN, 2022) joint plan at the 2022 Summit called for Greening Education to rapidly transform education at all levels and in all aspects of our lives, especially since education is a pivotal means to enhance the resilience of every learner and equip them to face climate change and reach a green future. UNESCO's Greening Education Partnership (GEP) seminars aim to share the latest developments made by countries as part of their commitment to the following four areas of action: Green Education, Green Schools, Green Communities, Green Communities, Enrichment Capacity and Readiness for Implementation. ESD-Net 2030 provided a platform for sharing experiences and showcasing practices in preparation for COP-28 to equip learners with the skills required for inclusive and sustainable economic development in the context of the transition towards digital and green economies, and encourages Education for Greening Partnership seminars in the following four action areas:

1) Green education: By adopting a lifelong learning approach that integrates climate education from early childhood to the end of secondary school into educational philosophy, curriculum, instructional materials, assessment in general and technical education, and labor skills development, leading to at least doubling the current education ratio to 45%.
2) Green schools: From early childhood to the end of secondary school, working to ensure that at least 50% of schools are Green Schools accredited.
3) Greening and Readiness to Implement: By integrating climate education into pre-service and in-service teacher training, and building the capacity of education leaders on how to embed climate issues into teaching and learning throughout the school.
4) Green Communities: Engaging all segments of society, by embedding climate education in lifelong learning programs (free studies, educational materials, brochures, reports), especially through community learning centers. This requires all countries to identify at least three different ways to provide learning opportunities for adults outside the formal education system, to develop skills, attitudes and actions that will enhance community resilience to climate change.

Moreover, the study of (Pal et al., 2023) indicates that curricula must be restructured to promote green curricula associated with smart digital transformation to reach green smart education, which refers to the set of values, attributes, skills, and cognitive changes related to the environment and environmental sustainability. Creating a green learning environment requires the implementation of green curricula by integrating science and technology and using green machine learning technology to reach the desired learning outcomes and achieve societal prosperity. Figure (1) below illustrates the main elements that must be available in smart green education, which includes zero energy infrastructure, zero water discharge, wise use of energy, reliance on environmentally friendly resources, green curriculum and green management, namely:

1) Green Smart Technology: Green technology encourages the use of modern smart technologies and smart devices such as: Internet of Things (IOT), cloud computing, artificial intelligence (AI) and others.
2) Sustainable learning environment: A sustainable learning environment provides digital global education, through the provision of smart classrooms, fast internet, and virtual learning environments (VLE).
3) Smart learner: The learner needs continuous development in all cognitive, skill and emotional domains.
4) Green smart leadership at all levels.



Source: Pal et al. (2023). Smart Green Classroom and Machine Learning to Promote Green Awareness for Sustainable Livings. *International Journal of Instructional Technology and Educational Studies*, (4)1, DOI: 10.21608/ihites.2021.107726.1081.

Green Education seeks to practice sustainability in a conscious and critical way, with the aim of conserving resources (water and energy) and rationalizing their consumption, preventing air, water and land pollution, reducing the carbon footprint (reducing the total amount of greenhouse gases emitted by the lifestyle), and improving the quality of life within the school. It is therefore a transformative model that recognizes, supports and realizes human potential; in relation to the need to achieve and sustain human well-being in all social, economic and environmental aspects.

From the above, it is clear that a green school is a school that meets the green quality standards and provides a safe, clean, healthy, protective, preventive, environmentally friendly and sustainable environment by minimizing environmental impacts, improving health and well-being, and increasing the environmental and sustainability culture of all graduates. Green energy sources, green environmental resources, the use of smart technology, and the efficient use of resources. Teachers provide opportunities for green education and sustainable environmental education.

Implementing a Green Curriculum:

The process of adapting the curriculum to include green skills is not easy, but the content of the curriculum can be included through the use of the following two methods (Pal, et al., 2022; ETF, 2021; Abdul Rasheed, 2023):

- The first method: Enriching the curriculum with the concepts, elements and components of green education, both tangible and intangible.
- The Second method: Embedding green teaching and learning practices, techniques and strategies in the curriculum such as: Environmental Approach, Functional Approach, Current Events and Environmental Issues Approach. Designing teaching units for learners at different stages of education that address the concepts, elements and components of green education and include them in the content of the curricula.

Studies (Scherak & Rieckmann, 2020; Pal, et al., 2023) have indicated that the green curriculum seeks to develop a set of skills that learners must acquire to become green citizens by implementing a set of green activities that aim to accelerate the green transformation process. The following table (2) illustrates it:

Table (2): Green skills and activities that the green curriculum seeks to develop

Skills	Green Activities
Understanding	Prioritized Interests & Environmental Elements
Knowledge	Ecology, ecosystems, biodiversity, global warming, green nanotechnology.
Creativity	Producing new knowledge and developing new environmentally friendly technologies.
Insight	Appreciating society's unseen needs and necessities.
Collaborative skills	Develop teamwork skills to work on addressing environmental impacts.
Management skills	Develop skills to apply environmentally friendly, low-carbon technologies
Ethical thinking towards green sustainability	Developing skills that promote the desired transformations of communities.
Self-awareness	Flexibility in accepting desired changes.
Changing quality standards	Learning through interdisciplinary approaches to sustainability.

From the above, it is clear that the green future is related to the greening of all elements of the educational process and its associated elements. School administration becomes green, curriculum becomes green, technology becomes green, the school environment becomes green, the classroom environment becomes green, and the quality of school life becomes green. Thus, it is clear that going green or greening education requires focusing on: The teacher, the learner, the teaching and learning process, and the acquisition of skills for life, work and sustainable development.

Dimensions of a Green Future:

Climate change, environmental degradation and biodiversity loss are among the major global challenges of the 21st century that pose an existential threat to the planet. Advancing knowledge in climate science and related sciences and further broadening and deepening the knowledge base is essential to create engaged societies capable of addressing these challenges by 2050, and to achieve the more ambitious goal of reducing greenhouse gases to Zero Pollution by 2030 and related targets set for 2050. Given the negative impact of these challenges on all countries of the world and the need to achieve a sustainable future, addressing these issues has become a global policy priority. Cooperative action at all levels is the only way to achieve real, urgent and sustainable change to mitigate and adapt to climate change, and to make behavioral shifts that will help achieve a green future. International conferences and seminars were held, platforms were formed, and initiatives were taken to facilitate scientific engagements, exchange international expertise, provide international solutions to issues, and take serious steps towards a green transition, such as the following, for example:

(1) The Green Future Summit at Atria University on 26 November 2022 is a platform for students and aims to instill the idea of ‘green living, clean living’ and how green energy can make a big difference in human life (ATRIA University, 2023).
(2) The Community Solar Power Conference held in the United States of America (January 18-19, 2023) brings together the top US solar community and solution providers in the field (Community Solar Power, 2023).
(3) The Future of Mobility Conference held in Saudi Arabia (15-16 May 2023), which considered that innovative technology and innovation are driving much-needed change.
(4) The Fourth Future Cities Summit held in Saudi Arabia (6-7 September 2023) which aimed to stimulate the concepts and dimensions of a smart city (a digital and technological ecosystem).
(5) Solar & Energy Storage Future conference held in Germany (21st June, 2023) in order to build a more mature connection between the world's leading expertise in renewable energy development (Solar & Energy Storage Future,2023).
(6) EU Green Week 2020, held in Brussels from 3-11 June 2023 on environmental policy, biodiversity and zero pollution, under the slogan ‘Achieving a Net-zero world’ (European Commission, 2020).
(7) Green Future Conference, 2023, which was held during the first and second days of June 2023 in Split, Croatia. The conference provided an opportunity to learn what the green transition involves, how technology can help in this transition, and identify the mechanisms available to achieve the green transition. The conference identified the dimensions of the green future and what each dimension includes in the elements of educational content, as shown in Table (3) below (Green Future Conference (2023).

Table (3): Dimensions of a Green Future identified by the Green Future Conference, 2023

Dimensions	Questions	Requirements for answering questions
1st. dimension: Environment	- How can technology help us adapt to climate change? - Do we understand that climate change is caused by human habits?	- It involves the use of technology that helps us adapt to the harmful effects of climate change, minimise the emission of greenhouse gases, and use different types of renewable energy such as: Wind, solar, and hydroelectricity. - Using climate-optimising technologies such as: Drought-resistant crops, early warning systems and sea barriers.
2nd. dimension: Energy	- What are alternative energy sources and at what stage of technological development? - What are the applications of alternative energy in everyday life?	- Describe specific technologies related to alternative energy sources that have positively impacted the environment. Such as: Solar panels. Specifically, how has it had a positive impact on the environment? Discuss any negatives associated with this technology. - Describe a specific technology related to alternative energy sources that has harmed the environment. Such as: Oil shale extraction. How has it specifically harmed the environment? Discuss any positives associated with this technology. - How any technology could be improved to benefit the environment and therefore society.
3rd. dimension: E-mobility	- What are alternative forms of urban mobility? - How willing are we to change our habits, comfort and policies in favour of a sustainable future?	- Transformation into new modes of transport beyond traditional routes. - The use of means of electrical mobility in whole or in part, which have a means of storing energy and obtaining its energy mainly from the public electricity grid; such as mass electronic means, electric cars, bicycles, electric motorcycles, etc. - There are many habits and choices in our lives that harm the environment and climate, and we can overcome them to conserve wildlife and plants and reduce our environmental footprint to conserve them. Among them: Think well before buying a product, use plastic-free objects, rationalize your water consumption, reduce car driving, water your home, choose a small family, and choose alternative energy.

The EU also explained (European Commission, 2023) that the shift towards the use of electronic mobility improves the climate and environmental impact. Europe's transport sector is responsible for 23% of CO2 emissions, yet still relies on oil for 92% of energy demand. Therefore, intensive scientific research is needed to reach innovations that will make the EU reach its targets and significantly reduce air pollutants by 2050.

Thus, it emerged from the previous presentation that international literature, studies and reports on the dimensions of the green future, namely green environment, green energy and electronic mobility, have been addressed.

Procedures for Research:

First: Research methodology:

Current research used the descriptive research curriculum to gather all the theoretical framework and previous studies on the role of education in the green future industry, the green future concept, and to study all the relevant educational experiences and how to utilize them and use them to enrich and deepen understanding of the research problem to determine the dimensions of the green future that should be included in the curriculum.

Second: Search procedures;

Many previous studies, international reports and conferences have been used in the theoretical framework of research and have focused on the topic of the green future, its dimensions and the need to rely on education to build a human being who seeks to preserve the planet. This is aimed at identifying the dimensions to be included in the curriculum at all levels of education.

Research Results:

In the light of the review and analysis of literature, conferences, symposiums, international studies and research results, the researchers found three dimensions of the transition towards a green future:

- **Dimension 1: Green environment**: This dimension is intended to use technology that helps us adapt to the adverse effects of climate change, reduce the emission of gases that cause global warming, and use different types of renewable energy (e.g. wind, solar, hydropower), and the use of techniques that improve climate (e.g. drought-resistant crops, early warning systems and marine barriers). Avoid habits and choices that are harmful to the environment and the climate that will preserve the wildlife of animals and plants and reduce our environmental footprint to preserve them. The trend towards behaviors and choices that work on the quality and preservation of the environment (such as: Thinking well before buying any product, use plastic-free objects, mend your use of water, reduce driving, turn green in your home, choose to have a small family, choose alternative energy).

- The second dimension: Green Energy: This dimension is intended to describe technologies associated with alternative energy sources that positively affect the environment (such as: solar panels) and adversely affect the environment (such as shale extraction), and to discuss the pros and cons associated with this technology. This helps reach zero carbon emissions (zero pollution), reduces heat retention, provides clean air and water, and reduces the risk of environmental disasters. This improves quality of life and life sustainability for the benefit of the human person in general and safeguards future generations' energy rights.

- **Third dimension: electronic mobility (-mobility (Electro):** This dimension refers to the shift to the use of electronic mobility means, which are fully or partially electric driven mobility, and have a means of storing energy on board, essentially acquiring its energy from

the public power grid, thus becoming zero-emission. Green mobility using low or zero carbon footprint mobility means such as: (electric cars, e-bikes, electric motorcycles, mass e-buses such as a bullet train, and a light electric train). It is thus clear that the inclusion of this technology in vehicles makes it environmentally friendly, calm and safe to use. The future benefit of electronic mobility (green mobility), which is to maximize the benefits of the transformation of efficient energy management, is thus determined.

Through the previous presentation, it had emerged that the green future was one of the new models that could be relied upon in curriculum development with a view to promoting Egyptian education. The current research would have answered the research question: What dimensions of the green future could be included in the curriculum?

Research Recommendations:

In the light of the results of the research, the following recommendations were formulated:

(1) Prepare a list of concepts, values and skills included in each dimension of the green future to ensure their inclusion in the different curricula and design appropriate activities for their development in students at different stages.

(2) Draw the attention of officials and education experts to the inclusion of the dimensions of the green future in the general framework of the curriculum, thereby contributing to its inclusion and achievement in the frameworks for each level of education and subject.

(3) Identify key issues, concepts and values that must be addressed by each dimension of the green future to benefit from in the preparation of the general framework and qualitative frameworks for curricula at all levels of school.

Research Suggestions:

To complement the current research, we propose the following research:

(1) Prepare a proposed scenario to incorporate the dimensions of the green future into the general framework of curricula at all levels of education and the qualitative frameworks for each stage of education.
(2) Design a matrix of skills associated with the green future to be included in the curricula of all levels of education.
(3) Build a training portfolio for teachers to develop the concepts and skills embedded in the dimensions of the green future.

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