Indian J.Sci.Res. 7 (1): 043-055, 2014

ISSN: 0976-2876 (Print)
ISSN: 2250-0138(Online)

SUSTAINABLE DEVELOPMENT; CONCEPTS, CHALLENGES AND SOLUTIONS AND ITS POSITION IN IRAN AND MALAYSIA

[1]MINA MOHAMMADI KARTALAEI

MA Sharif University of Technology and DBA student at the University of Industries and Mines of Iran

ABSTRACT

Education is the most effective mechanism of the society for facing the most enormous challenge of this century, that is, sustainable development. Education is one of the unique mental factors for the society's efforts for reaching sustainability through methods of skill, consultation, education and knowledge exchange. On the one hand, increase of competition in world markets and technology development as dynamic tools for more profit have led to an increase in the number of persons who try to act effectively by achieving a higher portion of world resource whereas they don't take much note of its harmful consequences such as destruction of natural resources, environmental pollution, poverty and inequality. With a change in paradigm of development from classic to modern, sustainable development and also environmental issues have turned into the main pillars of development. Meanwhile, increase in the awareness of people in the society of the importance of environmental issues in the form of sustainable development in the world has had a high coefficient. In this paper, we have tried to investigate the role of education in different educational institutions in expansion and codification of sustainable development by presenting some concepts and definitions and also study a sample of measures and experiences obtained in one of the pioneering countries in this field.

KEYWORDS: Education, Developmental Education, Sustainable Development, Environment

Scientific and technological advanced and progresses in today's world and the speed of changes and diversity in scientific and technological methods and styles are very rapid and incredible and ignorance and lack of adequate attention to necessary and proper teachings and negligence of accordance and correspondence of the qualitative and quantitative levels and the human resources with the scientific and technical growth level of every society, will eventually bring about numerous hardships and problems in the way of economic and social growth and development of the society (Sariolghalam, 1995). [5]

Organizations in our age have roles and missions beyond traditional roles and missions. In an economic and social environment, intentionally or unintentionally they have new responsibilities and duties. Organizations today have stopped being merely official economic and industrial institutions and have turned into social-political institutions that must be sensitive to and aware of the issue f the social environment; thus, valuing the public interests and attention to the social environment and norms are among important issues in all organizations and management (Alvani, 2001) [1].

In order o create a common language and interpretation, the two concepts of developmental education and sustainable development must be primarily defined.

CONCEPTS AND DEFINITIONS

Education

Education refers to any pre-planned activity or management which is aimed at creation of learning among learners. Education procedure includes specific content and direction and emphases during which information is replaced in the person's mind and is integrated with his/her previous knowledge and this result brings about changes in the person's behavior and attitude which also expresses this concept thus (Kianpour, 1979) [8].

As can be understood from the definitions above, learning and consequently change are counted ad the main and key goals of education.

Sustainable Development

Sustainable development refers to life, keeping alive, continuous persistence and what can persist in the future. It is a very broad idea and expression that has different and numerous meanings and as a result the frequency of these meanings evokes different reactions of experts.

The term sustainable development was used early in 1970s regarding the environment and development. The three important areas which sustainable development emphasizes are environmental issues and

[1]Corresponding author

since the time international organizations desired access to a proper and adequate environment for profitable development, their specific name and feature emerged in the sustainable development strategy. Using the term sustainable development became pervasive in scientific circles after the Rio de Janeiro conference in 1992 (Zarabi & Azani, 2001) [7].

Sustainable Development and Environment

The concept of sustainable development is a kind of effort for combination of growing concepts of an area of environmental issues with social-economic issues. The concept of sustainable development is a significant change in understanding the relationship between humans and nature and humans with one another. This issue is in conflict with the attitude of the two previous centuries of humans that was formed based on separation of environmental and social and economic issues. Over the two previous centuries, environment has mostly been considered as an issue extrinsic to humans. In this view, the relationship between humans and environment was perceived in the form of humans' domination over nature and it was believed that human knowledge and technology can overcome all environmental and natural obstacles. This view is related to the development ofcapitalism and industrial revolution and modern science. As Bacon, one of the founders of modern science, proposes it: the world is created for humans and not humans for the world. Environmental management was based on management of natural resources that acknowledged that humans need natural resources and that these resources must be managed instead of rapid and unplanned use so that maximum use of them is possible over years. Also, the science of economy must dominate the issue of the relationship between humans and economic development and as a result of awareness of and appealing to that, increase of products is defined as a priority. Sustainable development was codified in the commission of the world conservation strategy that was formed in 1980 by the international union for protection of nature. In addition, with this issue by the world committee of development and environment, our common future titles were proposed in 1987 and protection of the earth in 1991. In 1978, the world committee of development and environment reported our common future which is also known as the brundtland report. This report presented a comprehensive definition of sustainable development; therefore, according to the brundtland report: humanity has the ability for sustainable development so as to guarantee that the present needs can be met without endangering the ability of future generations to meet their needs.

In 1992 in "conference on earth", sustainable development was defined thus: meeting the needs of the present generation without compromise with future generations regarding their needs. The world commission on environment defined sustainable development thus: "sustainable development is a change process in using the resources, directing the investments, orientation of technology development and institutional change that is adaptable to present and future needs". The "Brandt land" commission says regarding sustainable development: "as a process that is a prerequisite for improvement and advance, sustainable development is a process that is the basis of improvement of situation and among the winner of social, cultural shortcomings of the advanced communities and must be the driving engine for balanced, proportionate and proper economic, social, and cultural advance of all communities and specifically developing countries" (Abbaspour, 2007: 1008) [9].

Shamsolsadat Zahedi states that sustainable development is a process during which the people of a country meet their needs and improve their life standards without consuming the resources that belong to future generations; thus, we call a development sustainable when it isn't destructive and provides the possibility of protecting resources for the future people including water, soil, genetic, plant and animal resources (Zahedi, 2003) [3].

Sustainable Education and Development

Developmental education means that humans must be educated in such a quality and be equipped with characteristics that not only don't they have any problems with developmental programs; rather, with sympathy and commitment and scientific attitude they use all their capabilities, energy, expertise and thought in order to achieve developmental goals and should constantly produce new intellectual and qualitative values for participation (Sakharopolos, 1994) [4].

When speaking of sustainable development, a development is meant which looks at the survival of humans and their complete and comprehensive welfare. Sustainable development is in an interactional form with all chains, dynamic processes, human resources, natural resources and hardware system of the society and intends

to create an interaction between present and future, human and nature and justice and welfare among and inside generations (Ayuzi, 2006) [10].

According to the two concepts above it seems that educational and research capacity building with a different and interdisciplinary approach and improvement of quantitative and qualitative values (creation of awareness, development of skills, logical decision-making, etc.), are greatly helpful in accelerating the concept of sustainable development and improvement of the category of education in the society.

Developmental Education and the Environment

Based on the studies conducted the cause of diversity and destruction resulting from ignorance or inattention to the environment has been due to shortage of scientific and expert teachings and also selfishness of humans and breaking with the past values and customs for its protection and support. The most effective step for protection of the environment is evaluation of people's behavior and performance in reaching the primary principles of sustainable life; that is, people must evaluate their behavior in encountering the environment in such a way so that they can achieve a fixed character and principles of symbiosis with nature since accurate productivity of resources and prevention of depletion of natural resources lead to sustainability of life [25].

With emergence of the new paradigm of development since 1970 targeting of qualitative growth along with oneness of economic-social systems with environmental (ecological) ones was considered and management of the country with accurate and organic combined interaction of the three systems was considered and the thought of supporting sustainability and the environment became the symbol of an effort for expansion of a broader concept in which covered not only the rights of the present generation; rather, all things including human and non-human, and present and future, and the biological system on which we all depend. Education of sustainable development is taken note of for preparing the citizens in order to directly face challenges at present and future and decision-makings combined with responsibility and accountability for construction of a dynamic and lively world. In this framework, five types of educational learning are considered and include education and learning for knowing, for taking action, for being and existence and life of the earth, for common life and positive change of oneself and the society. In this fundamental prospect everyone has the chance to make proper use of education and learning of values, behavior and style of life for sustainability of future and sustainable future and positive deformation of the society.

CHARACTERISTICS OF DEVELOPMENTAL EDUCATION

Professional and skill education

One of the operational signs of developed humans that helps to employment or facilitates the process of employment is having skills that pave the way for growth and development. Education and new information create new expectations among people and after a time information turn into the method of work and skill.

Education of Institutionalization of Change and Innovation

One of the signs of developmental education is that it constantly produces and deploys new thoughts or is in other words creative and innovative. In fact, this will be applicable when the rate of acceptance of new information by members of the society is high and people not only aren't affected by old thoughts and don't think of maintenance of the present state; rather, they are always thirsty for new information.

Education of Enhancement of Perceptive Skill

Perceptive skills are the ability to perceive this point that diverse applications of the society are interdependent and change in each of the sectors necessarily affects other sectors. Infrastructure of perceptive skill is in fact the same as systems thinking whose real implementation needs change in thoughts of the society in practice so as to change the perceptive thought into the perceptive action.

Education of Enhancement of Decision-making Skill

Decision-making is a complicated process which primarily needs adequate information. Education of this skill makes it possible for people to find the required data of their decision among the mass of available data and then process and use them. In fact, one of the characteristics of developmental educated human is that he/she must use reliable resources in the decision-making process.

Creation of Research Spirit

One of the qualities that show the educated human is to have a research spirit. Creation of this spirit isn't facilitated by formal and educational classes; rather, members of the society must create this spirit in them and carry out research in a structural and spontaneous way.

Creation of research spirit is effective in the following cases:

- Capability of deployment of data is enhanced among people
- Ability of selection of data increases
- Recognition power of people increases
- People become sensitive to the data
- Group research is formed

Self-monitoring Education

Self-monitoring is one of the features of developed human and every person that is equipped with that constantly thinks of his/her own development and completion. Self-monitoring is a kind of self-leadership and the person constantly compares his/her situation with the produced data and intends to keep himself/herself up-to-date (Shaverdi, 1992, 10) [6].

Importance and Necessity of Education of the Environment in Present Conditions of the Society and its Goals

It has been many decades that planners and executives of policies of economic development have made an excuse of advance and public welfare so as to reach the immense production of devices and facilities such that they have propagated the culture of consumerism among societies and in order to reach this goal have put top of their agenda depletion and destruction of environment; but over the recent years the results of these hasty decision-makings and unreasonable policies have been explicitly revealed [30].

Aldo Leopold, the father of science of protection of nature, says we use the country without any consideration since we consider it as our inseparable part. When we look at the country as a society and consider ourselves as an inseparable part of that society, "then our use of it will be coupled with love and respect" [27].

Therefore, in order to achieve a sustainable development, that is, a harmonic development with maintenance of environmental values, the development of environmental culture of societies must be thought of so that people constituting societies adapt their character with sustainability and dynamism of nature. Sustainable development achieves when environmental data expand among people and participation of people in its protection and preservation doubles. Without public support mutation in development will also make trouble; therefore, education of people in the area of environment is necessary since with by creation of change in intellectual and ideological foundations of people their performance can be changed, or it's better to say, transformed; and the outlook of sustainable development can be predicted with a proper pattern [35].

In the first priority, the goal of education of environment is the training of active people aware of their environment and their responsibility in protecting that. In order to achieve this goal, education must increase people's knowledge of mutual responses to physical, biological, social, economic and cultural aspects of the environment the attachment and complex relationships between social-economic development and improvement of the environment.

Goal of Education of Environment

The goal of education of the environment is to bring about a sensitivity to physical, environmental, social, economic and political incidents and changes of the environment in every person and to create in him/her concerns regarding the induced issues and make efforts to amend human problems such as poverty, illiteracy, social injustice and the like and nurture in his/her a skill for invention of methods, devices and solving environmental issues [14].

Concept of Sustainable Development in Higher Education of Environment

Over the five previous decades there has existed an affordable and social advance that leads to a considerable deterioration in natural environment (Klemes et al., 2012) [19]. Up to now, "sustainable development" has been an important agenda both at the global and national level (Lehtoranta et al., 2011) [21]. The term "sustainable development" in Brundtland report since 1987 as development has been determined so as to meet the present needs without reduction of ability of future generations (Chong, 2005; world commission of environment and development, 1987) [16].

The environmental dimension "sustainable development" is based on protection of long-term integration with life that explains environmental systems and infrastructures (Abdollah et al., 2009) [11].

The blue printable edition to take action for "sustainable development", agenda 21 was founded in Rio de Janeiro, Brazil in 1992 so as to limit the balance between development and protection of the environment (Spencer, 2002) [33]. In this regard, organizational integrated order, codification of polices and non-governmental participations of organizations are main properties for sustainable development.

The concept of "sustainable development" is based on strong relations between human welfare and scale and range of human activities which has impact on integrated systems (Quaddud, & Sidduque, 2001) [28]. In addition, Sanousi and Doust (2008) stated that education for sustainable development enables knowledge development, values and skills separately and in total at the local and global level that will help to the improvement of the quality of life. Therefore, sustainable development for higher education considers the trend of maintenance of education which needs long-term thinking, educational goals, multi-dimensional solution and programs in a systematic and integrated method. In other words, adoption of the concept of sustainable development of higher education must be coupled with success of local and global combination of knowledge, integration of members of the scientific board, apt students and staff and systematic transformation and work framework for creation of synergistic and development of new solutions (Kiwi et al., 2011).

HISTORY

The Stockholm declaration in 1972 was the first conference that showed sustainability of higher education and the interdependence between humans and the environment. This declaration was focused on finding ways in which universities, their leaders, professors, researchers and university students can involve their resources in response to balanced challenges between the effort of humans for economic and technological development and protection of environment (Sohen, 1973) [32]. In 1990, more than 300 universities in over 40 countries created the Talloires declaration which was a 10-score design for implementation of sustainability and environmental literacy in education, research and operations in faculties and universities (IONESCO, 1990) [36]. Since 1992, the agenda 21, a comprehensive plan adopted by the heads of the world in conference of United Nations of environment and development (UNCED) was amended in Rio de Janeiro so that sustainable development of environmental changes is maintained. Consequently, these universities have started voluntary projects committed to combination of sustainability to their systems, clear policies, strategic goals of planning and time framework for reaching a sustainable campus (UN, 1993) [37].

Four partners of institution of international design of association of universities, university managers for a sustainable future, Copernicus, Campus and IONESCO have combined a unique effort for mobilization of higher education universities and institutions to the support of "sustainable development" (Habib & esmayla, 2008) [17]. Based on this, leaders of higher education institutions and their university colleagues in all concentrated fields were persuaded to centralize sustainable development as a scientific and organizational center for creation of a just, fair and environmental future.

A scientific method that is broadly used to achieve "sustainable development" is the ISO 14001 standard which is the primary standard that issues the prescription sentence for environmental goals, policies, responsibilities and annual audit of its elements (Mac Arthur & Blen, 1998) [23]. This leads organizations in management of effect of its products, services and operations on the environment and attainment of external certificates for methods of deployment of methods. In Europe, the European environmental management and audit scheme (EMAS) was developed in 1993 so as to stimulate gradual changes of the performance of environment (Estegar, 2000) [34] and in England, an unseparablr strategy has been proposed for creation of 11 developmental plan under the specific plan" pioneer in sustainable development in higher education" (Simpson, 2010) [31] (table 1).

Table 1: Eleven transforming projects of sustainable development in higher education (Simpson, 2010)

Projects	University
Environmental management with common services of	Birk Beck, London
Development leaders for sustainable development: capable of changing behavior	Bournemouth University
Carbon brain print	Cranfield University
Pioneer in changing school plan for sustainability: strategic nears increase of quality	ShirGlocoster University
Kings of electro	University of Lincoln
Increase of generation of renewable energies in HE section	University of Liverpool and Consortium energy
Preservation of its place: common solutions for sustainability	Norsampton University
Integration of sustainable development with mechanism faculties	Notingham University
Midnight oil: in fact how the building of the faculty is used for 24 hours and how it can be better managed in hours outside so as to reduce carbon emissions	Oxford University
Environmental exchange	University of Stafordshire and environmental assembly for universities and institutions

Sustainable Development of Environment in Iran

One of the spiritual and religious requirements and recommendations that can be dared say is that religion of Islam is the greenest religion and the teachings of prophets of God are the most progressive solutions for maintenance of the environment; we have enough verses, hadiths and accounts in this field which has been implemented by the arduous people of every area depending on its geographical features over the splendid history of our country. For instance, in the protected area of Kalmand and Baharan Yazd the herds of five hundred apical gazelles in the morning before sunrise come to the margin of villages for pasture and on the dawn leave their with no fears since the people of this region believe that before them these creatures of God had resided there and they consider this symbiosis as the payment of one fifth of their property.

The second necessity is the current rules and regulations whose header and final word is the fiftieth principle of the constitution that requires all people to protect the environment and prevent from contaminating it and considers its destroyers to be violators of the law; unfortunately, at present numerous cases of violation of law takes place by governmental agencies and by the name of development projects that has endangered the environment of the country. A development that shakes one of its basic supporting pillars, won't be sustainable development.

At last the third necessity is international commitments that is implemented by different conventions whose membership Iran has accepted. Although some of these conventions may not be obligatory at moment yet the trend of world developments is developing in such a way that more coordination is being formed among countries for a common goal which is protection of the environment and what matters is that according to its effective historical background, our country should restore its central position.

For instance at present the environment of all open waters of the country is monitored in the north and south under the regional disciplines and in case of having efficient management and plan, this situation is considered an opportunity and otherwise a threat. Our management art must me such that we can utilize the created world capacities as an opportunity. We must admit that despite different political and religious inclinations, all human beings have sat on a ship.

In order to determine the status of protection of environment in the country's sustainable development primarily the present situation must be investigated. Based on the World Bank report, the country of Iran annually loses about 9% of its gross national income, that is equal to 80 thousand billion rials, due to environmental damage and meanwhile the most damages with 25500 billion toman has been in the section of water and after that with 22600 billion toman has been in the section of land and forest that includes agricultural lands, forests and ranges, wetlands and erosion. It appears that by of the existing environmental damages and correction of managements and cultural educational tasks with people part of the costs imposed can be removed.

Internal statistics aren't promising either; based on the second national report of the country's environment, although the country of Iran is considered among impoverished countries regarding forest with annual of 0/2 hectare of forest, still annually on average 142 thousand hectare of jungles is destroyed the complications of which can be observed in areas of forest and immigration and poverty of people in these areas.

Destruction of ground water resources such that about one third of the fertile plains of the country have been declared as prohibited in terms of development of groundwater withdrawals. We should emphasize that in an arid and semiarid country like Iran ground waters are considered as the most reliable sources of water.

Pollution of most surface water resources specifically in the basin of Karoun and Dez and Karkheh that in total include one third of surface water resources of the country. At present, cities like Abadan, Khorramshahr and even Ahvaz are exposed to the improper quality of water while all three cities are located in most watery plain of the country.

Lack of basic management of waste removal which is referred to as dirty gold has caused waste to turn into a problem and threat in most cities and even villages. The land area north of Alborz mountain range that glitters like a gem in the arid and semiarid region of intermediate circuit of the northern hemisphere and every square meter of which can support sustainable development and welfare and comfort of people in the country and even in the world, is now being administered in the worst way possible such that waste, sewage, destruction of forests and ranges, excessive condensation, air and sound pollution, unprecedented destruction of plant and animal biodiversity of this territory has gone beyond the limit of warning and gradually becomes an environmental crisis.

Soil erosion in Iran unfortunately has been among world records and annually reaches about 10 tons per hectare, while two-third of the country is barren desert and a huge bulk is high mountains and proper climactic conditions for soil formation aren't provided.

Lack of a comprehensive approach to the environment and basic resources and lack of a codified plan for land preparation have caused a considerable part of very valuable and manufacturing agricultural, pasture and forest part to be increasingly developed by cities and industries. From about 165 million hectare area of the country only 18 million hectare has the agricultural capability 12 million hectare of which is drylands and only 6 million hectare is irrigated cultivation. Lack of land preparation and inefficient management of natural resources have caused a huge part of the same irrigated land to be exposed to construction and go out of the cycle of production. For instance, only in the fertile plain of Tehran about 70b thousand hectare fertile agricultural lands have had a use change for growing development of the city.

Among about 90 million hectare of the rangelands of the country in 1975 about 16 million hectare had been classified among poor pastures while over recent years the area of poor pastures has increased to more than 27 million hectare.

According to the World Bank report air pollution in 7 big cities of the country annually exerts a direct damage for about 12000 billion rials and this is apart from life and spiritual damages that can't be materially assessed.

Severe reduction of sturgeons and kilkas in the Caspian Sea and severe economic and environmental problems of shrimp farms are the major problems of the department of fisheries in the country whose annual damages in sturgeons has been estimated to be 147 million dollars according to the World Bank report.

Such reports are unfortunately numerous which emphasize the necessity of review in environmental policies of the country based on the three aforementioned groups of necessity.

Eftekhari et al. 2010 explains as below the most important reasons for lack of attention to sustainable development and its retardation in Iran and other developing countries:

- Absence of adequate financial and credit back-ups for protection of the environment and ESD
- Absence of cooperation and formation of a kind of irregularity in behaviors of support from the environment
- Lack of implementation and operation mechanisms for coordination between institutions related to the environment
- Lack of deployment of competent and expert people in the area of protection of the environment and sustainable development

- Attention to the interests of the groups, persons and influential beneficiaries in illegitimate use of the environment
- Lack of attention to teachings of protection of the environment at different educational levels
- Prevalence of growth-centered and technocratic growth view and approach in the country's development plans
- Prevalence of classic industrialism in the world and unsustainable use of imported industries
- High poverty and unemployment in third world countries, a reason for unsustainable use of the environment
- Increase of people's inclination in using artificial and destructive energy of the environment
- National wars and unrests and destructive region of the environment
- Lack of proper relationship and link of countries with international centers and references in the field of education
- Lack of common world educational pattern in the field of protection of the environment among countries [2]

A Successful Example of Sustainable Development of Education

As a developing country and one of the active participants in the world process of sustainable development, since 1970 Malaysia has tried to introduce kinds of monitoring measures for balance between social and economic goals and protection of environmental conditions.

These goals, in a prospect design of program and in prospect of Malaysia were written for a comprehensive quantum mutation toward a society based on knowledge up to the year 2020. (Mousti, 2002). Based on this ambitious prospect the government must pay a high priority in integrated environmental research and development according to the development planning.

In his article entitled" a prospect on the role of environmental higher education in cooperation of sustainable development in Malaysia", Fo tries to bring about the concept of sustainable development of environmental higher education. This article investigated the recent and historical indexes of the developing policy in answering the needs of development and environmental changes. A clear and articulate statement of the role of higher education institutions, the state and participation of non-governmental organizations (NGOs) are determined.

At first in order to state the concept of sustainable development in higher education of the environment using the views of different researchers, the author states that:

Cole (2003) defines "sustainable development" as "local and global responsibilities for promotion of hygiene and human health and ecosystem". This issue actively involves the knowledge of the academic community so as to show the environmental and social challenges we are faced with at present and in the future.

Velakouiz et al. (2006) define a sustainable university as a higher education institute, as a whole or part that is shown at a regional or world level and is promoted and is affected by environmental, economic, social and health effects so as to lead their duties from teaching, research, cooperation and monitoring toward a transition from the sustainable life style.

Both definitions suggestively interpret "sustainable development" as a term that explains development and causes an improvement in the quality of human life.

In what follows the author presents a history of sustainable development in Malaysia and states that motivation for expansion of sustainable development in Malaysia started in 1995; at a time when the environment and development institute (LESTARI) brought about a work plan for inauguration seremonies. During thie period, LESTARI took on the delegacy of the government of Malaysia in sustainable development with multi-faceted organizations such as the Asian development banl, economic and social council of Asia and Pacific Ocean of United Nations.

The third plan of the 2001 prospect (2001) emphasizes the need for enhancement of capacity, capabilities of the country in education and accountability to the challenges of the new century. This plan emphasizes lifetime learning as a platform which continuously promotes the quality of higher education and work resources.

The government will also prioritize so as to improve facilities and infrastructures and for the sue of information and communications technology to be intensified in all schools and institutions and rural areas

will become modernized through presentation of communicational facilities and equipments, laboratories, classrooms and physical infrastructures (Moy, 2001).

The concept of green college and sustainable development in mechanism is a subsequent issue that the author has investigated. He introduces the green campus as below:

It is an interconnected and open green and linear space that has been constituted by surrounding tree, waterways and drainage streets and between urban areas, in all scale of a space in which people can get to work or school by means of them (Tokolini et al., 2006). This issue interconnects and organizes every space or patchy open buildings and facilitates the movement of people inside and around the university under safe and easy conditions. Green and open spaces are a network of environmental systems that protect the air, water, environment, energy resources and enrichment of life quality of humans.

In what follows, Fo presented a report of sustainability implementation in universities of Malaysia like the University of Sains, Monash University, INTI University, Pahang University, Potray University, etc.

Non-governmental participations (NGOs) constitute the final part of his research; Fo states that the role of NGOs was officially recognized when NGOs presented the environment of a specific season in the agenda 21 under the title of "enhancement of the role of non-governmental organizations" for "sustainable development". This integrated model searches and regulated general ways, methods and resources for development, implementation and protection of access to the sustainable environment. One of the pioneers of the area of non-governmental sustainable development in Malaysia is the Panasonic Company. The Panasonic Company in Osaka, Japan is all over the world the leader of development and production of electronic products for a broad range of consumers, merchants and industrial needs. As a producer of electronic products, Panasonic had the responsibility of showing the importance of protection of the natural environment that becomes the reason for establishment of life on earth for future generations. Panasonic of Malaysia has adopted different areas in the Perhentian Island, Terengganu for the sea protection of projects with state universities for protection of one resource exposed to the danger of nature.

Also, the green technology company of Malaysia with the former title of Pusat Tenega of Malaysia was founded in 12 May, 1998 in the energy ministry, green and water technologies. By common cooperation of higher education ministry of education, green technology organized many international exhibitions of green technology and conference in 2010.

In the conclusion part, the author states that in Malaysia active promotion of sustainable development by the government, NGOs and educational institutions over the past five years has been encouraging. Most strategies and measures must be followed so as to accelerate the trend of creation of a sustainable education that is inclined toward creation of a sustainable future; in what follows, a more complete explanation of his research has been presented.

Sustainable development of education in Malaysia

A motivation started in 1995 for expansion of sustainable development in Malaysia when the institute of environment and development (LESTARI) created a work plan for its inauguration. During this period, LESTARI presented agency of interests of the Malaysian government in sustainable development and multi-faceted organizations, Asian development bank, economic and social council of Asia and Pacific Ocean of United Nations. A regional and sustainable development council session was held for facilitation of sustainable development in Asian and the Pacific Ocean region (Lestari, 1995) [22].

Based on the summary of the third plan of prospect 20012010 (OPP3) the policy of national educational of Malaysia is planned so that educational system of Malaysia moves forth and gives it the possibility of changing into a center for removal of development needs of human resources and with high quality and accessible presentation in all educational levels (education planning, research and development, 2007). Intelligent school is one of the functional plans for multimedia super-corridor. Along with national policy of education, there are major pressures of the plan of development of national education of the years 2001-2010 for increasing accessibility, equities and quality of education and improvement of efficiency and effectiveness of education management (Moy, 2001) [26].

The plan of comprehensive economy based on knowledge for presentation of the strategic method for

country was regulated and formulated so as to grow in a society based on knowledge during a ten-year period. The six central areas of national plan of education (2006-2010) are the construction of society, development of human capital, national enhancement of schools, bridging the gap between educational gap of the city and the village, professional education and acceleration of excellence of educational institutes. Elementary schools, secondary schools, state universities, private universities, industrial faculties and local colleges will move continuously so that is assured that Malaysia produces graduates that are both are capable of meeting national needs and consideration of the role of world actors.

Up to 1970s many physical changes were considered by universities in Malaysia. According to the view of Balsas (2003) expansion of campus leads to reliance on vehicles as transportation methods that lead to reduction of quality of air, traffic density and gradual losing of green campus [13]. Losing the green space in vicinity of the campus affects climate.

Governmental and non-governmental organizations, local universities like Sainz University of Malaysia, Mara Technology University and Kabangsan university of Malaysia were shown by presentation of financial helps for more studies. These universities are also involved in this area in organization of many symposiums and conferences for raising awareness regarding sustainable development and knowledge exchange in this area (Holkim, 2006) [18]. Today, there are many sustainable projects that have been constructed in Malaysia (Tanarimba, 2006).

Implementation of sustainability in universities of Malaysia

In the year 2009, Sains university of Malaysia was selected as the acceleration plan of Malaysia for excellence of the university. This university had selected sustainability as a platform for changing into a higher education for a new sustainable future. Sustainability is used in many sciences such as economic, environmental areas and management of natural resources, production of food, energy, cultural-social dimensions and method of life involved in transdisciplinary training (Lee, 2009) [20]. It is in this framework that Sains university of Malaysia concentrates its view of the sustainable tomorrow through propagation of some values such as justice, access, price and quality.

The Sains University of Malaysia welcomes protection of many ecosystems, protection and repair of resources and also development of human and intellectual capital for this goal. Commitment of the university is the lever of research and teaching to the benefit of 385 million society and world that live with one dollar per dat. A study in this university showed that 100 educational courses in all areas claimed elements of sustainability (USM, 2008).

Montash university of Malaysia is famous in the world for its innovations and excellence in research and teaching. Its research creates an important portion that is coupled with a real and positive change. Some studies of the earth break include innovation in IVF technology, development of drugs (fight with malaria and influenza) and climactic changes (scientific studies and Monash strengths, 2009).

Pahang University of Malaysia created its cooperation in a student exchange program with Hauptschule technique Karlsruhe, Hermany and university of applied sciences of Wiryschaft in forming a group of engineers so as to help to the development of green technology for protection of natural resources and the environment. Based on this cooperation, students of Malaysia were welcomed for continuation of their studies in Germany not only for sharing knowledge worldwide but to establish a long-term relationship (UMP, 2009 achievements).

Up to now UPM has recorded the highest number of recorded inventions with a number of 169 among universities of Malaysia. Fifteen products have been up to now commercialized that mount to RM32 million people. Among the white-dotted quick-goaled considerable research advance lie the virus diagnosis that protects the industry of shrimp from a fall near late 1990s. In September 9, 2011 green technology company of Malaysia (Malaysia green technology) and UMP was declared as an agreement for establishment of a cooperation basis in the developmental pole for commercialization of green technology innovations. Memorandum of understanding (MOU) placed among the specific created certain regions that are placed in the medium balance with national orientation of policy of green technologies. Based on this memorandum of understanding the Malaysia green technology plays the role of the leader in six main sections of national economy, that is, energy, building, water and sewage,

transportation, production and information technology (green technology, 2011).

Non-governmental participations, organizations (non-governmental organizations)

General awareness is very important for interrogation of environment and moral value, approach, skill and behavior. Both government and also environmental non-governmental organizations in Malaysia continue to support national attempts for consideration of environmental plans regarding biological diversity and ecosystem. In Malaysia, the environment started to draw more attention in early 1970s. the role of NGOs was formally recognized when NGOs of environment presented a specific chapter in their agenda under the title of "enhancement of the role of NGOs: colleagues for sustainable development" (Abdollah et al., 2009) [1]. This integrated model searched and regulated general methods, ways and resources for development, implementation, investigation and protection of the policy of access to sustainable environment. By working in this formula, adjusted and positive changes regarding sustainability can be precisely shown and utilization of more resources will be more significant; investments will be directed with policy while technology and research and development can be completely deployed (Mat et al., 2009, sustainable development of United Nations, 1992) [24].

Panasonic company of Malaysia has adopted an area in the Prehentian, Terengganu island for the sea protection of projects with state universities for protection of one of the resources exposed to the danger of nature. In addition to thus, responsible activities of big companies was conducted for pre-school children so as to contain reduction, re-use, recycling. Some friendly environmental attempts include green campaign, computer project of recycling and support of world forestry dat. The methods of sustainable development in Panasonic of Malaysia focus on 4 issues: re-use, reduction, recycling and attention (Angel, 2012) [12].

Montage services of Sdn Bhd is a company subordinate of UMW company of Toyota motor and started working since January, 1968 (Chako et al., 1978) [15]. As construction has a key role for environmental issues, as a big company Toyota has contained many green plans for assurance of the fact that products and services are adjusted with environment. In active professions with educational institutions and research centers for management of environmental issues all over the cycle of machine life, Toyota contains designing, production, selling, distribution and eventually removing and recycling (Roseli, 2006) [29].

Green campaign is one of the hottest events for creation of awareness among people for protection of the environment. In Malaysia the association of protection of environment of Malaysia in11 January, 1974 in university of malaria was founded for control of activities that damage the environment. NGOs of the environment of Malaysia under Denmark international development helps in November 1001 was formed for protection of the environment and protection of plan at the local, national and international level. Company of treatment of specific limitations of the specific environment is a local nonprofit organization that was established in February 1995 for education of university students and majority of people regarding the importance of protection of the environment. At the same time, the recycled bags adjusted with the environment were designed by TESCO hypermarket so as to encourage consumers to encourage the using of recycled bags instead of plastic bags. TESCO had obtained this reward as the best company for strategy of big environmental companies for creation of a future karbandar zero supermarkets (Jung, 2008) [38]. In 28 March of 2009 the government of Malaysia has encouraged Malaysian people to turn off their lights from 8:00 to 9:00. Kuala Lampur Tower and TV8 were the companies supporting this plan for expansion of data and doing advertising on the activity (Angel, 2012) [12].

CONCLUSION AND SOLUTIONS

Although the role of education is clear and certain in every society, yet over long years that states have investigated the cost of this economic benefit, usually less attention has been paid to its qualitative promotion regarding development-orientation of the society. Today, the concept of sustainable development has been proposed as one of the most important concerns of the society and this is why serious investigation of this issue both in terms of education and also development is very serious. Developmental education in fact greatly helps to the expansion of the concept of sustainable development y proposing the indexes that are nevertheless short and brief.Based on this, it seems that education in developing countries, in case having the following features, will help to the sustainable development:

- Teaches job and life skills;

- Develops creativity and innovation;
- Enhances perceptive skills;
- Increases the skill for decision-making skills;
- Leads to growth and enhancement of research spirit;
- Increases the ability of evaluation and self-monitor

Every educational system whose exit doesn't have the features above is a non-developmental education and can't lead to behaviors adjusted to sustainable development that is the basis of constructive and complementary interaction with nature and other humans and insurer of welfare and justice between and within generations. The political suggestion of this paper is that the educational system of the country be evaluated in terms of sustainable development since the basis of sustainable development of the country passes the developmental education canal. Otherwise the exits of the educational system will act as anti-development factors.

REFERENCES

Alvani, SM (2001) Public Management, Tehran: Ney publication.

Roknoddin Eftekhari, A., Aref nia, Khojasteh, Sejasy Ghidari, Hamdollah, Firouznia, Ghadir, Sadeghloo, T., Diani, L, Fattahi, Ahadollah, (2010), Development Strategies in Education for Sustainable Development, Journal of geographic Society of Iran, new era in the eighth year, No. 25.

Wilson, Shams al-Sadat, the challenges of sustainable development in terms of ecotourism, Humanities - Research in Management, Fall 1382 Issue 30

Sakharvpvlvs, George (1373), Education for Development, Publishing and Budget Organization, Second Edition.

Sariolghalam, Mahmoud (1995), Third World Development and the International System, Tehran's Safir publication

Shaverdi, T., (1992), the role of education in development, Roshde moallem Journal, Year XII, No. 2, Serial No. 95.

zarrabi, A. and M. Azani, (2001), Sustainable development in industrialized and developing world, Tehran, Journal of Teaching Geography, No. 59.

Arefi, L., Daliri, Nehzat, S., (2012), educational services and its role in economic development, pp 7

Abbaspour, M. (2007), Energy, Environment and Sustainable Development, Tehran, Sharif University of Technology.

Eyvazi, Mohammadrahim (2007), human development, Fars News Agency: http://www.FARSNEWS.com/

Abdullah, A.N., Husain, K., Husin, N., 2009. Environmental communication and sustainable development in Malaysia: an analysis on environmental NGOs websites design. J. Hum. Capital Dev. 2, 37e52.

Angel, C., 2012. Green Campaign e Its Role in Creating Awareness Among Malaysian to Protect the Environment. Available online at: http://ezinearticles.com/? Green-Campaign-Its-Role-in-Creating- wareness-Among-Malaysian-to- Protect-the-Environment&id¼3607621 (accessed June, 2012).

Balsas, C.J.L., 2003. Sustainable transportation planning on college campuses. Transp. Pol. 10, 35e49.

Broomand, F., (1991); International Education of Environment, UNESCO, Iran.

Chacko, G.K., Tan, K.T.B., Yeoh, A.S.L., Muhamad, N.N.H., Ong, J.J., 1978. Toyota Transitioning to Hydrogen Fuel Cells-a Management of Technology Protocol (MOTEP) Analysis. MCB UP Ltd.

Chong, P.C., 2005. World Youth Foundation International Conference on Environment and Disaster Management: Our Sinking World, Environment Protection and Sustainable Development in Malaysia. Ministry of Natural Resources and Environment.

Habib, M.A., Ismaila, A.B., 2008. An integrated approach to achieving campus sustainability: assessment of the current campus environmental management practices. J. Cleaner Prod. 16, 1777e1785.

Holcim Foundation for Sustainable Construction (HOLCIM), 2006. Available online at: http://www.holcim.com.my (accessed June, 2012).

Klemes, J.J., Varbanov, P.S., Huisingh, D., 2012. Recent cleaner production advances in process monitoring and optimization. J. Cleaner Prod. 34, 1e8.

Lee, L.M., 2009. Universiti Sains Malaysia: Leader in Bringing Sustainability to the Forefront in Malaysia. Universiti Sains Malaysia, Malaysia.

Lehtoranta, S., Nissinen, A., Mattila, T., Melanen, M., 2011. Industrial symbiosis and the policy instruments of sustainable consumption and production. J. Cleaner Prod. 19, 1865e1875.

LESTARI, 1995. Inaugural Report of the Institute for Environment and Development. LESTARI, Bangi.

MacArthur, J., Bellen, G., 1998. ISO 14001 in state regulatory offices: a survey of activities. Environ. Qual. Manag. 7, 19e39.

Mat, S., Sopian, K., Mokhtar, M., Ali, B., Hashim, H.S., Rashid, A.K.A., Zain, M.F.M., Abdullah, N.G., 2009. Managing sustainable campus in Malaysia-Organizational approach and measures. Eur. J. Social Sci. 8, 201e214.

Moharamnejad, N., co-workers, (2003); Environmental Management (Translated), Department of the Environment.

Nordin, M., 20 August 1998. Indicators for sustainable development: the Malaysian perspective. In: Proceedings of Regional Dialogue on Geoindicators for Sustainable Development. Institute for Environment and Development (LESTARI), Geological Survey Department of Malaysia and the Commission on Geological Sciences for Environmental Planning (COGOEENVIRONMENT), pp. 1e13.

Pouyan, H., (2000); Education for Sustainable Future, Department of the Environment.

Quaddud, M.A., Sidduque, M.A.B., 2001. Modeling sustainable development planning: a multicriteria decision conferencing approach. Environ. Int. 27, 89e 95.

Rosli, M., 2006. The automobile industry and performance of Malaysian auto production. J. Econ. Coop. 27, 89e114.

Shaabani, H., (2002); Expertness of Education and Fostering, 13 Edition, SAMT publication.

Simpson, J., 2010. A Shared Vision for Sustainable Development in Higher Education. Higher Education Funding Council for England (HEFCE). Available online at: http://sd.defra.gov.uk/2010/09/a-shared-vision-for-sustainabledevelopment-in-higher-education (accessed June, 2012).

Sohn, L.B., 1973. The Stockholm Declaration on the human environment. Harv. Int. Law J. 14, 423.

Spencer, T., 2002. The Potential of the Internet for Non-profit Organizations, 6 September, 2005. Available from: http://www.firstmonday.dk/ issues/issue7-8/ spencer/index. html (accessed June, 2012).

Steger, U., 2000. Environmental management system: empirical evidence and further perspectives. Eur. Manage. J. 18, 23e37.

Taravati, H., Ayafat, A., (1998); Agenda 21(Translated), Department of the Environment.

UNESCO, 1990. The Talloires Declaration. Available online at: http://www.ulsf.org/ programs_tallories.html (accessed June, 2012).

United Nations, 1993. Agenda 21: the United Nations Programme of Action from Rio. New York.

Zhong, X.Z., 2008. Asian energy and environmental policy: promoting growth while preserving the environment. Energy Pol. 36, 3905e3924.