Facilitating Environmental Education and Capacity Development with children: Using the storytelling approach

by

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ABSTRACT

Facilitating Environmental Education and Capacity Development with children: Using the storytelling approach

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This thesis is an investigation of how storytelling can be used as a facilitation tool to promote Environmental Education (EE) in formal, informal and non-formal education. It reviews the relevant literature. Key informant interviews were conducted with storytellers and educational specialists to discuss their experiences and perspectives about storytelling. Participants agreed that it is an effective tool to promote EE. Electronic surveys were sent to home-school parents, who reported that storytelling is a useful tool to promote EE and most topics they teach. A focus group to demonstrate how storytelling teaches about EE was developed to evaluate the perception and comments of children and opinions and suggestions of observers in charge of the children of the focus group. The results suggest that storytelling should be used more in schools and public spaces. The study concludes that storytelling should be promoted as an adequate powerful and easy-facilitation tool to develop EE.
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My name is Manuel García Hernández, I am an Environmental Engineer, specialized in Education and I have been working for almost two decades with children and teenagers as an Environmental Educator, Cultural Animator and Health Promoter.

I believe that storytelling, puppets and music, all connected through games and playing can make a positive difference in the education process to engage children and change their habits when it comes to Environmental Education.

In the whole world for almost 50 years people from different disciplines have been talking about the importance of protecting the environment, there are a lot of researches around this topic, but very few actions or inefficient actions in comparison.
CHAPTER 1 INTRODUCTION

INTRODUCTION

Environmental Education (EE) is now understood as acting locally in order to get global results. Education is generally a process of learning and involves developing knowledge, attitudes and skills. Education and communication are closely associated with behavior change. Therefore, a good place to start generating changes in habits is in educational spaces such as schools. However, sometimes at elementary schools, the educators, teachers and people who work with students do not have enough communicative experience and interactive tools to develop environmental activities that could allow them to make sure that children will be interested and will participate in such programs. Another educational space where EE takes place is in informal Education (IE), which are spaces we all experience outside our formal learning environments, for instance, at home with our relatives and friends, and usually this is seen as a ‘natural’ learning. Finally, there is another educational space that exists known as Non-Formal Education (NFE), where learning is structured with the use of natural spaces, interactive programs, and special props, fun activities, like storytelling, puppetry or games. EE in NFE context can engage learners, often without them even noticing that they are learning.

Currently, EE, especially with children is not just about helping learners to get good grades, but to become conscious of the importance of taking care of the natural resources, be aware that they are part of an ecosystem and what could they do to improve their life quality in a sustainable and healthy atmosphere. This research paper focuses on these ideas, the relevant literature and the practice currently experienced in local education spaces in the city of Guelph area.
PROBLEM STATEMENT

When teaching about environment to children and youth, traditional educational techniques are often used to deliver the information and concepts to the students. Nowadays is very important to have the adequate facilitation tools that help teachers and educators to transmit to the students not only concepts but to engage them to take care about the environment.

The use of alternative facilitation tools to promote environmental education can help to develop the children’s capacities towards the environment, in order to use the opportunity to create possible changes of attitude and conducts between the students.

It is then, necessary to research about the impact and the acceptance that facilitation tools like storytelling may have between the students, in order to promote its use when working with groups of children, to make sure that the messages related to environmental education are understood and embraced by the participants.

RESEARCH QUESTIONS

This research will try to answer the questions: Which are the most common tools used when working with children and environmental topics? What is the acceptance of storytelling as a facilitation tool when working with children and environmental topics? How could be improved and promoted the use of storytelling as a facilitation tool?

RESEARCH OBJECTIVE

The goal of this research is to determine if storytelling is an adequate facilitation tool to teach children about environmental topics. In order to reach the goal of this research, this project has three specific objectives:

1. Knowing which educational techniques are most commonly used for groups, and how are they perceived by the teacher, authorities and students.
2. Knowing the perception that teachers have of storytelling as a facilitation tool when teaching about environmental topics.

3. Knowing the opinions and suggestions of teacher and students that have participated in a storytelling activity to teach about an environmental topic.

SIGNIFICANCE OF THE STUDY

This research tries to help teachers, educators and general public to understand how storytelling could be used as a facilitation tool to promote EE, by reviewing literature that can explain the background of EE, Educative spaces and storytelling as well as acquiring data from experiences of people that has worked with children for years as teachers, parents or educative authorities, finally the opinion of students will also be analyzed to understand what they think about storytelling and if they like it or not.

Teachers, educators and authorities, through the Key interviews and the surveys will be able to be aware of the teaching methodology that they currently use. With the results of the research, they will be able to know about the effectiveness of the use storytelling as a facilitation tool in environmental education, so they can use this technique in their work areas, such as classrooms, libraries, museums, etc.

Homeschool Parents, through the e-survey, will be able to be aware of the teaching methodology that they currently use, and be aware to about the existence of an alternative methodology (storytelling), to help them deliver knowledge to the children they work with.

The students that will take part of the focus group are considered participants because, they will give a feedback to the researcher of their perception about the use of storytelling to learn about an environmental topic, their comments are essential to create a description that helps to know if this technique is useful and accepted by students in their classrooms or areas were an educational process is taking part. The benefit for these students is that they will be able to
think about how they are learning while at the classroom, in addition they will be able to express their opinions and comments about the actual teaching process that is used in their schools and evaluate it, using their experiences as an evaluation method.

The adults that will be taking care of the students that are participating in the Focus Group and that will be considered as observers will be invited to answer a survey at the end of the Focus Group, where they will be able to express their opinions, comments about storytelling as a facilitation tool and evaluate from their own perspective the efficiency and acceptance that it may have between the students.

OVERVIEW OF THE THESIS

This Thesis is divided in seven chapters, this first chapter is about a general introduction to the topic and the thesis itself, which is the problem statement, which is the research question that we want to answer through this research, which is the main objective and which are the specific objectives that support the main objective. Chapter Two, presents the literature review that was done to have a better understanding of the history and background about Styles of Education, EE and Storytelling in order to be able to create a conceptual framework where all of these themes are connected. Chapter Three presents how this research was designed and the four methodologies, Key Interviews, Focus Group, Surveys and e-surveys, that were used to obtain quantitative and qualititative data from different perspectives that could help to understand how storytelling is used and can be used to develop environmental topics. Chapter Four presents the results obtained with each methodology, showing the quantitative results of the surveys and e-surveys, using graphs and tables to be able to see the data in a simple and easy visual way, the quantitative results obtained during the Key Interviews and in some of the comments of the surveys, are shown in tables, grouped according to the answers to each question or comments. Chapter Five presents all the analysis of the data obtained and presented in Chapter Four, how this data is related with the
literature review and the conceptual framework, how it supports or denies the main objective of the thesis; Knowing if Storytelling can be used as a facilitation tool for EE. Chapter Six presents a discussion of the findings, comparing the literature review and conceptual framework, the quantitative and qualitative data collected and the research question of this thesis. In this chapter are presented all the conclusions of this research and recommendations for this and for future researches related to this same topic. Finally, the thesis includes an appendix section were all research tools, such as the Research Design Matrix, the Interview guideline, Survey, E-survey, Focus Group Program, are presented.

The next chapter (Chapter Two) will present a literature review about education to develop capacities, EE and Storytelling, it also shows the proposed conceptual framework that relates all these concepts and that works as the base of this research.
CHAPTER 2 LITERATURE REVIEW

INTRODUCTION

This chapter includes the discussion and analysis of theoretical articles, case studies, and a review of articles and literature related to the statement of this research, as well as the main topics that support this research which include: education to develop capacities, environmental education, and specifically, storytelling as a facilitation tool. It also includes a conceptual framework that relates all these concepts and identifies how they are connected and how they are working in relation to storytelling. The literature reviewed in this chapter is divided into three parts. First the focus is on Education as the Development of Capacities. It provides a brief description of which types of education can be currently found in schools and out of schools: formal, informal and non-formal education, to identify where environmental education can be developed. Then a description of what playful learning is and specifically how it is often used to present topics like EE. A discussion about who is involved in this learning process; teachers, students, parents, leaders, and the importance of each one in the process is presented. This review ends by identifying the different learning modalities that are found in students, to understand how students learn and acquire knowledge. Secondly, we look at environmental education (EE). This section presents EE, what it is, how it has evolved, what the current topics in EE are, its main goals and the principles used to develop it, and comprehension of how the process has worked. This part ends with the characteristics of environmental educators and some of the facilitation tools and props that they use. Finally, we look at the facilitation tool of storytelling. In this section I discuss what storytelling is, its objectives, its uses and characteristics and its relation to education. Examples of cases related to storytelling, like puppets, drama and theater are presented to recognize their benefits as a facilitation tool. Also
examples of famous storytellers in the world are given. It is concluded with considerations that storytellers must know and suggestions and tips for developing an effective storytelling activity.

EDUCATION: DEVELOPMENT OF CAPACITIES

This section of the literature review will talk about education as a process, in which spaces it is developed, who are part of the education process and how they are related to it. Learning while playing is a component that forms part of the educational process and is also shown here because it can make education interesting for children. To begin, consider the different ways students have to learn, including formal, informal and non-formal spaces.

WHERE EDUCATION TAKES PLACE

Education is everywhere, starting at home (ETLING, 1993), continuing in the school and even after school, in everyday life. In fact we never stop learning. These different kinds of education, depending of where they are developed are classified in three different forms or processes of education: formal, informal and non-formal or out of school. All of them have specific characteristics. The most relevant is where they are used and how and by whom they are planned and evaluated (LA BELLE, 1981).

FE or inside-school, is the method we find inside educational institutions, (COOMBS, 1973), where a standardized process is followed to teach and deliver knowledge, information and concepts. It has pre-established evaluation formats and scales to measure the acquisition of knowledge by the children. This modality is the one that has predominated in cities where large numbers of children have to be educated or prepared to be “useful” members of our society.

IE is the one that children receive in a familiar or community environment. It includes all the popular or social knowledge that is acquired with the simple action of living and being part of a social group. This educational style is not structured or planned, it has no standardized evaluations (GERBER, 2001), but it is continuously
subjectively evaluated and explained by the members of the same society that forms it, often elders (KLEIS, 1973).

NFE is education that happens out of the classroom that is not part of the regular educational school programs (COOMBS, 1973), but that in fact it follows its own programs and planning that allows it to evaluate the goals and the achievements. It is developed through activities and projects focused on the learner (ETLING, 1993).

Non-formal programs are not new; they have evolved since the late 1910’s. What we call them and the tools used in them have evolved as well. When non-formal programs appeared, we could find the use of “each one teach one” where volunteers taught during out of school time. We could also find the use of media, like the radio program in Colombia called Radio Sutatenza, sponsored by the Catholic Church. At this time NFE was called Literacy programs (LA BELLE, 2000).

In the 1950’s, UNESCO changed the emphasis of these programs from an individual focus to a community development. We could find then, the “extension education programs” used mainly in agriculture with economic goals (LA BELLE, 2000).

Between 1960’s and 1970’s an important Brazilian researcher, Paulo Freire, started popular culture programs, that were based on the use of plays, films, leaflets, radio, proposing that the education should not be passive (LA BELLE, 2000).

In 1970’s, an experimental pedagogy was born in many countries, when out of school programs were developed involving the local communities. For example, Ecuador, working with the Massachusetts University, started using instructional inexpensive products like games, photo-novels, magazines, cassette recorders, drama, rubber stamps, community newspapers and puppets. The use of all these products created an innovative approach to NFE (LA BELLE, 2000).
In the decades of 1980’s and 1990’s (LA BELLE, 2000), NFE was focused on “informal sector training” which was related to training for work, caused by the growth of the informal economy and the need to teach people that were self-employed on jobs that used specific skills that schools did not teach. A lot of NGO’s participated in this non-formal education, but the World Bank concluded that this NFE was not useful, because only three percent of the labor force was receiving this training.

Currently NFE continues evolving, finding new tools to deliver the knowledge, for example; the use of social media can be found in many different areas, some of them focused on development of capacities in children and youth, such as sport programs, art classes, outdoor programs, environmental educational, health programs, promotion of human rights and values, education for peace, using most of the time, many of the same products that 50 years ago were used (LA BELLE, 2000), like drama, magazines, puppets and games.

Following the purpose of this thesis, the cases that will be presented and discussed focus on this type of education. It is necessary to mention that most of these cases are focused on learners (ETLING, 1993) as they are the main piece in this educative process, so is important to maintain our participants interest in the program being developed, because we cannot force anyone to participate in these programs. Losing the interest of the participants means losing the participants.

**EDUCATION: LEARNING WHILE PLAYING**

Nobody would ever consider questioning the importance of work as it is the way we make a living and getting a job is the goal of most people after years of education. In this scenario, the importance and value of playing is not fully considered, therefore, as the Chinese proverb says “Diligence has merit, playing has no advantage. Guard against it; exert your strength”. In many countries (HUI, 2015), playing is considered a waste of time because it reduces the time that we could spend acquiring knowledge that would allow us to be productive people once we are adults.
Fortunately, researchers recognized long ago that playing is an essential part of education (MOYLES, 1989). In the entire world, teachers have started to combine classes with what is usually called “less conventional domains” like arts, dance and movement, drama and music. For example, in Asian countries (HUI, 2015) teachers are changing their classes moving from a formal style to a more informal, playful style. Research has demonstrated that it is possible to make serious learning more playful. (MOYLES, 1989)

In developed countries like Hong Kong, the Institute of Education has been trying to increase the use of creativity in their classes. In a study developed by Hoffman and Russ in 2012 (HUI, 2015), they found that when using storytelling and “pretend playing”, students are improving the development of their skills.

It is recognized today (FISHER, 2008) that playing is a natural, age-appropriate activity that children use to learn about themselves and the environment they live in. From ancient philosophy to modern scientific research, playing has also been seen as an integral component in learning and child development.

Unfortunately, in some developed and undeveloped countries, the use, or application of playful activities for children has been modified. The freedom or the unstructured play, that is a basic characteristic in playing (MILLER, 2009), has been turned into structured activities, most of the time focused on academic preparation, meaning that free time for playing and recess in schools has been substituted with structured and educational activities. This is also happening at homes, where parents use free time to develop skills in their children, looking most of the time, for academic improvement, rather than the social development by itself (FISHER, 2008).

It is important to understand what playing is. Theorists will define it as an activity that has no externally imposed rules, some others think of it as a social interaction with defined rules (PRAMLING, 2006). In either case, no one can deny that playing is about having fun, but we cannot forget that playing can stimulate
many skills and competencies in children such as empathy, communication, problem solving, collaboration, and fantasy, all areas that children need to develop to become part of the society where they live.

Playing has been analyzed through many different studies, and this analysis has given it different definitions, often considering its releasing and constructive functions and its creative and problem solving aspects. Playing has been studied extensively and one general accepted finding is that “playing is a central part of children’s culture and the play world that children have, has an intrinsic value” (MARSH, 2000). Depending on the use that specific playing activities have, we find different definitions of playing.

Playing has different developmental benefits. In the domain of cognitive development we can find different types of playing such as (PRAMLING, 2006):

- The exploratory playing, where with spontaneous, everyday play helps children to observe, experiment and learn about shapes, space, patterns, and numbers in their environment.
- Symbolic play, where children using familiar objects and scenarios, will develop abstract thought, symbolic representation, perspective taking, creativity, memory, intelligence, language and literacy. It is also central to the development of self-regulation, in which children learn to manage their own behaviors and emotions.

As well as the benefits that any type of playing has, we must note that it helps developing socio-emotional skills when children play with other children (MILLER, 2009). We have to make sure that children have the opportunities to play, and play in groups, in order to facilitate playing opportunities for children as active learners, as a means of self-stimulation and healthy development.

Playing is important, and it is obvious that in most cases, playing gives us the opportunity to have a learning space where children can develop skills, competences and abilities, therefore it would be impossible (PRAMLING, 2006) to separate the term “playing” from the term “learning”.
The term “learning” can be considered as an act of observing, experiencing or understanding something in a new and qualitative way, and then relating that acquired experience with the world we live in. Depending on how the “learned” experience occurred, the significance of what we learned will vary (SOMMER, 1997), creating different possible meanings. This is the main objective that learning has.

There are some other terms for the process that allows children to learn while playing (EDWARDS, 2013), such as learning-centered play, playful learning, pedagogical play, play-based learning, all of them including, “learning” and “playing”. No matter which terminology we use, these two terms are strongly linked.

Learning or human development is founded in children’s social and cultural experiences that are also linked to the environment where each one lives. We could think then, that if we want to have any type of influence in the children’s world, through daily activities, we could start playing with them (PRAMLING, 2006).

When playing with children, is necessary to remember that the play world is complex (MOYLES, 1989), that there is no absolute right or wrong in children’s play worlds, and also, that rules are meant to be broken or can be changed at any moment because playing is a free activity that is equal between those who are playing.

WHO IS INVOLVED IN PLAYFUL LEARNING PROCESS?

It is well known that playful learning is very important (MOYLES, 1989), but is also important to understand how parents are perceiving this importance for the development of their own children, because parents will be the ones in charge of organizing and facilitating the activities of children, like the type of games, toys, environment, daily routines and social interactions they will be exposed to.

Educators, teachers and owners of knowledge (HORSLEY, 2007) who plan to use playing as an educational tool, sometimes have to sit inside the “flow” of the children’s play process, and some other times sit outside that “flow” facilitating the
process. Either way, they have to plan in advance and have a clear idea of what role they will have during the play (Kangas, 2010).

It is also extremely important (Hadley, 2002) not only that educators understand the benefits that playing has for the students, but that they can understand their role in the playing process. Most of the time children see teachers as presenters of knowledge, possibly because teachers have a lack of confidence when it comes to play with children.

The expectations that teachers have about the educational process while using playing tools (Davies, 2013) will affect the class, because students perceive those expectations and will act according to them, therefore it is important that teachers or educators stand in front of the class and really mean to be there playing, as facilitators, enjoying it, not just following an educational process.

A key to having a good connection, a good pedagogical relationship between teachers and students (Davies, 2013), as observed in Reggio Emilia schools where communication is promoted, is to have dialogues, allowing students to talk about what they think, share their ideas, and solve conflicts. The other key to improve that good connection is the relation between students through collaborative activities that creates a learning environment, sharing experiences and using team work.

**HOW DO WE LEARN?**

It has been discussed that in teaching and learning processes (styles of education) it is also important to know about how we learn. Before having a class, teachers, no matter the topic to be taught, will have planning where they will define what they will teach and how they will teach it, with the objective of transferring certain knowledge to a class, hoping that it is understood by the students to make sure that students own new information, data, concepts. This will mean that the students are learning and that teachers are teaching.
To answer the question “How do we learn?” it has to be first understood (Nash, 2013), that not everyone has the capacity to learn in the same exact way. As different and unique individuals, we acquire and process knowledge in very different ways. There are at least three modalities that students have to learn; visual, auditory and kinesthetic, each one with their own characteristics.

Visual modality (Sousa, 2006) is for those students that learn when the instructions that they receive from teachers are written. Their sense of sight is more developed or is more receptive. The use of boards, screens, charts, etc. will help this type of student. The eye contact between teachers and students, as well as the corporal language of the teacher will be essential for the student to be engaged in the class and interested in what is being taught. It is important to be careful to use visual material and not create “noise” while talking too much as students are trying to understand and learn from what they are seeing, for example, in a power point presentation. Some other very effective tools, used in this modality are Venn Diagrams, mind maps to represent relations, the use of images to remember concepts, actions of reading, writing, making notes, use of drama and art activities, lists of concepts or characteristics, using less spoken language, and using phrases as “can you see?” or “it seems to be…”

In auditory modality, “hearing” is the preferred sense (Sousa, 2011) that is used to acquire knowledge. These types of learners can more easily understand concepts when they listen to them: when someone is reading for them, the use of recordings, self-talk, or simply how words sound while reading is the way to help them to receive and analyze information. Even when reading by themselves, these learners will read in a loud voice and will continuously have conversations and discussions as a way to validate what they are learning by saying it loud enough to hear it themselves. The use of such phrases as “it sounds good”, “listen to me” or “lets talk about it” are very common in people who prefers this modality.

For kinesthetic or tactile learners (Dunn et al., 2005), movement is not just important, but necessary for them to learn and process new knowledge. These types of learners are the ones commonly called “special-needs students”. These
are the students that may always look distracted or busy doing anything else but learning. In fact, thanks to these movements, the brain of these students can create the right connections in a neuronal level, allowing them to learn.

For these learners the use of action-oriented activities is very useful. Some of the characteristics that they present

With are over-gesticulation while speaking, tapping or drumming, impulsive behavior, and very little interest in reading. They are always doing, and are the ones that prefer sports or dancing and will be solving a problem while they are moving. They tend to touch things or people and uses phrases such as “I feel that I can do it”, “Let’s do it”.

Having a classification for learning modalities does not mean that students can be classified 100% in one or another modality. We find different combinations and tendencies, and even these preferred modalities can change while students grow up.

So following the premise that every student learns differently, it would be totally logical to expect that education would be developed in different ways according to each student. Because of the amount of children in each class, the limited hours that they spend at schools and the necessity of having a system to evaluate the knowledge that is being transferred from the teacher to the students, the reality is education is not personalized, in fact it has been standardized, considering children at most times, as part of a group, not as individuals.

We think now about a conflict between how children can learn and how teachers are prepared to teach. Rather than a conflict, this is an opportunity for teachers to find more creative and attractive ways to plan and develop their classes. Teachers will teach almost always in the way they were taught (Nash, 2013), or at least with the same style that they found easier and more effective in their own education.
Considering that not all the students will learn in the same way, teachers (Gregory, 2012), while planning on how to develop an effective class that looks to meet all needs of students, must consider five important elements:

1. **Room arrangement**: redistributing the furniture to create open spaces in the classroom where it is easier for the teacher and the students to move, generates a more comfortable area to learn, especially for kinesthetic learners.

2. **Lesson plans**: classes should give the opportunity to have different types of activities, such as hands-on projects, visuals, recordings, music, mini-lectures, that will invite each student to participate, no matter what modality of learning they prefer, because there will be activities for everyone.

3. **Student learning style**: teachers should talk openly about the different ways of learning that each student may have, discuss with them the efforts to make classes interesting for them, even if sometimes certain activities will not match their preferred learning modalities. If this is done they are more likely understand and accept it.

4. **Student choice**: some students may prefer to work alone (low auditory) while some others will prefer to work in groups (high auditory), so teachers (Tomlinson et al., 2006) could, in some cases, give the opportunity to students to decide how they want to work, alone, in pairs, groups, with or without direct guiding.

5. **Teacher learning style**: all teachers (Sousa, 2011) may find it very useful to be aware of what type of learner they are themselves, in order to have better planning for their classes, a better connection with the students and so they know in which modalities they could improve to help students to learn with less difficulty.

**ENVIRONMENTAL EDUCATION (EE)**

This section of the literature review is dedicated to the study of Environmental Education (EE), explaining its definition, its goals and part of its
history to understand how it has evolved. These are the main topics that it is focused on, the importance that it has related to children’s education, through the presentation of some cases where children are the main audience in EE projects, to find useful characteristics in those projects that can help us proposing a EE workshop. At the end of this part we will see the characteristics of environmental educators and some of the facilitation tools and props that they use.

To understand what EE is, we must be aware of where it comes from. It is important to realize that environmental Education maybe a modern term, but is not a new practice. Aboriginal cultures, throughout history have proved how they taught their children to take care of the environment where they live, just like the Aboriginals in Canada (Paquette, 1986) used to do. He showed them through demonstrations, participation in cultural and spiritual ritual and oral teachings, etc. In most antique cultures the presence of the protection of nature is implicit in the education received by the young members of their communities (Nair, 1997), just like it has been done by the Indian Culture, to whom belong the 10,000 year-old cave paintings at Bhimbetka, where the love and protection of nature is represented.

In modern times, the idea that education in which nature or environment should be an important part of it, goes back to 1760’s (McCrea, 2006) when philosophers such as Rousseau thought that the main focus of education should be the environment. In his novel Emile, he argues that teachers should allow students to learn about the environment. Later, around 1830’s - 1840’s a scientist and educator, Louis Agassiz, who published science articles in the popular press, suggested the of study nature instead of studying books, so they could have direct contact with the environment. By the early 1890’s, Wilbur Jackman with his book Nature Study for the Common Schools, defines the nature study movement (Jackman, 1891), where Natural Science started having a structure in the education of children in schools.

At the beginning of 1900 (Bailey, 1909), Liberty Hyde Bailey, recognized botanist, writer, educator and researcher in the field of nature rejects the use of the
term “Environmental Education”, because he finds it imprecise, theoretical, pompous and with the necessity of being always explained. He is also the creator and first president of The American Nature Study Society. By the 1920’s a basic term in environmental education has begun to be developed as a scientific field, “Ecology”. It presented a view of the natural world and how to study it with an integral approach.

Events like the “Dust Bowl” (Worster, 2004) in North America in the 1930’s generated the term “conservation” that was widely applied to encourage the protection of the environment and the promotion of health practices related to nature, even the creation of institutions like The National Education Association in Wisconsin in 1935, that stated that teachers should have an adequate education in the conservation of natural resources. By the year of 1946 The University of Wisconsin offered a degree in conservation education, which was the first educational program where environmental education, not called that yet, was recognized as a degree.

Only two years later, on 1948, Thomas Pritchard, Deputy Director of the Nature Conservancy in Wales, used the term “environmental education” (Palmer, 2002) at a meeting of the International Union for the Conservation of Nature, celebrated in Paris, becoming the first professional who used the term in public. On 1953, to support all educators that were working in the conservation-education field, The Conservation Education Association was formed, in this moment conservation educators, became a recognized group and one year later, on 1954 The Association of Interpretative Naturalists was formed, today is known as the National Association for Interpretation.

As time went by, the term “environmental education” was developed. But it was not until 1969 (Stapp et al., 1998), that a professor at the University of Michigan, Dr. William Stapp, with his, students officially developed and published its definition. In this year the first issue of EE was published because of the increased interest in the field of EE.
In that same year in the U.S. an act was passed to declare a national policy, that encouraged productive and enjoyable harmony between man and his environment, promoting efforts to prevent or eliminate damage to the environment, stimulating the health and welfare of man and to enrich the understanding of ecosystems and natural resources, as well to establish a Council on Environmental Quality. The next year the Act of 1970 authorized the creation of EE in the U.S. Dept. of Health, Education and Welfare, Establishment of the National Advisory Council for environmental education and a program of domestic grants.

During the decade of 1970, significant events took place related to environmental education. On April 22nd, 20 million people celebrated in the U.S. the first Earth Day, which has been celebrated every year since then. In 1971 the National Association for EE was created, which integrated all the environmental educators. By 1972, in Stockholm, Sweden (Palmer, 2002) the United Nations Conference on the Human Environment celebrated Earth Day and 96 recommendations were created for the provision of environmental education as a way to address environmental issues worldwide, and the Alliance for environmental Education with international groups and corporations was founded to collaborate, this Alliance lasted until mid-1990’s.

In 1975, The United Nations Educational, Scientific, and Cultural Organization (UNESCO), in Belgrade, Yugoslavia (McCrea, 2006) sponsored a conference to ratify the Belgrade Charter that outlined the basic structure of environmental education. As part of this International Workshop, the need of new global ethics related to the relationship between humans and natural world that would lead to better and healthier practices through attitudes and behaviors was considered. It also discussed the need of environmental education to address environmental issues, including, knowledge, skills, values and attitudes.

The goal of environmental education generated in Belgrade is still in use today, and its goal is to develop a world population that is aware of, and concerned about, the environment and its issues, and to promote the idea that using
knowledge, skills, attitudes motivations and commitment to work individually and collectively is a way to solve and prevent issues.

In 1977 (UNESCO-UNEP, 1977), The United Nations Educational, Scientific, and Cultural Organization (UNESCO), in cooperation with the United Nations Environment Program (UNEP), in Tbilisi, Republic of Georgia, celebrated the Intergovernmental conference of EE, where they established the goals, objectives and principles of environmental education that even today are used by many environmental educators. These goals are:

- To foster clear awareness of, and concern about, economic, social, political and ecological interdependence in urban and rural areas;
- To provide every person with opportunities to acquire the knowledge, values, attitudes, commitment and skills needed to protect and improve the environment;
- To create new patterns of behavior of individuals, groups and society as a whole towards the environment.

One of the principles generated in this conference states that environmental education should relate environmental sensitivity, knowledge, problem-solving skills, and values clarification to every age, but with special emphasis on environmental sensitivity to the learner’s own community in early years”, which for effects of this thesis is basic it has big importance, because it is here where the “early childhood” is considered to be educated on environmental issues.

One of the most important results from this conference was also the definition of the concept of environmental education, which is (UNESCO-UNEP, 1977):

“is a learning process that increases people’s knowledge and awareness about the environment and associated challenges, develops the necessary skills and expertise to address these challenges, and fosters attitudes, motivations, and commitments to make informed decisions and take responsible action”
Today, the definition, principles and goals used in programs of environmental education continue to be used, however (Potter, 2010), a lot of research is being focused on how important it is to provide people of all ages, especially youth, the opportunities to have direct contact and experiences with the natural world, following a holistic educational approach. The interest in this approach may be generated by the fact that today more and more people are spending less time outside, making it harder for them to be related to nature, which also makes it harder for people to feel the need to protect it and act in a friendly and responsible way.

In 1992, the United Nations (McCrea, 2006), organized the Conference on Environment and Development in Rio de Janeiro, Brazil, where environmental education was proposed to be reoriented towards sustainable development, increasing public awareness and promoting training for educators. In collaboration with the United Nations Educational, Scientific and Cultural Organization, (UNESCO), The International Chamber of Commerce and the United Nations Environment Program (UNEP) a World Congress of Education and Communication on Environment and Development (ECO-ED) was developed, trying to stimulate the informed action, cooperative exchange of relevant knowledge between educators, scientists, business, government, NGO’s and media, so the work of each part could be shared, improved and applied.

In 2002, the United Nations Commission on Sustainable Development developed in Johannesburg, South Africa, the Johannesburg Summit, bringing together tens of thousands of participants interested in the management of resources for a growing population with increasing demands. The United Nations General Assembly passed a resolution that declared 2005-2014 as the decade of Education for Sustainable Development, led by UNESCO.

In 2004 at the University of Wisconsin, the first applied EE Program Evaluation in an on-line informal modality, started the era of the non-formal environmental education programs, guidelines, manuals and material being
produced to facilitate the job of the environmental educators administering high quality educational programs.

In the last century EE as it has been established, was originated by a series of events that have shaped the concept, formed its goals, principles and generated a worldwide accepted definition.

This is how environmental education has evolved and will likely keep on evolving while trying to adapt to modern times, to new issues, but above all by trying to make a behavioral change in people in order to have a better and healthier planet.

**MAIN ENVIRONMENTAL ISSUES**

Today any environmental issue should be addressed (Funtowicz et al., 1991) as soon as possible. Some issues are local but they will, sooner or later have an effect globally, some of the current issues are (Owen et al., 2006): loss of biodiversity, pollution (air, water, soil), climate change, deforestation, overpopulation, waste disposal, ocean acidification, ozone layer depletion, acid rain, water pollution, urban sprawl, public health, genetic engineering, and natural resource depletion.

Currently there are many different guides and manuals on how to design, plan, develop and evaluate environmental educational programs. A lot of them focus on non-formal education, with very easy approaches for educators that may not have a teaching background but that work with children, youth and adults.

EE has evolved to adapt to specific moments of the history of human beings, following the goals that environmental education has had since 1977 which are: awareness, knowledge, attitudes, skills and participation. It is remarkable how important it is to not just to transfer knowledge, theories or formulas, but also to work on the engagement of the community members towards the actions that may lead to a real protection of nature and a way to do it is by the participation of everyone, and that is why is necessary to have facilitation tools that allow the
teachers, educators and facilitators to promote environmental education in an interesting way.

ENVIRONMENTAL EDUCATORS

Environmental educators (Lieberman, 2013) must have certain characteristics to make sure that they can transmit effective messages to the target population that they are working with, such as a concern of the environment as a whole, with a holistic view, be able to work interdisciplinary, because many thematic areas will integrate the teaching topic, that this work will be seen as a life-long one. All the work must be focused on the learner, because he or she is the center piece. Environmental educators should engage people to act, not just to talk and in that process always seek for long-term solutions. They must make sure that the information provided is accurate and precise and above all act with environmental ethic at all times.

An environmental educator must never use scare tactics to educate or promote the action of students. His work is not about environmental activism or environmental-ism. It is not just outdoor education or fun games and happy songs. Finally, the environmental educator must never forget that his work should never be used as propaganda.

Environmental educators are everywhere (Hungerford et al., 1980), working as teachers, facilitators, communicators, community leaders and in all of these cases their main goal is to generate behavioral changes in the students and the public they work with. This work can take place in schools, zoos, parks, museums, public spaces, through classes, workshops, conferences, shows, using different learning techniques like oral or visual expositions, songs, stories, movies, props like toys, board games, drama, anything that it takes to teach others about issues of conservation, preservation, and sustainability.
STORYTELLING AS A FACILITATION TOOL

In the previous section it the definition of storytelling was discussed, along with its objectives, its uses and characteristics, and its relation with education and learning theories. Examples of activities related to storytelling, such as puppets, drama and theater were presented to recognize their benefits as a facilitation tool. Examples of famous storytellers in the world were given. The section concluded with what storytellers must know and suggestions and tips for developing an effective storytelling activity.

For thousands of years, humans have had the need to communicate and to transfer knowledge between the members of their communities (Haven, 2007). Stories may have been used at the beginning to survive, to explain how and which animals to hunt, how to make fire or how to collect food and avoid poisonous food. In this process of passing information and educational process it is recognized we can say (Egan, 1986) that storytellers are our original teachers.

Even though there is no way to know exactly when the storytelling started it is presumed (Harrell, 1983) to have begun when the vocal cords of humans evolved enough to be used, not with words at the beginning, but with sounds and noises that may have helped to describe and narrate everyday anecdotes that our ancestors lived. This early way to communicate between the people must have meant a deeper way to generate meanings and intention to what was described, more than the drawings that can now be found in caves, because sound can reproduce and represent more vivid emotions.

The first recording of storytelling (Greene et al., 2010) is found in Egypt, in a Papyrus called Westcar. This papyrus may have been written between the years 2000 and 1300 B.C. In it is described how as an entertainment act, a son tells stories to his father while he is building a pyramid.

All cultures through the history of humankind have used storytelling to educate, some cultures more than others. Today Indigenous cultures still use storytelling as an important part of their way to teach the new generations about
how to interact with nature and within the society that they live (Stein, 1982). This way of teaching uses stories as a powerful tool. Because stories become part of our lives, there is a huge impact on the mind of people of all ages that listen to them (Haven, 2007).

The history of storytelling has a common factor in its long existence. It has been used to preserve the culture of each civilization (Stein, 1982), by showing how the society works and the knowledge that each culture has accumulated through time, but it has also served as a way to explain what people experienced, for example when talking about nature and its phenomena.

Sometimes the stories that were told helped to explain and find reasons for things that were hard to understand by a community, like fire, thunder, the origin of humanity or death. These stories were even considered sacred (Egan, 1989), so stories have had an important place in culture, since storytelling began.

Informal stories have been re-told by anyone who has heard them before. They can be told anywhere, and they may be accurate or not depending on how they were learned by the storyteller, plus how they have been combined with the storyteller’s own experiences. Stories would have been heard from a family member, a friend, a teacher, but most of the time these stories would be first be heard from older people who may have heard them when they were younger, again, told by older people.

Formal stories, such as myths, religious or epic tales, usually were told by storytellers, like priests or recognized artists. In Europe, since ancient Greece and Rome, these artists were initially known as Bards (Greene et al., 2010), who would sing stories about historical events. While they sang they would play the kithara. Bards were powerful actors in society, because they had the power to charm the masses. They were then replaced by Rhapsodes who would sing and use a staff called Rhadbos, with the freedom to have a hand used to include movements while they told the stories, adding with a more dramatic style. Rhapsodes then evolved into what we know today as Storytellers.
In the western world the importance of Bards, Rhapsodes and storytellers decreased when the printing press was invented in 1450, because all the stories that were told, the oral tradition to entertain and inform, was more expensive and not as easy to spread as the stories written in paper (Greene et al., 2010).

In most cultures, storytelling started to lose importance as a formal way to communicate, to inform or to educate, so much that storytelling was seen as a mere entertainment activity that was focused on children. By the years of 1812 and 1815, the Grimm brothers became the heroes who saved storytelling, when they published a book that contained their oral tales. This book started to be used as an educational tool in kindergarten children by Friedrich Froebel in 1837. The teachers of these kindergartens received instruction on how to use storytelling as an educational tool in their classes, and by 1905 one of these teachers, Sara Cone Bryant, wrote the first storytelling text in America, “How to tell stories to children” (Greene et al., 2010).

Since 1970, there has been a wide effort to bring back storytelling to form part of educational programs (Haven, 2007). Today there are associations of storytellers all over the world whose main goal it is to keep alive the tradition of storytelling, because even though storytelling can be used to educate efficiently it has been seen only as an extracurricular activity that is not officially included in educational programs.

Because of its versatility, storytelling has been used to develop very different disciplines (Sousa, 2006), as a communication tool, to inform and narrate important events in history, as a management tool for organization, where it is used to improve systems or work and management, it is also found as previously said in the educational field, as an educational tool.

Storytelling has a number of important characteristics that make it an effective educational tool. One of these is that it helps to create relevance and develop meaning in the process of learning (Egan, 1989). Another important aspect is it provides motivation to learn, generating that interest to learn new
knowledge and to keep on learning more, which nowadays is so hard to generate within the students. Using storytelling also helps us to understand more complex subjects or topics, such as sciences, environmental education included (Isbell, et al., 2004). With the regular use of storytelling, writing is also improved, because the students learn while they listen about how to structure their ideas and thoughts (NCTE, 1992). Three more characteristics that can be highlighted for the purposes of this thesis are that storytelling helps young students to generate a connection with nature (Bizard et al., 2007), this connection can also be created with adults (Payne, 2010), which make it even more versatile and allows the design of stories for all kinds of people.

**STORYTELLING AND LEARNING THEORIES**

It is clear that storytelling has a wide educational use in many different areas (Haven, 2007), but is it important to know how storytelling works? When storytelling is considered as an educational or facilitation tool, it can be based in different learning theories according to how it is implemented and the specific goals that it follows, some of these theories are constructivism, brain-based learning, multiple intelligences, and multicultural education.

The theory of constructivism (Klein et al., 1994) indicates that the knowledge generated will depend only on two things in each student; the prior knowledge and prior experiences. This theory considers that learning as a social task and unless the content is relevant for the student, they will not participate or at least the student will not learn. It also considers that multiple learning styles should be considered while developing new knowledge. Two of the most important presenters of this theory are Piaget and Vygotsky. Constructivism states that the learning process is determined by prior knowledge, expectations and perceptions that every student has at the moment of learning. This will define what information will result in being more important to them, which information they will remember and which information will have significant meaning. Storytelling is a tool that is
compatible with all these statements because it helps to activate prior knowledge and to give relevance to the new information (Haven, 2007).

One more theory is that brain-based learning theory (Sousa, 2006), which tells us that emotions are the foundation of learning. What is learned and saved in the long-term memory is determined by the emotional area of the brain, not by the rational area. So having in an environment where emotions of learners are not altered, the more possible it would be for them to acquire knowledge. Storytelling provides a safe, positive, inclusive space where students can easily learn.

Another theory is the one of multiple intelligences (Trostle-Brand et al., 2001). This theory makes reference to the fact that not everybody learns in the same way. It involves mind, emotions, body and spirit; it sees the human as a whole. Storytelling, here can optimize the way students learn in any of the eight multiple intelligence areas; musical-rhythm, logical-mathematical, visual-spatial, intrapersonal, interpersonal, verbal-linguistic, body-kinesthetic, and naturalistic. It is important to highlight that the use of music in the storytelling process helps students to anchor information in their long-term memories (Trostle-Brand et al., 2001). When following the sequence of stories, the audience will be able to use the logical-mathematical area. Another area includes, bodily-kinesthetic and visual-spatial students, because of all the movements, sounds, gestures, and expressions that take part during the story.

The last theory presented here is one of multicultural education (Greene et al., 2010). This theory tells us that the use of alternative educational techniques for example, indigenous storytelling, can help teachers to improve their educational programs and integrate people from different backgrounds in the learning process.

Storytelling can also be seen as an communication tool (Ollerenshaw, 2006), because it creates a communication process where listeners learn not just to listen a story, they hear that story, appropriate it and learn how to tell that story to other persons. In addition (Sousa, 2006), storytelling uses the combination of the knowledge that students already have, the experience they have accumulated in
their current world, and the emotions generated through the storytelling, to make specific topics relevant to the students and turn them into part of their lives.

Storytelling for environmental education (NAAEE, 2010) has been proposed in various manuals and guides produced to promote a more efficient education that leads to accomplishing the goals of environmental education; having knowledge, the facts, data, information and theories of how things work, the intellectual skills to interpret and understand all that information, being able to see the meaning of the data, then having the attitude to keep an opened mind, be conscious that there are behaviors that must be modified to be improved, adding the experiences gained during the whole life, even when talking about children and their short age, and finally getting the motivation to act, to do something that may be translated into a better and healthier environment.

Storytelling can help people to be aware of the local environment where they live (Strauss, 2006). Starting to care about it is possible because storytelling is one of the most basic ways that people learn. This technique gives the learner the possibility to visualize himself as part of the story, as well as the environment where he lives, making it easy for that person to identify possible issues or problems present in their daily life in a congruent way.

To be successful storytelling has to deliver relevant content to the audience, but is also extremely important on how the stories are told (Schank et al., 2006). People will remember the stories that are told properly, that engage the audience and to make this happen, the story presented must be aligned to the ideas that the audience already have or that they may want to have, otherwise the story will not be welcome. If the story is well told by the storyteller, it can lead to deep learning by making the audience feel as part of the story, of the experience that is being told. This is vital, when trying to motivate people to learn more about certain topics or to motivate them to specific actions.

If the audience is able to connect their emotions with the content that the story may have (Sousa, 2006), then students will remember the information
received, because a connection is established. This is one particular characteristic that only storytelling as a communication form offers (Haven, 2007).

Six interconnected areas of emotional involvement in storytelling have been recognized (Sturm, 2000). These areas are the telling, the story, the story characters, personal experiences or memories, and listening to the story as a complete activity. The last area is the connection between listener and storyteller.

Storytelling will engage the different audiences ways to learn; visually, auditory and kinesthetic, allowing every person to create their own connection, depending on which sense is more developed (Haven, 2007). In the scholar curriculum, storytelling could occupy an important spot, considering that it can be a powerful tool when working with literacy development (Isbell, et al., 2004).

Storytelling in schools cannot be developed in an isolated space. It needs to be developed in a known environment, where there exists an understanding of who belongs to that environment, where everybody knows the rules that are applied in it, and that between the storyteller and the audience exist an attitude of mutual respect (Dyson et al., 1994).

IMPORTANT STORYTELLERS

The literature suggests that the storyteller is a significant influence on the process of storytelling. Throughout time there have been a lot of important storytellers, each of them with different characteristics according to their own era. Good storytellers share one thing; they used words to create fantastic worlds that engage audiences, and most of the times the stories they told, had an educational component. One of the most representative storytellers that the world has known (Maguire, 1988) is the Danish author, Hans Christian Andersen, who used to tell stories to children who were immediately enchanted with his stories, that were made for the occasion and combined with fairy tales. His main characteristic was that he had fun while he shared his stories. Some of his stories are “The Emperor's New Clothes,” “The Ugly Duckling,” and “The Princess and the Pea.”
Another important storyteller was Aesop (Norton, 1991), who lived in ancient Greece. He used animals as main characters in his fables. These fables showed how to solve problems and provided a moral at the end of each story. Some of his stories are “The Boy Who Cried Wolf” and “The Tortoise and the Hare.” A legendary storyteller is Scheherazade (Jurich, 1998) who told every night for 1,001 nights, stories to Sultan Schahriah in order to save her life. She became his wife, and her stories were told all around the world. Some of this stories are “Ali Baba and the Forty Thieves,” “Sinbad the Sailor,” and “Aladdin and the Magic Lamp.”

Culturally, there are storytelling icons. For example, two brothers are present in the European history of storytelling (Bettelheim, 2010. They are Jacob and Wilhelm Grimm, who lived in Germany. When their parents died, these brothers collected stories from all over the country. They used to tell these stories and when they published them, they became famous. Some of their stories are “Hansel and Gretel” and “Snow White and the Seven Dwarfs.” Another recognized storyteller is (Bottigheimer, 2010) Charles Perrault, who lived in France in the seventeenth century. He took popular folk tales and turned them into children's fairy tales that ended with a moral. He became famous because he was one of the first French authors to write especially for children. Some of his fairy tales are “Sleeping Beauty,” “Tom Thumb,” and “Puss in Boots.” Culture and expression are apparently intrinsically linked in storytelling.

**HOW TO TELL A STORY**

Doing storytelling is considered a fine art (Greene et al., 2010), and as an art it has to be studied, practiced and improved every time it is performed. Practicing this activity will strengthen the stories that are told and a better result will be obtained whether it is educational or as an entertainment tool.

There are multiple types of stories and multiple ways to tell them. These stories may vary from their simplest forms, as anecdotes, folktales until more elaborated epic stories, history, legends, religious stories or ancient myths. In any
of these cases, it is very important that the stories to be told have certain basic characteristics like (Greene et al., 2010):

- Having a single theme, that may be defined clearly.
- Following a good developed plot, preferentially a linear one.
- Using vivid word pictures that can help to imagine the scenes.
- Using of pleasing sounds and an appropriate rhythm
- Having the right characterization, according to the story.
- Containing dramatic resources to stimulate senses of the audience.
- Using time efficiently, keeping the stories simple and brief.
- The most important is that the story is appropriate for each audience.

Storytelling (McWilliams, 1998), most of the time is an interactive activity that relies on the audience to enrich the story. Nowadays audiences have lost some of their skills to easily follow the act of storytelling, so it is responsibility of the storyteller to engage the audience, using props, such as puppets, toys, special effects or music.

**PUPPETS AS PROPS FOR STORYTELLING**

Puppets are a very good complementary tool for storytelling, mainly to engage children, youth and even adults in the educational process. The materials, colors, and forms that they have, allow them to charm any audience and generate a connection with them and make them want to participate. Activities with puppets can include; introduction of new concepts, reinforcing of previous knowledge, transition between activities and many more possibilities (Salmon, 2005).

Puppets have different functions and benefits in any way that we use them. Puppets will always seem to be simple but they are profound. Depending on what we need to achieve, we can design characters, plays, songs or activities that the puppets usually will lead or will be part of (Currant, 1985).

Storytelling and playing are two of the most basic ways to develop capacity in children and youth, and using puppets while we tell a story makes this
development much easier because puppets engage the audience. A puppet is by itself a facilitator who is friendly and has the freedom and the license to say and do whatever it wants, without consequences for the puppeteer. This allows the audience to have a confident connection with them (Salmon, 2005).

There are an infinite amount of characters when talking about puppets, not just talking about the shape they have or materials they are made of. We can find puppets that play the fool, the bad boy, the imaginary friend, the monster, the fantastic character, the healthy fruit, and all of them with very specific functions during their use, but with the option to be versatile. They can change from one moment to another according to our needs as educators (Salmon, 2005).

Puppets can help to disseminate knowledge in order to change social attitudes. This is very useful when we try to teach children about topics that could be hard to talk about in a regular class such as bullying, sex education, HIV, and domestic violence. Puppets as well as storytelling can be seen as educational entertainment (Kruger, 2008).

There are a large number of puppeteers that have used puppets to educate; two representatives of this “edutainment” process are Jim Henson and Gary Friedman who were creators of the muppets show in USA and the Royal Puppet Company in South Africa respectively. Their job has been transcendental and recognized all around the world. In both cases they have used puppets to deliver not just information and knowledge, but to promote capacity development in children and youth (Kruger, 2008).

**CONCEPTUAL FRAMEWORK FOR THE STUDY**

The main goal of environmental education is to show people how to improve the quality of life of all living beings, without risking the environment itself for present and future generations.

Environmental education as an educational process is developed three different ways; as formal, informal and non-formal style, where the concepts,
information and/or change of habits as part of the main goal are delivered to the students/participants using different methodologies, evaluation systems, programs and education/facilitation tools.

EE, no matter which style is used to deliver it, has one main goal, but different approaches when it comes to the execution of the particular objectives, generating very different results in each case. There is no good or bad approach, because each style targets different areas of environmental education.

In the FE style we may find, detailed programs with clear objectives, timing, and objective systems to evaluate and test the knowledge learned by the students through the teaching/learning process that certified teachers will provide. By the end of this process, an accreditation for the students is offered, which demonstrates that knowledge has been acquired. Most of the time, this knowledge is focused on learning concepts, formulas, facts, dates.

In the IE style usually we observe a process of education that does not follow a program. The objective is to generate certain behaviors that are accepted by the rest of the society. This can happen in any moment, and is most of the time delivered by older people, youth, adults or seniors without any certification in what they are teaching. All is experience-based. The evaluation of this process is subjective and made by the group of people that taught the behavior and those who are affected directly by that behavior. The participants are usually relatives or very close to the instructor.

In the NFE style the main objective is to create changes of attitude through simple activities that allow children to immediately have a better understanding of their environment and how to take care of it. In this style there are flexible programs that allow the participants to adapt to the activity and adapt the activity to their own needs. This process is focused on the participant more than in the program, concepts or theory, because of the nature of its goal. There is no objective system of evaluation because the development of every participant is
respected and encouraged at the appropriate speed of each person. In this style facilitation tools are used to develop the capacities of each participant.

All three styles are complementary; the formal offers to pass information, data, concepts, statistics, the informal offers to instruct the skills that we need to live in the society, and the non-formal offers the opportunity to make a behavioral change through practice and appropriation of methods or techniques used and that result attractive to kids.

Storytelling as a facilitation/educational tool can work in the three different styles, each with its own pros and cons, so is important to know these characteristics to be aware of the power of a tool like this, when it can be used and in which way it can be more efficient and effective to be used.

The human components of the environmental education in these three styles are the same ones, but are identified and treated in different ways according to the objectives of each style. These components are the users who will receive the knowledge; known in general as learners, but depending on each style they are considered participants, students, or simply children, youth, adults or seniors, etc. Another component is the developer or teacher, who again, depending on the style are known as teachers, facilitators, tutors or simply close relatives as parents, or close friends, counselors, guides, educators, etc.. Finally the last component is the authorities, who are in charge of the programming of activities, resources, and timing. These are usually the ones that are identified as part of school boards, or leaders of civil associations, NGO’s, and here there are also authorities like the elders from each family or community, groups of parents, members of planning or development committees, government offices, etc.

Storytelling is an ancestral facilitation tool that has been used to develop the skills of the listeners, to deliver concepts in a simple and easy way, and to learn how to improve the social interactions between the members of a community through the use of anecdotes and fables. It has also been used to entertain people
of all ages. It has been an interesting tool, and because of its low cost and simplicity it can be applied in any environment, time or space.

Storytelling has been used to develop science topics such as Biology, Ecology, Natural Resources; mainly to deliver concepts and knowledge, and lately to improve environmental education, not just delivering theory, but creating a change of attitudes and habits, inviting people to act in benefit of the environment.

Storytelling can be used as a transversal tool through all the different educational styles, helping to achieve specific goals in each case, with the flexibility to adapt to each style. By being such a simple, quick, inexpensive and effective tool, it can be easily reproduced by any teacher or facilitator. It does not require too many resources so authorities find it efficient and easy to be considered as part of the educational programming while planning.
Figure 2.1 Conceptual Framework Diagram.
Table 2.1 Description of Relations between components of CF Diagram

<table>
<thead>
<tr>
<th>Presence of Storytelling in the different educational styles</th>
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<th>Relation between Education styles</th>
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<tr>
<td><strong>1</strong> Formal E. gets help of Non-Formal E, using it’s spaces and specialized resources and activities to enrich the learning process of the classroom, although this complement has no curricular value on Formal E. The Non Formal E. tries to close the gaps present in the integral formation of participants of the learning process.</td>
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<tr>
<td><strong>2</strong> Formal E. identifies the Informal E. as part of the formation of the student, but when talking about knowledge it considers more relevant the formation developed at the Formal E. space. This is the school, so there is a gap in the synchronization of both styles.</td>
</tr>
<tr>
<td><strong>3</strong> The Non-Formal E. works closely to the Informal E. to develop activities that can be helpful and appropriate for the general public, at the same time, Informal E. gives feedback about activities that are needed to complement this style of education.</td>
</tr>
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Table 2.1 Description of Relations between components of CF Diagram (cont.)

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<thead>
<tr>
<th>Relation between Developers/Executioners of programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Formal E. teachers have help of Non Formal E. Facilitators, because of how interesting the educational activities that are offered in the Non-Formal E. facilities, are for students.</td>
</tr>
<tr>
<td>2. Formal E. teachers present results of advances to Informal E. parents but do not consider them as an authority inside the learning process in the classroom.</td>
</tr>
<tr>
<td>3. Informal E. parents have the power to decide which Non-Formal E. Facilitators interact with the participants, because of the access to different options of activities offered to them.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relation Between Human component and Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. In Formal E. the resources are acquired according to the programming and planning of the curriculum, so most materials are preselected and form part of a scheduled program.</td>
</tr>
<tr>
<td>2. In Informal E. the resources are usually adapted of acquired depending on the educational needs in every different occasion.</td>
</tr>
<tr>
<td>3. In Non-Formal E. the resources usually generate the programs and allow authorities to design and plan.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relation between Authorities of each Education Style</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The authorities of Formal E. have very little contact with the authorities of Non-Formal E. mainly because these last ones do not have a certified recognition.</td>
</tr>
<tr>
<td>2. The authorities of Formal E. barely have a contact with authorities of Informal E. usually because Formal E. authorities do not act locally, following programs that are designed in a centralized way.</td>
</tr>
<tr>
<td>3. The authorities of both Informal and Non-Formal E, can work together through mutual feedback that helps the activities to be enriched considering the needs of local communities interested in participating in more structured learning processes but without the formality of Formal E.</td>
</tr>
</tbody>
</table>
Table 2.1 Description of Relations between components of CF Diagram (cont.)

<table>
<thead>
<tr>
<th>Relation of power of Human components</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In Formal E. all the planning, design, programing and authority goes vertically from the authority to teachers and finally to students, who do not give feedback on the process.</td>
</tr>
<tr>
<td>2</td>
<td>In Informal E. the process of passing the experience to the younger is vertical and goes from the older parents, grandparents or relatives to younger ones, but is not as strict as the Formal E.</td>
</tr>
<tr>
<td>3</td>
<td>In Non-Formal E. the process of designing and executing goes vertically but in both directions between authorities and participants, creating feedback about how the activities are working.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relation of importance between Programs and Goals</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Fowler</td>
<td>In Formal E. programs are designed thinking about delivering concepts and information to students and certifying after evaluating the appropriation of that information through standardized objective tests.</td>
</tr>
<tr>
<td>2 Informal</td>
<td>In Informal E. there is no a structured programing, the objective or goal in each particular learning process generates a particular way of teaching the social socials skills required and the evaluation is subjective and done by the members of the community the people belong to.</td>
</tr>
<tr>
<td>3 Non-Formal</td>
<td>In Non-Formal E. the programming and the goals are equally important and offer mutual feedback, which gives it the opportunity to have continuous improvement, considering the main goal and the programming in this way the process is constantly evaluated, participants are evaluated subjectively, only observing the changes of attitudes and responses obtained in each of the participants.</td>
</tr>
</tbody>
</table>
SUMMARY

This chapter presented some of the components that are related to education and the different spaces or styles where it is developed; formal, informal and non-formal. The last one of the styles can be seen to be the one with the highest potential to promote storytelling as a facilitation tool for EE. It also talked about EE and how it has evolved through time and how it is focusing now in the change of attitudes between the population, rather than just deliver information, then the concept of Storytelling and how it has been used for centuries and in the last years to educate people of all ages, was presented, how useful it has been and some of the ways it has been used to generate consciousness between the population, especially children, who are its main users.

After reviewing what the literature tells us about these concepts, in this chapter a diagram of a conceptual framework was presented, were the connection and relations between each style of education, components of education and storytelling are identified to be used as a guideline for this research.

Chapter Three describes the methodology that was used to design this thesis, which methods of data acquisition were used as well as what type of research will be done, and what kind of sample will be used, the way that the data collected will be handled and analyzed, and the ethical considerations that have to be observed and the limitations of the research.
CHAPTER 3 METHODOLOGY

INTRODUCTION

This chapter includes the description of how this research has been designed, starting with the epistemology that was selected and that best fit the nature of this research, the methodologies selected to collect data, either quantitative or qualitative that combined can create a triangulation in order to give the research more validation. It will also present how the data will be handled, secured, presented and analyzed. Also discussed are the methodological limitations that affected this research.

EPISTEMOLOGY

The selected methods are consistent with the interpretivist approach (Bryman, 2015), because social research was developed, trying to understand what is happening in educative spaces with children when working on environmental education and how it is done, with face to face key interviews. There was an opportunity to collect not only information and facts, but feelings, and perceptions, beliefs, and with observation in the focus group it was possible to see how the people inside this group are working, how they interact, and what is the perception using surveys and finally a triangulation of these methods was done to validate the information acquired.

This research intended, by having an interpretivist approach, first to respect the differences of the participants (Weber, 2004), to acquire valid data and information that could help to understand the importance of storytelling as a facilitation tool. As an interpretivist research, it was supposed to understand the circumstances of a specific problem or issue, in this case, the actual process that is followed to teach about environmental topics, however it could be seen, even when
it is opposed to the bases of Interpretivism (Williams, 2000), as an example that could generalize, transfer, confirm or have external validation to understand what happens in most of the schools when talking about their environmental programs.

**METHODS**

The research used four different methods to acquire information and data. With these methods the data can be “crossed”, giving the opportunity to have a better interpretation of it. Using triangulation is another way that the research had more significance and validation because it used quantitative but also qualitative methods. The Research Design Matrix that includes the problem statement, objectives, research questions and methodologies to collect data can be found in APPENDIX 1.

The methods used to acquire data in this research were:

1. Collection of data using qualitative method “Face to Face Key Interviews”.
2. Collection of data using qualitative method “Focus Group”.
3. Collection of data using qualitative method “Survey”.
4. Collection of data using quantitative method “e-Survey Questionnaire”.

The data, once collected and analyzed, was presented following the next linear order: interpretation of results; formulation of conclusions and recommendations and presentation of results, conclusions and recommendations.

**SAMPLE**

This research worked with different populations to gather information and data to analyze, these populations are formed according to the methodology that is applied in each part of the research, being:

1. Teachers, Leaders and Storytellers, whom through key informant interviews help to collect qualitative data related to the facilitation tools that are used when working with children in a classroom. Ten interviews were applied. These participants were selected as a purposeful sample, which is (Patton,
2002) a logical way to generate a sample, considering that each one has rich information about the topics related to this research.

2. A group of children between eight and 12 years old, that are part of the Focus Group (environmental workshop) where they experienced a class using storytelling. The size of this group was of 26 participants.

3. Teachers and parents of children participating in the Focus Group, as observers, gave their opinions and comments about the development of the workshop where storytelling is being used, through the application of a Survey at the end of the Focus Group.

4. Home school Teachers were asked to answer an e-survey that included their opinions about the actual techniques used to teach environmental topics as well as their experiences and acceptance perceived in their students while using storytelling. 51 surveys were applied.

COLLECTION OF DATA

Face to Face Key Interviews

The interview script contains a list of 21 questions; most of them open, so the people can express their opinions. They took 45 minutes each (120 sec. per question), the information was written on paper that was kept to be analyzed at a later time. During the Interviews I focused on recognizing how each participant is related either to the education field or to storytelling as a facilitation tool. I wrote down their perception of storytelling as a facilitation tool and how they think it can be or cannot be used to develop environmental topics for children. KEY INTERVIEW GUIDE OF QUESTIONS can be found in APPENDIX 2.

Focus Group

A workshop of one hour was developed in different groups using storytelling as a facilitation tool, to learn how students perceive each class. Then results were analyzed by comparing the behavior and conduct of the participants during the workshop. I presented a workshop of one hour, in a classroom; participants were invited with at least 2 weeks of anticipation. The Focus Group was formed with 26
participants. They were asked at the beginning of the program some questions at the beginning and at the end of the activity, that are related to how they are taught in the classroom and then at the end of it, they were asked about how they liked the activity. I used one assistant to keep track of the activities (secretary). The FOCUS GROUP PROGRAM is in APPENDIX 3.

**Post-Workshop Survey**

Once the presentation of the Focus Group was finished, parents, teachers and leaders present were asked to answer a quick written survey. It consisted of a set of 16 multiple choice questions that would help to identify the acceptance of the workshop using storytelling as the main educational tool. The FOCUS GROUP SURVEY is in APPENDIX 4.

**E-Survey / Online Questionnaire**

A structured Questionnaire with 13 questions most of them of multiple choices was used to collect quantitative information about how Home school Teachers perceive the traditional and alternative educational tools. These questionnaires (51) were sent to the teachers in an electronic format. E-SURVEY QUESTIONNAIRE is in APPENDIX 5.

**DATA ANALYSIS**

The methods selected are primarily qualitative methods because of the nature of the research which is “social”. A fourth method was added to this research, a quantitative one, in order to validate the data collected and to be able to analyze it with quantitative analysis tools, which maintain objectiveness in the research. The information collected with each method was analyzed depending on its nature, and the results were then “crossed” to improve the understanding of the data.

1. **Analyzing Data collected with the Face to Face Interview**
The data acquired during every key interview received an identification number, so it was easier to work with. Then all the information of each interview was be compiled and analyzed using Open Coding Analysis, so I could recognize all the different values present, certain patterns, differences and similarities between the data collected in order to categorize it.

2. **Analyzing Data from the Focus Group**

   When I did the observation in the focus group, I was able to find more values that all the groups recognize as important in a deeper way, working with Axial coding to interconnect the values that I first found with the interviews and summarizing the data with its respective characteristics, notes, and recommendations.

3. **Analyzing Data through Survey Questionnaire**

   Because of the small size the data collected with the surveys they were computed using Excel and Qualtrics, to be able to find multiple results. This allowed the presentation of information found in Tables, and then produce graphs that could show results like frequencies, means, tendencies, dispersion, correlation that could be easily understood.

4. **Analyzing Data collected in E-Survey:**

   Data collected with the Survey was analyzed using Excel and Qualtrics, to find multiple results that allow presentation of information that shows results like frequencies, means, tendencies, dispersion, and correlation in an easy way to be understood.

**ETHICAL CONSIDERATIONS**

To work according to the rules that University of Guelph Research Ethics Board dictates, some ethical considerations were considered:
• The proposed research deals directly with children. So each child’s parent receives a letter about the goals of the research. Their child’s participation was fully explained as well as what was expected of them as parents. Then parents that agreed to their children participating in the research were asked to sign a consent form where they give explicit consent for their children to participate in this research.
• Each teacher, leader or educator that participates in key interviews received a letter where the goals of the research and their participation were fully explained. Then adults that agreed to participate in the research were asked to sign a waiver where they give explicit consent to participate in this research, exactly as it is explained in the letter.
• Each home teacher that participated in the E-survey received with the e-survey a letter where the goals of the research and their participation were fully explained. Then teachers that agreed to participate in the research were asked to mark a box in the survey where they give explicit consent to participate in this research, exactly as it is explained at the beginning of the survey.
• Each student that has written consent from their parents or tutors receives a full explanation of what the focus group is about. Then they were invited to participate in the focus group and if they are interested, they were asked immediately to sign a waiver where they write if they want to be part of the focus group or not, without any pressure to make sure that they were participating totally voluntarily.
• To keep and protect the confidentiality and anonymity of the participants, the data collected during the key interviews were coded and the original files were destroyed.
• The electronic data already coded as well as the information generated was kept in an encrypted password computer. When the research was completed the electronic files were destroyed.
• No pictures or video of the participants were allowed during the key interviews, the survey or the focus group.
• During the focus group an assistant transcribed all the responses and attitudes that children display while participating.

• Following the requirements of Canada’s Tri-Council Policy (TCPS2) for research where human participants are involved, the final research design was submitted and approved by the University of Guelph Research Ethics Board.

LIMITATIONS

When designing this research, in order to make it feasible, useful and developable, limitations of resources were considered, having the next main limitations of this research:

• Permits and approbation of Scholar authorities, such a thesis advisor, University of Guelph Ethics Board, local school district board.

• Money: to cover all the costs of travelling when doing the interviews, printing the respective formats used in each research method.

• Time: to develop this research fully and make sure that I followed the times that the institution (University of Guelph) establishes to deliver the thesis in order to achieve successful completion. I would have liked to have had six months to finish the research.

• Human resources: this research was developed only by me and an assistant.

Because of the previous considerations the research was limited to a local area, basically affecting the possibility of generalization of the results that we could get, and the truthful and validation of the data collected, and by this reason this thesis is thought of as a first step or the base of wider and deeper research for a PhD, which could have more resources.

SUMMARY

In this chapter it was discussed how this research was designed using a philosophy that follows an interpretivist approach. Four research methods were
used to collect, handle and secure data; first the key interviews done to people who have worked with EE and/or storytelling. Secondly, a focus group was used where children had the opportunity to express their opinions about what they think about the way they learn in their schools. From the surveys we will know how educators or teachers see storytelling as a facilitation tool. Finally, from the e-survey we will know how parents consider storytelling and how they apply it to the education of their children. The chapter discussed some ethical considerations that have been considered for this research and the limitations that this thesis has because of the resources as time and money that made it a local research. In the next chapter we will see the results obtained with these four research methodologies mentioned in this chapter. All the data collected will be presented according to its nature either as qualitative data, mainly groping the answers and comments or quantitative data presented in graphs and tables to visualize the data collected.
CHAPTER 4 FINDINGS

INTRODUCTION

This chapter includes all the results obtained through the four methodologies mentioned in Chapter Three: key interviews, focus group, survey and e-survey. The results are presented here according to the nature of the methodology. For the quantitative methods charts and tables are used to present the data generated and in the case of the qualitative methods all the information, comments and recommendations made (mainly during the key interviews) have been grouped with each one of the questions that were used. In Chapter Five there is a narrative discussion of these results based on each method used in the study.

RESULTS OF THE KEY INFORMANT INTERVIEWS

The key interviews were applied to each participant in the place and date that each participant decided to do it. Every interview took an average time of 45 minutes and all the data collected was written on white paper.

The research was designed to apply 12 interviews, but only a total of 10 interviews were applied because a saturation point was reached at the ninth and tenth interview and no further new information was obtained.

With the information collected during the interviews and after coding it, it could be categorized in the next tables, according to each one of the research questions of this thesis.
Research question number one, wanted to answer which are the most common tools used when working with children and environmental topics and how are they perceived by the teacher, authorities and students.

Because of the background of the people interview the most common teaching technique was storytelling.

Table 4.1 Use and perception of most common teaching technique.

<table>
<thead>
<tr>
<th>Origin of Storytellers</th>
<th>Professional Development</th>
<th>Personal Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants were Retired teachers, Puppeteers, Actors, Government employees, Storyteller, Art teachers. But all of them work actively with children or adults, in a permanent way, now that they have more freedom to develop their job as storytellers. They comment that they do not tell a story, they tell people a story. They are seed planters in children but they have to wait until it grows, but you must take care of it. The also commented that being a teacher is being a storyteller and good teachers consider themselves as actor performers when doing storytelling.</td>
<td>Participants had at least 20 years working with children, some switched to work with adults. Some had more than 40 years working with children (6). Many of the participants had a formation as teachers. But they think that when it comes to storytelling, anybody can tell a story, but only some people can master it, like ballet dancers. They think that everybody can tell a story, but not everyone gets the credit of being a storyteller and to be a good one there are strategies and processes to learn and practice, but many of them think that storytelling comes with you, not anyone can do it, not as good.</td>
<td>Most participants said that they will be storyteller for the rest of their lifes (8), that they would never have chosen another job, no matter the money. They feel happy being storytellers, because is a job where you can use your skills and is a fun job and allows them to be a little ‘crazy’. A participant said “Love something is different of being professional about it” They learn a story and share it with their own words, these stories grow every time they are told and each story speaks to you as a storyteller.</td>
</tr>
</tbody>
</table>
The research question number two, wanted to answer what is the acceptance of storytelling as a facilitation tool used for EE topics.

Table 4.2 Acceptance of storytelling as a facilitation tool used for EE topics.

<table>
<thead>
<tr>
<th>Adequate tool</th>
<th>Children’s Acceptance</th>
<th>Field of Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants consider that storytelling helps to connect to the audience because it is the natural way that we have to learn, so it is a good technique, for children and for teachers, because of all the movement and thinking that it requires. It is a real (traditional) education technique involves imagination, creativity, basic components of development in kids. It makes story come alive, promoting the development of the imagination of the listener. It also helps to develop oral skills in kids. Is a Human to human technique that is effective and affective. A good storytelling process engage any group. Storytelling is more than just words, it includes feelings, desires, imagination, dreams, every thought a person can have. It exposes kids to real world, real things.</td>
<td>Participants answered that children enjoy storytelling and puppet shows. That every person learns from different ways through different experiences. Storytelling offers a different experience. Children love storytelling, it can combine reality and magic, fantasy, they can make children wonder about everything that surround them, it connects kids to real life. Every time children hear a new story their imagination is provoked, the use imagination is a tool to connect with the students. And If kids would not like storytelling they wouldn't come back for more.</td>
<td>Storytelling sets a tone for working with any audience, linking the topics to teach, because the same story can be told in different versions according to the goal. It can educate, inspire, entertain and amuse. Storytelling can be used with any topic; death, taboos, divorce, cancer, gender, potty, family anecdotes etc. It as an education activity is not just playing Storytelling combined with puppets can be used as a therapeutic tool to help kids express their opinions. It can be seen as a way to create change in people by use of critical thinking. It is a hands/brain on activity that promotes creativity but it is also a group activity that develops social habits, because kids can ask anything they do not know, without being evaluated.</td>
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</table>
The research question number three, wanted to answer how could be improved and promoted the use of storytelling as a facilitation tool.

Table 4.3 Promotion of storytelling as a facilitation tool.

<table>
<thead>
<tr>
<th>Status</th>
<th>Threatens</th>
<th>Promotion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants comment that traditional education stops us from wondering, but storytelling promotes wondering. It is part of presentations (shows) trying to touch the deeper fibers of children.</td>
<td>Teachers know is a good technique but society sees no value in it, that is why funds for arts and education are being cut. People usually do not believe in the power of storytelling to educate. In the 50s and 60s storytelling was very popular but TV affected it, digesting all the information given to children killing their imagination and creativity. Storytelling is often used in kindergarten but it is forgotten for higher levels. Is a natural way of teaching, the simplest way to do it, but is not always used because teachers do not always have the skills or training to do it, even though is natural. Besides, teachers are encouraged to read a book everyday but there is no time. We demand storytellers to be good, but we have not too many measures to make sure that they are doing their job right, but</td>
<td>Participants said that all the storytelling should be recognized as an instruction tool and promoted it. It only takes a little voice to generate change. Teachers need to let themselves try new things, variety not just one same tool for every class. Valuing storytellers can be done by telling stories, and creating story listeners, because there should be more story listeners, this can be done by creating nets of storytellers to listen and look for other storytellers Teachers can inspire other teachers and children by using their own skills, props and any resource to keep telling stories, showing what can be done through storytelling, showing the impact of the technique. Use the time of PA days, vacations to train more teachers.</td>
</tr>
<tr>
<td>Using storytelling to educate is a gamble that may be for sure won because it is a free activity where participants have the decision to participate or not and they don’t realize that they are learning. It’s successful depend on the skills of the teacher and her/his commitment to develop it and if parents like it, probably kids will like it, parents have to be charmed with storytelling. Storytelling is used in schools in initial levels, public spaces, churches, schools are asking to promote this kind of techniques and new teachers are rediscovering the use of storytelling.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Storytelling will never die, is part of the life of everybody, it is not going anywhere is part of who we are.

Storytelling will be valued until the moment that there are no more stories to tell. Even though money is not the final solution to promote storytelling it can help to develop it.

there is no certification for being a good storyteller, the same way that a dentist would be recognized.

Teachers can be very good storytellers, but we may never find it out because they do not practice or show the world those skills. A lot of them are not good storytellers because they do not practice.

FOCUS GROUP RESULTS

The Focus Group was conducted at the Landscape and Architecture building of the University of Guelph one evening, it lasted 55 minutes. The leaders of the Girl Guide that were invited received the children that would participate in the Focus Group. In total there were 26 children between ages of 8 and 14 years old, participating.

These are the results of the questions that were asked to the participant children at the beginning and at the end of the focus group.

Participants were asked if they liked the way they are taught at school, and 80% answered yes, which is a higher number than the expected. Also 80% of them thought that they are learning a lot of things at school. The same 80% said that they prefer to learn by play instead of doing homework.

When asked if they like stories, participants said that they do like stories, such as fairy tales, happy ending, fiction, love stories (Titanic), happy - sad - happy end, legends (Mayan), weird things.

Participants were asked if they have ever had a storyteller at their classroom and only 60% had seen a storyteller, which shows the lack of storytellers in FE.
Participants were asked if they wanted to hear a story, all they answered that they wanted to hear it.

At the end of the storytelling example, participants were asked, if they liked the storytelling, is clear that most of them like it a lot.

![3.3.1 Did you like the storytelling?](image)

Figure 4.1 Answer 3.3.1

Participants were asked: if they learned something. All participants answered that they learned something such as don’t litter, speak "BLA" (puppet language), consequences of being clean (avoid the Green monster of the story), do not talk with strangers, do not trust BLA (puppet that lies), read books, do not eat them (like BLA does).

They were also asked what did participants like most about the activity, overwhelmingly, it was the puppet.

![3.3.3 What they liked the most of the activity?](image)

Figure 4.2 Answer 3.3.3

Participants were asked what they did not like of the activity. All participants answered that there was nothing that they did not like. When asked what would
they prefer to have storytelling at school, all participants answered that they would like to have more storytelling at their schools and commented on bringing puppets to school, that they like to sing and dance, and that they like to read books

RESULTS OF POST-WORKSHOP SURVEY

At the end of the Focus Group a survey (written) was applied to the observers that were present during the Focus Group (Girls Guide Leaders), they were told previously about this survey and they all agree to answer it, in total 5 surveys were answered, with an average time taken to complete the survey of 10 minutes. All participants were Girl Guide Leaders.

Participants were asked what did they think about the use of storytelling shown and why? Most participants found it definitely good and they identified five reasons for their answer, which are that music puppetry + comedy is a superb combination, the kids were very engaged, with a topic easy to understand, that helped to bring the message to the level of the kids, they also thought that kids found it interesting, however some teens did not have interest

Participants were then asked if they liked the storytelling, 80% of them said yes, then they were asked if they think if storytelling was adequate for the topic participants commented. Most of the participants considered it was an adequate topic, adding that could be better maybe by making larger pictures of the book or giving photocopies, also that the monster threat of the story could be a real threat, the commented that the subject was for younger ages, because the group was a little old for the story but it clearly got the message, our younger kids were more engaged (9 y.o.) than the older (14 y.o.), the amount of information was just enough for the age and attention of the kids

When participants were asked if they thought the children liked the storytelling example, Participants commented that the show was excellent for a young audience, they did not want it to finish, that some kids kept their interest well, some were too young, maybe it was not for their age, but all were very
engaged with the programming and had a good time, full of laughs, engaged in discussion

<table>
<thead>
<tr>
<th>3.2.3 Do you think children liked it?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definitely yes</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

Figure 4.3 Answer 3.2.3

Participants were asked if they as a teacher/authority/storyteller/parent liked it. Participants commented that it was funny and letting the kids play with the puppets after the show was a great idea, they said it was fun and entertaining and that Manu was very engaging with the kids.

Participants were asked if they would use storytelling for teaching. Participants commented that as a teacher and storytelling comes in handy for many reasons in different contexts; to learn new skills from kindergarten to higher levels. Also they said they like to use it to explain how to find solutions of problems. Another participant indicated, “I am not as good at storytelling”.

<table>
<thead>
<tr>
<th>3.2.5 Would you use storytelling for teaching?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definitely yes</td>
</tr>
<tr>
<td>2</td>
</tr>
</tbody>
</table>

Figure 4.4 Answer 3.2.5
Participants were asked if they would promote the use of storytelling to teach other topics, which ones and how. They add that there is no need to be a teacher to promote storytelling, that also children can use storytelling, because playing is very important for them.

![Chart showing responses to 3.2.6 question](image)

**3.2.6 Would you promote the use of storytelling to teach other topics?**

- Definitely yes: 4
- Somehow yes: 1
- Neutral: 0
- Somehow no: 0
- Definitely no: 0

*Figure 4.5 Answer 3.2.6.1*

These are the topics that participants thought that can be taught using storytelling:

![Bar chart showing topics](image)

**Topics to show with storytelling**

- Math
- Sport
- Chemistry
- Biology
- Health
- Civic
- History
- Values
- Other: Old Stories

*Figure 4.6 Answer 3.2.6.2 Topics*

Participants evaluated the components of the storytelling example and this are these are the averages obtained for each one, it was a satisfactory activity according to the participants.
The E-survey was answered by 51 participants, who were doing home schooling in the city of Guelph and its surroundings. All e-survey participants were invited through the contact of one of the home parents who is in charge organizing activities for other parents. Most participants in the e-survey were parents of children in home schooling.

These are the answers obtained on the E-survey:

Most participants said that they had spent more than five years working with children in home schooling.
Participants chose as “other”: Reading out loud and discussion, all the above, Storytelling followed by narration by the child, a variety of life experiences, Inquiry, un-schooling child led learning, Kinetic learning.

Participants were asked how children perceive the use of this technique to teach, most children were definitely pleased with the overall learning approach.

The participants said that consider that the techniques used is usually efficient and that they like using those techniques.
Almost all participants said that they like the technique they use to educate and they that storytelling is an adequate technique to teach.

Most participants answered that they are actively using the storytelling method to educate their children.

Those who have not used storytelling to educate it is because some of them do not feel they know how to tell stories or they do not feel comfortable.

All participants answer that they would use storytelling as a facilitation tool to teach. Those participants who are already using storytelling to teach will keep using this technique and they will promote it to other teachers.
Participants were asked if they liked to teach with storytelling and 95% said that they like it, this shows the acceptance of if as an education tool. And most of them said that they would promote the use of storytelling by sharing their experiences with other parents, using audio, videos and animated stories, by providing good quality stories of importance, sharing resources and experiences with other parents, by having the children tell their own stories. Only one person said that it is already being used enough by teachers in schools.

**SUMMARY**

This chapter presented all the data collected through each one of the four research methods used in the research. The results were presented as graphs or tables that could help the reader to easily understand visually the meaning of the data.

In all cases all data collected was handled only by the researcher, and all data was kept in a locked portfolio to secure the privacy and anonymity of all participants.

In the next chapter, all the data presented in here will be discussed by drawing connections to the literature review and the conceptual framework. This discussion will respond to the research objective: “to determine if storytelling is an adequate facilitation tool to teach children about environmental topics.”
CHAPTER 5 DISCUSSION

INTRODUCTION

In this chapter, the results found in each one of the quantitative and qualitative methodologies used during the research, will be analyzed, to understand what the relationship between the findings that the collected data is showing and the literature review with the conceptual framework that was proposed in chapter 2.

The objective of this thesis is “Determine if storytelling is an adequate facilitation tool to teach children about environmental topics” Using the conceptual framework that was proposed in Chapter Two we can determine how the relations proposed in it, as well as the existence of the storytelling as a facilitation tool in each educational space is. The organization of this discussion is based on the results of each method used in this study.

RESULTS OF THE KEY INFORMANT INTERVIEWS

This research considered the most methods used when working with children and environmental topics, in the context of Guelph, Ontario. It found that most of the leaders of EE are teachers or retired teachers who have been working directly to kids, most of them have been part of the Formal Education (FE) space, but they now are part of Non-Formal Educational (NFE) spaces, in libraries, museums, parks, theaters and public spaces. They all consider their actual job, as storytellers, children program coordinators or actors, as an essential job were children are the fundamental piece in their job. This is obviously consistent with the section of the conceptual framework that states that in the NFE children are considered very important and designing in both ways from the participants to facilitators and authorities that run these spaces.
A common comment appeared in this question, now that they are in a non-formal educational space, they have more freedom to develop their programs and have even better results than when they were in front of a group in a classroom at schools, this again supports the idea that non-formal spaces are designed to develop specific topics, considering the facilities but also the participant and its educational needs as a basic part of the program.

The second questions asked was about how long they have been working with children, some of them have been working for more than 40 years, the rest have been working with children for an average of 20 years. The general opinion is that they will never stop working with children, because is what makes them happy, but all of them are working with children in non-formal educational spaces, because they can participate in the programing of activities, deciding what works better for the children by having a permanent interactive feedback with children, again only occurring in non-formal spaces.

Some participants consider that they cannot stop teaching through their activities because as artists, any space is a good space to teach, every opportunity is a good opportunity to teach, even though the pay is not as good as it should be, they think there is nothing else they would have preferred to be.

Some of the participants have developed so much love for their activity out of the school that they have become puppet and book collectors to be able to share the knowledge of stories with anyone who is willing to hear a good story.

The main question was asked then, about the most common technique they used to teach, they all agree that the easiest and most simple technique used would be storytelling and involves the use of the voice, sound, movement, music and rhythms, to first catch the attention of students and engage them into the development of any topic that they have to teach.

Story time, according to their opinion is one of the most favorite activities that any kid and even teens may have and is part of the natural education process that usually is found in informal education, applied most of the times by parents.
and especially grandparents and older relatives, so they use that known tradition to deliver information to the participants.

The participants consider that storytelling is not just an activity where kids are seated to hear about a story, is a more interactive activity that they usually enrich with the use of props, such as outfits, puppets, musical instruments, etc. which is commonly used in formal education, but always limited by the educational programs imposed by higher authorities.

About the use of this technique in their work, they were asked if they feel comfortable with it, all of the participants said that they are more than happy, because they can use their natural skills learned in IE spaces, like their families combined with the professionalization through training that is received in formal education, but the general consensus is that this last style of education does not offer enough training for teachers when it comes to storytelling.

The general opinion is that to be a storyteller “you have to love it or leave it” that is a unique tool for every educator of facilitator that is adapted to every person that uses it, based in their experiences acquired in formal, informal and NFE spaces, but is only in informal and NFE where they can really apply with full freedom. At this point we can recognize that the relations between the different education styles when we talk about teachers-facilitators of adult persons in families are strong because they form part of each person who works with children, but the FE will hardly see the other two educations with enough authority. Participants consider themselves not just as people playing to educate, they see themselves as professionals, and they are aware that loving to do something is different from being professional about doing it, and some of them comment that more professionalization of this technique should be offered.

Because of the background of the people interviewed and the fact that the technique that they use to educate was storytelling, the questions about what they thinking about the efficiency of their technique, how children like it or not, and if
they like it or not, were done but the results were presented as part of the second research questions, when the same questions are asked but linked to storytelling.

The second research question is

To answer this second research question, what is the acceptance of storytelling as a facilitation tool when working with children and environmental topics, participants were asked if they are using storytelling as a facilitation tool. All participants agreed once again that they use the storytelling to present their classes, workshops or shows, and most of them think that this is a very useful way to touch deeper fibers of children, necessary to create a change of in their attitudes, which is the objective of the NFE when it is related to the environment. They consider that storytelling is good for children but also for teachers, because it allows both parts to think critically about environment topics and how they are related to their lives, again the two ways relation of the NFE appears here.

Participants think that if the storytelling process is run properly, it can easily engage any group or audience is just a matter of knowing how to use it and have a lot of practice, allowing the participants to use their imagination and creativity, which are basic and natural components in kids development. A second question was made and this question had so many answers but most of them common for all participants.

They think that first of all is an engaging technique because it combines reality with magic and fantasy which is always appealing to children, because it makes stories come alive in a unique way in each child, because the imagination of each listener is the one creating images in their heads helping them to absorb knowledge. This is a common practice that can be identified in the informal education, where previous personal experiences are used to get new social skills. The opinion is that by being a traditional way of teaching, the most basic way of teaching in the informal education, is natural and already known by all children, so is not seen as a new educative method which makes the process, easier to be understood and accepted by every child.
The fact that storytelling allows teachers to have a humourous, weird or "little crazy" style when using it, creates a connection with children, because it breaks the formality of programs, found mostly in formal education, and makes them more human-focused because they are not just effective but also affective, which is more common in non-formal education.

As teachers they consider that education using storytelling is about planting seeds in children’s minds, but teachers have to take care of the development of those seeds, guiding them in every moment, just like it is done in IE between older people with experience and young people who are learning. Anyhow they think that the use of storytelling is like a gamble that may be for sure won because children already wonder about anything that surrounds them, so in a way the job of a teacher using storytelling is just to create connections between the children and the world.

Unfortunately, as the literature suggests, traditional or FE has been delivering all the information and knowledge digested for children and participants recognize that the objective of FE is to deliver information, not to understand or explain that information to children, and storytelling in NFE tries to do that, explain it, teachers know it but usually society and authorities not always see the value of storytelling. They consider that storytelling is a good technique because of the human to human component, because is made by persons to persons in real time, each story told, speaks to the storyteller and the story listener, is more than just words, it integrates feelings, desires, imagination, dreams, every single thought that a person has had until the moment of being part of the story time activity. Videos and books do not have this component, even though they are frequently used in formal education.

The goal of environmental education in NFE as the conceptual framework tells us is to generate change and all participants think that storytelling with the use of critical thinking can generate changes in people, especially children because they are absorbing as much information from the world they live but they still have
to understand it and then be able to use that information and storytelling can create that change.

As an educational tool, storytelling according to most participants, is a dynamic tool that is always changing, growing, adapting, to the circumstances where it is applied, to the experience of the storyteller who learns more about it the more he uses it and the experience of the story listeners who enrich with their feedback the learning process because it is interactive and efficient when done properly. Storytelling, suggests the literature, is a tool that can be used in most of the educational topics, not only when is about concepts or theory as in FE but as life experience as in IE or with an specific goal to change conducts and habits as in non-formal education, is seen as a good adaptable tool, and our participants think that it can be used to teach about scholar topics, but also delicate topics such as, death, divorce, cancer, gender, politics, religion, bullying, violence, sex, etc.

And finally without even having any program as in informal education, storytelling is seen as an educational tool, because according to the general opinion, it teaches, no matter what or how, but at the end of a story it will have taught something to who listens the story and to whom told the story, is a “natural educational tool” because it connects people with life. Participants responded that they think that children like storytelling because children are used to storytelling, even adults like it, considering that storytelling allows children continue being children, they do think that is more frequently used in kindergarten and in higher levels is forgotten as a favorite tool, because academic programming in FE does not see storytelling as a fundamental piece of grown up children or youth, but teachers that are really committed with their students, can tell when storytelling is working properly no matter the age of the students.

The general opinion is that people will believe the stories that they are told, so telling stories about environment will make people believe in them and motivate them to act, it only takes a little voice to generate change. This is the objective of non-formal education. If children would not like storytelling, they would not return to get more of it, children are always asking for more stories and they do not feel like
being evaluated like it happens in formal education. When children are listening to a story they feel comfortable to ask for details, clarification, and make suggestions comments, just as they would do it when they are being educated in an informal space. The final and most rewarding result of storytelling is when children start developing their storytelling skills, because is in that moment that they have assimilated knowledge and start using it and explain it with their own words, storytelling stimulates them to tell stories as if they were inside a big TV, and they are the main characters.

If the facilitators, as teachers or a person working with children like storytelling, the general answer was affirmative, all participants confirmed that they enjoy using storytelling, they find it useful, as a natural and organic tool, that allows them to create wonderful worlds where children want to stay, and once there they will receive any learning process happier, their opinion again is that this created world should be more accepted in the formal education. The sentence “I will be storyteller until the day I die” was used at least in five interviews, most participants say that they would never change their profession, they are just disappointed with the fact that they are not seen always as professionals once they left the FE system, even when they are still working as educators, just not following the same programs. Many participants think that by being storytellers represent in sometimes “economical sacrifices” because there are not too many government programs funding in a permanent way these activities when they are in non-formal education. Anyway they do not regret to be storytellers. They also think as the conceptual frameworks shows that storytelling is an intergenerational activity, which makes it transcendental and meaningful, usually in informal and NFE it is used as a guide line but not as a rule book, what would be something that FE would expect it to be to recognize it as a full educational tool.

Overall, participants indicated that they like storytelling because it creates a bridge of understanding between listeners and tellers, because it promotes understanding, if we understand kids, understand will understand us, here again is present the double way direction that is common in non-formal education. They
also think that when you like your job so much, you can master it, they said that anyone can tell a story but only some, the ones that really love it can master it, just like ballet dancers, here can be seen a strong connection between authorities, facilitators and teachers, of NFE and formal education, because there is a need and an interest to professionalize the storytelling as a job. Participants indicated they would promote storytelling and if they think that storytelling is widely used in teaching. All the participants considered that they would definitively promote storytelling and in fact they thing that they all are doing it, every day when they develop their workshops, when the program more activities for children and families. But they are also aware that promoting storytelling depends on the skills of every person, not just as storytellers, but as salesmen, merchandisers, accountants, publicity, etc.

A general opinion is that to start promoting storytelling it needs to be practiced, gain experience and this will only happen when teachers allow themselves to try new techniques different from their every day-common tools, which usually are tools designed by authorities in the formal education. The participants consider that is important to promote storytelling because is a way not just to teach or educate, is also used to inspire, entertain, amuse, process that are not always valued in FE and that in real life are losing importance by the lack of money value that they have. Is important that storytelling is not only offered to little children, more detailed stories with different approaches should be designed and applied to older children, even to adults, to make sure that future generations will receive those stories too. Stories do not have to be just fantasy, fairytales or non-real stories, they can be family anecdotes which can be useful to understand how social dynamics move, this is exactly the objective of informal education, so storytelling can also be promoted from the family environment by non-official storytellers. Participants think that storytelling is the most simply way to teach but it is not always used because teachers does not always have the developed skills or training to dominate the tool, or so they think, but by being a natural facilitation tool it should feel natural. There could be a lot of teachers that could be good storytellers but they do not practice and do not allow themselves to try.
In FE a reason why teachers do not use more often storytelling is because teachers have too much paper work to do, and their time in front of a group sometimes is very limited so they just stick to the common techniques. Being a storyteller is not widely promoted because there is not a certification to be storyteller, in the same way a dentist would be recognized, so people do not feel too much confident about becoming a professional that will not be officially recognized. NFE demands to have good storytellers but there are no ways to measure if the job they do is right, the only way to appreciate if their job is good is the acceptance of the public, which is a very subjective way of evaluating this job. The general opinion from this study is that in all the styles of education there should be more storytellers but the true is that people may do not have enough time to enjoy this activities, so is not just about more storytellers is also about more story listeners.

Finally, participants had no difficulty identifying how to improve and promote the use of storytelling as a facilitation tool. They also could say what they think about present and future of storytelling. They indicated that storytelling is literally used every day in all education spaces in informal ones, with every day anecdotes, in non-formal by facilitators developing their programs, and even teachers in FE when they talk about anything that already happened. They consider that all people love stories, young children, older children, adults, seniors, so use that natural love for stories and start telling stories. In FE spaces teachers are encourage to read a book every day but teachers as has already been said, do not have that time, in most cases they think that telling a story would be even harder and time consuming, so storytelling today in FE is not still considered as a common tool. Some literature suggests that actual technology as internet and TV has reduce the storytelling culture, in some cultures storytelling is more frequently used and stronger, but in most cultures this practice is very weak.

In this study, most home schooling participants agreed that funds from the Ministry of Education for activities like storytelling in FE are being cut because they are not seen as essential activities that will develop skills that are easily measured
in children, but still, with more parents participating in the educational processes of their children in formal education, as well as non-formal education, authorities and people in charge of designing the curricula at schools, are starting to invite and promote storytelling inside the schools as part of extracurricular programs, like afterschool programs, anyway it is still seen just as an extra activity, not an essential educational activity. The general opinion is that in FE there are more teachers involved in storytelling, sometimes promoting it between the children as when they invite a storyteller to their classrooms or when personally they decide to develop and storytelling activity for their groups. In IE people are used to educate through storytelling every day, anyhow most people are not aware of how powerful this technique can result.

All participants said that storytelling will always be present in our lives in IE and in FE is the “mom” of the books it was here before we learned to write, it may not being seen as basic as food is, but it is as important, because it “feeds” the soul of the teller and the listener. They opine that storytelling finds a perfect spot to exist in NFE because there is considered as an educational/facilitation tool, without being so rigid in its shape, but that contains topics and themes that have been previously designed.

Participants think that any topic can be taught through storytelling, any topic is adaptable it all depends on two facts: the age of the public and the deepness of the topic that we want to teach. They consider that teachers in FE can become lovely teachers when they use storytelling and that helps them to teach about any topic using this tool. They finally think that storytelling focuses more in the passion and the form of educating rather that the content itself, they just think that any storytelling has to be made professionally and with a previous design and planning, that a lot or practice and training has to be done too, so the activity is really efficient and effective.

Results indicate the fact that more workshops, training and practice needs to be done, for anyone that wants to become a storyteller, being the practice the most important piece.
The participants all agree that in the FE system, there is almost no time for teachers to develop this skills in a more “official” way because all the duties that they already have. They recognize that most teachers want to teach, that most teachers have this passion for teaching, but most of them have never had the opportunity to discover the real impact of storytelling because is not that important in their curricula. A moment that most of them considered that could be used to teach teachers about storytelling are PA days, weekends or vacations, but they are aware that most teachers would not like to invest their personal time in their professional time, unless they may feel inspired to do it, and this inspiration could come from other teachers in the FE system, using this tool or other facilitators from the NFE system when they are invited to develop programs at school and even sometimes from the IE when they see other people teaching the younger children. Here we can observe how there are relations between the teachers-facilitators-parents of the three different styles of education.

Unfortunately, as they say, in most cases teachers believe that they still do not have enough skills to use this technique, so they go back to their most common-every day educational techniques and the true is that a lot of teachers may be good storytellers but they will never find out if they are because they do not have the space and time to show the world those skills, even though when they already have the audience. Participants commented that if storytelling is officially recognized as an educational method and is part of the training curricula for teachers at FE it would increase the use of it at schools, so far storytelling is part of the curricula as part of open arts, the same way as acting is considered. They all agreed that to promote storytelling, money is not the only factor that is needed. Is a matter of being committed with it and enjoy using it. They added that people cannot be forced to understand storytelling, we can only guide them, showing people how storytelling can help us to create a better place to live and even evaluating the knowledge and experiences that we have acquired through it by comparing stories, searching for meaning in each story.
Storytelling requires time to be mastered, sometimes that time is too long and then storytellers cannot find the way to be storytellers and businessman that can sell their services, that is why they suggest to create storyteller networks, to share the work done, to promote services of each storyteller, as well as a being a space to share experiences with other storytellers, which makes their labor more efficient and with more quality, most of them think that if they knew exactly how to promote storytelling efficiently they would be probably millionaires by now. Meanwhile results suggest that every storyteller should use all their skills, natural or acquired by repetition or training, props, resources to keep telling stories in any place, because there should be storytellers in every public space and because probably there will never be enough storytelling to educate people. And while doing this promotion of storytelling, design and plan in a very attractive way so people feel engaged with it.

Training according to the study participants, should not be just for teachers, it should be provided to any person, starting in the IE to parents and people who has close contact with children, because they could offer safe spaces to their children to explore their sensibility and get engaged with storytelling. This could be a practical real option because currently parents have more time to spend with their children at home or at public spaces. Another option provided by participants was to create storytelling tours, where storytellers could visit schools, museums, libraries and parks to share their stories, following designed programs, so they would be considered as non-formal educators, who would be performing not only locally, but countrywide which would also be useful to enrich their stories and the stories heard by children. The creation of spaces for storytelling is another suggestion of various participants who think that is important to have places dedicated to storytellers, but only where also exists an offer of permanent programs and activities to promote participation, like contests, festivals, because storytelling has to connect with more people who may be interested but that may still do not know that they are.
RESULTS OF FOCUS GROUP

The first group of questions was made to know about the acceptance by students of the current educational techniques in FE used by their teachers in the classroom. The first question was rather blunt, if they liked how teachers teach at school? In this first question 75% of the participants answered that they liked how they learned at school, which is somehow contradictory to what storytellers commented about the work done by teachers in formal education. The Second question showed that almost 75% of the participants thought that they did learn a lot of things in school. They considered that teachers have a lot of knowledge. This answer is consistent with the fact that FE is a place where all the knowledge is kept and passed to the children. For the third question, when they were asked how they preferred to learn, by playing or by doing homework, almost 75% of the participants said that they prefer to play rather than doing homework because they find it boring and some of them think that homework usually is given to them as a punishment by not working properly during the class.

Then they were asked if they like stories, all participants said that they like stories, like fairy tales, legends, happy stories, love stories, fiction, stories with happy endings, but in general any kind of stories because they felt connected to some of those stories which is what usually happens in the IE context. They were then asked about having storytellers in their classrooms, 60% of the participants answered that they had had activities where stories were told to them, here we can notice the relation between NFE and formal education, because children said that those stories were told by people who were not teachers at their schools. They also add that they did not remember if they had learned something about those stories.

The last question of this series of questions was if they would like to hear a story, again all children answered that they would love it, some participants said that it would be just like when they are on vacations on their cottages or at Christmas time with their relatives, the presence of IE model is obvious at this point. The workshop with storytelling activities and props like puppets was an
example presented to generate discussion. Participants indicated they liked the storytelling activity, 60% of the participants, the youngest, said that they liked it very much, 23% of the participants, not so young, said they liked it, and only 15% of the participants, the older ones, said they liked it just a little, but nobody said that they did not like it, we can see a pattern here just like the Key interviewed participants stated, storytelling is forgotten while the children get older, because storytelling in FE is seen for little children, usually in kindergarten.

Then participants were asked if they learned something, they all answered that they did learn, but to confirm that the main message, waste management was learned, they were asked what did they learned, most of them talked about no littering and the consequences of being clean, some others answered about things they learned like the puppets language, not taking with strangers, to read books instead of eating them. Here it is important to state that children were not told on purpose, which was the main topic of the workshop, so we could observe what knowledge they would absorbed, and obviously they absorb almost everything that was told to them.

Next question was about what they liked the most of the workshop, 80% of participants said that they preferred the puppets because they were very funny, 11% said that the music, because they like to sing and 11% said that the story of the book. This answer shows how important are the props, especially for little children puppets, as a colorful, new, unexpected tool could engage them even more than music and more than the book that was shown to them.

They were also asked about what they did not like about the activity, but they all answered that there was not anything that they did not like, which can let us think that anyhow they enjoyed the activity or at least they did not hate it.

Finally they were asked if they would prefer to have storytelling at school, and all participants agreed that it would be fantastic, even more if there were puppets, and if they can sing and dance again they would prefer that instead of reading books, and more than doing homework. Here the combination of the tools
and props looks like the ones used in non-formal educational spaces, where everything is especially designed so the children feel attracted and engage to the programs that are developed through them, where they will for sure learn but without noticing it.

RESULTS OF SURVEYS

The post-workshop survey was focused on what the observers/leaders of the Girl Guide think about the storytelling activity that was developed for their children, 80% of the participants said that it was definitely good and 20% said it was somehow good. They commented that puppets and comedy was a superb combination because made the kids feel comfortable not as in a class, which is something that happens only in informal and NFE spaces. They also said that older kids were not as comfortable as the young ones. Participants commented that the engagement with the children was made very good and that helped a lot to deliver the environmental message to the kids, making the topic easy to understand and to relate to their real lives, because all the things said during the workshop were things that children were familiar with, excepting the green monster (character of the book).

Participants considered that storytelling was adequate to teach about an environmental topic (waste management), 80% of the participants gave a definite yes, and 20% of them said ‘somehow yes’. The comments for this question were that maybe a bigger book (of the main story) could be used to show the pictures of it to the whole group. Also the topic was maybe focused for a younger public, which was most of the group, because the older kids were not totally interested in the story. Last comment was that it was the right amount of information for the ages of most of the girls, so they could understand it. In NFE groups may not be always formed by participants of the same ages, like in this case, so the appropriate adaptations on the go should be done to maintain the interest of most of the participants. Participants were also asked if they considered that children had liked the activity, 60% answered that definitely yes, they also commented that
kids did not want the show to finish, and they were very engaged in part because of all the laughing. 20% of the participants thought that kids somehow liked it, and another 20% stayed neutral, because some kids were not as young as to be there and did not look so engaged. Is good to see that the general opinion was positive because the activity seemed to be attractive and familiar to the participants, this is because this activity is a common activity for children when they are told stories at home, in a fully informal space.

Then participants were asked if they as leaders of their group liked it, 80% of the participants said definitely yes because it was fun, engaging and the use of puppets was incredible, 20% of the participants said that they somehow like it. The use of puppets was again obvious to be a very engaging and attractive tool even for the leaders of the group. This is a tool that would be usually found in NFE to engage big audiences in spaces that are already very attractive. Participants answered to the next question about if they would use storytelling, 60% of them said definitely yes, because they find very handy the use of stories to explain solutions of problems, but the other 40% said somehow yes because they do not consider themselves as very skilled storytellers. The need of training as a storyteller is seen here.

The next question was about if they would use storytelling to teach about other topics besides from environmental education, 80% said definitely yes and 20% said somehow yes, the topics selected as the ones they would teach with storytelling were, with the same importance values, history, civic, health, then biology, followed in same less importance by chemistry, sport, math and old stories.

Finally, participants were asked to evaluate the components of the workshop in general perspective in a scale from 1 to 10, being 10 the highest value. Participants evaluated between 10 and 9, the interaction with participants, the respect shown to them, the engagement of the group, the lights used, the space provided, the presentation and the puppets, from 9 to 8, the music and songs, the colors used, the vocabulary used, the timing, sound, and control of
group, from 8 to 7, the main story and the information delivered to participants. From this evaluation we can see that it was seen as a good presentation, good use of props, with good production and good control of group, there must be some details about the ages of the participants that were in the activity to make sure that everyone can enjoy the activity. This type of activity could be often seen in non-formal educative spaces, probably evaluated in a similar way, with the age difference as a possible issue, every time groups are formed in situ and not with the exact same age or scholar level.

**ANALYSIS OF THE RESULTS OF E-SURVEY**

Here is the analysis of the last methodology, E-survey, used in this research, applied to home school parents of the city of Guelph and its surroundings.

The first question was to know the relation between participants answering the e-survey and children. 94% of the participants answered that they were parents of homeschool parents and 6% were home teachers. This allow us to make sure that all the participants are outside a formal educative system, meaning that they are not working in a classroom as we know them in schools.

Next question was about the time that they have been working with children, 98% have been working with children for more than five years, this is comprehensive because these teachers are not just teachers, are also parents, and they have been doing parenting for all the life of their children, and if they were not doing homeschool they would be in the IE style, but because of the planning and the programing of their own educative styles they are found in the non-formal educative style.

They were asked then which is the most common technique that they use to teach, 45% answered that oral expositions was what they used the most, follow by 21% who said that video and audio, 19% reading, and 13% using other techniques as discussions, reading loud, narration, inquiry, kinectic learning. From this results,
we can observe that the oral style, the use of the word is the most used, probably because is the most simple and natural way of teaching, even more in a educative style as homeschooling, where experience is such an important way of learning.

The next question was how they consider that children feel about the techniques that they use to educate them, more than 60% of parents think that their kids are comfortable learning like they do, 52% consider that their kids seem interested in the topics they are learning and also that they participate. 45% said that they make questions about the topic being studied and 49% of the parents think that their kids probably like the methods that they are using.

About the efficiency of the techniques used by the parents, 49% answered that they are extremely good, other 49% said that are somehow good and only 2% said that they are somehow bad. They were also asked if they like the technique, 70% said that they definitely like the technique used, 25% said that they probably like the technique used and only 5% might not or probably not like it. It is obvious that if parents would not find efficient or would not like the technique that they use they would stop using it, this is a freedom that is found in non-formal education.

The participants were asked if they have used storytelling as an education/facilitation tool, 96% of the participants answered that they have used it, this was an answered that was expected, because of the non-formal style of education that they follow. The 4% that have not used storytelling explained that they have not because they do not consider that they know how to tell stories or that they do not feel comfortable telling stories.

The next question was made to those who have not used storytelling, it was if they would like to use it, all participants said that they would like to, so we can observe that very few people may have not used storytelling, but only because they do not feel skilled to used them, but they would be willing to use if for sure.

For those who have used storytelling, a question was made about how their children feel about it, 75% of parents answered that their children definitely look comfortable with it, 69% answered that their children definitely seem interested,
56% answered that they definitely participate and make questions and 67% that their children definitely like the storytelling. In general the acceptance of the storytelling as a technique was pretty obvious and because of the minimum number of kids that every parent teach (only their own) and because the close relation and the previous knowledge of the emotions and opinions with the children, the information obtained in this question is very reliable.

Parents were then asked if they like storytelling as an education technique, 89% answered that they definitely like it and 11% that they probably like it, which is consistent with the previous questions about their appreciation of storytelling and in the fact that they could choose any other technique if they did not like this one.

Finally they were asked if they would promote the use of storytelling to educate and how to do it. 98% of the participants said that they would promote it, and on how they would do it, they commented that they would simply use it, then would share it with other parents their experiences, allowing older children telling stories to the youngers, starting groups of storytellers, using more topics not just the social ones, recommend it to other teachers, reminding adults about how they enjoyed listening to stories when they were younger, explaining its benefits, sharing resources, encouraging children to share their own stories in an oral and not read way, by telling more stories to more kids, with the use of props, from mouth to mouth. All these comments are consistent with the comments made by the people who were interviewed, in both cases, both parts consider that promoting storytelling has to be done starting in the same simple way, telling stories.

The research found that current storytellers that work in non-formal educative spaces worked for many years as teachers in formal educative systems, and they decided to become storytellers or facilitators in public spaces, because they feel free to develop and use alternative techniques as facilitation tools, such as storytelling. With storytelling these former teachers can develop different topics like the ones belonging to environmental education. The most common technique that are used in public spaces where NFE takes place is the oral exposition, anyhow, sometimes facilitators who work in this spaces will not use storytelling
even though it is also an oral tool, which would sound contradictory, but the
problem is that it is not always used because they often feel that they are not that
skilled to use it, in most cases they have not received proper training at least not
from a FE system. The students who participated on the Focus Group like the way
they are learning in formal schools where FE is developed, also they think they are
acquiring a lot of knowledge and concepts, although they consider that there could
be used a funnier environment in their schools. For environmental purposes,
delivering information to students is not enough, there should be a change in the
conduct of habits of each person that participates in environmental education in
order to consider the process successful.

Storytellers are passionate about their job, it can be noticed at any moment that
they are seen working, one more reason, is because of all the benefits that
storytelling represents to participants and also to themselves, like being a non-
complex tool, easy to apply, how powerful it is to engage children, how adaptable it
is to any user, this makes it a perfect tool to promote environmental education,
turning storytellers in potential environmental educators. All these and many other
reasons have made storytellers decided that they would never change their
profession. But the reality about storytellers is way different, currently there are not
enough storytellers in the world, not enough to go to non-formal spaces, and
obviously not enough to go to formal spaces like schools.

The non-formal educative spaces, not limited to the ones where environmental
education is developed, offers the opportunity to facilitators to feel free to choose
any facilitation tool that they consider the most efficient, adequate or simply the
one that they find more comfortable to teach with, such as storytelling. This allows
them to improve the way they deliver knowledge or messages to participants, and
this improvement is real, because the facilitators really like the technique they are
using so is more possible that because of this enjoyment for storytelling, they may
be more willing to try to make it better every day.

Children, as students, prefer stories because they have fun with them and they are
used to hear stories, just as it happens in IE spaces, because in their homes is the
first place where children learn to take care of their environment. The nature of children is to have fun, to play, to enjoy every moment and then storytelling is being developed, children have the opportunity to have fun, to interact and be part of the learning process, giving real time feedback that can be immediately used by the storytellers to adapt the activity according to the response of the story listeners.

People that have been using storytelling as a facilitation to educate in non-formal spaces, as well as homeschool parents, they all think that storytelling will never disappear because is a natural education/facilitation tool, and it should be used more often because their labor results to be interesting and attractive for children. They also consider that storytelling should be permanently promoted so every day there would be more people telling stories but also more people listening stories, with the addition of the environmental education topics, storytelling has more opportunity to be developed, because of all the interests that exists from association, government and private companies to promote it.

Promoting storytelling could be done with more resources as money and time, but the human resource is even more important, and the commitment of facilitators, teachers, parents and even participants/students is a must, because it is a human to human tool that is focused on the participants not just in the knowledge that it delivers, which is the exact same objective of environmental education. Currently more people is more interested in storytelling, and those people, now, are willing to participate in the process as storytellers.

Storytelling is found in informal and NFE in outdoors, indoors, in public spaces, but it could also be found more often in FE if it were considered as an official educational/facilitation tool, with proper training to use it and recognition by FE authorities. This could be very hard if not consensus is made by all the people who administrate and design the facilitation tools, in order to consider storytelling as a real job.
SUMMARY

In this chapter we have analyzed the results obtained with the use of the four methodologies in the present research and that were presented in Chapter Four. We could observe and understood how the data collected was consistent in most cases with the conceptual framework proposed in chapter No. 2, allowing us to find key points that can be discussed, comments and conclusions for the researcher.

In the next and final chapter all the discussion that was generated during this analysis and through all the research, the conclusions that were found and the recommendations originated with this thesis will be presented. Next chapter also represents the end of this thesis.
CHAPTER 6 FINAL SUMMARY CONCLUSIONS & RECOMMENDATIONS

INTRODUCTION

This chapter provides a final summary, major conclusions and recommendations to support the objective of this thesis. It considers if the research questions made at the beginning of the research were answered. Then sustained on the findings along the research and the ones got during the analysis of results a series of recommendations are presented that can help to improve the field of knowledge and practice related to storytelling, that can be useful for future researches and the application of storytelling as a facilitation tool, respectively. Finally, the personal conclusions of the researcher, focusing on the experience and knowledge acquired during the development of this research.

FINAL SUMMARY

This research investigated how storytelling can be used as a facilitation tool to promote Environmental Education (EE) in formal, informal and non-formal educational spaces. The review of literature showed how EE has changed through the years since it began and how it has been perceived by authorities, teachers, educators, students, parents and children to find what makes storytelling effective for EE purposes. The methodology involved data collection in the City of Guelph, Ontario, with 10 professional storytellers and authorities who work closely with groups of children, to gather data about their experience and their perspectives about storytelling. These participants had an average of 30 years of experience in their own areas of work, and all of them agree that storytelling is an effective tool to promote EE and that storytelling itself will never die as an educational tool. Another method used in this research was an e-survey to home-school parents from the city of Guelph, who are in charge of the education of their children. These parents
develop this education in a non-formal space. They also find storytelling useful as a basic tool to promote EE along with most of the topics that they teach their children at any age. Finally, the last method used was a focus group, where a storytelling activity was developed and used to evaluate the perception, acceptance and comments of children as final users in the educational process where storytelling is the main tool to teach waste management, as part of an EE topic. In the focus group the opinions of external observers who were in charge of the group of children participating, were analyzed through the application of surveys where they could express their opinion and suggestions related to the process itself. In both cases participants as well as observers enjoyed the storytelling process. Discussion was detailed but the general consensus was that storytelling should be used more frequently in schools and public spaces. This research helps create a picture of the state of storytelling and how it can be improved and to find the ways to use it in a wider way in formal, informal and non-formal spaces to deliver EE topics more efficiently, concluding and recognizing that in fact, storytelling has been and will continue been a powerful and easy-access tool in the EE world.

CONCLUSIONS

Based on the findings of this study, the analysis and reflections are summarized as follows:

1. FE system has limitations in the curricula when it comes to teacher training on the field of storytelling, because it has not been seen as an official learning/teaching tool yet, so I think that this is a potential field to work in, developing workshops to train other storytellers, where we could all share our experiences to improve storytelling.

2. Storytelling seen as a job can be and must be remunerated as a professional work, not just be seen as a hobby and even less, offer to the storytellers just tips, as if they did not deserve to be paid as teachers/facilitators, when in fact that is what they are.
3. I have found that the storytelling is an adequate facilitation tool to develop practically any topic, but because of its characteristics to work in a deeper level in participant’s brains, it can be used for developing environmental education topics, because it is necessary to create a change of habits and conducts in participants.

4. It is very important to professionalize the job that we, storytellers do, so we can be recognized as professionals, to be able to be evaluated and be certified by the FE system and in this way be in position to demand the creation of more spaces to practice storytelling and also to increase the amount of story listeners.

5. Storytelling is a facilitation tool or a process/activity that will never disappear, it has been in our lives since the human appeared on earth, it is a very useful technique but it has to be promoted, it has to start been considered as the important/most basic educational tool that it is, and people who works with it every day, people like me, we are responsible to make sure that every day more people knows about its existence and use it every day more.

Finally as a general conclusion I found that Storytelling is an adequate facilitation tool to teach environmental topics, but I have to add that it could be used in almost any topic, which makes it even more a versatile tool, also I found that as any other facilitation tool, people who wants to use in a professional way, need to receive training to apply it properly and make it really efficient, otherwise it would be seem nothing but as an entertainment activity, and finally I also found that storytelling as a facilitation tool is part of an interactive learning process that also includes the children or students, so it is very important to promote the existence of spaces where story listeners could learn on how to receive a storytelling activity.

RECOMMENDATIONS

After doing this research recommendations for improving this research and for possible future research areas are summarized as follows:
1. The scholar system integrated by authorities, planners, principals, teachers is a robust organism, that has multiple gaps to fill when taking about educational innovations, it has been changing but unfortunately all the processes and timing that characterizes it are too long or slow, so it becomes very, very hard to work with the school boards, when you do not belong to an established association in the education field. So I would recommend to contact educational, artistic or environmental or parent’s associations, city offices, that could backup any project or proposal that you would like to present to any school board.

2. Schools have certain autonomy to decide about the application of projects, but I would recommend to understand and consider that it is very important to follow every and each policy that schools have and that comes from higher authorities such as the school boards, that are the ones monitoring almost everything that goes on in schools, otherwise almost no project of any nature can be developed inside any school.

3. There are plenty of alternatives to develop educational projects besides the scholar system, I would recommend to look in spaces like outdoor schools, libraries, museums, parks, conservation areas, malls, churches, associations, that welcome very well projects, as long as they are justified and their goals coincide with the ones of the place to be developed.

4. Teaching or facilitating about environmental topics through storytelling turned to be a very limited field, because storytelling has the particularity to be able to be used to deliver any kind of topic, I recommend that a deeper research about the efficiency of the use of storytelling with more topics could be very useful to understand better how wide storytelling could be in any field of knowledge.

5. Environmental education has been done for many years, and has evolved through the time, a lot of material has been developed all around the world, I would recommend that before designing new educational material of any kind, make an exhaust research about what has alredy been done, doing this we could probably save a lot of resources as time and money, plus we would be using material that has been previously used.
6. For teachers, educators, facilitators that are interested in storytelling, it must be pointed that there are many associations and groups that can be joined as storytellers, many of this groups would share resources and offer training and spaces to practice storytelling, most of this spaces are NFE spaces, I would recommend the use of information technologies to find and be part of all these groups to create a database that allows to have more options of getting resources and support.

7. Conducting a research involving children can be very complicated in terms of permissions from the scholar boards, ethics boards, parents committees, but if the research is worth it, I recommend to make sure to do all the necessary arrangements with enough time to be able to develop a successful research.

8. When developing any kind of methodology where humans are involved, I would recommend to make sure that all participants know what their participation is and if you will recruit people to participate in any activity make sure that all of them have all the requirements to be considered part of the research, otherwise the data collected with participants that are not appropriate in an specific method could biased the results obtained.

9. Developing a research where there are so many human components can represent a complicated analysis of the data collected, for further researches in this topic I would recommend to establish realistic boundaries that can set real limits to the extension of the research, considering the resources as money, time and human labor, have simple but clear objectives and when it comes to surveys, interviews of questionnaires run a couple of rounds to test it before applying it to the final users, to make sure that it is easy to understand and that the data collected is the right type of data that you may be looking and that will be possible to analyze.

10. When designing a research like this in a place that is not our original home, I recommend to make a previous research about the culture, customs, habits that people may have, so we can do the necessary adaptations to our research methodology and to our data analysis, because we may be for sure biased by our own background.
11. Facilitators such as storytellers, puppeteers, singers, actors, are willing to participate in researches when these have as part of their objectives to promote or increase the use of any of these techniques, I recommend to use the social media to contact as many associations but also as many facilitators as possible, because there are already very well established networks in NFE space that may be very interested in participate and offer counseling and/or sharing experiences about their job.

12. Storytelling could be promoted with more strength if environmental education topics are added to it, because all the resources that in the last decades have been assigned to environmental education and that could be channeled through the use or storytelling, this could also be applied with other relevant topics like health, security, bullying, addictions, etc.

13. There is plenty of literature about storytelling and all its benefits, however most of this literature could be hard to find if we look for it as a facilitation tool, I recommend to visit schools, associations, web pages of arts and culture, in the fields of acting, drama and theater, because it is there where storytelling is catalogued.

CONCLUDING REMARKS

When I first decided to study the Master degree in Capacity Development and Extension, I already had in my mind that I wanted to create a way to professionalize my job as a facilitator who works with children and who has done it for 21 years. This research experience has done that, gave an academic background to my labor and probably to other facilitators who just like me, work every day with children following a magnificent learning process but anyhow still be considered as if I was just playing and that this work has not a real value, economic or academic.

So today after designing this mixed research with quantitative but also qualitative methodologies to collect data and analyze it, I have made important findings that are useful for me and I hope that also for other storytellers. The time,
money and human resource limitations forced this research to be local and with just a small sample of what is happening between storytelling and education in formal and non-formal education, but the results presented here can be used as a start point for a deeper research conducting through a longer period of time with more resources and that could involve a bigger sample of participants and also that could be done in schools where FE takes place.

Designing and conducting this thesis has been a hard/long experience but today I can finally understood what I am doing as a professional, today I have a better understanding of the limitations and also the power that storytelling has, I have accepted how important and rewarding this tool has been for me for the last two decades, and I am willing to share this experience with more educators, teachers and authorities, even when they may hesitate about how good telling and/or listening a story can be for any person in this world today.

Fig. 6.1. Manu and puppet 2.
REFERENCES


APPENDICES
APPENDIX 1 RESEARCH DESIGN MATRIX
<table>
<thead>
<tr>
<th>Objective 1</th>
<th>Research Question N. 1</th>
<th>Method / Public</th>
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<tbody>
<tr>
<td>Knowing which educational techniques are most commonly used for groups, and how are they perceived by the teacher, authorities and students.</td>
<td>Which educational techniques are most commonly used for groups, and how are they perceived by the teacher, authorities and students?</td>
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<td>1.1.1 How is their job related to children? 1.1.2 How long have they been working with children? 1.1.3 Which is most common technique they use to teach? 1.1.4 Do they feel comfortable with it? 1.1.5 Do they think it is efficient? 1.1.6 Do they think children like it? 1.1.7 Do they as teachers/other like it?</td>
<td>Key Interviews / Teachers, storytellers and Educators.</td>
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<tr>
<td>1.2.1 How is their job related to children? 1.2.2 How long have they been working with children? 1.2.3 Which is the most common technique they use to teach 1.2.4 Do they feel comfortable with it? 1.2.5 How efficient do they think it is? 1.2.6 Do they think children like it? 1.2.7 Do they as teachers like it?</td>
<td>Survey / Other teachers</td>
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<td>1.3.1 Do they like how their teacher teaches at school? 1.3.2 Do they think they are learning what the teacher teaches? 1.3.3 How they prefer to learn (working or playing?)</td>
<td>Focus group / Students</td>
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<td>Objective 2</td>
<td>Research Question N. 2</td>
<td>Method/Public</td>
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<td>Knowing the perception that teacher, authorities and students have of storytelling as a facilitation tool</td>
<td><strong>Research Question N. 2</strong>&lt;br&gt;What is the acceptance of storytelling as a facilitation tool when working with children?</td>
<td>Method/Public</td>
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<td>2.1.1 Do they use storytelling as a facilitation tool?</td>
<td>2.1.2 Do they think storytelling is an adequate technique to teach?</td>
<td>Key Interview / Teachers, storytellers and Educators.</td>
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<td>2.1.3 Do they think children like it?</td>
<td>2.1.4 Do they as teachers/other like it?</td>
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<td>2.1.5 Would they like to use storytelling as a facilitation tool to teach?</td>
<td>2.1.6 Do they think that storytelling is widely used in teaching?</td>
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<tr>
<td>2.2.1 Do they use storytelling as a facilitation tool?</td>
<td>2.2.2 Do they think storytelling is an adequate technique to teach?</td>
<td>E-Surveys / School teachers</td>
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<td>2.2.3 Do they think children like it?</td>
<td>2.2.4 Do they as teachers like them?</td>
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<td>2.2.5 Would they like to use storytelling as a facilitation tool to teach?</td>
<td>2.2.6 Would they promote the use of storytelling in other classes?</td>
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<td>2.3.1 Do they like stories to be used in class?</td>
<td>2.3.2 Have they had classes with storytelling?</td>
<td>Focus group / Students</td>
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<td>2.3.3 Would they like to have a class with storytelling?</td>
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<td>Objectives</td>
<td><strong>Research Question N.3</strong></td>
<td><strong>Method / Public</strong></td>
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<td></td>
<td>How could be improved and promoted the use of storytelling as a facilitation tool?</td>
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<td><strong>3.1.1</strong> What do they think about the use of storytelling?</td>
<td><strong>Key Interviews / Teachers, authorities, storytellers, Educators</strong></td>
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<td></td>
<td><strong>3.1.2</strong> Do they think it was adequate for the topic?</td>
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<td><strong>3.1.3</strong> Do they think children like it?</td>
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<td><strong>3.1.4</strong> Did they as teachers/parents like it?</td>
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<td><strong>3.1.5</strong> Would they use the storytelling to teach? Why?</td>
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<td><strong>3.1.6</strong> Would they promote the use of storytelling to teach other topics? Which ones, How?</td>
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<td><strong>3.1.7</strong> What would they change to improve the class with storytelling?</td>
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<td><strong>3.1.8</strong> What is future of the storytelling?</td>
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<td></td>
<td><strong>3.2.1</strong> What are they (teacher, parent, authority)?</td>
<td><strong>Surveys/ Teachers, authorities, Educators and parents that assisted as observers to the focus group</strong></td>
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<td></td>
<td><strong>3.2.2</strong> What do they after participating in focus group as observers, think about the use of storytelling in the class?</td>
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<td><strong>3.2.3</strong> Do they think it was adequate for the topic?</td>
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<td><strong>3.2.4</strong> Do they think children liked it?</td>
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<td><strong>3.2.5</strong> Did they like it?</td>
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<td><strong>3.2.6</strong> Would they use the storytelling to teach? Why?</td>
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<td><strong>3.2.8</strong> What would they change to improve the class with storytelling?</td>
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<td><strong>3.3.1</strong> Did they like the class with storytelling?</td>
<td><strong>Focus group / Students</strong></td>
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<td><strong>3.3.2</strong> Do they think they learned?</td>
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<td><strong>3.3.3</strong> What they liked the most?</td>
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<td><strong>3.3.4</strong> What they did not like?</td>
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<td></td>
<td><strong>3.3.5</strong> Would they prefer to have more classes with storytelling? Why?</td>
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</tbody>
</table>
APPENDIX 2 KEY INTERVIEW GUIDE OF QUESTIONS

TEACHERS / AUTHORITIES / EDUCATORS / STORYTELLERS
Hello if you agreed and signed the consent letter we could start this interview:

KEY INTERVIEW QUESTIONS

RESEARCH QUESTION 1:
Which are the most common tools used when working with children and environmental topics?

QUESTIONS FOR OBJECTIVE 1:
1.1.1 How is your job related to children?
1.1.2 How long have you been working with children?
1.1.3 Which is most common technique you use to teach?
1.1.4 Do you feel comfortable with it?
1.1.5 Do you think it is efficient?
1.1.6 Do you think children like it?
1.1.7 Do you as a teacher/other like it?

RESEARCH QUESTION 2:
What is the acceptance of storytelling as a facilitation tool when working with children and environmental topics?

QUESTIONS FOR OBJECTIVE 2:
2.1.1 Do you use storytelling as a facilitation tool? (yes/no) why?
2.1.2 Do you think storytelling is an adequate technique to teach? Why?
2.1.3 Do you think children like it? Why?
2.1.4 Do you as teacher/other like it? Why?
2.1.5 Would you like to use storytelling as a facilitation tool to teach? (yes/no) Why?
2.1.6 Would you promote storytelling to teach? Which topics? How?
2.1.7 Do they think that storytelling is widely used in teaching?
2.1.8 What is the future of storytelling?

RESEARCH QUESTION 3:
How could be improved and promoted the use of storytelling as a facilitation tool?

QUESTIONS FOR OBJECTIVE 3:
1.1.1 What do you think is the present and future of storytelling?
1.1.2 Would you promote the use of storytelling to teach other topics? Which ones, How?
1.1.3 What would you change to improve and promote storytelling?
APPENDIX 3: FOCUS GROUP PROGRAM

GROUP OF STUDENTS
FOCUS GROUP PROGRAM

The Program for the Focus group includes activities based in storytelling, its objective is to teach about the topic “waste management”

Focus group activity name: “The 3 super R’s”

PLACE: Inside a Classroom  DURATION: 45 min

PARTICIPANTS: 15-20  PERSONAL: 1 Facilitator and 1 Assistant (secretary)

MATERIALS: sound equipment, microphones, puppets, book.

MAIN THEME: Waste management (R’s)

PRESENTATION: the vocabulary used is adapted to the age of the participants.

METODOLOGY: it follows a constructivist philosophy, through the use of storytelling the topic will be presented to the participants.

EVALUATION: an oral pre- and a post-evaluation is done to determine the knowledge and the attitude of the participants before and after the WORKSHOP.

RECUPERATION FEE: it will have no cost for any participant.

WAIVER: every participant will sign a consent form added to the written consent from their parents.

WORKSHOP PROGRAM “The 3 super R’s”

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
<th>Objective</th>
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<tbody>
<tr>
<td>10</td>
<td>Presentation of Facilitator and Interactive Dynamic “HAO”</td>
<td>In front of the participants the facilitator salutes with different words and movements, in order to get their attention. Introduce the Facilitator, get the attention of the participants and ask some questions about how they are taught in the classroom. Then they will be asked 3 questions about waste management. 1. Do they know how to separate garbage? 2. What is the meaning of 3 R’s? 3. Who wants to separate their garbage?</td>
</tr>
<tr>
<td>10</td>
<td>Physical Dynamic “Neat vs. Dirt”</td>
<td>Group game where “Neat” children have to catch the “dirt” children and convert them to “Neat” The participant will understand about the importance of separating garbage.</td>
</tr>
<tr>
<td>20</td>
<td>Storytelling and puppets</td>
<td>A story is told with the help of a puppet that does not want to wash his hands. Show the importance garbage separation and the meaning of 3 R’s.</td>
</tr>
<tr>
<td>10</td>
<td>Music Dynamic</td>
<td>Participants sing a song with the use of a guitar, to help the puppet to remember to wash his hands. Reinforce the idea of washing the hands before eating and after going to the bathroom.</td>
</tr>
<tr>
<td>10</td>
<td>Workshop closure</td>
<td>End of the Workshop, group photo and applauses. Close the workshop asking if they like the use of storytelling and puppets in class. Then they will be asked again the same 3 questions about waste management. 1. Do they know how to separate garbage? 2. What is the meaning of 3 R’s? 3. Who wants to separate their garbage?</td>
</tr>
</tbody>
</table>
Questions made to children at the beginning of the Focus Group Program

1.3.1 Do you like how your teachers teach at school?
1.3.2 Do you learn a lot of things?
1.3.3 How do you prefer to learn playing or doing homework?
2.3.1 Do you like stories?
2.3.2 Have you had storytellers at your classroom?
2.3.3 Would you like to hear a story?

Questions made to children at the beginning of the Focus Group Program

3.3.1 Did you like the storytelling?
3.3.2 Did you learn something?
3.3.3 What they liked the most of the activity?
3.3.4 What they did not like of the activity?
3.3.5 Would they prefer to have storytelling at school? Why?
APPENDIX 4: SURVEY

OBSERVERS OF THE FOCUS GROUP.
Survey for Teachers and parents that were observers on the Focus Group

PLEASE DO NOT ENTER ANY PERSONAL INFORMATION, AS NAME, ADDRESS, TELEPHONE, AGE, ETC. IN THIS SURVEY

You are:

☐ Parent   ☐ Teacher   ☐ Other:__________________

3.2.1 What do you think about the use of storytelling today? Why?

☐ Definitely good   ☐ Somehow good   ☐ neutral   ☐ Somehow bad   ☐ Definitely bad

Reason:_________________________________________________________________
________________________________________________________________________

3.2.2 Do you think it was adequate for the topic? Why?

☐ Definitely yes   ☐ Somehow yes   ☐ neutral   ☐ Somehow no   ☐ Definitely no

Reason:_________________________________________________________________
________________________________________________________________________

3.2.3 Do you think children liked it?

☐ Definitely yes   ☐ Somehow yes   ☐ neutral   ☐ Somehow no   ☐ Definitely no

Reason:_________________________________________________________________
________________________________________________________________________

3.2.4 Did you as a teacher/authority/storyteller/parent like it?

☐ Definitely yes   ☐ Somehow yes   ☐ neutral   ☐ Somehow no   ☐ Definitely no

Reason:_________________________________________________________________
________________________________________________________________________

3.2.5 Would you use storytelling for teaching? Why?

☐ Definitely yes   ☐ Somehow yes   ☐ neutral   ☐ Somehow no   ☐ Definitely no

Reason:_________________________________________________________________
________________________________________________________________________

3.2.6 Would you promote the use of storytelling to teach other topics? Which ones, How?

☐ Definitely yes   ☐ Somehow yes   ☐ neutral   ☐ Somehow no   ☐ Definitely no

Why:____________________________________________________________________
________________________________________________________________________

☐ Math   ☐ Sports   ☐ History
☐ Chemistry   ☐ Health   ☐ Civic
☐ Biology   ☐ Values   ☐ Other:

How:____________________________________________________________________
### 3.2.7 What would you change to improve the storytelling activity?

<table>
<thead>
<tr>
<th></th>
<th>No change</th>
<th>More</th>
<th>Less</th>
<th>Use a different type, like:</th>
<th>Grade (0-10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Music/songs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main story</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Puppets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vocabulary used</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information of topic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Timing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presentation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Space</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lights</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Sound</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control of group</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engagement of group</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respect to participants</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interaction with participants</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Any other comments or suggestions:

__________________________________________________________________________

__________________________________________________________________________
APPENDIX 5: E-SURVEY

HOME-SCHOOL PARENTS
RESEARCH QUESTION 1:
Which are the most common tools used when working with children and environmental topics?

QUESTIONS FOR OBJECTIVE 1:

1.2.1 How are you related to children in your job?
- Teacher
- Educator
- Librarian
- other ____________________

1.2.2 How long have you been working with children?
- less than 1 year
- from 1 to 5 years
- more than 5 years

1.2.3 Which is the most common technique you use to teach?
- Asking kids to read
- Asking kids to write
- Using Oral exposition
- using Video / Audio
- Other ____________________

1.2.4 When you use this technique to teach, most children...

<table>
<thead>
<tr>
<th></th>
<th>Definitely yes</th>
<th>Probably yes</th>
<th>Might or might not</th>
<th>Probably not</th>
<th>Definitely not</th>
</tr>
</thead>
<tbody>
<tr>
<td>...look comfortable?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>...seem interested?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>...participate?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>...make questions?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>...like it?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
1.2.5 How efficient do you think the technique that you use is?
- Extremely good
- Somewhat good
- Neither good nor bad
- Somewhat bad
- Extremely bad

1.2.7 Do you as a teacher like it?
- Definitely yes
- Probably yes
- Might or might not
- Probably not
- Definitely not

RESEARCH QUESTION 2:
What is the acceptance of storytelling as a facilitation tool when working with children and environmental topics?

QUESTIONS FOR OBJECTIVE 2:

2.2.2 Do you think storytelling is an adequate technique to teach?
- Definitely yes
- Probably yes
- Might or might not
- Probably not
- Definitely not

2.2.1 Have you used storytelling as a facilitation tool?
- Yes
- No

Condition: Yes Is Selected. Skip To: 1.1.2 When you use storytelling to te....

2.2.1.1 Why you have not used storytelling in your classes? (you can choose multiple options)
- It takes too much time
- I do not know environmental stories
- I do not know how to tell
- I do not feel comfortable telling stories
- Other: ____________________
2.2.5 Would you like to use storytelling as a facilitation tool to teach?

- Definitely yes
- Probably yes
- Might or might not
- Probably not
- Definitely not

Condition: Probably yes Is Selected. Skip To: Thanks for your participation.
Condition: Definitely yes Is Selected. Skip To: Thanks for your participation.
Condition: Might or might not Is Selected. Skip To: Thanks for your participation.
Condition: Probably not Is Selected. Skip To: Thanks for your participation.
Condition: Definitely not Is Selected. Skip To: Thanks for your participation.

2.2.1.2 When you use storytelling to teach, most children...

<table>
<thead>
<tr>
<th></th>
<th>Definitely yes</th>
<th>Probably yes</th>
<th>Might or might not</th>
<th>Probably not</th>
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</tr>
</thead>
<tbody>
<tr>
<td>...look comfortable?</td>
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<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>...seem interested?</td>
<td>○</td>
<td>○</td>
<td>○</td>
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<td>○</td>
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<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

2.2.4 Do you as a teacher like it?

- Definitely yes
- Probably yes
- Might or might not
- Probably not
- Definitely not

2.2.6 Would you promote the use of storytelling in other classes?

- Yes, How? ____________________
- No, Why? ____________________

Q17 Thanks for your participation.