THE EFFECTIVENESS OF USING ENGLISH STORIES IN DEVELOPING PRIMARY STUDENTS' ENVIRONMENTAL LITERACY

By

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Background and Problem

Introduction

What does it mean to be literate? As with so many educational questions, the answer depends upon whom you ask. Some would say that literacy is the ability to read and write, to use the tools of written language in an instrumental way. Others would say that literacy also concerns the critical application of these tools to understanding the world (Clair, ٢٠٠٣).

To *Mosely* (٢٠٠٠) reading literacy requires a number of stages starting from recognizing the alphabet, to building the letters into words and phrases, to decoding the written words for meaning. There are degrees of literacy, ranging from the minimal ability to decode such things as the words on signs, to the ability to read and understand newspaper accounts, to the ability to read easily and comprehend great literature or complex scientific journals.

The overall goal of education has been to create a society of literate citizens. Literacy is a term that originally referred to the ability to read and write. Only in recent years has it been extended in scope to include several interest areas--science literacy, computer literacy, and environmental literacy. It is to environmental literacy that this study was focused.

Environmental literacy

Roth (١٩٩١) classifies Environmental literacy into three parts:

١. Nominal Environmental Literacy: the ability to recognize many of the basic terms used in communicating about the environment and to provide a working definition of their meanings. The nominal environmentally literate person, although aware of the terms or vocabulary, has little or no

depth of understanding them, has only rudimentary process skills, and has no more than casual commitment to environmental concerns and actions.

٢. Functional Environmental Literacy: the capacity to use fundamental environmental knowledge, concepts, and thinking skills to formulate action positions on particular environmental issues and in daily behavior.

٣. Operational Environmental Literacy:the capacity to regularly perceive environmental issues; gather and evaluate pertinent information; examine and choose among alternatives; take positions and actions that work to sustain and develop the foundation of environmental knowledge; and use elements of questioning, analytical and deductive reasoning, logical thought processes, and objective analysis.

The present study attempts to focus on nominal literacy and functional literacy, for the present study aims at giving the students some terms and information related to the environment and giving them solutions for these problems.

Environmental literacy must then imply the power to develop an understanding of the factors that contribute to environmental change and to have a view on how to further oppose that change in a way which can be translated into action. (*Bath,*١٩٩٨). This change needs highly skilled individuals who can think "out side the box" as (*Braus,* ١٩٩٩) puts it. Solving complex environmental problems, according to *Braus,* requires non-linear thinking. Environmental literacy goes beyond providing students with simple information about Environmental issues (*NAAEE &NEET,* ٢٠٠١).

Since Environmental Education focuses basically on developing critical thinking it is then clear that the bottom line goal of Environmental Education is the creation of an environmentally literate citizenry , (*Disinger & Roth,*٢٠٠٣) , (*U.S Department of Education,* ١٩٩١).

According to *Cates* (١٩٩٣),being and becoming an environmentally literate citizen is in the hands of good education for a lot of things can be learnt about earth, recycling and renewing materials to save the planet from destruction.

But still there is a question which remained unanswered ? In spite of all the efforts taken to develop an environmentally literate citizenry, *when should environmental education begin?* Environmental Education based on life experience should begin during the very earliest years of life, such experience plays a critical role in shaping life long attitudes, values, and patterns of behavior toward natural environments (*Tilbury,* ١٩٩٤), (*Wilson,* ١٩٩٤).

Wilson (٢٠٠٣) is of the opinion that environmental education for the early years focuses primarily on young children exploring and enjoying the world of nature under the guidance and with the companionship of caring adults. Environmental education for the early years should be based on a sense of wonder and the joy of discovery, and that, according to Wilson, is because young children learn through discovery and self initiated activities.

It is natural for human beings to be interested in the world around them.No one is surprised to see the curiosity of small children examining a worm or a flower or asking why the sky is blue or the wind blows.as quoted from the *(NAAEE &NEET,*٢٠٠١*)*.

It is really important to get the children out of their isolation, embrace the real world and smell the fresh air and this can never happen by spending most of their time in settings and activities that keep them essentially isolated from direct contact with the natural world (*Wilson,* ٢٠٠٣*)*.As a result, "the amount of exposure can be increased exponentially ----to become effective environmental stewards in addition to better learners" *(NAAE &NEET,*٢٠٠١*)*.

Such interaction, according to *Wilson* (١٩٩٤) is an important part of healthy child development and it enhances learning and quality of life over the span of one's life time. Environmental education is rooted in the belief that humans can live compatibly with nature and act equitably towards each other *(NAAEE,* ١٩٩٨*)*.

English teaching and Environmental issues

Educators nowadays are studying the relation between language and the environment, how to develop language skills and at the same time promote environmental literacy by incorporating environmental issues into the language syllabus.

In a survey done by *Geraland &Hoody* (١٩٩٨), educators reported that using the environment as an integrating context for learning improved development of language skills when they were allowed to explore the environment and related community topics. Students commonly expressed a growing interest in developing their language skills.

Stempleski (١٩٩٣) believes that environmental issues are a fertile ground for teaching English language skills for they bridge the gap between English and other school subjects and encourage students' interaction. Since this study is concerned with the reading skills, it is essential to open the students' eyes and minds on the natural environment around them through stories.

Oltman (٢٠٠٢) regards reading stories to children as the single most important activity for building the understanding and skills essential for reading success. It aids in language development, builds knowledge and comprehension. In the early childhood years—from birth through age eight—educators believe it is the most important period for literacy development, as it fosters familiarity with letters and words and builds community.

According to Oxford dictionary (٢٠٠٥) a story is an account of imaginary or real people and events told for entertainment, *Bencherab &Berrabah* (١٩٩٧) believe that stories can offer an opportunity for learners to speak and for teachers to reinforce some grammatical rules, fables. As Bencherab &Berrabah put it, "Stories are useful with weak classes in need of practice in narrating events in a logical sequence"

Ghoson (١٩٩٧) believes that children's literature along with nursery rhymes offer a natural and interesting medium for acquisition.According to him, stories contain predictable, receptive patterns that reinforce vocabulary and structure, in addition *Ghoson* points out that carefully

chosen children's literature allows children to develop their receptive language in an entertaining, meaningful context and naturally invites them to repeat many of predictable words and phrases and add to their receptive and productive language.

Stories for children or for young learners are most of the time accompanied with pictures. Visual support enables learners to acquire new vocabulary and revise lexical items that students may have forgotten (*Bencherab & Berrabah*, ١٩٩٧).

Cartoons also depend on pictures but this time these pictures move, a technique which keeps the children staring at the T.V unable to wink. *Zamzam* (١٩٩٤) in her study discovered that the most interesting kind of cartoons for children are the ones having children or animals as heroes in addition to mythical stories and characters, fiction, wonder tales and folk tales are also preferred by children. As a result, cartoons, according to Zamzam, can take part in bringing up children in a right environmentally educational way.

Concerning the reading materials *Day & Bamford* (٢٠٠٠) addressed the issue of selecting reading materials. From their point of view student's interests are on top of the list. *Wei* (١٩٩٩) added that students ' interests bring interaction smoothly to the class and make them realize that reading is not fossilized knowledge but a rich vigorous resource that can be explained and used. The reading materials must be both easy and interesting.The word easy means materials with vocabulary and grammar within the students' linguistic competence.

From all that it can be concluded that stories, long known as the most attractive kind of reading materials for children, can be a fertile ground for enhancing students' Environmental literacy.

Taking a look at the Egyptian schools, it is obvious that Environmental issues are some what subsided or overlooked in the Egyptian schools. The same premise is shared by (*Tawfiek*, ٢٠٠٣), (*Zamzam*, ١٩٩٤) and (*Abdulla*, ١٩٩١).

Even while designing the syllabus or planning the lessons no trace could be found for Environmental issues. Even the teachers ' guide of

Hello for fourth year primary focuses mainly on enhancing the four skills {listening, speaking, reading & writing} and gives no attention towards enhancing Environmental literacy.

But it is not just a syllabus problem it is far beyond this to *Disinger & Roth* (٢٠٠٣) for many educators apparently assume that environmental literacy is equivalent to or a subset of scientific literacy. This idea is justified by the fact that, many science educators have demonstrated more interest and involvement in environmental education than have others. It is therefore strange or unusual to find a lesson in English or in Arabic devoted to the Environment, as if acquiring a language and being environmentally literate move in two crossed lines.

To *Haury &Milbourne* (٢٠٠٣) Environmental literacy needs more than the text book. Environmental education should best be taught in a real naturalistic scene that requires teachers to take the students every time on a different scene other than the classroom or bringing nature inside the classroom. This needs lots of materials which are scarce and very limited. Also materials used in language courses should be as authentic as possible so as to develop meaningful communication. (*Dief Allah,* ١٩٩٨)

The Statement of the problem

The problem of the study is that the Egyptian students at primary schools lack literacy of a lot of environmental issues due to the fact that the syllabus does not emphasize these issues. This was confirmed by the results of the Pilot study conducted by the researcher which clearly identified the problem as the students' English vocabulary hardly contains words related to environmental issues.

Thus the present study aims at raising the students' literacy of some environmental issues for the fourth year primary students.

This study attempted to answer the following main question:

How can English stories develop environmental literacy for the fourth year primary students?

To answer this main question, the following sub- questions were also be answered:

١) What types of stories do fourth primary students need for improving their environmental literacy?

٢) To what extent can stories enhance English vocabulary concerned with environmental issues for fourth year primary students?

٣) To what extent can these stories enhance fourth year primary student's environmental literacy?

Hypotheses of the study:

The Present study tried to test the following hypotheses:

I. <u>Over all test</u>

<u>Hypothesis one:</u> There is no statistically significant difference between the mean scores of the control group and the experimental group in the pre-Environmental literacy and vocabulary test.

<u>Hypothesis two:</u> There is no statistically significant difference between the mean scores of the control group in the pre test and their mean scores in the post Environmental literacy and vocabulary test.

<u>Hypothesis three:</u> There is a statistically significant difference between the mean scores of the experimental group in the pre test and their mean of scores in the post Environmental literacy and vocabulary test in favor of the latter.

<u>Hypothesis four:</u> There is a statistically significant difference between the mean scores of the control group and the experimental group in the post- Environmental literacy and vocabulary test in favor of the latter.

II. <u>Vocabulary Section</u>

<u>Hypothesis five:</u> There is no statistically significant difference between the mean scores of the control group and the experimental group in the pre- vocabulary section.

<u>Hypothesis six:</u> There is no statistically significant difference between the mean scores of the control groups in the pre test and their mean scores in the post vocabulary section.

<u>Hypothesis seven:</u> There is a statistically significant difference between the mean scores of the experimental groups in the pre test and their mean scores in the post vocabulary section.

<u>Hypothesis eight:</u> There is a statistically significant difference between the mean scores of the control group and the experimental group in the post-vocabulary section.

III. <u>Environmental literacy section</u>

<u>Hypothesis nine:</u> There is no statistically significant difference between the mean scores of the control group and the experimental group in the pre- environmental literacy section.

<u>Hypothesis ten:</u> There is no statistically significant difference between the mean scores of the control groups in the pre test and their mean scores in the post environmental literacy section.

<u>Hypothesis eleven:</u> There is a statistically significant difference between the mean scores of the experimental groups in the pre test and their mean scores in the post environmental literacy section in favor of the latter.

<u>Hypothesis twelve:</u> There is a statistically significant difference between the mean scores of the control group and the experimental group in the post environmental literacy section in favor of the latter.

Aims of the study

Conducting the present study, the researcher aimed to investigate:

- The effectiveness of some English stories about some Environmental issues in developing Environmental literacy for fourth year primary students.
- The effectiveness of some English stories in developing

vocabulary related to environmental issues for fourth year primary students.

Limitations of the study

The study was limited to:

- A sample of fourth year primary students at Mostafa Kamel primary school in Maadi (evening period)
- A limited duration for implementing the program (٧ weeks) from

  the ١١th of February to the ٢٨th of March ٢٠٠٧.

Significance of the study

It is hoped that the study will help in:

٤) Enhancing fourth year primary student's awareness of environmental issues.

٥) Enhancing fourth year primary student's vocabulary related to environmental issues.

٦) Drawing curriculum designers' attention to include some vocabulary related to environmental issues in the primary stage and in the English course book.

Tools of the study:

- A pre-post environmental literacy and vocabulary test prepared by the researcher.
- The program.

Design of the study:

The present study is a quasi- experimental in which two intact fourth primary year classes were randomly assigned to an experimental group and a control group. The experimental group was taught the selected stories. The control group was taught the ordinary course (Hello

book).

Procedures:

In order to answer the study questions, the study went on the following procedures:

١-Identifying the types of stories that the fourth year primary students need through:

- Analyzing the course book "Hello" with the purpose of finding out topics relevant to Environmental issues.
- Surveying literature related to Environmental Education.
- Reviewing literature related to children Education.
- Examining different types of English stories for beginners.
- Selecting some stories related partially or mainly to some Environmental issues and at the same time related to some topics of the "Hello" book.
- Presenting the stories to some experts for validation.

٢-Choosing the aids and materials for teaching the chosen stories and combining them with the Hello lessons. This was done through:

- Surveying the teachers' guide and the student's book of Hello.

- Reviewing literature related to Environmental Education especially the parts concerned with ways of presenting Environmental issues in class.

- Reviewing literature related to teaching English stories for EFL young learners.

٣- Designing the program and validating it.

٤- Designing a pre– post Environmental literacy and vocabulary test for both experimental and control groups.

٥- Determining the reliability and validity of the test.

٦- Selecting the subjects of the study from Mostafa Kamel primary students.

٧- Administering the pre- environmental literacy and vocabulary test to both groups the experimental and control groups

٨- Administering the program to the subjects of the experimental group.

٩-Administring the post environmental literacy and vocabulary test to both groups.

١٠-Analyzing the   results.

١١-Drawing conclusions and giving recommendations.

Definition of terms

١- *Environmental literacy*

After reviewing various definitions of environmental literacy (see Chapter two), the following definition is adopted in this study:

Environmental literacy is based on the knowledge of environmental issues, knowing what these issues and problems are about, their causes, their results affecting the environment and giving them solutions for these problems.

٢- *English Stories*

Stories discussed in the research are limited to three stories describing Environmental issues accompanied by pictures with few simple sentences (pictures amplify more fully the meaning of the words).

Chapter Two

Review of literature & related studies

Introduction

This chapter is divided into three main parts. The first part discusses global education as an umbrella term that encompasses environmental education among other issues. It will also focus on integrating global education into English teaching. The second part is concerned with children's literature and the third part introduces the previous studies.

Part ١

This part discusses global education with its different braches then moves to Environmental Education and discusses Environmental literacy and the relationship between children and the environment. Finally, it discusses the integration of global education into language teaching.

Global Education

Gaudelli (٢٠٠٣) defines global education as a curriculum that seeks to prepare students to live in a progressively interconnected world where the study of human values, institutions, and behaviors are contextually examined through a pedagogical style that promotes critical engagement of complex, diverse information toward socially meaningful action.
To *Ramler* (٢٠٠٢) Global education means that we are linked to the "other" living next door, over the border, and across the ocean.

Cates (٢٠٠٤) in the following figure classifies Global education into the following three categories

- <u>Global education</u> aims to develop the knowledge, skills, and attitudes needed by responsible world citizens.
- <u>Peace education</u> deals with the knowledge, skills, and attitudes necessary to build a peaceful world.
- <u>Human rights education</u> aims to inspire students with the knowledge and commitment required to protect human rights.
- <u>Environmental education</u> aims to develop the knowledge, skills, and commitment needed to protect our home, Planet Earth.
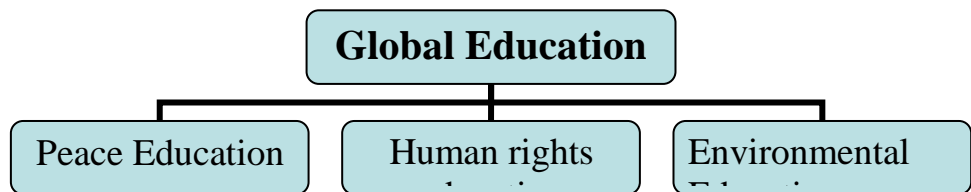

Figure (١): classification of Global Education (*Cates*, ٢٠٠٤, p.١).

For the purpose of this study, light will be shed only on environmental education.

Environmental Education

To *Saul* (٢٠٠٠) education is a cumulative approach to environmental problems, an approach that can take generations to physically improve the land. Education can build the foundations for an ecologically sustainable culture at the level of perceptions and practices that transcend generational boundaries.

Environmental problems result from environmental practices, and environmental practices are cultural activities, according to Saul, to change cultural practices, in the long run, an environmental education initiative that integrates comprehensive understandings of nature, culture, and the ecological consequences of human practices into every area of the curriculum is needed. To do this we need to change, deepen, and complicate individual and cultural perceptions of the world

McNaughton (٢٠٠٤) believes that there has been an increasing focus of attention on the environment and on sustainable development, not just from environmental groups but in the media, politics and among the general public. There has been growing international concern about issues such as how the Earth's resources are being depleted, the consequences of global warming, social inequality, poverty and starvation and growth in the world's population.

Educators began to realize the importance of the environment not as something to be admired by others but as a medium which helps in enhancing the quality of learning. *Geraland &Hoody* (١٩٩٨) summarize the benefits of environmental education which include:

- Better performance on standardized measures of academic achievement in reading, writing, math, science, and social studies.

- Reduced discipline and classroom management problems.

- increased engagement and enthusiasm for learning; and, greater pride and ownership in accomplishments

Naylon & Drewes (٢٠٠٢) focused on the efforts of teachers and deliverers of environmental education to unify their many independent efforts through the Environmental Literacy Scope and Sequence approach. The Scope and Sequence approach which is a series of age-appropriate achievements that makes it possible for all its deliverers, no matter how diverse, to maximize their ability to contribute to student achievement in environmental education. In addition, a curriculum based on the Scope and Sequence is able to:

- ☐Build on what the grade level or student has learned before.
- ☐Contribute to what that student will learn later.