

03 Talk About the Present Situation and Development of Environmental Education in Macao

Preface

Since the beginning of industrial revolution in the nineteenth century, the global commercial and industrial activities have developed rapidly. As a result, the environment worsens with each passing day and gradually different kinds of environmental issues evolve, such as air pollution, water pollution and the breaking of the ozonosphere and greenhouse effects which affect immediately the survival of human beings. Now environmental protection is the high concern of all knowledgeable people in the world and becomes an issue of international focus. In order to protect and use properly the limited resources on earth, many countries of the world (include China) one after the other, enact laws and plan mid and long term programs to promote natural ecology conservation and environmental development. These programs include the "National Environmental Strategic Plan" of Holland, the "The Environmental Composite Plan in 21 Century" of Japan and the "National Strategic Plan on Sustainable Development of Ecology" of Australia etc. In the 21st century, China holds a decisive position in the international stage in many areas. In recent years, Beijing successfully hosted the Olympic Games. Even more, it regarded the building of a society with environmental protection and sustainable development as the chief policy of the country and advances a big step in the job of environment conservation. Macao is one of the important cities in China and, due to the burgeoning of its tourist industry, is known by the world gradually. Therefore, Macao cannot evade the obligation on promotion of the world's environmental protection works. Yet, Macao lags behind the neighboring areas in environment conservation. For example, laws on smoking prohibition regulation, tax on plastic bag, architecture waste material managing and control on air pollution which have been implemented for years in many developed countries, are still not in place in Macao, not to mention the schedule for execution. The present environmental protection regulations of Macao can be traced back to the year 1964, when Macao was still ruled by the Portuguese and the "The Offshore Committee of Protection Nature" was promulgated to protect Macao soil, plant, animals and natural scenery. Following the evolution of age and society, many legislative laws lack actual effect. As a result, there is no law for the government to follow to promote the environmental protection works. When will a series of environmental protection laws suitable for today's Macao economic developments be formulated is now the bottlenecked problem of Macao's environment protection works. It needs strong public opinion support to make laws. How to strengthen the public's concerns on environmental issues? It depends wholly on the success and effective promotion of environmental education to the public.

The rise of environmental education

After the Second World War, industries progressed rapidly in Europe and America. These industries brought about many environmental problems. From this time people started to be concerned about environmental education. Europe and America were the countries that first suffered from environmental pollution problems. For example, in the year 1948, air pollution brought injury to more than one thousand of residents in Colorado-America; in 1952, more than four

thousands of citizens of London in England died of poisonous smog. Therefore, Europe and America were the earliest countries to start environmental education. From the beginning, in the 1930s and 1940s, the environmental education of these two countries focused mainly on the skills to survive in outdoors. Then it changed to levels of knowledge, skills and emotional integrations gradually and even to a more substantial living way of environmental protection. In the 1980s and 1990s, Japan referred to the environmental education modules of Europe and America and created a set of sustainable progressive environmental education materials which integrated into the country's regular education. It successfully brought up generations and generations of citizens who treasured nature. Just after a period of more than ten years, Japan became one of the most excellent countries in the world on environmental protection works.

Today, we often highly praise the great improvement of mankind's technology. But it is ironic that we still face a lot of environmental problems that are not readily evolved despite the improvement of technology. The majority of environmental problems originated from the deviation of human conduct and thinking, such as creation of excessive waste due to reckless consumption; lack of the consciousness of water and energy consumption which leads to shortage of

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resources in many regions. The only way to change people's thinking recognition and conduct is to influence them unconsciously through education. Therefore, starting from the 1970s, the United Nations has devoted great efforts to promote the environmental education in every country and in the year 1974, the United Nations formulated the International Environmental Education Program, IEEP, hoping that it would enhance the Environmental Literacy of human beings. Many scholars believe that the collapse and crumble of the ancient great Roman Empire was not caused by defeat in war or illness but by environmental problems which were caused by excessive lumbering in forest, washing out of land and over accumulation of waste. For a country, how to successfully develop the citizen's environmental education is the key to sustain prosperity and stability.

The present situation of environmental education in Macao

In recent years, due to the rapid development of the city, environmental problems e.g. air pollution, deteriorating living environment, water salinity crises are the popular topics of Macao citizen and these problems bring people to be concerned about the effectiveness of environmental education in Macao. Although starting from the 1980s, themes relating to environment have been penetrated into regular education of secondary schools and environmental protection of knowledge is taught to students through the subjects of biology, geography and science. But until now and today, the majority of schools in Macao still use teaching materials mainly from Hong Kong and Mainland. Environmental education is taught in different courses, lacking system and completeness. In addition, the contents cannot suit to local environment of Macao. It is hard for students to have a sense of belonging to local natural environments, even more difficult to apply to their daily life with what they learn. Although environmental education is not included in regular education as compulsory subject, it is common that nowadays the society and schools have more concerns on areas of environmental protection, and it greatly increases people and students' chances to get in touch with environmental education, compared with just a lopsided view through seminars in secondary schools. Besides, many secondary and primary schools designate environmental education as a compulsory supplementary course or "Second classroom" in which students are encouraged to participate. Every year the schools develop diversified environmental education activities inside and outside schools, which help build up environmental inspiration to students unconsciously. Macao Government has done its utmost effort to promote environmental education. A few years ago, the Government compiled the book «Environmental Education» as teaching material for secondary schools, but it was sad to say that due to the lack of teacher and professionals from environmental protection's participation in the compiling of teaching materials and lack of sustainable support to schools, the compiled teaching materials were not broadly used in schools. In recent years, the environmental education works of the Macao Government were mainly about visiting schools periodically, holding seminars and putting up advertising posters on boards. Occasionally, some environmental protection activities were organized for students. These activities give the impression to people that the activities are superficial and cannot elicit resonance from citizen. For example in recent year, there was the activity "to switch off the light for five minutes". The purpose was to raise the citizen's concern about problems on energy conservation and light pollution. But after the activity, there was insufficient sustainable action. Where was the actual effectiveness? Recently, Macao in response to Kyoto Protocol and held the activity "A jigsaw by thousand people". On that day, it caused a great sensation and a great number of students from many schools held plastic foam sheets and built up pattern words. But what had they realized? It created a lot of waste before it could reduce waste and save energy. More important is that, when citizen really know that the standard waste

reduction of Macao is still based on the standard of a developing country, they will doubt "What is the role of Macao on the obligation of global environmental protection?" Many schools and government departments give publicity on environmental protection to students and public, but they cannot "act and teach by example", how can people be convinced by their environmental education? Another example is that every year Macao Government encourages the public to plant different kinds of plants during "Green Week". The purpose is to green the living environment. But at the same time, they lumber and uproot big trees. Although statistics shows that the numbers of trees in Macao has increased in the recent few years, but the trees lumbered are mainly tens of years old and the replanted trees are only saplings. All in all, it weakens the ecological environment. Besides, many of these old trees carry the group memories of citizens in Macao. Besides educational knowledge from books, a successful environmental education needs complements in all aspects. In order to build up a firm sense of environmental protection, it needs the leading of Government, the following of industrial entities, voice of consent from citizen and complement from students.

The writer has been engaged in environmental education works for many years and deeply understands that promotion of environmental education cannot be done overnight. Based on the principle of life-long environmental education, correct environmental knowledge and recognition need to be maintained by the citizen comprehensively, systematically and long lastingly, inducing them to protect the environment as their duties and achieve a healthy and comfortable living environment for the public. It is hoped that in future the environmental education works of Macao will be elevated to a higher level; by referring to the educational plans of other regions; and gathering government departments, educational groups and environmental conservation professionals to formulate an environmental educational plan which is suitable for citizen and students and most important of all for the present state of environment in Macao

Chan Chong Meng (Teacher of Escola Secunda Ria Luso-Chinesa de Luis Gozaga Gomes – Biology and Natural Science; Lecturer of Macao Environment Educational Centre)

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