MOTIVES OF THE EGYPTIAN EDUCATION FUTURE FOR SUSTAINABLE DEVELOPMENT: A COMPARATIVE ANALYSIS BETWEEN 2020 AND 2030

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Abstract

Purpose of the study: The current study aims to identify the engines of the future of Egyptian education to achieve the fourth goal of the United Nations Convention on Sustainable Development.

Methodology: The research followed the analytical method in the comparative analysis of the future of Egyptian education between 2020 and 2030.

Main Findings: The results of the research, in addition to the conclusions of researchers from the literature and previous studies, stressed on the importance of the existence of ten motives for the future of education for sustainable development 2030.

Applications of this study: This research attempts to address this dilemma through the perspectives and engines of education for sustainability. Where teachers can meet the Education for Sustainable Development (ESD) approach to enhance knowledge and positive attitudes towards appropriate action for sustainability in relevant, meaningful, exciting, and creative ways, this research offers experiences that allow pupils to become more connected to nature, develop children's sense of practical orientation that embraces positive attitudes, change behaviour and hope for the child's future.

Novelty/Originality of this study: There is no research or studies that addressed the motives of the Egyptian education future for sustainable development.

Keywords: Development, Egypt Plan 2030, Egyptian Education, Entrepreneurship, Future of Education, Sustainable.

INTRODUCTION

The world today faces enormous challenges, as millions of people are still living in poverty, gender inequality, unemployment, in addition to threats of frequent health disorders, natural disasters, violent extremism, terrorism, and more. (Raworth, 2017).

The Arab Republic of Egypt is exposed to a high level of climate change and has a prominent voice in climate negotiations. What is happening in Egypt affects all countries in the Middle East, if not all, countries in the world. Therefore, the ability of education to support economic growth and the awareness of future generations with the causes and consequences of environmental change and respond to it is not only for Egyptians but for all of humanity. (Taylor, Quinn, & Eames, 2015)

Statement of the problem

We emphasize that education plays an essential role in breaking the intergenerational cycle of poverty, increasing the earning potential and improved health outcomes, psychological well-being, and personal sense of social existence. In this regard, the social pillar of Vision 2030 in the Arab Republic of Egypt aims to create a fair and just society based on democratic ideals. Education plays a leading role in developing the skills and knowledge for all Egyptians to achieve the aspirations of Vision 2030 and the 2014 Constitution of Egypt that education is a fundamental right for all citizens, and the state is obliged to provide it. (Singer, 2019)

In this light, the study of the future of education is a due response to very rapid economic, social, and cultural developments at the level of nations. A nation that has a well-defined map and a precise compass to help determine its right course is a nation that exposes its future to great dangers. The future of this nation will not come from one of two possibilities: First: that this future comes as the result of considerations of coincidence rather than from the manufacture of reason and national interest. Second: the formation of this future is controlled by external forces that do not care about the future of this nation, but to serve its interests, whether these interests are compatible with the benefits of this nation or not. In the two cases, the future of the nation becomes dependent on factors that the will of the citizens do not have anything to do with shaping or influencing it, and this is a miserable situation. (Taylor et al., 2015)

We believe that education is a real compass to accommodate or adapt it through meeting quality standards, which include the school attendance by all children who are ready to learn and high secondary school graduation rate to at least 90% and all students reached the fourth grade after achieving a degree of competence in the fields of mathematics, science, foreign languages, economics, history, and geography. Each school must ensure that students taught to use and use their minds well, to be responsible citizens and productive workers within a modern economy, decentralization of
school management, improving the quality of teachers' performance and their access to professionalism, quickly enrolled in career development programs, gaining more information and skills to help prepare students for life and the future, availability of suitable places for teaching and learning in the school from kindergarten to the end of the education ladder, increasing stakeholder participation and seeking best practices and experiences from developed countries in the field of education, having an advanced position by students in science and mathematics achievement globally and that every citizen has a level of culture and knowledge qualifying him/her to exercise the duties and responsibilities of active citizenship. The schools should be free from drugs, alcohol, and violence, and their environment is suitable for self-learning and autonomy in learning, and creativity, increasing the level of participation of parents in improving the social, emotional and academic growth of children together with enhancing the ability of schools to provide students with the skills and behaviours required to succeed in the business world. (Singer, 2019)

The path to this is to provide educational experiences that activate the potential of individuals and make them adhere to their national and cultural identity, and awareness of their ability to achieve more, investment opportunities to be the best they can and reach out to all learners including those who need additional, complementary or compensatory educational support as well as those who have a desire to return to education because of their willingness to develop their skills, surroundings and country and even their planet.

During the latter half of the twentieth century, international thinking – because of recognizing the ongoing social, economic, and technological changes and the increasing amount of human knowledge produced - began to seriously study the role, functions, and goals of education in an unprecedentedly complex and uncertain world. The existence of serious challenges described by some scientists as very “evil problems” cover social, economic, political, environmental, legal, and ethical areas. Learners, teachers, school leaders, families, and the community need skills and abilities to participate in solving “evil problems” and improve or develop schools to better adapt the capabilities of the 21st century.

The term "knowledge age" refers to reorganization away from the industrial age economy, which focuses on the exploitation of natural resources, commercial production, the class hierarchy of individuals, bureaucratic management, a standard model for economic development. But in the age of knowledge, the ability to generate value through creativity and merit has become the foundation of economic growth and investing the education in developing learners' behaviours and skills to deal with new situations and environments, including conditions that are highly complex and uncertain.

This does not mean that knowledge is no longer necessary or that the school curriculum does not require clear goals to develop student knowledge. Instead, future-focused teaching literature suggests that we need to adopt a more complex vision of experience, including education, action, a sense of existence, and rethinking our ideas on how to organize and support our educational systems, resources, and natural sphere. (ElSayed, 2019)

If we are serious about building an education system capable of preparing young people for knowledge societies in the future, we need to reformulate it in new ways that focus more on procedural knowledge and awareness of cognitive processes and provides broader support to teachers and school leaders during their attempt to transform education.

Significance Of the Study:

The government recognized its responsibility to ensure that every Egyptian child has the right to education following state resources. This has necessitated rapid change, moving towards a knowledge society, better addressing and absorbing the challenges of the 21st century and seeking to achieve strategic goals approved by Egypt's 2030 plan, including:

1) Skills development is essential for education and learners to become successful, confident, and responsible citizens. We provide them with the necessary skills and features of lifelong learning and reach their full potential.

2) Provision of education and learning opportunities that improve access, fairness, and respect fundamental freedoms for all segments of society, and training students to take responsibility in a free community according to a spirit of understanding, peace, tolerance and friendship between national and religious groups.

3) Developing respect for the natural environment, maximizing opportunities for cultural development and respecting individuals and groups, developing the child's personality, natural and mental genius to the fullest extent.

4) Developing and implementing accountability systems to improve performance, gain public confidence, and the efficiency of personnel in all aspects of service to ensure continuous improvement in performance.

5) Supporting pupils' learning and equipping them to live in the local and international community according to the employ and use of ICTs.

6) Evaluating children and youth, reflecting on their skills, identifying steps to improve their skills, and understanding how the skills they have acquired can be used in their lives in and out of the classroom or school.

7) Provision of education in partnership with all relevant institutions and partners on skills development and employment.
In this regard, the orientation of the Egyptian education has become not only to eliminate or face the eradication of illiteracy or reduce its sources but to deal with inequality in all its forms (inequality according to gender, rural, urban or poverty) and to consider technology as a tool for education, social development and support the values of democracy, tolerance and counter-extremism and terrorism.

**LITERATURE REVIEW**

The authors of this research believe that the Egyptian education system has been heavily criticized for the quality of graduates of government-funded or co-financed institutions, and the high rate of illiteracy among individuals who benefited from the school education system. The researcher linked these results to specific weaknesses, including low quality of educational institutions, especially pre-school and primary education, and lack of availability in weak areas, an insufficient number of trained teachers at all levels of education and little use of instructional technology at all levels, use of teacher-centered teaching methods in all stages of education, especially in the early stages, the inability of some parents to afford fees imposed despite the policy of free education, lack of adequate facilities to accommodate people with special needs (e.g., physically, mentally, emotionally and behaviorally disabled students and with high abilities), the growing phenomenon of anti-social behaviour, increased violence in schools and inadequate management training among school leaders. The literature of this research will be divided into the following components:

**Perspectives of the future of education (2030) in Egypt**

a. Guaranteeing human rights in security, freedom, and enjoying every beautiful thing in life. Respect for rights is the objective and appropriate return for the individual's willingness to perform his duties in a way that serves the public interest.

b. Building generations of free thinkers who are aware of themselves as well as the humanitarian and social conditions and the world around them, upholding the value of dialogue that may end in a creative difference rather than the inevitability of agreement.

c. Raising the critical mentality according to an appropriate social context and upholding the value and importance of applied sciences, practical exercise, and introducing education following projects and service education.

d. "Empowerment of Creativity" and "Freedom of Thought" are two slogans that should define the future point of any educational institution.

e. Studying the political situation and environmental resources and the changes in the regional and global environment, avoiding simplifying phenomena and deepening understanding of reality, entanglements, and perception of the event in its context and entirety.

f. Reading the past, the experiences and expertise of others well, and drawing lessons from them, which are useful in understanding the mechanisms of development, and identifying constraints, difficulties, and challenges together with studying the possibilities of overcoming them.

g. Scientific neutrality in identifying alternatives and not excluding specific options merely for refusal, analysis, exploring its implications, and assessing their advantages and disadvantages according to agreed criteria.

h. Focusing on knowledge derived from multiple sciences and the integration of knowledge according to a multidisciplinary perspective to reach new perceptions and solutions to problems.

i. Democracy is a prerequisite for the future of education because it is the fruit of minds operating at full capacity in a context of responsible freedom and deep insight into the needs and requirements of society.

j. Children are born qualified for education that achieves educational equality and provides equal and uneven educational opportunities and enables the children of at-risk groups to enter different levels of education according to their abilities and not to the financial or social potential of their families.

k. The right of the learner to be understood and dealt with as an integrated personality aimed whose education aims his body, conscience and mind in integration and consistency, a better understanding of his own culture on a global scale and departing an education from its "past" to a prosperous future that rejects a unilateral vision in interpreting events (False - True) (Reject - Accept).

l. Raising individuals on experience and skills that enable them as individuals and members of formal social entities to compete honourably with other nations according to the knowledge economy, information society, environmental concepts and phenomena, sustainable development, etc.

m. Acquiring essential and functional competencies to live in a complex world such as the merit of employing the national language and its diverse skills such as reading, writing, speech and listening, having other international languages, proficiency in basic science processes such as measurement and estimation, differentiation processes, and symbolic innovations such as computers and necessary scientific instruments.
n. Practical exercising of vocational and technical education according to the apprenticeship system, preparing the student for working life and paying attention to everything that leads to linking education to the job market.

o. Providing students and members of the learning community with peacemaking and conflict resolution skills.

p. Educational evaluation systems respond to the needs of the learner and the society growth, requirements of comprehensive development and measurement of the educational work success, and the learning response to the needs of the individual and society alike.

What does sustainability mean?

There is a growing awareness among the peoples of the world of our impact on the environment, and when we rely entirely on our natural environment to provide the resources that support our lives (water, food, materials, fuel, etc.).

These trends have consequences such as resource depletion, waste disposal, climate change, and species extinction, and challenges to ecosystem integrity, described in detail in our book "Education for Sustainable Development".

Environmentalists called for changes in human behaviour towards more ecologically, economically, socially, culturally, and personally sustainable livelihoods. We need the knowledge and skills to understand the problems we face, and to be able to make decisions and actions to solve them. We also need behavioural changes that support a more sustainable future. Education has a crucial role to play in facilitating the kind of knowledge, attitudes, and behaviours that will enable us to achieve this goal. There is, however, an ongoing debate about the meaning of sustainability, and what form education should take on sustainability, (Anthony, 2017)

A sustainable future depends on interrelationships between four key areas - our ecological, economic, social, and political systems - these systems are in a reciprocal relationship where the health of one is affected and affects the health of the other three ones.

For example, if society is to function well in the long run, we need a healthy natural environment, good economic systems, and effective political processes.

Water shortages (environmental dimension) may result in loss of income for people who depend on this source (economic size), demographic changes if people move outside the region (social dimension), and conflict between different water users (political dimension). Such problems continue to occur worldwide. Therefore, the sustainability of our future is fostered through actions that preserve our natural environment, build peaceful social systems for equality and human rights, implement appropriate democratic political arrangements and economic development that take into account the constraints and limits of our planet.

The four systems are often referred to as “pillars” of sustainability because these dimensions and their relationships are critical to a sustainable future (Williams & Millington, 2004), and weak sustainability is defined as human-centered, and that nature should be used for the benefit of man. It is geared towards economic development and sees no need for drastic changes in individual requirements on the ground. From this perspective, sustainability is about solving problems we face through technological development (E.g., better use of resources, alternative energy sources, better waste disposal, and recycling techniques), more dynamic economic growth, and more equitable distribution of the proceeds of that growth. However, when viewed from a healthy sustainability perspective, a weak sustainability model preserves development rather than nature or the environment (Anthony, 2017). The strong argument for sustainability is that we need to take a more centralized view of the environment for which nature values. We need to change our social and economic systems to reduce our demands on nature, and to realize that we cannot replace the ecosystem services provided by nature.

As might be expected, given the views on the essence of sustainability and how to achieve it, the literature contains hundreds of definitions of sustainability. One of these most commonly used definitions is the definition of Brundtland; sustainable development is the one that meets the needs of the present without compromising the ability of future generations to meet their own needs (United Nations, 1987:1). This definition affirms that development has environmental constraints and consequences, and we must be concerned about our future, especially the equitable distribution of resources for future generations, which is a concept referred to as intergenerational justice.

Brundtland’s definition has been heavily criticized for its focus on the man. The term "sustainable development" reflects the prevailing view of the new human-centered world and gives priority to economic development over environmental sustainability. Questions were raised about an optimistic assumption that current and future human needs could be balanced or met by technology.

Sustainable development can thus be defined as sustainable lifestyles that meet the needs of the present without compromising the ability of future generations to meet their needs (Eaton, Gomes, & Williams, 2014) when moving from the use of the term “development” to "lifestyles," this definition avoids problematic aspects of the Brundtland definition; therefore we have adopted it for this paper. Besides, since this paper is primarily designed for teachers in the Arab Republic of Egypt and similar countries, the definition is consistent with the ethics of the Egyptian curriculum.
Education and sustainable development

The terms used to describe the types of education for sustainability is diverse, including environmental education, education for durability, and education for sustainable development. We also have views on their relationship.

We use the term "Education for Sustainability" in this paper for three reasons. First, the condition is more consistent with Egyptian policy approaches and documentation. Second, ESD addresses a complex set of factors that shape the world in which we live. Third, Education for Sustainability emphasizes that sustainability is imperative for the quality of life and survival of future generations. (United Nations, 2013)

We need to change our behaviour to avoid environmental, social, and economic problems rather than being a reaction by acting according to the symptoms of issues and challenges.

Education for sustainability is an essential component of our changing world. Global interdependence is more significant than ever before, the gap between rich and poor is widening, and population growth is significantly growing, and the scarcity of food and water occurs. Therefore, it would be tempting not to put our heads in the sand, and hopefully, someone else would take care of our problems. Instead, school principals, teachers, and students are going up and taking responsibility for shaping a sustainable future. Listen to principal Alison Suffet Diaz describing the changes in her school: Today, the Environmental Charter High School is a thriving green oasis in southern Los Angeles County. This school is different. Students fertilize bio-fertilizer, make biodiesel, repair bicycles, harvest rainwater, and conduct field research.

Schools with a social purpose become schools where students are more academically successful as education and democracy go hand in hand in schools that follow the approach "Education for Sustainability". Let us be clear about what we mean by the term "education for sustainability" where it is referred to as Education for Sustainable Development.

The United Nations document on the report of the World Commission on Environment and Development defines sustainable development as development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs (WCED, 1987).

It is a learning process that provides students, teachers, and school systems with the knowledge and ways of thinking we need to achieve economic prosperity and responsible citizenship and to restore the health of the livelihood systems on which our lives depend. Therefore, Education for Sustainability aspires to educate students with the ability, ambition, and knowledge to make decisions that balance the need to maintain healthy ecosystems with the need to maintain vibrant economies and equitable social systems in this and all future generations. (Anthony, 2017)

It is important to note how this concept is described in the context of the ESE curriculum as follows: Education for Sustainability develops global knowledge, skills, values, and perspectives that are necessary and appropriate for more sustainable lifestyles. It enables individuals and communities to think about ways of interpreting and participating in the world. Sustainability education focuses on protecting environments and creating a more environmentally and socially fair world according to enlightened action. It requires activities that support more sustainable lifestyles and the consideration and interdependence of environmental, social, cultural, and economic systems.

This interpretation is relatively complex and contradicts the Egyptian Ministry of Education's clarification of this concept in its guiding principles for teaching thinking and acting in ways that will protect the well-being of people, our world and our nation in the future. (Egyptian Ministry of Education)

We have to take care of the environment to achieve the welfare of the environment and nature and develop them, and then ensure our well-being and the health of our future generations. Although there are some differences in these interpretations, they are consistent in asserting that Education For Sustainability should help students acquire knowledge and skills that allow them to work to preserve the environment. Education For Sustainability requires that we take care of our environment and be a definite link between generations.

There is a belief that merely educating children and adults about the environment through environmental education or upbringing will lead to changes in behaviour that would benefit the environment. However, the lack of apparent change and increased research has only become an inappropriate hypothesis. But if environmental education is to change behaviour, it has to do more than just educate children about the natural world. Several researchers have called for moving away from this relatively negative form of environmental education towards a “socially critical” model, which has made students sceptical about community behaviour that leads to ecological degradation and participation in affirmative action for the environment itself. (Slaughter, 1996)

This view of environmental education or upbringing has been further developed in recent years, and many experts in the field now emphasize that this type of education needs to be comprehensive, valuable, and action-oriented to achieve positive results. There is also a growing realization that studying environmental issues requires us to see how cultural norms, the economic need for resources, and political decision-making link human societies to the environment. So we now recognize that the environment is shaped by our cultures, consumer habits, how we live, enjoying entertainment,
governing ourselves, and thinking about the future. This recognition has extended the efficiency of education beyond a simple understanding of the natural world to many aspects of how the world works.

Moreover, although much of the world's environmental degradation is linked to the mass consumption of materials and energy by the Western world, people exposed to poverty can simply harm their environment while trying to survive. The environment is influenced by how people interact with the world, and the understanding of the four pillars of sustainability (environmental, economic, political, and social) reflects this understanding. (Anthony, 2017)

These changes in focus have been accompanied by a difference in the discourse towards the concepts of sustainable development and hence, the environment and sustainable development. Since 1987, the Brundtland Report (United Nations, 1987) has linked sustainable development to education. Since then, researchers and other organizations have acknowledged, for example, the 1992 Earth Summit in Rio de Janeiro prepared Agenda of 21st century, which states that: "Education is crucial to promoting sustainable development and improving the capacity of people to address environment and development issues (United Nations Sustainable Development, 1992: 2)

Since the publication of the Brundtland Report "Our Common Future" (WCED, 1987), the concept of sustainable development has gained increasing attention at the international, national, local, and public levels. Since then, organizations have been involved in researching and developing measures and strategies to provide long-term capacity for nature and humans to survive and prosper together and guide planning and make transition policy to sustainable development. (Anderson, Bakir, & Wickens, 2014)

At present, it is recognized that sustainable development can contribute to changing attitudes and behaviour of people as consumers, producers, and citizens to fulfill their collective responsibilities and duties. In 1975, UNESCO recognized for the first time the importance of environmental education in the Charter of Belgrade. In 1997, the Intergovernmental Conference on Environmental Education in Tbilisi set the following general objectives for environmental education: Increased awareness and sensitivity on ecological problems, gaining knowledge and a basic understanding of the environment and associated issues, changing trends, values and motivation for active participation in environmental protection and improvement, acquiring and developing skills to identify and solve environmental problems, the involvement of all social groups and business players (UNCED 1992) and emphasizing the importance of the social environment and the need to consider all social, economic and political aspects.

This statement was reaffirmed at the 2002 World Summit on Sustainable Development in Johannesburg, which recognized that education is a critical factor for sustainable development. The United Nations Decade of Education for Sustainable Development (2005-2014) was launched as a complex and far-reaching project, with enormous environmental, social, cultural, and economic impacts affecting many aspects of the world's population. The objective of this project is to integrate the principles, values, and practices of sustainable development into all aspects of teaching and learning. This educational effort encourages behavioural changes that will create a more sustainable future in terms of environmental safety, economic viability, and just society for present and future generations. (Manitoba Government, 2011)

The fundamental value of education for sustainable development lies in respect for others, both present, and future generations; respect for the planet and what it offers us (such as resources, animals and plants) and achieving lifestyles based on economic and social justice, food security, environmental safety, sustainable livelihoods, respect for all forms of life, and strong values that promote social cohesion, democracy, and teamwork.

Education at the international level recognized as critical to meeting the significant global challenges we all face — United Nations Decade of Education for Sustainable Development. (Cassen, 1987)

Education is an international priority, and a right first asserted in the Universal Declaration of Human Rights in 1948 and a key objective under the sustainable development agenda, improving the quality of education, enabling young people to communicate globally, and motivating them to change, developing themselves and their communities (UNSG, 2014: 21). Education plays a pivotal role in eradicating poverty and is a real compass for prosperous and sustainable development (World Bank, 2013). Education is a cornerstone for the promotion of the morality and behaviour of the individual, improves his health and sense of social and psychological existence, and supports the components of the psychological capital of the learner in addition to its fantastic impact on the well-being of individuals and the future of the nation, and the promotion of new knowledge, upholding new systems and practices, emphasizing creative, critical and innovative thinking approaches, assuming responsibility for understanding future challenges and aspirations, promoting the right types of values and skills that will lead to sustainable and inclusive growth and living in peace together. (ElSayed, 2012)

Given that public awareness and changes in behaviour through education are the keys to driving communities towards sustainability, Education For Sustainability must begin as soon as possible if we are to encourage individuals in our communities to live more sustainably.

Learning for Sustainability approach is away from being constrained by “Doom and Gloom” scenarios, success and failure, or death and life towards future-oriented thinking that stimulates action, calling for questions and reflection on
our actions and decisions to rethink and redesign our activities to help Egyptians achieve environmental outcomes and quality of life, and contribute as responsible global citizens. It is essential to integrate change-based learning approaches into environment and sustainability initiatives. We also need to mainstream sustainability approaches into education, training, and capacity building activities.

Education for Sustainability goes beyond providing information about the environment. It is seen as a process that motivates people and encourages them to create a sustainable future. It is not only a process of building efficiency but also a strategy of change that helps individuals and organizations move towards sustainability.

But what kind of sustainability is integrated into our education systems? How should we teach it? Government authorities in the Arab Republic of Egypt have introduced active and targeted policies to support education for sustainability. At the national level, the Egyptian government published a document in 2005 entitled: Education for a Sustainable Future, a national environmental education statement for Egyptian schools, outlined the importance of education for a more sustainable future and provided a vision of what ecological knowledge might include for sustainability: Environmental education for sustainability incorporates teaching and learning curricula that integrate the goals of social justice, cultural diversity, appropriate development and democracy as an inherent direction of personal and social change and revitalizing the strengths of individuals, communities, and entities. This includes developing the types of civic values and skills that enable all citizens to be leaders and build people's ability to innovate and implement solutions. Education for Sustainability is essential to reorient the way we live and work so that the Arab Republic of Egypt becomes a sustainable society.

In this context, Egypt has adopted an approach characterized by a high level of ambition, firm commitment, and dynamic innovation towards addressing this transformative agenda. This commitment was reflected in the formulation of Egypt's Vision 2030 [Sustainable Development Strategy: Egypt Vision 2030,2016], which extends over the three dimensions of sustainable development, i.e., economic, social, and environmental aspects. It outlines the broader principles that will guide Egypt in achieving its development goals. The vision states that by 2030, Egypt will enjoy a “competitive, balanced and diversified economy, based on innovation and knowledge, justice, social safety, and participation.” It is characterized by a balanced and diversified environmental cooperation system, which invests the ingenuity of space and people to achieve sustainable development and improve the quality of life of Egyptians’.

However, some challenges may slow the achievement of Sustainable Development Goals. These challenges are linked to national, regional, and global conditions and the ability to coordinate action strategically that requires more effort. Furthermore, Agenda 2030 provides an excellent platform to enhance participation and policy coherence, strengthen accountability, and more effective monitoring, reporting, and follow-up mechanisms. Efforts on these fronts will require significant coordination and cooperation focused on the national, regional, and global levels. The level of coordination and collaboration required can only be achieved through the exchange of knowledge and experience in the areas of innovation, finance, capacity enhancement, education, and technology transfer. [New Zealand Ministry of Education, 2010].

Although the current educational policy and curriculum environment in the Arab Republic of Egypt supports Education For Sustainability, we need to mention that education and curriculum policies are policy statements that may be ephemeral. This point was recently highlighted when the current Minister of Education (Tarek Shawky) announced the revision of the current curriculum and the introduction of interdisciplinary teaching methods and the place of sustainability in them with emphasis on the fields of science, mathematics, technology, engineering, and the arts. This has been met with strong resistance in the past as the content of the areas of learning and topics is unclear and not procedural.

The New Zealand Government has shown a commitment to education as a critical driver of sustainable development. This commitment gained impetus in the late 1990s by the publication of guidelines for environmental education in New Zealand schools [New Zealand Ministry of Education, 1999].

The guidelines, accompanied by a post-implementation professional development and advisory service to support them, emphasized that “environmental education is an essential element of a practical policy framework for environmental protection and management.

Recently, New Zealand’s revised curriculum [New Zealand Ministry of Education, 2007] has recommended sustainability as a principal, integrated, future-focused key theme in teaching and learning in all schools. However, these commitments, together with the funding of the non-governmental environmental school program as in Australia, are subject to political change. New Zealand's focus in recent years has been more on economic growth rather than sustainable development. These changes have somewhat stalled progress in implementing Education for Sustainability in schools in both countries.

Despite the concerns mentioned above, there are exciting projects related to Education for Sustainability in schools in Australia and New Zealand. In Australia, the Australian Sustainable Schools Initiative's goal is to engage all members of
the school community and the broader community in improving sustainability (New Zealand Ministry of Education, 2014). The initiative has the following objectives:

- Education for Sustainability is an integral part of the curriculum.
- Schools are actively and continuously involved in planning, implementing, and reviewing their approach to sustainability as part of their daily operations.
- Schools that use natural resources, including energy, water, waste, and biodiversity in more sustainable and effective ways.
- Schools and school authorities objectively decide changes and developments towards sustainability.
- Youth participation in ownership of sustainability and decision-making initiatives. Schools that work towards sustainability in partnership with their communities are schools and school authorities that implement governance practices to support effective environmental education for sustainability.
- Support individuals to make effective decisions and choices about sustainability; schools and communities support sustainability values.

In pursuing these goals, students are often involved in direct actions such as collecting primary data through a review of biodiversity, energy, and waste, implementing strategies of increased biodiversity in school grounds, reducing energy consumption and waste production. These types of action-oriented projects are a vital part of education for sustainability. Often, sustainability issues are presented and discussed only as a series of problems.

Although it is essential to acknowledge the existence of problems, an overemphasis on them may make children feel very vulnerable. Action-oriented projects allow them to see that community-level change is possible as well as vital to maintaining youth participation in sustainability and positive issues for the future.

In New Zealand, for example, the New Zealand curriculum encourages teachers to develop sustainable citizens, thereby providing impetus to learning for sustainability in primary schools. The development of education rules for sustainability in primary schools is growing with an awareness of environmental and sustainability issues. This growth has been supported by countless non-governmental organizations and local government bodies. The consultancy services in education are supported for durability. Enviroschools continues to play a vital role in education for sustainability in primary schools. This program began as a community initiative and remains strongly supported by local government and community groups (Enviroschools Foundation, 2014).

Despite these positive initiatives, substantial research evidence suggests that Education For Sustainability is not being adequately taught in parts of the primary and secondary school sectors in Australia and New Zealand. Unfortunately, a quantitative study of the opinions of about 5,000 teachers in both government and non-government schools across Australia indicated that the vast majority (91%) of Australian teachers did not incorporate sustainability into their educational practices. This lack was evident even though the same study showed that 92% of surveyed teachers believed that sustainability was important and valuable to students and should be integrated into the curriculum (Australian Department of the Environment and Heritage, 2005). A well-established approach to Education for Sustainable Development is, therefore, to provide learners with enlightened skills and abilities and actions responsible for environmental safety, economic growth and just society for present and future generations, develop competencies that enable individual students to think about their activities, engage in new paths, participate in socio-political processes, and drive society towards sustainable development, integrate phenomena of the environment such as climate change, poverty and sustainable consumption in school curricula and teaching methods, transition to learner-centered learning situations, practical and self-directed, participatory and collaborative learning, problem-solving and interdisciplinary, focus more on strengthening links between children and nature and facilitate a more fundamental vision of the relationship between humans and the natural world. Hence, the development of critical competencies for sustainable development. (Suter & Smith, 2019)

An international consensus was reached on eight competencies published by UNESCO in 2017. (UNESCO, 2017)

- The efficiency of systems thinking: Ability to recognize and understand relationships to analyze complex systems and think about how systems can be integrated into different areas and deal with uncertainty.
- Anticipatory Efficiency: The ability to understand and evaluate what is expected, potential, and desirable to create unique visions for the future, apply the principle of prevention, assess the consequences of actions and practices, and deal with risks and changes.
- Normative efficiency: The ability to understand and reflect on the rules and values that form the basis of an individual's actions, negotiate sustainability values, principles, goals, and targets, in the context of conflicts of interest and trade-offs, knowledge, and uncertain contradictions.
- Strategic efficiency: Develop and implement innovative collective actions and practices that increase sustainability at the local level.
- Collaboration efficiency: Ability to learn from others, understand and respect the needs, perspectives, and actions of others (empathy), understand and deal with others and their sensitivity (empathic leadership), deal with group conflicts and facilitate collaborative and participatory problem-solving.
- Critical thinking efficiency: Considering the rules, practices, opinions, values, perceptions, and actions of the individual and take a position to facilitate the pillars of sustainable development.
- Self-awareness efficiency: Ability to think about the role of the individual in the local and global community; continuous evaluation and motivate the actions of the individual; and deal with the individual's feelings and desires.
- Integrated problem-solving efficiency: Comprehensive ability to apply different frameworks to solve problems on complex problems and develop viable, comprehensive and equitable solutions options that promote sustainable development as well as the integration of the above competencies (UNESCO, 2017). Most of these competencies are prerequisites for learners to find sustainable solutions, which are not sufficient to achieve them, so we need to learn more about sustainability and sustainable development.

Education is an essential tool for achieving development goals, meeting future challenges, promoting economic growth, reducing poverty, exclusion, ignorance, oppression, and war (Delors, 1996: 11).

At the individual level, each additional school year supports an average earning potential of 10% on average (Polacheck, 2007). At the national level, the increase in average one-year achievement is related to a 0.58% increase in per capita GDP growth rates. An improvement in the quality of education is an essential factor for economic growth, with an increase of one standard deviation in international tests contributing to a 2% increase in GDP per capita (Hanushek & Woessmann, 2008).

The benefits of education are strong in countries that lack these goals. One study determined that a global poverty reduction of 12% could be achieved once all children in low-income countries were guaranteed to leave school with necessary reading skills. This is equivalent to leaving 171 million people in poverty. For example, the contribution of education to sustainable development is through changing the behaviour of both the individual and society, promoting environmental resilience, and instilling an awareness of climate change. “Educating those in school about climate change helps shape and sustain community development,” notes Wheeler and Hammer, 2010. (Wheeler and Hammer, 2010) indicate that “Educating those in school about climate change helps shape and sustain community development.

The broad public and international debate of policymakers support intense action on education for sustainable development, and a World Bank study suggests (World Bank, 2013) that education is one of the best investments in the prevention of disasters caused by climate change, in addition to the high rates of social return in overall sustainable development.

A recent economic study suggests that female education (along with family planning) is cheaper and contributes to reducing carbon emissions through female options for low-carbon energy directly (Wheeler and Hammer, 2010).

The Organization for Economic Co-operation and Development (OECD) forecasts that low-income countries will enjoy a 28% annual GDP over the next 80 years by improving education and necessary skills by 2030 (Hanushek & Woessmann, 2015: 61). Education contributes to improved health, disease prevention, and social justice compared to increased income or employment (Lochner, 2010) and a 50% reduction in child mortality. Educated mothers are generally more responsive to identifying and responding to children’s health needs (Mattos, MacKinnon, & Boorse, 2012).

There is a direct and robust relationship between the development of education and the improvement of civic participation and political stability. The World Bank notes that a 10% increase in secondary school enrollment contributes to a 3% reduction in the risk of civil war (Collier & Sambanis, 2005: 341). Education is an essential means of acquiring the knowledge and skills of sustainable development and developing positive trends to meet global challenges. Hence, the integration of sustainable development issues such as climate change, disaster risk reduction, biodiversity, and poverty into education essentially requires learning methods that motivate learners to change their behaviour and take actions and practices for sustainable development in their personality, thinking dealings, and surroundings.

As a social process, sustainable development contributes to a culture that respects the principles of sustainable development such as reshaping education systems to address social, economic and environmental dimensions (Lenglet, Fadeeva, & Mochizuki, 2010) and to promote student lifelong learning, critical thinking, collaborative learning, work-based learning, problem-solving, and knowledge utilization.

Good education revolves around what and how people learn, influences people's choices and decisions, enhances their sense of responsibility, and prepares them better for the world they will inherit (Buckler & Creech, 2014: 28).
Education is the source of human capital, cultural capital and social capital (Singer, Mahmood, & Elsaeed, 2019) and that investment in education may be more effective in increasing resilience to climate change than in physical infrastructure investment particularly in cases where the effects of climate change remain highly uncertain (Lutz, Muttarak, and Striessnig, 2014). The goals of the United Nations Millennium Declaration (2000) are to increase free and compulsory primary education for all, reduce global illiteracy rates, eliminate gender disparities in education, and improve early childhood education.

The United Nations Decade of Education for Sustainable Development (DESD, 2005-2014) aims to integrate the principles, practices, and values of sustainable development into teaching and learning processes to enable a more sustainable and equitable society for all, support quality education system reforms, the core values and behavioural outputs that should characterize education. (UNESCO, 2005)

On the other hand, the sustainable development agenda helps advance teaching and learning by introducing curricula that motivate students to ask questions, analyze and think critically, make decisions, and use collaborative, student-centered teaching methods (Buckler and Creech 2014: 65). The expected outcome should go beyond acquiring knowledge to change the behaviour of individuals, equipping future generations for the inevitable changes of the world, and instilling a greater understanding of environmental responsibility for the consequences of human practices and actions.

It requires the transformation of education towards sustainability, as proposed by UNESCO (Nolet, 2009).

- Moving towards Interdisciplinary Learning: Learning for sustainability is an integral part of the curriculum.
- Values-based education: common standards, values, and principles under which sustainable development is based are clear and can be studied, discussed, tested, and applied.
- Critical thinking, problem-solving, and confidence in addressing the dilemmas and challenges of sustainable development.
- Multiple methods (word, art, drama, debate) in dealing with processes rather than teaching output, and rewriting teaching from directly transferring knowledge to a curriculum where teachers and learners work together to acquire knowledge and play roles in shaping the environment of their educational institutions.
- Involving learners in making decisions about how they learn and integrate learning experiences into personal and professional life.
- Addressing local and global issues, using the language or languages commonly used by learners, and carefully expressing sustainable development concepts in other languages - languages and cultures say things differently, and each language has innovative ways to express new concepts.

**Fourth Sustainable Development Goal on Education “United Nations General Assembly”**

"Objective text": Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all by 2030. This objective is linked to the following goals, which may be achieved by 2030.

- Ensure that all girls and boys have free, fair, and quality primary and secondary education, leading to appropriate and effective educational outcomes.
- Ensure that all girls and boys have excellent quality opportunities for development, early childhood care, and preschool education so that they are ready for primary education.
- Ensure equal access for all women and men to technical and vocational education and high quality and affordable education.
- Ensure a significant increase in the number of young people and adults with the right skills, including technical and vocational skills for work and decent jobs, and entrepreneurship.
- Addressing gender disparities in education and ensuring access to all levels of education and vocational training for vulnerable girls, including persons with disabilities, indigenous peoples, and children in hazardous situations.
- Ensuring that all young people and a large proportion of adults, both men, and women, are literate and numerate.
- Ensuring that all learners acquire the necessary knowledge and skills to promote sustainable development through, among other things, education and human rights, gender equality, promotion, and promotion of a culture of peace and non-violence, global citizenship, and appreciation of cultural diversity. (UN, 2015)
- Building and updating gender-sensitive, disability, and child-friendly education facilities are upgrading existing education facilities and creating productive, safe, and non-violent learning environments for all.
- Expanding the number of scholarships available to developing countries, in particular, the least developed countries, small island developing States and the African States, for higher education including grants for vocational training, ICT and technical, engineering and scientific programs in developed and other developing countries.
Achieving a significant increase in the number of qualified teachers through international cooperation for teacher training, in particular, LDCs and SIDS. (The European Committee for Standardization, 2011)

The fourth objective of sustainable development emphasizes the inclusive and ambitious role of education in the framework of the future development agenda by including goals for early childhood care and education, relevant skills for decent jobs, education for sustainable development, and global citizenship (Kutesa, 2015) and focusing on the quality of education, and this is not new because the sixth goal of education for all addressed the quality of education, showed that the quantitative indicator of the pupil continuation rate until the fifth grade weakened the focus on achieving real quality, and we hope that the fourth goal of sustainable development will focus on the actual quality of education and realism in future implementation plans. The identification of appropriate indicators to accelerate the improvement of the quality of education remains elusive in the proposed framework (UNESCO, 2015).

Accessing to quality education at all levels is a prerequisite for sustainable development, poverty eradication, gender equality, women's empowerment and human development, and the full participation of women and men, especially young people (UN General Assembly, Resolution 66/288, The Future We Want, 27 July 2012: para. 229). (Didham & Ofei-Manu, 2015)

ESD in Egypt

Egypt has adopted an approach to achieve sustainable development. It has proven itself to be a strong and resilient nation in the face of various economic, social, and political challenges at all global, regional, and national levels. Egypt has overcome the challenges posed by the global economic and financial crisis of 2008, social and political unrest in the Arab world that began in 2011, and two popular uprisings in 2011 and 2013. Despite these challenges, Egypt has been able to absorb and lay a solid foundation for sustainable development through wise and determined political leadership, strong popular support, and regional and international cooperation. (UN, 2016)

- At the national level, inclusive and sustainable development is a fundamental constitutional value and a general strategic objective. Before the launch of the SDGs in September 2015, Egypt committed to achieving sustainable development through the Egyptian Constitution, drafted and approved by 98% of Egyptian voters who participated in January 2014. (UN, 2016)

- The new constitution represents a marked improvement compared to the previous one in guaranteeing citizens' rights to education, health, social protection, and comprehensive development. It contains articles that promote equality and guarantee the constitutional rights of citizens while ensuring that no one is left behind, such as the guarantee of 15% of parliamentarians are women, which indicates a historical milestone in female representation. Egypt's Constitution covers the economic, social, and environmental dimensions as well as many of the 17 Sustainable Development Goals in its various articles presented as national goals. All sectors and levels of government are required, and multiple stakeholders are invited to participate in the development process towards their realization.

- To meet the demands of the Egyptian people, in May 2014, Egypt held presidential elections and appointed a new government with a clear and coordinated vision towards inclusive economic growth and sustainable development with the development of a political roadmap based on the embodiment of the new constitutional spirit. Egypt has begun to develop its vision for a better future by developing a sustainable development strategy: Egypt's Vision 2030, launched in February 2016. The strategy was aligned with the SDGs in terms of content and implementation period. (UN, 2016) The strategy was reflected in the Government program for 2016-2018, which represented the operational program of the sustainable development strategy over the medium term. Besides, the Government has developed a sustainable development plan for the fiscal year 2016/2017, which represents an implementation plan for the first year of implementation of the strategy. The strategy and the Mid-Term Program presented and approved by Parliament by an absolute majority in April 2016.

- The Egyptian Government immediately initiated the planning and implementation of major national projects that serve the objectives of inclusive and sustainable development. These projects subsequently integrated into the newly adopted National Strategy for Sustainable Development - Egypt Vision 2030. Egypt's Vision 2030 was formulated through a comprehensive and integrated process that ensured the participation and continuous consultation of various community sectors with key stakeholders and was approved by the elected parliament in February 2016. Vision 2030 is strongly guided by the Sustainable Development Goals (SDGs), whose goals will be implemented by all stakeholders, including government, the private sector, civil society organizations, and international development partners.

- The Government recognizes the importance of science, technology, and innovation as key drivers of economic growth and sustainable development. Consequently, there has been considerable emphasis on accelerating technology transfer and diffusion globally, developing necessary legal and regulatory frameworks, financial instruments, and public-private partnerships to support innovation, science, and technology. (Egypt Sustainable Development Knowledge Platform, 2016).
- Recognition of investment in the human and institutional capacity as critical pillars for inclusive and sustainable development, and as such, was strongly emphasized in Egypt’s development strategy. The implementation and success of Egypt’s Vision 2030 and the SDGs and their integrated nature requires addressing human and institutional capacity gaps through capacity building and competence at all levels. Much of the effort is focused on investing in Egypt’s abundant stocks of human capital, especially through education and training, and promoting the creation of decent jobs. On the institutional side, the establishment of highly qualified implementers and civil servants in relevant sectors is critical for Egypt to achieve the SDGs.

- Even though the SDGs are still at an early stage because of their recent launch, the Government of Egypt has taken necessary steps and made commendable innovative efforts towards their integration, institutionalization, and implementation. For example:

  - At an international level. Egypt participated in and contributed to the formulation of global forums leading to the 2030 Agenda and the Sustainable Development Goals. For example, Egypt volunteered to hold the first National Forum 2016 to be among the 22 leading countries that will provide a voluntary national review.

  - At a regional level. Egypt is working with African countries signatories through the African Union Commission and the United Nations to implement the 2063 Agenda and the Sustainable Development Goals. Egypt hosted the African Regional Forum on Sustainable Development, during which Egypt was elected Chairman of the Tenth Commission on Sustainable Development in Africa. Egypt also organized a high-level meeting of national audits of the six voluntary countries in the Africa region in coordination with UNDP.

  - At the national level in December 2015, a national committee was established to follow up the implementation of the SDGs, with the Ministry of International Cooperation as its national coordinator, planning, coordinating and monitoring implementation and ensuring appropriate alignment and integration of the SDGs with the priorities of Egypt Vision 2030. (Egypt Sustainable Development Knowledge Platform, 2016).

  - Monitoring and evaluation units have been established in line ministries to support the monitoring of relevant programs and policies. The Strategic Planning, Monitoring, and Evaluation Unit of the Ministry of International Cooperation was reactivated in 2015 and was established within the institutional structure of the Ministry. The Unit aims to promote active development cooperation through all stages of the ODA management cycle. In April 2016, the Sustainable Development Unit was established within the National Statistical Organization to lead the monitoring and evaluation of the implementation of the SDGs and Egypt Vision 2030 (Egypt Sustainable Development Knowledge Platform, 2016).

Hypotheses of the Future of Education in Egypt, according to Egypt Plan 2030

The objective of studying the future of education is to formulate strategies and plans for the future. And that perhaps we haven’t changed much as biological species despite genetic treatments, cloning, implantation of artificial intelligence, and other advanced medical fluctuations. This means that at least biologically, we might expect to work in the same way we do today, providing educators with somewhat identical reference points to what they are today if we are to achieve educational success. Hence, we may expect hypotheses, which are all derived from psychology and related fields.

To determine the possibility of each hypothesis, we present a triple relevance to each phrase. If something good happens, students learn more and become more willing to learn and participate. This belief justifies profound psychological ideas: for example, if something looks good (i.e., if people feel positive emotions and meaning), individuals are likely to learn better. If someone succeeds in a particular place, the same person will describe the place as good and non-dangerous, and then will express more behaviours in support of this place (ElSayed, 2012) and this light, the following hypotheses can be presented:

- The more learners have better physical and mental health, the more they learn, and the more they are willing to learn more and to participate in group work. The more learners are independent and control over the learning process, the more they learn as well as their willingness to learn more and participate more in group work (Ryan & Deci, 2008). The more students are motivated internally and enjoy learning, the more they learn, the higher their willingness to learn more and to contribute to teamwork (Fredrickson, 1998).

- The more positive the learner experiences in his life, especially the joy, gratitude, attention, hope, pride, enjoyment, inspiration, the horror of the creator and love, the more they learn and the more they are willing to learn more and participate in group work (Seligman, 2002).

- Whenever learners see that the future that lies ahead is attractive and fascinating, education was proceeding according to the mental, personal, and social strengths (talents - intelligence) for students well; the more they learn and greater their willingness to learn more, more participation in group work (ElSayed, 2012).

- The better the teaching is among the students’ preferred learning styles and the learning environment is rich in aesthetic values and more sensational, the more students learn, the higher their willingness to learn more and participate in group work (Salama, 2013).
- The more learning and teaching experience are similar to an exploratory journey in which the individual student plays the role of the essential character of learning; the more opportunity the students become more creative; the more they learn, the more they have a willingness for further education and participation in group work.

- The higher the connection between students, the sense of social well-being in the school community and environment (Seligman, 2002) and recognize their social excellence and are unique individuals with exceptional capabilities (and essential to others), belong to a society that respects them and appreciates them as part of it, the more they learn and the higher their willingness for further learning and participation in group work. The more learners perceive more positive support and challenge, the more they learn and are willing to learn more and have a willingness for further learning and participation in group work.

Comparative analysis of the future of Egyptian education between 2020 and 2030

In the following, we can explore a comparative analysis of the future of Egyptian education between 2020 and 2030:

1. In 2030, we must take care of the future of education such as helping each learner to evolve as an integrated person, emphasizing the well-being of individuals, communities and the world, the importance of children's need, who entering the school to be existent as they add, find, renew, officials and collaborators and cross the boundaries of the division that may exist between them as well as revere the notion of sustainability beyond the short-term gain.

   Education can make a difference. For example, the challenge of climate change and the depletion of natural resources requires urgent action in education, the most important of which is the interdisciplinary approach to education. Challenging the economy requires new solutions to enrich our lives, create new economic and institutional models that seek a better life for all, and unprecedented innovations in science and technology, especially biotechnology and artificial intelligence.

   In large parts of the world, inequalities in living standards and opportunities for life are exacerbated, conflict and instability are often linked to a popular policy that erodes trust in government itself - while threats of war and terrorism are escalating and these trends are affecting individuals' lives and may do so for decades to come.

2. In 2030, there will be ways to improve physical and psychological health, and it is possible to gain accurate information about the specific needs of the human body to be in optimal balance and form. Specific treatment will be available for several mental illnesses that we do not yet understand by 2020, providing education for the disabled and achieving well-being for most of those whose problems range from attention difficulties to depression. These hypotheses may be beneficial for everyone, but not everyone can invest them well, leading to increased tension and inequality. Moreover, we may expect ethical challenges in the light of techniques to improve and grow intelligence and happiness that cannot all be addressed equally.

3. Based on a better understanding of the strengths, 2030 will be much more comfortable than 2020 in harmonizing and adapting teaching methods to students' needs for autonomy and control of their position and status in school. This potential increase in personal control must be seen through the globalization of information technology, which in 2030 will mean that students are more directly exposed to a dangerous world around them, in which they may feel more vulnerable and lack the necessary strength than previous generations who have lived in much smaller communities. With further innovation, there will be enormous ethical challenges of being the first to witness many of the world's biggest problems as well as being forced to distance themselves as citizens to avoid the possibility of grief, guilt, etc.

4. Teachers in 2030 may be more curious and innovative, with social interest and strong technical skills, and they become an excellent example of learning and creativity, and they will evolve to the professional standard of work, as someone who teaches himself, and someone who helps others learn. Dealing with high-quality content forces him to act as leaders and commanders of the social enterprise rather than just a traditional person who communicates knowledge through standard approaches and methods. Indeed, this poses a reasonable educational challenge to society because political control over schools - which are the pillars of society and the teacher that connects them through its power and cultural potential - is under pressure when education content is downloaded from global databases, which is not under political, administrative control.

5. In 2030, schools will be prepared to achieve a very high degree of fun for the student through learning as this is because it will be necessary to remain attractive to students and family who will choose other schools better in caring for these essential, educational, scientific ideal human needs. For the individual, learning will become like an individual journey into new knowledge contexts into natural history, cultural history, and the arts. Multiple digital technologies will open the door to better opportunities for creating spaces of expertise and experience for the students as individuals and groups. It would be better to create rich experiences that represent more abstract concepts than in 2020.

6. Assuming the existence of the current positive theory in 2030, its essential components of joy, attention, hope, pride, enjoyment, inspiration, love, and fear of God will then remain as necessary to the students. The motivation of these
emotions is mainly through individuals and open societies full of hope, kindness, authenticity. There is no apparent reason to change that in 2030. As the social world becomes more interdependent and more influenced by real opportunities, it is clear that self-perceptions such as realism and openness may also change. None of the emotions was expected to be affected by the rapid social differences and transitions that occur in the future. It seems that preparing learners for life in this kind of ambiguity is something we recommend more in the future as well.

7. In light of the best estimates of 2030 for the future, we assume that the pace of development of digital technology will be at least a thousand times faster than in 2020. Digital technology supports knowledge production. In 2030, the amount of information generated per unit of time will be enormous. There is even a danger that humans will not be able to see the distant future. In light of this, students will also find it difficult to imagine a more attractive future than the situation in 2020, at least in a very concrete way. Here, the situation is called uniqueness (privacy), a situation that arises when the production of knowledge is too fast to be considered in the future because the entire cognitive capacity of the individual will be required to process the information delivered immediately, and it is a case of its event horizon. It is a concept borrowed from physics and relates to the so-called “black holes” in the universe as the gravitational force is so extreme that light cannot escape from it, so large areas of the sky appear black to us. This may seem strange, but it is already seriously discussed as a possible scenario for the future. So, the technologist ray Kurzweil put his book since 2006 under the title of his book since 2006, namely “uniqueness.”

8. By 2030, it will be possible to elaborate on the learning process to be consistent with the learner's strengths because brain rays development and psychological testing are much more advanced than in 2020. It will make it easy to map and shape these forces, and this will increase the priority of understanding the learner's uniqueness (which can be measured quickly but should not be done) to avoid harsh comparisons among students according to their strengths, their talents, and area of their powers. Very few students are likely to succeed if they feel less or worse than others. When this happens, social cohesion will certainly weaken.

9. In 2030, it will be widely known that personal strengths are a more direct way towards higher degrees of happiness and contentment than mental powers. One of the character's strengths like “love” will bring immediate happiness upon spreading, while a mental force such as linguistic intelligence will only enable this indirectly by paving the way for good communication experiences. Therefore, it will be essential for teachers to work and maintain the individual strengths of individual students productively. Moreover, personal strengths appear to be a necessary prerequisite for greater participation, which in turn is the key indicator of active learning for students and teachers alike.

10. In 2030, all students will have a strong understanding of their preferred styles from a variety of styles and will, therefore, be able to effectively use this understanding, which will be particularly important in light of content that is difficult to understand or difficult to focus on. Therefore, this imposes new requirements on the constraints of physical and realistic frameworks for learning environments so that students and their parents will compare the school environment with the most advanced learning alternatives in well-prepared and well-equipped homes.

11. By 2030, virtual and physical learning environments will be rich in beauty, sensational, and adaptable to educational goals. Sensitive richness will certainly strengthen memory and support learning by providing more intensive experiences and expertise for students. But it should be noted that even more than in 2020 it will be a big challenge for teachers in 2030 to have experienced and felt so much that they may get used to a very high level of sensation such as habituation, which means to reduce the impression of the dependent sensory inputs. Here, there may be a strong temptation for students to indulge in superficial, trivial, and artificial experiences as it poses a constant challenge for teachers to help students look more closely at content and attitudes so that they have the opportunity to appreciate their more in-depth attributes and qualities.

12. By 2030, it will be possible to take advantage of digital media to emulate almost everything during teaching, and this not only helps students gain rich experiences with academic concepts and theories, most of which are still circulating in very abstract ways in 2020 but it also opens the door to simulating time and space expeditions in deeper technical and academic worlds and by taking advantage of the many possibilities in virtual reality, the students are no longer just a negative future for information on these journeys (Which is still only known in 2020 through cinema experiences) but now have the opportunity to effectively control and dominate the direction and space of their journey themselves. A particular feature of this simulation is worth mentioning is that it includes students' physical competencies, including balance and physical compatibility. Therefore, it involves areas of the brain that are excluded in 2020 from the standard industrial model of teaching because of waiting for teachers' orders. There can be a significant breakthrough as long as for millions of people; humans have learned almost everything through some physical movement. We also remember things better when we get them in our hands, and when we test and experience the material benefit of what we have learned. For learning to be meaningful, some kinds of emotions must be secured into new situations, which in turn must also be physically beneficial.

13. 2030 will see great potential for creativity in the school. At the same time, students will be exposed to a global level of creativity through the media, they may evaluate themselves on it, and it will, of course, be difficult, if not impossible, to surpass it in any case. Moreover, there is an unpleasant fact; namely, machines become more creative,
and there is a real risk that human creativity will become a minor trivial aspect besides the ability of innovative tools in many areas.

14. Through fixed and mobile media, it will be possible to remain in direct contact everywhere and at any time, which provides more support and enhancement of social ties, and this true freedom of social organization is an advantage for all, but the arbitrariness of social relations involving individuals rather than intimate relationships results in many requirements in terms of the quality of the links that are established and the ability of individuals to formulate a productive project with others. It would be morally cumbersome to deal with the fact that the unorganized global network is a rich source of active players rather than weak ones. Therefore, there is another danger to population social development. On the other hand, comprehensive global organizations may create a massive and fragile bureaucracy because of the full scope of their corruption.

15. In 2030, it will be apparent to everyone that the viability of any social system such as a community or school is determined by its ability to reunite (which creates mutual interest among people) and the occurrence of social integration of forces (making it possible to live and work together).

16. No one disagrees with the fact that the Arab educational curricula are traditional ones that are not in line with the needs of the individual and society and future challenges. These curricula represent the views of the ruling authority linked to agreements and protocols with powerful states, which always seek their satisfaction to legitimize their regime. Some countries have adopted the educational curricula that are foreign to their social environment, such as the American curriculum, for example, whose owners admit that they are lagging behind Japanese curricula, this does not mean that we deny all that is non-Arab (because it is not Arab), but because these curricula with its regulation, philosophy, and content on a degree of alienation and isolation as well as based on Western social, cultural and psychological foundations incompatible with the specificities of our Arab societies and the needs of their individuals. Therefore, we must build our educational curricula from the core of our Arab culture, according to exceptional standards that take into account the movement of reality and its development.

17. In general, the school lacks the main elements of the school environment compared to those in Western educational environments, and this may be due to the steady increase in the number of students due to rapid population growth compared to the capacity of these limited schools. This resulted in overcrowding in the classrooms, bringing the number to more than 50 male or female students per semester; therefore, it provided a strong incentive for some students to drop out of school and enter the labour market early without obtaining minimum labour rights.

This crisis called on concerned parties to introduce the morning and evening shifts, with full awareness of the disadvantages of that system, especially the time factor available to give lessons and the implementation of related activities, deprive students of access to vital facilities at the school on the one hand. On the other hand, the phenomenon of renting schools that lack the essential elements of the school, playgrounds, good ventilation, and proper lighting is rampant.

The low level of spending of the State of its gross national product on education and scientific research, where the Human Development Report in 2002 indicates that the level of expenditure on scientific research does not exceed 0.02% of the gross national product compared to more than 2% for most industrialized countries. The rate ranges between (5.2 - 5%) of the national product, and therefore comprehensive development strategy shall be found to achieve a balance between all sectors and work to establish craft centres and institutes of national industries to ensure the effectiveness of education and its ability to advance the Arab development movement.

18. Reconsidering the knowledge architecture and educational structures of the teacher to increase its cultural awareness and restore leading role in society and its ability to employ the techniques of the age of globalization in his daily and practical life, prepare him for a world that is no longer the same as for producing an innovative generation of scientific knowledge that achieves a qualitative cultural shift through proper and continuous preparation and interaction with the amount of information flowing to them via the Internet and satellite channels to upgrade the educational process, conducting intensive workshops for teachers to enable them to use the computer and use it in the education process. It is necessary to integrate globalization and its contents into the curriculum so that teachers and students do not live in a state of separation from reality.

19. Developing a new strategy for the advancement of education following the universality of academic curricula where global education programs are progressing rapidly as global knowledge increases with the development of communication. There is no longer any need to rely on the movement of students and teachers around the world and use the means of communication technology to increase cooperation between countries.

20. The growing number of students wishing to graduate should be considered a health condition that reflects the increasing culture of societies and their desire to develop and improve their cultural and social conditions and catch up with the scientific and technological development sweeping the world. Therefore, it requires governments to go to this vital area, and in the same regard, investment in this sector will increase the number of students in the world from 80 million to about 150 million by 2030.
In the same context, developing countries will be the biggest beneficiaries of the globalization of the university sector because third world countries do not have the means to accommodate the needs of students and improve their standards and enable them to compete freely in global markets. In this view, the principle of education for all, adopted by the United Nations Educational, Scientific and Cultural Organization (UNESCO) at the Dakar Conference in 2000 and set a time limit of 2015, requires a substantial financial cost that exceeds the capacity and educational budgets of developing countries. Therefore, many researchers believe that the need to provide foreign educational services for education is still present. Accordingly, to reduce the need for and rely entirely on educational experiences and curricula, and to rise to the level of competition in education, new practical plans must be developed to keep pace with the development of the world to raise the scientific and educational level of its emerging generations can be summarized as follows:

- Develop a policy and acceptance criteria that are consistent with achieving justice, equal opportunities, and responding to national needs.
- Developing a policy and acceptance criteria that are compatible with achieving justice, equal opportunities, and responding to national needs.
- Developing curricula to prepare graduates with a high degree of scientific and practical and technological, language, and computing skills.
- Diversifying the sources of adequate funding for education in a way that ensures its quality and independence and finding means at all levels of education to ensure the quality of education and a high level of quality through codified, ambitious and authentic standards, leading to modernity and creativity as a gateway to knowledge and technology.
- Periodic evaluation of educational curricula to see how they keep pace with the spirit of the times, address illiteracy on the one hand and activate the principle of lifelong learning on the other.

21. By 2030 ICTs and technological infrastructure will develop continuously, and open and adaptable educational resources will be abundant in all languages. Knowledge and content expected to be available to users free of charge. Ideally, by 2030, there will be a mix of open educational resource providers (e.g., government, experts, communities, learners, industry, publishers).

For example, in the case of adult education, the decentralized production of resources will be necessary to cover the diversity of resources and objectives covered by the education sector. In the future, learners are placed at the centre of a learning process they control when they have the skills to succeed. Social learning opportunities will be more abundant than they are today, thanks to a focus on learning within gatherings and communities. In 2030, “Fluidity” will finally become popular in education. The fluidity is understood as the ability to move between learning contexts, meaning that learners will be able to move quickly from one learning environment to another, therefore combining educational opportunities suited to their preferences and needs. To make better use of this fluidity, 2030 will have multiple mechanisms for assessment, recognition, and certification.

METHODOLOGY

The present research aimed to identify the engines of the future of Egyptian education for sustainable development according to the bases of comparative analysis between the years 2020-2030.

The researchers followed the descriptive-analytical and comparative approach through theoretical and field literature and previous experiences and experiences in the field of sustainable development. A system analysis approach to analyze the components of the system to compare what can be achieved in 2030 with what was achieved in 2020, according to the fourth goal of sustainable development, which relates to Education.

And also, to identify ways in which to bridge the gap of sustainable development between the periods of analysis through the engines of ten of these engines allow students to become more connected to nature.

RESULTS

The results of the research, in addition to the conclusions of researchers from the literature and previous studies, stressed on the importance of the existence of ten motives for the future of education for sustainable development 2030.

- **First Motive: Education meets the needs and aspirations of all learners**

One of the biggest challenges of education is that two completely different approaches support our ideas. First: the traditional knowledge as concepts and skills that constitute subjects or areas of learning, the function of the learner is to absorb the knowledge in his mind and demonstrate his success through different means of assessment, and store this knowledge for later use during the life of the learner. Second, knowledge is something that may involve the processing and use of experience to solve problems and challenges when they arise in time.
The Age of Knowledge emphasizes that reproduction of knowledge is no longer a fundamental goal of education because (a) it is no longer possible to determine precisely which knowledge people need to store for use in their lives, (B) The model for storing knowledge for the future is no longer useful or sufficient to reflect on the development and use of knowledge in the twenty-first century.

Instead, we should focus on preparing individuals or learners to do things and employ knowledge in innovative ways in new contexts. Although it is essential for an individual to store knowledge for his or her cognitive development, to be a severe and active participant in social and economic life, an individual must have the ability to communicate and collaborate with others who have knowledge and complementary ideas. (Lovat, Toomey, & Clement, 2011)

This means focusing on developing each individual's abilities to approach and reflect on knowledge, which is not an end in itself; instead, it is a context in which other skills, talents, and aspirations can be developed. This may depend on academic programs, social and life activities, and a successful, sustainable institution according to the differentiation of education as a strategic choice, and providing a service that others cannot quickly provide. This is controlled by:

- Existence of student-centered academic programs, teacher achievements, academic credits, and other financial and material resources, fair and equitable assessment of students, scientific research levels, and ongoing subsidies from beneficiaries and donors.
- The satisfaction of parents and employers, appropriate return on investment, and control of expenses.
- Enhance the well-being of learners to support success in learning and life.
- Review and reform the curriculum from the early years to the second stage to promote quality learning and support the physical, emotional, social, life, and mental development of learners.
- Improve the efficiency and diversity of language teaching to provide more opportunities for learners and meet their needs.
- An education system that meets the current and future needs of participants in the economy, labour market, and society.

Preparing students for new digitization which is more than just acquiring technical skills, therefore digital learner has the necessary knowledge, values, and attitudes needed to proactively deal with a changing and enlightened world and practice safe, legal and ethical behaviours and can make digital technologies do what they want, meet the needs, purposes and will of the individual safely and ethically.

We must provide our students with the knowledge, abilities, and skills of the core values of full and safe participation in an increasingly digital world, especially for our Arab countries, which are increasingly dependent on knowledge industries for economic growth. This is consistent with the idea that education systems should move away from the “one size fits all” model of the industrial age and support the concept of "personalization of learning" and centred around the learner. Learning experience enhances individual well-being needs and provides a wide range of attractive and stimulating approaches to respond to the changing opportunities they will face in the future. Including:

- Skills development is an essential factor for learning and teaching, helping young people to become successful learners, confident individuals, responsible citizens, and active contributors, develop them as lifelong learners and enable them to reach their full potential.
- All children and young people are entitled to opportunities to develop learning, life, and work skills from the early years to the upper level of learning and beyond.
- Develop interdisciplinary education and learning contexts. As such, it is the responsibility of all preschool teachers, schools and colleges, professionals, and those working with children and youth. It will be essential to recognize and reflect the critical role of parents and caregivers in influencing young people.
- Skills progress is an indicator that helps teachers make sure they are taught according to similar skills developed at previous levels, expanded, and applied.
- Focus on the learner and provide opportunities to develop skills in different ways commensurate with the needs of learners, stimulate active learning strategies, interdisciplinary tasks, and learning experience in critical practical contexts enables children to develop, demonstrate and apply a wide range of skills.
- Children's awareness of the value of the skills they develop. Teachers, practitioners, and learners must think together about their progress according to skills they consider essential in their learning, life, and work.
- The assessment process helps children and students understand the importance of thinking about developing their skills, identifying the steps to build their skills, and using the skills they have acquired through a curriculum and in their lives inside and outside the classroom or school.
- Each child and student is entitled to support to enable them to achieve the highest possible opportunities for the development of their skills through appropriate education and to learn to meet the needs of individuals and to participate effectively in skills development opportunities.

- Delivering the curriculum through a partnership of all institutions, sharing of understanding and language on skills development and application, planning and implementation of learning and other experiences that meet the needs of children and youth.

### Second Motive: Finding New Sources of Funding for Education

The broad and ambitious nature of the (169) Sustainable Development Goals means that various mechanisms and sources of funding are needed to achieve quality, fair and equitable education, lifelong learning, and sustainable development (UNSG, 2014).

Traditional sources of funding for education are government (local) resources, external aids (from bilateral and multilateral donors or agencies), private entities (communities, individuals, and private institutions). It is generally agreed that the governments shall reimburse education expenses through their public expenditure, which is a key mechanism responsible for sustainable and long-term financing for education.

In 2006, a High-Level Group concerned with providing education for all recommended allocating between 4-6% of GNP and 15-20% of public expenditure on education. Such standards included in the Muscat Agreement of Global Education for All. However, in low- and middle-income countries where significant investments are still needed to improve overall infrastructure in education systems, international assistance and funding remain crucial. If all countries meet these ambitious domestic expenditure targets on education, a deficit of USD 22 billion annually is expected to stay over the next 15 years to achieve basic education goals by 2030, (EFA, 2015).

Historically, a general trend has been observed to increase the funding of basic education by governments over the past decade until recently, in particular between 1999 and 2010, domestic expenditure on education has increased in (63%) of countries and represented a large proportion of GNI, besides, marked increases were recorded in many low-income countries.

Despite these significant increases in financing education through domestic resource mobilization, there is still a significant shortage of resources required to achieve EFA in many low- and middle-income countries. Besides, the education sector has had limited success in mobilizing additional international financial support under the Millennium Development Goals (EFA, 2012).

For low-income countries, education remains severely underfunded, multilateral donors are critical. Although education funding continues to flow from some prominent donors, the donor base for education remains narrow, and many bilateral donors are reducing overall education funds (EFA, 2015). Although multilateral aid to education increased between 2002 and 2011, the share of basic education declined in favour of higher education funding, and this must be addressed in the future.

When reviewing the distribution of aids among five types (water and sanitation, agriculture, health, population and reproductive health, and education), the share of education aid already reaching recipient countries is much lower than other sectors. Only (68%) of the total direct aid to education reaches recipient countries. This is because (25%) of total direct aid to education is spent in donor countries on scholarships to support students from recipient countries to study at their universities. (Didham & Ofei-Manu, 2015)

There is little evidence that these scholarships are helping to build knowledge or education capacity within prospective recipient countries, and concerns have been raised that such practices may lead to either local brain drain or an increase in inequality in these countries (EFA, 2015).

Therefore, the fourth goal of the Sustainable Development Goal calls for an increase in these scholarships, which is a single educational objective that specifically addresses bilateral and multilateral funding, but such matter raises concerns as it could lead to a significant reduction in the amounts of the CPA already reaching those countries, which are in need to develop the capacity of their educational systems.

One of the main factors hindering sufficient financing is the lack of a coordinated global education aid structure for donors. To improve the efficiency of the financing, it was proposed to open national educational accounts to improve coordination, control and to provide the education financing in a more integrated manner, (Rose & Steer, 2013; Schmidt-Traub & Sachs, 2015).

A Global Fund for Education should be established to spend at least USD 20 billion annually by 2022 and benefit from the organizational and operational expertise of the Global Education Partnership. Moreover, the private sector may contribute significantly to the achievement of global education goals, although it currently accounts for only one-fifth of funding compared to government sources (EFA, 2012). It is essential to explore the potential of new funding sources, create innovative funding paths to fill funding gaps, and enhance how / where education aid funds are disbursed.
Third Motive: Governance, Accountability, and Partnerships

Good governance requires the coherence of legal and legislative policies and guiding the process of setting educational goals and targets following the 2030 Agenda and that the SDGs are consistent with the State's sustainable development policies and strategies, which requires cooperation between ministries and sectors, and facilitating the flow between policy and implementation. This requires responsibilities and authorities authorization on all the levels of the political process from the national government, down to schools and classrooms.

Partnerships are based on formal education policies of public government institutions, while non-formal education policies often require the active participation of civil society and the private sector. (Didham & Ofei-Manu, 2012a).

The Global Monitoring Report (EFA, 2015) defines Multi-stakeholder partnerships as vital in increasing the capacity of education systems, including involving communities, societies, youth, students, and teachers in policy development and decision-making partnerships. Civil society, the private sector, and specialized research institutions have been identified as key actors in mainstreaming and implementing education policies (UNESCO, 2015). Such partnerships can lead to an integrated understanding of education systems.

The importance of accountability appears in education management and framing through the education process, integrating it into education management and decision-making structures and being a part of the review of education policy planning and evaluation of schools, teachers, and students. Regarding governance, accountability should ensure that policies are correctly implemented, responsibilities are fulfilled, and resources are effectively mobilized. For the management of education systems, the quality of curricula, schools, and teachers should be assessed according to specific criteria and qualifications. In the light of educational practice, mechanisms may include accountability measures such as standards and objectives of practice, behaviour and knowledge acquisition, and accountability assessment tools, (Didham and Ofei-Manu, 2012b).

The objective of M&E is to bring learning to both the individual and the institution through the results and steps of the monitoring process (Didham and Ofei-Manu 2012b). As part of the Agenda for Sustainable Development 2030, the experience gained from global monitoring mechanisms for education will be renewed. National Governments have the primary responsibility for establishing and integrating effective monitoring and accountability mechanisms into their respective policy and planning strategies. Quality education, being a key learning objective for sustainable development, monitoring, and evaluation of the fourth SDG, is more complicated than previous targets. This requires a multidimensional approach covering system design, inputs, content, processes, and results (UNESCO, 2015).

Fourth Motive: Education for Political and Civic Goals

It is necessary to make people in the Arab world read not only sacred texts, but also reference materials of natural and human sciences, and that education develops the ability of the individual to think critically about what he reads and displays, and the individual's own culture and other cultures to make the student able to understand his culture and the culture of the world together.

The school must teach religious education for citizenship to tolerate others, learn about cultural and individual diversity, and to settle disputes and differences through peaceful negotiation.

Researchers agree that the goal of education is to promote and support international peace and understanding by enabling students to communicate between cultures. Kishore Mahbubani deemed that one primary purpose of education is to work on the urbanization of humanity and prevent conflicts, that the enormous challenge of this century will be to empty some of the global elements into a cohesive fabric and to remind children all over the world that they belong to a single human race. Socrates' spirit, which is an essential spring of western civilization, has been able to present universal leads to link humankind together. Socrates’ pedagogical methods of questioning and critical rational justification may be the most important heritage of education in the 21st century.

Deborah Meier, the author of The Power of Their Ideas, provided lessons to America that the purpose of education is "to prepare students to use their minds for democratic governance, develop democratic habits rooted in the minds and hearts of our young, adopt the concept of appropriate rational suspicion and accept others who are different from us." Deborah Meier agreed with the ideas of Dewey (1916) that anyone with a potential vote (as in elections) needs an education that was once reserved for the ruling classes. People should see school as a tool to expand intellectual life, a place where everything must be set according to what the school prepares people to, to be decision-makers in a larger society, to allow them to participate in discussions and debates about the future of their community, state, country, and the world, and to encourage respect for what the person has or others have of ideas.

Continuous and systematic attention to civic education should be given in the curriculum from kindergarten through twelfth grade. Although national educational goals and curriculum and policy objectives and requirements reflect the need for the value and glorification of civic education, this vital part of education is rarely given sustained attention in the curriculum.
- Although history, economics, literature, and other subjects enhance students’ understanding of government and politics, they cannot be replaced by civic education (Branson, 1998). Civic education should be considered a significant concern from kindergarten through 12th grade, whether taught as integrated curricula or in separate units or content.

- Schools should thoroughly examine the informal curriculum. The importance of managing the school community and the quality of the relationships between those within it are rarely of interest. Classes and schools must be run by senior people who govern according to democratic values and principles and show personal, private, and public traits worthy of emulation.

- Student participation in classroom and school management should be an integral part of civic education. Classes and schools should be considered laboratories through which students can use cooperative skills appropriate to their maturity. In addition to interacting effectively and learn to monitor and influence school and public policies.

- Civic education should help students develop a logical commitment to the core values and principles necessary to preserve and improve Egyptian constitutional democracy, even at a microcosm of school. It then makes wise choices in recognizing alternatives, experiences, and understanding that encourage the development of a logical commitment to values and principles that enable a free society to exist. (Branson, 1998)

- Every student should be aware of the necessary documents of the Egyptian nation through an appropriate education for his age and maturity. Such materials include but not limited to Egypt’s independence declaration, principles of the glorious revolution of July 23rd, the other successive struggle revolutions, the historical resolutions of the Supreme Constitutional Court, and the Egyptian constitution, in addition to the critical letter and speeches of the country’s presidents and elders.

- Students in all grades can benefit from studying exemplary citizens, both famous and unseen from past and present. The use of a wide variety of age-appropriate historical accounts, biographies, and current accounts shall be encouraged in the media. Students must have many opportunities to identify people who had defended human rights and political freedoms, carried out their civic responsibilities, or dared to make ethical decisions when they were in a vulnerable situation such as “Gamal Abdel Nasser” and his decision of the July 1952 Revolution, regardless of its pros and cons. (Branson, 1998)

- The school should be allowed to serve the community as part of their civic education. Students should be prepared for the appropriate service according to their age group, adequately supervised during their service, and expected to think of their experiences under the supervision of qualified teachers or mentors.

- Students should be in direct contact with appropriate sectors of civil society, and go out to the community to make observations and interviews and contribute their time and talents for the benefit of the public good. Government members, civilian leaders, and other knowledgeable people should be invited to schools to share their views and experiences with students.

- Provinces should be more attentive to the professional development needs of less experienced teachers. Requirements for renewal of credentials or licenses should ensure that teachers deepen their understanding of the discipline, improving their teaching skills, and expand their knowledge and interaction with civil society.

- We recommend a national civic education initiative that will increase public enlightenment skills.

- Promoting the development of civic personality by promoting recognition of public and private responsibilities, encouraging commitment to the values and principles of democracy, raising the level of municipal effectiveness, and the impact that citizens can have on policies at all levels of government and the nature and objectives of associations and civil society endeavours. (Branson, 1998)

### Fifth Motive: Education for Economic Competitiveness

Two significant forces influence education. The first is the quality of education that is inevitable in knowledge societies. Second, education is one of the paths of growing people’s awareness of the world and the environment, coping with instability, achieving social peace, active citizenship, cooperation with others, and preparing for any unpredictable changing situations.

To develop the Egyptian economy, this will only be possible with the active participation of education as a factor for economic growth, continuous employment, and social cohesion, reducing early school drop-outs, increasing the number of students studying mathematics, science, and engineering, or the so-called “central themes” and integrating ICT into Education Programs. For example, community partnerships can be relied upon in the face of the worsening relationship between education, work, and production. Labour markets have not yet developed into competitive markets in Egypt, but they still suffer from a great deal of turmoil, so the markets cannot be relied on to harmonize education and work. Indeed, even in mature capitalist economies, such harmony depends on a significant social cost that Egypt cannot afford, which necessitates more efficient cooperative efforts among sectors of society to harmonize education and work.
The issue of encouraging the private sector to enter the field of education and the existence of strong quality assurance through a tight quality control system are raised here.

This requires innovative, independent, and creative students working with others. For example, reshaping creative capacity (the ability to generate new ideas, processes, and valuable products) and making it a key precedent in Egypt's education reforms is essential in making Egypt a more progressive and more sustainable economy by 2030.

Recognizing that all students have different degrees of creative abilities, these abilities are not only reinforced and supported by arts, music, and drama curricula but should be considered an essential part of the school's culture of education.

Therefore, acquiring the ability to produce new and valuable ideas, processes, and products should be as important as literacy and numeracy skills in early education. This calls for more frequent and extensive use of teaching methods that focus on the formulation and development of the creative capacity of students, such as learning to imagine, making judgments, and linking findings to their premises or causes (Tokić, 2016).

Emphasis has been placed on attention to education for economic competitiveness, as UNESCO and international donors have reoriented education goals towards labour force participation and ethics education to include skills for economic competitiveness such as the communication skills, archiving, record-keeping for juveniles, vocational rehabilitation in the fields of agriculture, industry, other appropriate occupations and knowledge of the trade.

Students from the elementary school should have three main competencies (1) competence of possessing tools to interact with the environment, including physical tools such as information technology and socio-cultural tools such as the use of language and understand these tools sufficiently and use them effectively (2) sharing with others from diverse backgrounds and in heterogeneous groups (3) taking responsibility for managing their own lives in a broader social environment and working independently (Cohen, 2006).

### Sixth Motive: Education for Social Mobility, Equity, and Justice

Education is significant not only for economic prosperity but also significant to promote social mobility, equity, and justice. Since children of parents with a high salary job are likely to get paid high salaries too. In the same vein, children whose parents work in jobs with low salaries are likely to end up in jobs with low salaries. Thus, the income of parents plays an essential role in sustaining a similar income for their children (OECD, 2016)

Statistics are more apparent when assessing the results of people with social disorders (such as immigrants), which is a fact confirmed by the results of scientific research, where indigenous students perform less than their non-indigenous peers in science, reading, and mathematics. Around 40% of indigenous students are classified as underperforming compared to 17% of non-indigenous students in the fields of reading and writing or reading only.

Education policy usually focuses on issues of diversity and equity concerning learners and communities lagging behind other learners and communities. The education system did not well meet the needs of these learners and communities, and the goal of the education system is to meet the needs of diverse learners. Education for the future, however, points to the need for new ways of thinking about equity and justice. The achievement of equity is not limited to the treatment of the income issue or to getting all people close to an individual standard, this is particularly important because arguments suggest that acceptable degrees of success in education may not reflect appropriate learning methods for the requirements of the 21st century, and that diversity should be recognized as a force for future-oriented education, which must be strongly strengthened, as it is not a weakness that reduces the performance of the education system.

This calls for greater participation of learners, families, and communities in shaping an education that meets their needs, strengths, interests, and aspirations, while ensuring that all students, regardless of where they are or where they receive their education, have equal opportunities to develop and succeed according to the high-level educational aspirations appropriate to Egyptians as a whole.

Citizens of the 21st century need education for diversity where a changing environment requires sharing work with people from cultural, religious, and/or linguistic backgrounds or world views that are quite different from theirs. Therefore, the education system should focus on the future, providing trainees with thinking models and working with diverse ideas.

### Seventh Motive: Education for Knowledge Building

Knowledge is understood in different ways in economics, mathematics, natural sciences, neuroscience, sensory sciences, and information technology, and is perceived as relative matters generated through numerous processes as well as the progress of complex systems, human and environmental systems.

This paradigm shift in knowledge has meant that education in schools should focus not only on reaching predetermined learning standards but on alternative visions and new ways of building knowledge and creating valuable ideas. Hence, concentrating on students’ abilities to enter the labour market with skills such as literacy and numeracy has shifted the focus of attention to the results of international studies such as; TIMSS and PISA, far from less clear educational
objectives (such as democratic participation, artistic talent, understanding of political science, history, ... Etc.) to seek a more realistic view of the importance of education. The results of international studies such as: TIMSS and PISA have acquired a considerable appreciation among the media and are found in the minds of senior policymakers. (Singer, 2019)

To better understand creativity, attention must be paid to extracting economic and social value from knowledge. Ideas, knowledge, and technology should result in significant improvement in performance, indicating that creativity and project performance are interdependent. Technology and innovation are key drivers of economic growth and the product of education referred to as "natural capital."

Education for cognitive construction is linked to the teacher's use of the structural assessment that we lack in our schools because our practices give preference to the final assessment based on relevant criteria derived from comparing students with each other (Norm-Referenced).

The use of diagnostic tests is the beginning of the Formative Assessment process, which is based on known milestones. The constructive assessment of the teacher and the learner provides continuous benefit on the effectiveness of the teaching and learning process at each step of teaching, which in turn contributes to the continuous changes in the process of teaching, and help each student when needed to reach the desired stage of mastery.

It is not correct to compare each student's achievement with the achievement of others based on a well-known statistical equilibrium curve or to compare with his classmates' rates, which cause tests to base on arbitrary criteria rather than reflecting the actual learner's achievement according to specific lesson objectives that he/she require to learn in a given circumstance. That is, following the standards of achievement agreed upon developmentally or about the previous achievements, which help in preserving learner's educational rights on the one hand and are developmentally beneficial to the person and the group on the other side. (Gellet, 2010)

Structural assessment is based on real tasks performed by students. They are not associated with pen and paper and maybe practised outside of learning and teaching sites.

From global experiences in the field of structural assessment, teachers are eager to adopt it because it guides education towards better learning goals, raises motivation for learners and teachers, improves their learning outcomes, promotes job satisfaction, and achieves more teacher professionalism.

If it is hoped that the structural assessment processes will affect the teaching and learning processes, change their nature, and make them real, attention shall be given to the pressure resulted from the unenlightened accounting and using fast, and easy solutions may get us back to some of the aspects of the old assessment that we almost assured that it is harmful and misused. The actual assessments themselves can be confused, distorted, misapplied, and lack of clarity and implementation, invoked by traditional researchers who rely on them to criticize this assessment.

In this light, the ideas of the 21st century on knowledge and learning require a shift in reforming teacher roles. If the task of the learner no longer assimilates and stores knowledge for future use, the roles and responsibilities of learners also need to focus heavily on identifying and working with learners' strengths and reflect on the part of teachers in supporting the development of each learner's potentials. (Singer, 2019)

Therefore, the assessment model for education sustainability requires us to think beyond the current assessment models. We have to think about how to evaluate problem-solving, systems thinking, understanding deep concepts, creativity, and innovation. Similarly, we must consider how attitudes and values related to the diversity of life and conservation help us keep making decisions and setting priorities that will affect our future. We need to rethink the idea that some students will succeed in school, while others will inevitably fail and create an assessment system that enables school leaders, teachers, and students to plan and prepare for a sustainable future.

Leaders must create an assessment model that assesses higher-order thinking skills. This dimension requires students to demonstrate understanding and competence and apply a clearly defined set of sustainability-related knowledge and skills that can be grouped into common core standards, innovative scientific standards for future generations, and orientation towards future science and dealing with environmental issues and appropriate national and social sciences. (Thomas, 2009)

Assessments can include a combination of mixed approaches and open response elements, in-depth performance tasks that require students to solve problems, critical thinking, apply their learning to genuine sustainability issues and topics, and communicate clearly about social media interactions, political, economic and geochemical systems. These performance tasks can include research, experimentation, and assessment, or they can focus on modelling, design, and problem-solving.

Assessment of global and ecological citizenship skills: This involves assessing non-cognitive skills that support global citizenship, working appropriately and productively with others, leveraging the collective knowledge of groups, filling cultural gaps, and using different perspectives to increase innovation and quality of work. These skills also enable students to learn and work with individuals representing different cultures, religions, and lifestyles in a spirit of mutual respect and open dialogue in personal, business, and community contexts and encourage understanding of other cultures.
including the use of foreign languages. Skills that support global citizenship and the environment lead to dealing with the natural world as an integral part of society, as expressed through the conservation and supervision of natural resources and other living organisms.

Assessments can include community-based collaborative projects that address social justice concerns in the community based on an oral, written, graphical and multimedia presentation and an achievement file that demonstrates the student's ability to collaborate and participate in effective interpersonal, global, and ecological interaction.

Assessing essential skills for creativity: This is evaluated when students transfer their knowledge and skills to original projects that address 21st-century issues and concerns. Students use knowledge and skills to solve complex problems and create a set of works that demonstrate innovation and creative application. Students learn to prioritize, plan, and organize themselves and others efficiently to achieve the goals of a particular project or problem. Students learn how to deal with multiple objectives, tasks, and inputs while understanding and to adhere to time, resources, and systems constraints.

The assessment should include expanded performance tasks that use scenarios to maintain a balanced life on Earth that contribute to a real audience by replicating how these capabilities will be used in college and professional contexts. These projects may require students to work with local professionals and may include internships, partnerships, or workplace mentors.

- **Eighth Motive: Education for Entrepreneurship Skills**

Young people need to learn entrepreneurial skills to prepare them for the future economy so that they can become job creators, not just job researchers or seekers, and move between more complex jobs. Entrepreneurial skills are transferable across different jobs and are successful in long-term work, such as technical knowledge, which will become increasingly important in the future (OECD, 2016).

- **Ninth Motive: Education to Support Human Capital**
  
  - Social Capital: This requires changing our ways of thinking about education, opening the way to social intelligence, knowledge sharing, and problem-solving based on teamwork (Reich, 2001). Whereas successful economies and communities with creative capabilities are based on the idea of strategic synergy rather than market competition, and that sustainable development and economic competitiveness require more significant efforts in developing interpersonal skills. This is called social capital through education.

    We must recognize the existence of a knowledge gap between our countries and others, and through our current slow march, we are in a state of disability to catch up with others. This gap is manifested in underdevelopment as an unambiguous feature that cannot be overlooked or to find a verbal justification for it.

  - National Human Capital: This requires attention to many indicators, including the percentage of learners who can read and write a text that speaks of everyday life. In addition to the number of educational institutions per population and the ratio of primary education teachers with recognized competence.

  - National Process Capital Index: This requires attention to many indicators, including the ratio of the number of fixed telephone lines to the population. The number of personal computers per 1000 people and the ratio of the number of internet users to the population.

  - National Market Capital Index: This requires attention to many indicators, including the ratio of high technology exports of GDP, the number of registered scientific patents, and the number of competent international scientific conferences held annually.

  - National Renewal Capital Index: This requires attention to many indicators including the value of books supplied and their percentage of GDP, the number of periodicals and their rate of GDP, the ratio of expenditures on research and development to GDP and the number of researchers, scientists, and engineers working in the research sector.

- **The tenth Motive: Learning for Life and Lifelong**

According to Egypt's 2030 plan, education has become a priority in Egyptian politics. The Egyptian government realizes the significant need to provide solutions to the key challenges confronting Egypt, which may be manifested in demographical change, global competition, technological development, and economic crises.

The traditional education was mostly in an isolated form of space and time as if knowledge is an unchanged stockpile, and children and pupils should only save it and empty it without using it to solve their problems, especially in the future. The application of knowledge is often associated with artificial learning and teaching situations. In today's world, learning intended to take place in authentic dialogue situations as much as possible, and to become an integral part of the context in which it occurs, aiming at supporting cohesion between the learners and what he/she learns, so that the knowledge and experience integrate into the heart and mind of the learner. Thus, the learner retains them in the long-term memory system and remains ready to benefit from it in theory and in practice for most future times.
The human capital theory argues that the value of competencies ends with time, and this is true in the changing world of the 21st century. Lifelong learning is a priority that emphasizes the importance of lifelong learning and lifelong skills development, which is critical to economic success and enabling people to participate fully in society.

The importance of advocating for the concept of learning for life emphasize in response to a time of knowledge multiplication that requires growing expertise that enables the owner to absorb renewable information and upgrade performance from one level to a higher level or shift from his work to a newer job, (Singer, Mahmood, & Elsaeed, 2019).

Lifelong learning is characterized by the flexibility that the education system has not experienced in its traditional form, especially in its openness to sources of knowledge of any kind and location, leading to the integration of formal education and other types of education.

Lifelong learning is a way people get to know their world and be guided by their needs or interests. It is about acquiring knowledge outside formal education. People have more control over what they learn and how, and they can choose to learn in an appropriate and supportive environment (Morrison-Saunders, Pope, & Bond, 2015). The importance of this learning process is often underestimated, ignored, and poorly understood because it occurs outside the classroom, and often, there is no experienced teacher involved in the process, and it is difficult to measure the knowledge acquired.

As the world moves from an industrial society to an information society, lifelong learning for children, adolescents, youth, and the elderly have become essential. People spend more and more time learning not only in the classroom or during work, but also at home, after work and on weekends. Surfing the Internet, participating in discussion groups, watching nature, documentaries on television, listening to the radio, visiting museums or reading newspapers, magazines and books, are experiences that include lifelong learning. This is an effective way of learning, as it is self-directed, voluntary, and guided by a person's needs and interests.

Lifelong learning is essential for sustainable development as it is possible to encourage people to involve them in these topics from childhood to adulthood. Simple principles and concepts of sustainability can be presented, for example, by scientific and practical experiences or simply by participating in public debates. Evidence suggests that the likelihood of learning more easily depends to a large extent on the ability of school teachers, parents, and the media to communicate with “discover things,” as developed by Richard Feynman, Nobel laureate.

The media may have a significant positive impact on sustainable development. The question is how to provide the necessary information to people. When done correctly, some documentaries, talk shows, or commercials can mobilize people to better understand environmental problems and how we can solve them, for example, describing how to separate household solid waste for recycling (Filho & Murphy, 1996).

The learning process is led by learners who have full control over their learning, as they define their own learning needs, define their individual goals, select and create their learning environment through communication, collaboration and knowledge sharing, and create, generate, adapt, review and validate learning resources themselves. This scenario is characterized by the abundance and diversity of resources, groupings, groups, and experiences, combining self-directed and collaborative learning supported by communities and gatherings. The need to control the learning process may lead to social exclusion, which means that all the individuals may not have the required competence or motive for such an educational journey.

Learning for life is particularly suitable for gaining competencies for individual needs, such as learning in spare time or active citizenship education. Examples include a parent who wants to learn more about his/her child's learning disorder, who uses Google search to identify and study relevant information, (Castaño Muñoz, Redecker, Vuorikari, & Punie, 2013) a person who needs to take a job in a different European country and wants to learn the language of the host country in the future through a combination of tools, courses, and online communities and a faithful botanist allocating his site on the internet to gardens, with all the links and sources that he deems relevant and exciting, in addition to advice from his experience with others.

In this regard, project-based education is life-learning in Finland, Poland, Norway, and Spain, where projects have been incorporated into national curricula. In Poland, the basics of any project "subject" are compulsory in all comprehensive secondary and vocational schools. In the UK, plans began to enter education in 2001. In Finland, the Youth Academy and other non-governmental organizations are promoting active citizenship practices and undertaking projects both in and out of school, as the traditional approaches failed to orient the coming generation sufficiently to the truth of the various, dangerous, and interlinked threats to the human society.

DISCUSSION

The Egyptian education system has been heavily criticized, focusing on the feasibility of graduates of government-funded or co-funded institutions, and the high illiteracy rate among individuals who have benefited from the school education system, and the researchers linked these results to certain weaknesses, including low quality of educational institutions; especially pre-school and basic education, lack of availability in the regions poor and insufficient number of
trained teachers at all levels of education, little use of education technology at all levels, use of teacher-centred teaching methods at all stages of education; especially in the early stages, the inability of some parents to afford fees imposed despite the policy of free education, inadequate facilities to accommodate people with special needs (e.g., physically, mentally, emotionally, and with high capacities), the phenomenon of anti-social behaviour is growing, violence in schools has increased, and inadequate management training among school leaders.

Examining the surrounding environment and other activities such as model learning, games, and visits provide students with an exciting context for developing sustainability knowledge, skills, attitudes, and values. The study of the surrounding environment may include direct observation, analysis, research, discussion among students and teachers, critical thinking, problem-solving, the evolution of sensitivity to different environmental aspects, and the relationships between the environment, the economy, and society.

It is essential that during their studies, students can benefit from a school environment that respects sustainability. Focusing on the mutual relationships between man and nature, taking into account the future role of students in society. Students must develop a sense of responsibility towards the environment. The researchers, therefore, see the importance of the direction of decision-makers to take the drivers of the future of education for sustainable development related to the results of current research (UNESCO, 2019):
- The first engine: education that meets the needs and aspirations of all learners.
- The second engine: finding new sources of funding.
- The third engine: Governance, Accountability, and Partnerships.
- The fourth engine: Education for Political and Civic Goals Engine.
- The fifth engine: Education for Economic Competitiveness Engine.
- The six-engine: Education for Social Mobility, Equity, and Justice Engine.
- The Eighth engine: education to Support the Heads of Human Funds Engine.
- The ninth engine: Learning for Life and Life.

CONCLUSION

Changes in human behaviour towards more ecologically sustainable, economic, social, cultural and personal livelihoods through behavioural changes that support a more sustainable future require linking education to development that meets the needs of the current generation without compromising the capacity of generations coming to meet their special needs and provide students, teachers and school systems with knowledge and ways the thinking we need to achieve economic prosperity, responsible citizenship, and the restoration of the health of the living systems on which our lives depend.

The transformation of education towards sustainability, as proposed by UNESCO Nolet, 2009) requires a trend towards interdisciplinary learning by considering learning for sustainability as an integral part of the curriculum as follows:
- A value-based education: the shared standards, values, and principles underlying sustainable development should be clear. It can be studied, discussed, tested and applied - critical thinking and problem solving, confidence in addressing the dilemmas and challenges of sustainable development (Manitoba Government, 2011)
- Multiple methods (word, art, drama, and discussion) in dealing with processes and not the output of teaching, and reworking teaching from simply transferring knowledge to a curriculum Teachers and learners work together to gain knowledge and play roles in shaping the environment of their educational institutions.
- Participants in decision-making on how to learn and integrate learning experiences into personal and professional life - addressing local and global issues, using the language or languages commonly used by learners and carefully expressing the concepts of sustainable development in other languages - languages and cultures You say things differently, and each language has ways. Innovative to express new concepts.

LIMITATION AND STUDY FORWARD

In this paper, the researchers concluded that while there are real drivers for the future, basic education, organizations, and lifelong learning are still very slow formal education systems to change and may take a long time to redirect them to produce results. This requires scientific research to investigate the acceleration of formal education to achieve sustainable development.

Although informal and private education, run by private institutions and a good civil society, can provide new information, methods, and methods of teaching and learn more easily in a shorter period, formal and informal education is necessary to ensure a sustainable future.
Although the integrated education system would be an optimal approach so far, no public or private education system can claim to have this characteristic. One of the most important problems identified is the lack of integration between the various levels of the education system and the lack of a coherent approach until the future of sustainable development we seek to move forward. There is a need for new subjects in the field of academic curricula and vocational training. This requires researchers and national research institutions to move to the integration of the technical education sector to contribute effectively to the movement for a sustainable future.

Scientific research in the teacher training component is important to gain specific knowledge about sustainability problems and questions and maximize the ability to integrate sustainability into teaching methods and methods. Besides teacher training, it is necessary to develop educational materials and modules that will improve the situation of dealing with sustainability in a multicultural context. The introduction of a multidisciplinary approach to teaching and research has also become more important to be able to address increasingly complex problems as well as because sustainability encompasses many technical and scientific fields.

In the future, environmental and media literacy will be an essential skill in a sustainable society regardless of background, level of education, or professional activity of its members. Sustainability must be at the heart of the academic curriculum and will require a lifelong and global commitment at all social and economic level.

AUTHORS CONTRIBUTION

Singer, N. conceived of the presented idea and developed it through structuring the research and wrote the manuscript with support from Elsayed, E. F., who aided in interpreting the results and worked on the manuscript. Both authors discussed the results on the manuscript.

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